Western Australian Aboriginal Child Health Survey

Measuring the Social and Emotional Wellbeing of Aboriginal Children and the Intergenerational Effects of Forced Separation
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As a child I used to listen to my Mother and her brothers and sisters talk about growing up in the respective missions they were sent to and the stories they shared with each other. They would reminisce about the people they grew up with outside of their own families, family connections they re-established after leaving the mission and I often wondered about the experiences that remained locked away in their memories and not talked about.

What I found even more fascinating was the blurring of the lines between real family and the many others who were accepted as family because they had shared a significant part of their childhood together in the mission away from their parents and carers. The memories they shared were always interesting to me because it provided a sense of our family links and gave my mother and her siblings a way to fill the gaps in their lives created by being apart as a family throughout their childhood and adolescent years.

We all have vivid recollections around the way things were, but as children we didn't comprehend the significance of many actions until much later when we were more capable of understanding the reality of life my mother experienced while she was at Roe-lands Mission, outside of Bunbury Western Australia and later as a domestic worker.

My parents substantiated this when I was much older and the missed pieces were gained through reading the numerous entries, correspondence and field officer's reports in my mother's Native Welfare Department file. It gave us an inkling of the challenges that she faced as a child and later as an adolescent woman when she was sent out to work. The letters from her parents or the entries made about parental contact over a period of time clearly established the fact that her parents had not relinquished their parental rights.

The complexity of the impact of the forced separation of my mother from her family wasn't realised until I and other staff of the Aboriginal Education Branch of the West Australian Department of Education became embroiled in the development of school resources for the first National Sorry Day. The release of the materials to schools resulted in varied responses and strong opposition from some sections of the community, which resulted in extensive media coverage of both the intent of the resources, as well as outright opposition manifested by local community reaction.

What saddened me was that this was part of my mother's history which had been shaped by government policy at the time. The various stories of those who were removed needed to be shared because there were stories of terrible experiences but equally there were others who were able to use the opportunity to move forward.

We need to acknowledge the past and understand that the majority of Aboriginal parents did not freely give up their children. Where removals occurred for reasons of education or betterment, offers were presented in such a way that families could not refuse them. Some removals were justified as being in the children's best interests and many others were simply taken to accommodate benevolent policies.

The value of National Sorry Day and other formal acknowledgements of this history is that it provides a platform for stimulating discussion and enabling the broader community to become aware that a real history of Aboriginal society exists. This is a history that is there to be shared - a history that will help us to understand the past and its effects upon the present and the future.
It is not a history built on guilt nor is it intended to generate any degree of guilt but an awareness, understanding and acknowledgement that develops greater understanding of our people as well as assisting in the grieving process and for the future.

I am reminded of the words of Justice Enfield who said:

‘I would rather wear a black armband than a white blindfold that prevents me from seeing the truth. Education provides an opportunity for the truth to be extended to all ages.’

To achieve this Australians must be exposed to all facets of education, factual information, informed debate and the truth about the history of our country. If they choose to ignore the factual history of Aboriginal and Torres Strait Islander people and their place within Australian society, then they do a disservice to the future generations of Australians.

It must be accepted by all that our history, culture, language, dreaming and way of life has been in existence for 60,000 years and must be accorded its correct and rightful place in the curriculum framework and within school learning programs. We are a part of Australian History.

This publication provides important information for all Australians to be able to remove the shackles of the past, so that they can openly share our culture, our history and our future.

Understanding the impact of forced separations can assist us to heal as a society and build our strength and health. We want to do this to reduce the burden of illness that hovers around, passing from one generation to the next.

Ken Wyatt AM
Director Aboriginal Health
New South Wales Department of Health
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Chapter 1

INTRODUCTION

1.1 HISTORY OF FORCED SEPARATION FROM NATURAL FAMILY

The practice of forced separation of Aboriginal children from their families began in the 1800’s and was in operation until well into the 1960’s. Over this period, a framework of laws, practices and policies existed that saw Aboriginal children forcibly separated from their family by missions, the government or welfare. Separation took three general forms: putting children into government run institutions; adoption of children into white families; and fostering of children into white families.

The forcible separation of Aboriginal children affected every region in Australia.\textsuperscript{1,2}

The Victorian Aborigines Protection Act 1869 established the Aborigines Protection Board. Although it contained very few substantive provisions, the Act authorised the making of regulations on a wide range of subjects including 'the care, custody and education of the children of Aborigines'. One of the regulations allowed for the removal of an Aboriginal child neglected by its parents to an industrial or reformatory school. The Protection Board was replaced by the Welfare Board in 1957. The Welfare Board was abolished in 1967.

In 1883, the NSW Aborigines Protection Board was established. In 1915, the Board was given total power to separate Aboriginal children from their family without a court order. This power was repealed in 1940. The Board was renamed the Aborigines Welfare Board and abolished in 1967.

In Queensland, the Aboriginal Protection and Restriction of the Sale of Opium Act 1897, allowed government officials under the control of the Chief Protector to ‘remove’ Aboriginal people to and between reserves and to separate children from their families. All that was required under the Act was an administrative decision authorised by the Minister, there was no court hearing. From 1939 to 1971, this power was held by the Director of Native Affairs.

Under the Aborigines Act 1905, in Western Australia, the Chief Protector was made the legal guardian of every Aboriginal child under 16 years of age. Under this Act, regulations could also be made for the ‘care, custody and education’ of Aboriginal children and ‘enabled’ any Aboriginal child to be sent to or detained in an Aboriginal institution, industrial school or orphanage.

In 1911, under the Aborigines Act in South Australia, the Chief Protector was made the legal guardian of every Aboriginal child under 21 and could control the child’s place of residence. The Chief Protector was replaced by the Aborigines Protection Board in 1939, with Guardianship power repealed in 1962.

In the same year, the Federal Government passed the Northern Territory Aboriginals Ordinance. Under this legislation, the Chief Protector was made the legal guardian of every Aboriginal child under 18. Any Aboriginal person could be forced onto a mission or settlement and children could be removed at will. These powers were repealed in 1957.
In Tasmania, in the 1930's, Aboriginal children were removed from Cape Barren Island. The Infants Welfare Act 1935, was used to separate these children from their families.

It has been documented that Aboriginal people who were directly impacted by the child removal and family relocation policies of past governments experience many negative life outcomes. The 1997 Report of the National Inquiry into the Separation of Aboriginal and Torres Strait Islander Children From Their Families, Bringing Them Home¹ documented many stories of the damaging consequences associated with forcible separation of Aboriginal children from their natural families. However, until now, there has not been large-scale empirical data available to test whether that social and cultural dislocation has influenced the life outcomes of children in their care.

The Western Australian Aboriginal Child Health Survey (WAACHS) sought to obtain information about the association between forced separations and relocations and the social and emotional wellbeing of subsequent generations.

1.2 MEASURING SOCIAL AND EMOTIONAL WELLBEING

The Social Health Reference Group³ specifically differentiates social and emotional wellbeing from definitions of mental health and of social health. Mental health, social and emotional wellbeing and social health represent three nested concepts.

1. Poor mental health refers to the range of mental health issues, problems and diagnoses that may affect an individual when their social and emotional wellbeing is so compromised that the individual can no longer function to the satisfaction of themselves and/or the community. It is generally dealt with by mainstream mental health services.

2. Mental health represents one part of the concept of social and emotional wellbeing. Social and emotional wellbeing reflects a holistic Aboriginal definition of health and includes:
   - Mental health
   - Suicide and self harm
   - Emotional, psychological and spiritual wellbeing and issues impacting specifically on wellbeing in Aboriginal and Torres Islander communities such as grief, loss, trauma and issues surrounding the forced separation of children from their families.

3. The social and emotional wellbeing of each individual contributes to the social health of the community, where social health is used to cover a wide range of issues including social and emotional wellbeing, substance use, family and community violence and child abuse.

In this paper we assess the impact of past policies and practices of forced separations on a range of indicators of social and emotional wellbeing of Aboriginal carers and their children.

Wide-ranging data on the social and emotional wellbeing of Aboriginal children aged 4–17 years were collected in the WAACHS. Interviews conducted with carers canvassed information about their children that included difficulties with emotions, feelings and behaviours; specific episodes of self-harm or attempted suicide; cultural and spiritual engagement and family experiences of grief, loss and trauma. In addition
to questions about the social and emotional wellbeing of children, interviewers also administered a standardised questionnaire – the Strengths and Difficulties Questionnaire (SDQ)\textsuperscript{4,5} – to gather specific information about the emotional or behavioural difficulties of children and young people. The SDQ is described in more detail in the commentary box on page 10 Measuring Emotional and Behavioural Difficulties in Aboriginal Children.

While the survey was not specifically designed to measure the social and emotional wellbeing of carers, a small number of indicator variables have been collected. We have been able to examine their use of mental health services as consent from carers was sought to access hospital records. Data on the use of mental health services by children and carers were obtained by linking survey responses with administrative health records. Consent rates for record linkage were very high. Approximately 97 per cent of primary carers and 92 per cent of secondary carers gave consent for their records to be linked.

1.3 VALIDATION OF THE MENTAL HEALTH INSTRUMENT

Before the SDQ can be used as a measure of emotional and behavioural difficulties of Aboriginal children, it is important to assess aspects of its reliability. This is done by using a statistical technique called Confirmatory Factor Analysis and by comparing the SDQ results to other measures of social and emotional wellbeing. The results of this analysis are reported in Chapter 2.

1.4 ANALYSIS OF THE MENTAL HEALTH INSTRUMENT AND FORCED SEPARATION FROM NATURAL FAMILY

The relationship of emotional and behavioural difficulties to the age and sex of the child and to location with respect to Level of Relative Isolation (LORI) and ATSIC region is detailed in chapter 3.

In Chapter 4, the impact of forced separation from natural family is analysed in terms of the SDQ and other indicators of social and emotional wellbeing. Chapter 5 concludes.

As information was collected relating to both Aboriginal children and their carers, the WAACHS allows, for the first time an empirical analysis of the nature and extent of intergenerational effects caused by the practice of forced separations from natural families and forced removals from traditional homelands.
In 1995 a national inquiry was commissioned into practices of separation of Aboriginal and Torres Strait Islander children from their families. The Inquiry was led by the Human Rights and Equal Opportunity Commission (HREOC). Particularly important to the Inquiry was validation of the stories and experiences of Aboriginal people who had been separated from their families as a result of official government policies and actions. The Inquiry noted, that unless the community listened to these stories with an open heart and mind, the continuing devastation of the lives of Aboriginal people could not be addressed and there would be no commitment to reconciliation. *Bringing Them Home,* was released in May 1997 and contained wide-ranging recommendations addressed to Federal, State and Territory Governments and to non-government organisations, including churches.

The Inquiry was a response to increasing concerns among Aboriginal communities and agencies that no formal examination had been undertaken into the consequences of separating Aboriginal children from their families despite evidence of the negative effects of forced separation policies. The 1991 Royal Commission into Aboriginal Deaths in Custody found that 43 of the 99 deaths in custody investigated were people who had been separated from their families as children. A key turning point in the development of the inquiry was the 1994 Going Home Conference held in Darwin. At this conference, people from every state and territory met and shared experiences and discussed survival strategies.

The Inquiry was commissioned to investigate and report on four issues:

1. **Separation of Aboriginal and Torres Strait Islander children from their families by compulsion, duress or undue influence** — to trace the history of forcible removal of Aboriginal children from their families, whether taken by force or coercion or given up under pressure or influence and to examine the experiences and effects of removal (See *Commentary Box — Bringing Them Home: Experiences and effects of forced separation of Aboriginal children from their families*).

2. **The need to change current laws, practices and policies related to services and procedures currently available to those affected by the separations** — to examine the adequacy of services available for people affected by forced removal, in particular, access to personal and family records and assistance for family reunions.

3. **Assessing what principles were relevant to determine justification for compensation** — the Inquiry was to report on the principles relevant to determining the justification for compensation for persons and communities affected by such forced removal.

4. **Examine current laws, practices and policies where Indigenous children are placed in care** — to examine whether current laws, practices and policies related to the placement and care of Aboriginal children taken away from their families needed to be changed to take account of the principle of self-determination for Aboriginal people.

*Continued . . .*
HREOC President, Sir Ronald Wilson, and Aboriginal and Torres Strait Islander Social Justice Commissioner, Mick Dodson had primary responsibility for conducting the hearings. With the assistance of other HREOC Commissioners and the Queensland Discrimination Commissioner, information for the Inquiry was gathered from every state and territory capital and most regions of the country in the form of written submissions and evidence provided in public and private hearings. Information was provided by Aboriginal people, government and church representatives, former mission staff, foster and adoptive parents, doctors and health professionals, academics, police and others. In Western Australia, evidence was obtained from 57 individuals and organisations plus 58 confidential submissions. Personal support and counselling was provided to Aboriginal witnesses during the process because of the traumatic nature of memories being recalled and the confronting task of talking about this to strangers.

Overview of the findings of the Inquiry

The Inquiry reported that the separation of Aboriginal children from their families and the abuse some experienced has permanently scarred their lives. The harm continues in later generations, affecting their children and grandchildren.

From the evidence presented to the Inquiry it was found that:

- Institutional conditions were often very harsh
- Education of children in these institutions consisted of basic literacy, numeracy and hygiene, with a view to preparing them for domestic or manual labour
- Excessive physical punishments were common. Physical assault or brutal punishments were reported by almost one quarter of witnesses who had been fostered or adopted, and by one in six who had been institutionalised
- Children were vulnerable to sexual abuse and exploitation. Sexual abuse was reported by one in five people who had been fostered or adopted and by one in ten in work placements organised by the Protection Board or institution
- Some people found happiness
- People who were separated from their families are not necessarily better off. The 1994 Australian Bureau of Statistics (ABS) National Aboriginal and Torres Strait Islander Survey found that 29.1 per cent of people who were forcibly taken away assessed their health status as ‘poor’ or ‘fair’ compared with 15.4 per cent of people who were not taken away. The survey also found that they were not better educated, not more likely to be employed and not receiving significantly higher incomes than people who were raised in their communities
- As well as suffering loss of family and community, people who were forcibly removed have suffered loss of culture, language, heritage and lands

Continued . . .
BRINGING THEM HOME (continued)

- The loss of so many children affected the health and morale of many Aboriginal families and communities
- The effects of separation still resonate today. The Inquiry concluded that Aboriginal families and communities have endured gross violations of their human rights and that these violations continue to affect Aboriginal people’s daily lives.

Recommendations of the Inquiry

*Bringing Them Home* contains 54 recommendations categorised under the following headings:

- Acknowledgement and apology from parliaments, police forces and churches who were involved
- Guarantees against repetition by provision of education, training and instituting self-determination principles
- Restitution by way of counselling services, assistance in maintaining records, language, culture and history centres
- Rehabilitation through mental health programs, parenting and other services
- Monetary compensation where a National Compensation Fund would operate..

1.5 MEASURING REMOTENESS AND ISOLATION FROM SERVICES

Throughout this paper, we undertake analysis by remoteness and geographical isolation.

For this survey, a new classification of remoteness – the Level of Relative Isolation (LORI) has been designed. The LORI is based on a product from the National Key Centre for Social Application of Geographic Information Systems at Adelaide University (GISCA) called ARIA++. The ARIA++ is an extension of ARIA (the Accessibility/Remoteness Index of Australia), which has been widely adopted as the standard classification of remoteness in Australia. Because ARIA is based on describing the whole population of Australia, it has not been specifically designed to describe the circumstances of Aboriginal people living in remote areas. The ARIA++ gives a more detailed description of more remote areas by including more services centres, of smaller sizes, in calculating remoteness scores.

Under the original ARIA, over two-thirds of the land mass of WA, and over one quarter of Aboriginal people in WA live in areas classified as very remote. However, WAACHS data showed that, within this group, there were marked differences in access to basic services, cultures, lifestyles and health outcomes. For instance, small regional centres like Fitzroy Crossing with its own hospital servicing the surrounding region, through to truly isolated Aboriginal communities with strong ties to traditional cultures and lifestyles were classified as very remote under the original ARIA. The greater detail of ARIA++ enables these differences to be more adequately described in the Aboriginal population.
The extra discrimination at the remote end of the scale has also been very effective in discriminating between communities with quite different characteristics within very remote Australia.

As one example, Figure 1.1 shows the proportion of carers and children who speak Aboriginal languages by ARIA++ score. Locations scored above 10.5 (defining very remote in the original ARIA) range from 40 per cent of carers speaking an Aboriginal language to almost 90 per cent. This variation is masked under ARIA by treating these diverse regions as equally remote.

FIGURE 1.1: PROPORTION OF CARERS AND CHILDREN WHO SPEAK ABORIGINAL LANGUAGES, BY ARIA++

To simplify analysis, five levels of remoteness have been created for the WAACHS based on the new ARIA++ score from GISCA. The cut-off scores for these 5 regions were determined from an analysis of WAACHS data which identified cut-off points that produced regions that are as internally homogenous as possible, while conveying the differences across the continuum of remoteness. To avoid confusion with the original ARIA, the five categories are referred to as Levels of Relative Isolation (LORI) and range from None (the Perth Metropolitan area) to Low (e.g. Albany), Moderate (e.g. Broome), high (e.g. Kalumburu) and Extreme (e.g. Yiyili). Figure 1.2 shows the distribution of survey children in these five regions.

Full details of the LORI measure can be found in Zubrick et al. (2004).
FIGURE 1.2: WA CENSUS COLLECTION DISTRICTS – LEVEL OF RELATIVE ISOLATION (LORI) CATEGORIES BASED ON ARIA++ VALUES

LORI (ARIA++)
- None (0 - 0.2)
- Low (0.2 - 8)
- Moderate (8 - 13)
- High (13 - 17)
- Extreme (17 - 18)
Chapter 2
MEASURING MENTAL HEALTH

A key aim of this paper is to investigate the effects of past policies that saw Aboriginal people forcibly separated from their natural families and forcibly removed from their traditional lands. To assess the impact of these policies on Aboriginal people’s social and emotional well being – we have made extensive use of a standardised questionnaire, Goodman’s Strength and Difficulties Questionnaire (SDQ). (see commentary box on page 10, Measuring Emotional and Behavioural Difficulties in Aboriginal Children). This instrument is designed to gather specific information about the mental health of children and young people. In this paper, the Goodman SDQ scores have been used extensively as a measure of Aboriginal children's emotional and behavioural difficulties.

The SDQ questions have been well tested and are known to be valid for the general population (see Goodman, 1997) and (Goodman et al 1998). However this is the first time the SDQ has been administered to a West Australian Aboriginal population and the first large scale attempt to measure emotional or behavioural difficulties of Aboriginal children and young people in a diverse range of circumstances and settings.

Before using the SDQ as a measure of children's emotional and behavioural difficulties, it is important to assess how reliably Goodman's measurement model performs when it is applied in an Aboriginal context. That is to say, how well do each of the individual items measure the underlying unobservable variables they purport to measure (e.g. emotional symptoms, conduct problems and so on). Goodman's measure is designed to be summed to derive a total score, therefore, it is also important to evaluate how well the entire set of items measure, in a global sense, emotional and behavioural distress. Assessing reliability is important because if the SDQ is not adequately capturing the mental health dimensions it claims to measure, then we can be less confident in the conclusions we draw from use of the instrument.

A statistical technique known as confirmatory factor analysis (CFA) is one of several methods needed to answer these types of questions. Further details of the assessment and validation of the SDQ can be found in a forthcoming technical paper (See the ICHR website: www.ichr.uwa.edu.au for the details of the release of this technical paper).

2.1 MEASURING EMOTIONAL AND BEHAVIOURAL DIFFICULTIES – CONTEXT

Health status is a difficult concept to reliably and validly measure using sample surveys of households. It is usually not feasible to have a person with medical training present during an interview and therefore the presence of specific conditions and overall health must be based on the respondent’s recollection and self-report. This can lead to under- and over-reporting or misreporting of certain conditions because that respondent: a) has not or can not recall being tested for that condition; b) can not recall the exact diagnosis given by a medical practitioner; or c) if they had the condition at a certain point in time they have not been tested to see whether it is still present.
Reliability and validity of reporting is further threatened when:

- The conditions in question fall under the heading of mental health (as common understanding of phrases such as ‘mental health’ problems is often different from its usage by medical professionals)
- The individual in question is a child or for some other reason needs to have someone else answer the survey questions on their behalf, or
- The questions and method of gathering the data are not reliable and/or valid given the language and cultural circumstances of the respondent.

All of the above conditions are potential additional threats to the validity of data gathered from Aboriginal Australians.

MEASURING EMOTIONAL AND BEHAVIOURAL DIFFICULTIES IN ABORIGINAL CHILDREN

The selection and use of a measure for child and adolescent mental health had its origins in 1997 when Aboriginal leaders requested that a survey be commissioned to collect high quality information about the health and wellbeing of Aboriginal children and young people.

The Strengths and Difficulties Questionnaire comprises twenty-five items probing five areas of psychological adjustment in children. Selection of the SDQ was made following wide ranging consultations with Aboriginal people in urban and remote areas across Western Australia. While the SDQ is widely used in research, pilot testing with West Australian Aboriginal families indicated that some modifications were needed, particularly with respect to the wording of some items and to the response scale. Permission was obtained from the author of the SDQ to undertake these modifications. All SDQ data reported in this report are based upon this modified instrument.

The Strengths and Difficulties Questionnaire: Administration and Content

Respondents were the carers in the household who knew the most about the child. For the most part, this person was the mother of the child. The SDQ was conducted in a face-to-face interview with the carer. A range of information related to the child’s health, behaviours and emotions, social and environmental circumstances was gathered.

Carers were shown a prompt card that illustrated the response categories of No, Yes or Sometimes. These categories were given numerical values of 0, 2 and 1 respectively in order to score the SDQ. Administration followed a standard procedure in which respondents were asked: Thinking about (child’s name) behaviour over the past 6 months, that is since (calendar event or month), has the child:

Continued . . .
### MEASURING EMOTIONAL AND BEHAVIOURAL DIFFICULTIES IN ABORIGINAL CHILDREN

(continued)

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<th>Item</th>
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<tr>
<td>A</td>
<td>been considerate of other people's feelings+ (RCONSID)</td>
</tr>
<tr>
<td>B</td>
<td>been restless, overactive, cannot stay still for long (RESTLES)</td>
</tr>
<tr>
<td>C</td>
<td>often complained of headaches, stomach aches or sickness (SOMATIC)</td>
</tr>
<tr>
<td>D</td>
<td>readily shared with other children (lollies, toys, pencils, etc.) + (RSHARES)</td>
</tr>
<tr>
<td>E</td>
<td>often had temper tantrums (TANTRUM)</td>
</tr>
<tr>
<td>F</td>
<td>tended to play by him/herself (LONER)</td>
</tr>
<tr>
<td>G</td>
<td>usually done what adults told him/her to do (ROBEYS)</td>
</tr>
<tr>
<td>H</td>
<td>often seemed worried (WORRIES)</td>
</tr>
<tr>
<td>I</td>
<td>been helpful if someone is hurt, upset or feeling ill+ (RCARING)</td>
</tr>
<tr>
<td>J</td>
<td>constantly been fidgeting or squirming (FIDGETY)</td>
</tr>
<tr>
<td>K</td>
<td>had at least one good friend (RFRIEND)</td>
</tr>
<tr>
<td>L</td>
<td>been in fights with other children or has he/she bullied them (FIGHTS)</td>
</tr>
<tr>
<td>M</td>
<td>often been unhappy, sad or tearful (UNHAPPY)</td>
</tr>
<tr>
<td>N</td>
<td>generally been liked by other children (RPOPULAR)</td>
</tr>
<tr>
<td>O</td>
<td>been easily distracted or had poor concentration (DISTRAC)</td>
</tr>
<tr>
<td>P</td>
<td>been nervous or clingy in new situations, easily lost confidence (CLINGY)</td>
</tr>
<tr>
<td>Q</td>
<td>been kind to younger children+ (RKIND)</td>
</tr>
<tr>
<td>R</td>
<td>often lied or cheated (LIES)</td>
</tr>
<tr>
<td>S</td>
<td>been picked on or bullied by other children (BULLIED)</td>
</tr>
<tr>
<td>T</td>
<td>often volunteered to help others (parents, teachers, other children) + (RHELPOUT)</td>
</tr>
<tr>
<td>U</td>
<td>been able to stop and think things over before acting (RREFLECT)</td>
</tr>
<tr>
<td>V</td>
<td>stolen from home, school or elsewhere (STEALS)</td>
</tr>
<tr>
<td>W</td>
<td>been getting on better with adults than with other children (OLDBEST)</td>
</tr>
<tr>
<td>X</td>
<td>been fearful, easily scared (AFRAID)</td>
</tr>
<tr>
<td>Y</td>
<td>had good attention and finished the things he/she starts (RATTENDS)</td>
</tr>
</tbody>
</table>

+ A prosocial scale item which is not included in calculating the SDQ total score. See the section Specific problems of social and emotional wellbeing below for more information about the prosocial scale.

At a later stage in this report, the results of various models are reported. For the 25 items described earlier, the brackets refer to the labels we assign to each item as reported in these models.

Several measures may be derived from the SDQ. Three of them are used extensively in this report:

1. The **strengths and difficulties total score** is a continuous measure derived by summing 20 of the 25 SDQ items. For children in the Western Australian Aboriginal Child Health Survey, the strengths and difficulties total score ranged from zero to 38 (the maximum score possible was 40) and had a mean of 11.3 (CI: 10.9–11.7).

2. The strengths and difficulties total score can be grouped into three ranges – the **normal range** (0–13), **borderline range** (14–16) and **abnormal range** (17–40). These categories and their ranges are described by Goodman, 9

3. The strengths and difficulties total score can be grouped into a two level (i.e. binary) variable that combines scores in the normal and borderline ranges (0–16) and allows their comparison with scores in the abnormal range (17–40).

Continued . . .
MEASURING EMOTIONAL AND BEHAVIOURAL DIFFICULTIES IN ABORIGINAL CHILDREN
(continued)

The classification of the SDQ total score into normal, borderline and abnormal ranges is typically used within a clinical setting by mental health professionals to help identify and diagnose specific emotional or behavioural difficulties amongst children.

In clinical settings, the SDQ may be used in conjunction with other techniques to assess an individual child in accordance with recognised diagnostic standards.

In household-based population surveys such as the WAACHS, where it is not possible to conduct comprehensive clinical assessments of individual children, the SDQ is more appropriately used to assess risk status for clinically significant emotional or behavioural difficulties. Thus, groups of children with SDQ scores in the range of 0-13 are identified as having a low risk, those in the range 14-16 as having a moderate risk and those in the range 17–40 as having a high risk of clinically significant emotional or behavioural difficulties.

The following graph shows the distribution of the SDQ total scores. Additional details about the reliability and validity of the SDQ will be published in a forthcoming technical paper. See our website: www.ichr.uwa.edu.au for details of the release of this technical paper.

ABORIGINAL CHILDREN AGED 4–17 YEARS — DISTRIBUTION OF STRENGTHS AND DIFFICULTIES TOTAL SCORES

The WAACHS version of the SDQ had never been administered before in Western Australia. In order to provide a benchmark for comparing the results from the WAACHS with SDQ outcomes for non-Aboriginal children, a survey of 1,200 carers of children aged 4–17 years in Western Australia was commissioned by the WAACHS survey team. The sample was selected randomly from the Electronic White Pages and conducted in September 2004 using Computer-Assisted Telephone Interviewing (CATI) by the Survey Research Centre at the University of Western Australia.

Continued . . .
MEASURING EMOTIONAL AND BEHAVIOURAL DIFFICULTIES IN ABORIGINAL CHILDREN

(continued)

In addition to administering the SDQ, the age and sex of the survey child and postcode of usual residence were also collected. These variables were used to compare the sample obtained from the CATI survey with the distribution of children aged 4–17 years in WA in the 2001 census.

These results showed no sign of any bias in the survey sample by age, sex or place of usual residence.

Postcodes were also grouped according to levels of socio-economic advantage and disadvantage, and no sign of response bias was found.

The following graph shows the distribution from the CATI survey of the SDQ total scores for non-Aboriginal children in Western Australia.

NON-ABORIGINAL CHILDREN AGED 4–17 YEARS — DISTRIBUTION OF STRENGTHS AND DIFFICULTIES TOTAL SCORES

Throughout this report comparisons are made between the WAACHS findings with the CATI survey findings for non-Aboriginal children in Western Australia.

At a later stage in this report, the results of various models are reported. For the 25 items described earlier, the brackets refer to the labels we assign to each item as reported in these models.

Goodman’s measure may also be divided into five specific emotional or behavioural problems, providing measures of:

- Emotional symptoms (Items C, H, M, P and X)
- Conduct problems (Items E, G, L, R, and V)
- Hyperactivity (Items B, J, O, U, and Y)
- Peer problems (Items F, K, N, S, and W)
- Prosocial behaviour (Items A, D, I, Q, and T).
2.2 THE MODEL

How well do the individual items in the SDQ measure emotional and behavioural difficulties? Are some items more effective in measuring emotional and behavioural difficulties relative to other items? In this section the procedure of Confirmatory Factor Analysis (CFA) is used to assess these questions.

Initially, CFA is used to assess single-factor measurement models of the five specific SDQ emotional and behavioural problems. The model used for these assessments is explained below and can be illustrated graphically in the form of a path diagram (Figure 2.1)

**FIGURE 2.1: GRAPHICAL REPRESENTATION OF THE ONE FACTOR MODEL**

For example, the five items underlying the emotional symptoms scale can be used to describe the model. In this case:

- $X_1$, $X_2$, $X_3$, $X_4$, and $X_5$ represent the five items that attempt to measure the emotional and behavioural dimension of 'emotional symptoms'. For example, item $X_1$ is the carer's assessment of whether the child often complains of headaches, stomach aches or sickness (SOMATIC). $X_2$ is another item where the carer rates if the child often seems worried (WORRIES), and so on for all five items underlying the emotional symptoms scale.

- $\xi_1$ is the underlying emotional and behavioural dimension of 'emotional symptoms'.

Because each item is unlikely to perfectly measure the underlying dimension, $\delta_1$, $\delta_2$, $\delta_3$, $\delta_4$, and $\delta_5$ are the measurement errors associated with each of the observed items ($X_1$, $X_2$, $X_3$, $X_4$, and $X_5$ described above). They are estimated in the modelling process.

- $\lambda_1$, $\lambda_2$, $\lambda_3$, $\lambda_4$, and $\lambda_5$ are the regression coefficients in the relationships between each of the observed variables ($X_1$ to $X_5$) and the underlying variable $\xi_1$ ('emotional
Measuring mental health

symptoms’). The regression coefficients are estimated in the modelling process. They indicate the strength of association between the observed variable and the underlying emotional and behavioural dimension. In these models the regression coefficients tell us how well each item measures the underlying emotional and behavioural dimension. These coefficients range from zero to 1.0, where 1.0 means the item is a ‘perfect’ measure of the underlying dimension.

The same model was fitted to the five items underlying the conduct problems, hyperactivity, peer problems and prosocial subscales. The purpose in fitting these models is to assess the reliability of each SDQ subscale. This is done by examining various statistics that assess ‘goodness of fit’. (i.e. how well does each hypothesised model fit the data?). As an example of how to interpret these models, an estimated model is shown in Figure 2.2 on page 19. The ‘worries’ variable is an indicator of underlying ‘emotional symptoms’. The value of 0.69 is the estimated regression coefficient. This can be compared with the estimate of 0.84 for ‘unhappy’. The larger value for ‘unhappy’ indicates that emotional symptoms are better measured by the ‘unhappy’ indicator compared to ‘worries’.

2.3 MODEL RESULTS AND INTERPRETATION

A separate model was fitted to each of the five SDQ subscales. The model results were obtained under a weighted least squares method of estimation based on polychloric correlation matrices (see Polychloric Correlation Matrix and Weighted Least Squares in Glossary). The table below summarises the estimated regression coefficients for each SDQ subscale.

<table>
<thead>
<tr>
<th>TABLE 2.1: REGRESSION COEFFICIENTS - ONE FACTOR MODELS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emotional symptoms</td>
</tr>
<tr>
<td>Unhappy</td>
</tr>
<tr>
<td>Worries</td>
</tr>
<tr>
<td>Clingy</td>
</tr>
<tr>
<td>Afraid</td>
</tr>
<tr>
<td>Somatic</td>
</tr>
</tbody>
</table>

* reverse coded

These results are generally satisfactory. As Table 2.1 above shows, the majority of the estimated regression coefficients are between 0.5 and 0.8, which are acceptable results (in terms of the relationship between the observed items and the underlying unobservable dimensions). Entries in each of the columns have been ordered by their strength of association with the underlying emotional and behavioural dimension. For example, CONDUCT PROBLEMS are best measured by ‘Lying’, ‘Stealing’ and ‘Fighting’ while ‘Tantrums’ and ‘(dis)Obeying’ are less reliable measures of conduct problems.

In contrast to most of the scales in Table 2.1, the PEER PROBLEMS scale is less well measured and shows considerable variability in the strength of association between the items and the underlying latent variable. Three of the items in the Peer subscale have regression coefficients less than 0.5 (‘tends to play by themselves’, ‘picked on or bullied’, and ‘getting on better with adults than with other children’). Some of this undoubtedly reflects the wide variation in ages of the children (4–17 years) and the developmental appropriateness of the items for those ages. More formal statistical tests of the reliability of each of the five subscales are described the next section.
2.4 GOODNESS OF MODEL FIT

To assess how well each model measures the SDQ emotional and behavioural dimensions, various goodness of fit measures were employed (see Goodness Of Fit Measures in the Glossary). This is done to evaluate how well each of the five behavioural domains are measured using data collected from the carers of Aboriginal children.

Joreskog and Sorbom (1989) outline four measures which can be used to judge model fit. These are:

- Chi-square ($\chi^2$)
- Goodness of Fit Index (GFI)
- Adjusted Goodness of Fit Index (AGFI)
- Root mean square residual (RMR).

Brown and Cudeck (1993) also propose the Root Mean Square Error of Approximation (RMSEA) measure as another means of assessing model fit.

Here, we present a summary of some minimum guidelines reported in the literature for acceptable model fit.

**TABLE 2.2: GOODNESS OF FIT STATISTICS - SUMMARY OF MINIMUM GUIDELINES**

<table>
<thead>
<tr>
<th>Test</th>
<th>Guideline</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. GFI</td>
<td>GFI &gt; 0.95</td>
<td>Fullarton, et al (2003)</td>
</tr>
<tr>
<td>3. AGFI</td>
<td>AGFI &gt; 0.80</td>
<td>Hair, et al (1998)</td>
</tr>
<tr>
<td>4. RMR</td>
<td>RMR &lt; 0.05</td>
<td>Hair, et al (1998)</td>
</tr>
<tr>
<td>5. RMSEA</td>
<td>RMSEA &lt; 0.10</td>
<td>Brown &amp; Cudeck (1993)</td>
</tr>
</tbody>
</table>

When reliability is assessed against each of these measures, all five models are judged to be satisfactory based on the GFI and AGFI measures. At least 98% of the variation in each of the five emotional and behavioural dimensions are explained by their respective set of five items.

EMOTIONAL SYMPTOMS, HYPERACTIVITY and PEER PROBLEMS models have an RMR value above the recommended value of 0.05 suggested by Hair, et al (1998). We note that the HYPERACTIVITY model has an RMSEA estimate of 0.108 which is just at the upper bound of acceptability (Joreskog et al 2001).

2.5 A SUMMARY MEASURE OF SCALE RELIABILITY

The next step was to estimate a summary measure of reliability for each set of items that measure the SDQ emotional and behavioural subscales. This was done to assess whether the five specified items adequately represent each SDQ subscale.

A measure proposed by Raykov has been used to estimate SDQ scale reliability. This measure is called Raykov’s Rho. (See Raykov’s Rho in the Glossary for further details of this measure). Full details of this statistic can be found at (http://www.ssicentral.com/lisrel/mainlis.htm). This measure also ranges between zero and 1.0, where a value of 1.0 indicates that all of the items together perfectly measure the underlying dimension.

This measure is calculated by squaring each regression coefficient (the $\lambda$s from section 2.2) and adding them together. This figure is then divided by adding up this figure
and the sum of the measurement errors (the δs from section 2.2). From this we can see that when the measurement errors increase (i.e. the observed items are measured less precisely) then scale reliability falls. Higher scale reliability scores indicate more ‘precise’ or ‘consistent’ measurement.

Hair et al (1998) recommend a level of at least 0.70 when assessing scale reliability using this measure.

The scale reliability for each of the 5 SDQ subscales is reported in Table 2.3.

**TABLE 2.3: SDQ SCALE RELIABILITY**

<table>
<thead>
<tr>
<th>SDQ subscale</th>
<th>Sub-scale reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hyperactivity</td>
<td>0.813</td>
</tr>
<tr>
<td>Emotional symptoms</td>
<td>0.780</td>
</tr>
<tr>
<td>Conduct problems</td>
<td>0.774</td>
</tr>
<tr>
<td>Prosocial behaviour</td>
<td>0.774</td>
</tr>
<tr>
<td>Peer problems</td>
<td>0.604</td>
</tr>
</tbody>
</table>

Again the results here are generally satisfactory. Internal reliabilities are all relatively robust for HYPERACTIVITY, EMOTIONAL SYMPTOMS, CONDUCT PROBLEMS and PROSOCIAL BEHAVIOUR. When assessed against the recommended value of 0.70 the PEER problems subscale is the only one not to exceed 0.70, indicating that it performs more poorly in terms of its scale reliability.

**2.6 SUBSCALE RELIABILITY WITH RESPECT TO LEVELS OF RELATIVE ISOLATION**

Scale reliability has been further assessed by calculating scale reliabilities for each of the five SDQ subscales by the classification of the Level of Relative Isolation (LORI) – a measure of geographic remoteness from population service centres.

**TABLE 2.4: SCALE RELIABILITIES BY LEVEL OF RELATIVE ISOLATION**

<table>
<thead>
<tr>
<th>Level of Relative Isolation</th>
<th>Number of children</th>
<th>Emotional symptoms</th>
<th>Conduct problems</th>
<th>Hyperactivity</th>
<th>Peer problems</th>
<th>Prosocial behaviour</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>1 214</td>
<td>0.709</td>
<td>0.651</td>
<td>0.752</td>
<td>0.428</td>
<td>0.626</td>
</tr>
<tr>
<td>Low</td>
<td>1 266</td>
<td>0.644</td>
<td>0.661</td>
<td>0.734</td>
<td>0.352</td>
<td>0.674</td>
</tr>
<tr>
<td>Moderate</td>
<td>715</td>
<td>0.662</td>
<td>0.641</td>
<td>0.649</td>
<td>NA*</td>
<td>0.593</td>
</tr>
<tr>
<td>High</td>
<td>416</td>
<td>0.606</td>
<td>0.722</td>
<td>0.631</td>
<td>0.469</td>
<td>0.548</td>
</tr>
<tr>
<td>Extreme</td>
<td>382</td>
<td>0.585</td>
<td>0.482</td>
<td>0.607</td>
<td>NA*</td>
<td>0.506</td>
</tr>
<tr>
<td>Total</td>
<td>3 993</td>
<td>0.780</td>
<td>0.774</td>
<td>0.813</td>
<td>0.604</td>
<td>0.774</td>
</tr>
</tbody>
</table>

* NA - the models underlying these calculations did not converge

The overall individual scale reliabilities for the HYPERACTIVITY, EMOTIONAL SYMPTOMS, CONDUCT PROBLEMS and PROSOCIAL BEHAVIOUR scales are relatively robust ranging from .77 to .81. PEER PROBLEMS has the lowest overall scale reliability when calculated across the entire sample reflecting underlying variability and non-convergence (i.e. the model failed to be estimated) within some LORI levels (see Table 2.4 above).

Within levels of relative isolation, data show that for each SDQ subscale, scale reliabilities decline as a child resides in a more isolated locality. This probably reflects differences in interview administration with a high proportion of respondents who spoke an Aboriginal language as a first language in areas of higher relative isolation, who required simultaneous translation during interview, and for whom some concepts were less salient to cultural and living circumstances. As with the overall scale reliabilities, the peer subscale performed poorly. Scale reliabilities could not be
2.7 ASSESSMENT OF RELIABILITY BASED ON THE SDQ SUBSCALES

The scale reliability of the five SDQ subscales have been assessed with reference to:

- Examination of their estimated regression coefficients
- Various model fit statistics
- Scale reliability as measured by Raykov’s Rho.

At the subscale level there are noticeable variations in scale reliability. These variations are between each of the five underlying factors and between levels of relative isolation. Broadly speaking the EMOTIONAL SYMPTOMS, CONDUCT PROBLEMS and HYPERACTIVITY scales show relatively better scale reliability in terms of magnitude, PROSOCIAL BEHAVIOUR somewhat less so, while the PEER PROBLEMS subscale perform less well – particularly within levels of relative isolation.

On balance these findings suggest that the total SDQ score is likely to be a good measure of emotional and behavioural distress.

2.8 A GLOBAL MEASURE OF EMOTIONAL AND BEHAVIOURAL DIFFICULTIES

The previous sections examined each of the SDQ items and their relationship to the subscales that they are purported to measure. Results were generally satisfactory, with the exception of PEER problems the other SDQ sub-scales appeared to be reasonably measured. However, one of the purposes of using the SDQ is to derive a Total Score. To do this requires assessing how well the SDQ items fit a larger measurement model of emotional and behavioural difficulties in Aboriginal children and young people.

The models described in section 2.3 can be readily extended a total model with several emotional and behavioural dimensions (see Joreskog et al 1989). If the different dimensions of mental health $\xi_1, \xi_2, \ldots, \xi_n$ are all uncorrelated, then each set of dimensions can be analysed separately as in the previous section. However in most cases, these dimensions correlate with each other (e.g. we would expect correlation between the hyperactivity and conduct problems subscales). In these cases, an overall analysis of the entire set of unobservable measures must be made.

We have no strong a priori hypothesis of the number of dimensions underlying the SDQ measurement model in Australian Aboriginal children. For example, data are collected on five subscales but only four of these are used in the actual scoring of the SDQ. For this reason, in assessing Goodman’s underlying model of strengths and difficulties on data collected from the carers of Aboriginal children three models are separately estimated:

- A five factor model (emotional symptoms, conduct problems, hyperactivity, peer problems, prosocial behaviour scale) with all 25 observed items
- A four factor model (emotional symptoms, conduct problems, hyperactivity, peer problems) with the 20 items used in the recommended scoring of the SDQ model
A preferred model with 16 items based on empirical results using the WAACHS data.

For each of these models, estimates are once again obtained under weighted least squares estimation, based on polychoric correlations (and asymptotic covariance matrices).

Some comment should be made on the reduced (16 item model). Initial models were run on a 50% random sample from the WAACHS data. After inspection of the standardised regression coefficients ($\hat{\lambda}$s) those coefficients that were above 0.59 were retained. Two exceptions were made to this. An additional item, ‘Shares’, was retained on the PROSOCIAL BEHAVIOUR scale and ‘Bullied’ was retained over ‘Loner’ on the PEER PROBLEMS scale. In general the goal was to retain a set of items that strongly measured their underlying dimension of emotional and behavioural difficulty (in the sense of have lower proportions of error variance). A path diagram for the 16-item model containing model estimates is reproduced in Figure 2.2 below.
2.9 ASSESSING THE OVERALL EMOTIONAL AND BEHAVIOURAL DIFFICULTY MODELS

As with the earlier models, how well each model fitted the data was assessed with reference to the various diagnostic statistics described in sections 2.3 and 2.4. Table 2.5 contains a summary of these statistics for each of the three models.

**TABLE 2.5: DIAGNOSTIC STATISTICS FOR THE THREE MULTIPLE FACTOR CONGENERIC MODELS**

<table>
<thead>
<tr>
<th>Model</th>
<th>GFI</th>
<th>AGFI</th>
<th>RMSEA</th>
<th>RMR</th>
<th>Total Scale Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Five factor (25 items)</td>
<td>0.981</td>
<td>0.977</td>
<td>0.0414</td>
<td>0.118</td>
<td>0.950</td>
</tr>
<tr>
<td>Four factor (20 items)</td>
<td>0.984</td>
<td>0.979</td>
<td>0.0437</td>
<td>0.104</td>
<td>0.935</td>
</tr>
<tr>
<td>Best fit (16 items)</td>
<td>0.989</td>
<td>0.983</td>
<td>0.0438</td>
<td>0.101</td>
<td>0.936</td>
</tr>
</tbody>
</table>

Overall, we conclude that each of the hypothesised models provides an adequate fit to the underlying data. The GFI, AGFI, and RMSEA values all indicate that the models fit the data satisfactorily. Though, all three models do have high RMR values that are above the recommended cut-off of 0.05.

These models are also assessed in terms of their calculated scale reliabilities (i.e. Raykov Rho). Each of the hypothesised models perform well (scale reliability in excess of 0.93). See Table 2.5 above.

2.10 OTHER OBSERVATIONS OF SDQ RELIABILITY AND VALIDITY

So far our assessment of the SDQ has focused on the internal properties of the items by assessing how well the SDQ items measure emotional and behavioural dimensions such as emotional symptoms, conduct problems, etc and how well total sets of these items measure the global concept of emotional and behavioural difficulties.

The WAACHS data also afforded an opportunity to assess other aspects of reliability by comparing the parent reported SDQ total score to a) carer reports of other questions in the survey that could be related to, but not measured by the SDQ and b) to compare the SDQ total score in children who received, at some point in their lives, mental health services. This latter comparison is made by using linked data (see Record Linkage in Glossary) gathered independently from the interviews of carers.

2.10.1 RELATIONSHIP BETWEEN THE SDQ AND PROBLEM BEHAVIOURS IN ABORIGINAL CHILDREN AGED 4–17 YEARS

Carers were asked about a number of problem behaviours such as eating and sleeping problems or drinking alcohol or using other drugs. Responses to these questions were used to assess how well the SDQ correlated with these behavioural problems. Figures 2.3 and 2.4 show the proportion of children who had each particular problem by whether they were at low, moderate or high risk of clinically significant emotional or behavioural difficulties. A higher proportion of children at high risk of clinically significant emotional or behavioural difficulties were reported to have problem behaviours than children who were at low risk of clinically significant emotional or behavioural difficulties. Out of all the problem behaviours only alcohol consumption did not show a statistically significant increase in proportion, but it followed the same trend as the other problem behaviours. For children who experienced nightmares and bedwetting, there was a significant difference between all three levels of risk, while among young people who have talked about suicide, there was a significant difference between the proportion at moderate risk (9.6 per cent; CI: 5.6%–14.8%) and those at
high risk of clinically significant emotional or behavioural difficulties (19.3 per cent; CI: 15.6%–23.4%).

**FIGURE 2.3:** CHILDREN AGED 4–17 YEARS — PROPORTION WITH BEHAVIOURAL PROBLEMS, BY RISK OF CLINICALLY SIGNIFICANT EMOTIONAL OR BEHAVIOURAL DIFFICULTIES

![Bar chart showing the proportion of children with behavioural problems by risk level.](image)

**FIGURE 2.4:** CHILDREN AGED 4–17 YEARS — PROPORTION WITH BEHAVIOURAL PROBLEMS, BY RISK OF CLINICALLY SIGNIFICANT EMOTIONAL OR BEHAVIOURAL DIFFICULTIES

![Bar chart showing the proportion of children with different behavioural problems by risk level.](image)

2.10.2 RELATIONSHIP BETWEEN THE SDQ AND USE OF MENTAL HEALTH SERVICES BY ABORIGINAL CHILDREN

Data on the use of Mental Health Services by children and carers has been obtained by linking survey responses with administrative health records. These health records include the Mental Health Information System (MHIS), a record of all contacts with inpatient mental health services in WA as well as with state-run outpatient and community clinics. Consent rates for record linkage were very high. Approximately 97 per cent of primary carers and 92 per cent of secondary carers gave consent for their records to be linked.

There was a strong association between emotional and behavioural difficulties in Aboriginal children and use of Mental Health Services (Figure 2.5). For children aged
4–11 years who were at low risk of clinically significant emotional or behavioural difficulties only 2.0 per cent (CI: 1.4%–2.7%) had had contact with Mental Health Services in WA, compared with 8.4 per cent (CI: 5.6%–12.2%) of children at high risk. Similarly for children aged 12–17 years only 6.6 per cent (CI: 4.9%–8.4%) of those children at low risk had had contact with Mental Health Services compared with 22.4 per cent (CI: 16.3%–29.8%) of children at high risk.

**FIGURE 2.5:** CHILDREN AGED 4–17 YEARS (a) – USE OF MENTAL HEALTH SERVICES, BY RISK OF CLINICALLY SIGNIFICANT EMOTIONAL OR BEHAVIOURAL DIFFICULTIES

(a) Only children whose carers gave consent for the survey team to access their child’s medical records.

### 2.11 SUMMARY OF THE SDQ VALIDATION ANALYSES

We have tested the reliability of the SDQ subscales, and overall SDQ measurement instrument with reference to:

- Examination of their estimated regression coefficients
- Various model fit statistics
- A scale reliability measure proposed by Raykov
- Associations with other measures of emotional and behavioural difficulties and Aboriginal children’s contact with Mental Health Services in WA.

The results from these analyses are encouraging, suggesting that the observed items are reasonably measuring dimensions of emotional and behavioural difficulties. At the single dimension level, with the exception of PEER PROBLEMS the other SDQ sub-scales appear to be well measured. When the five subscales are combined to form a global measure of emotional or behavioural difficulties, we find that overall scale reliabilities are pleasing (in excess of 0.93 for each of the hypothesised models).

In the next section, demographic breakdowns of SDQ scores for all Aboriginal children extracted from the WAACHS are provided.

The SDQ and its five subscales are then used to analyse the impact on the children of primary carers who were forcibly separated from their natural family by a mission, the government or welfare in Chapter 4.
Chapter 3

EMOTIONAL AND BEHAVIOURAL DIFFICULTIES IN ABORIGINAL CHILDREN AGED 4–17 YEARS

The following sections detail the relationship of emotional and behavioural difficulties to the age and sex of the child, to location with respect to Level of Relative Isolation and ATSIC region. The relationship between the SDQ and problem behaviours such as eating and sleeping problems, and alcohol and other drug use are also examined. SDQ scores calculated from carer responses for each of the survey children were used as the basis for the estimates in this chapter.

3.1 PROPORTION OF CHILDREN AT HIGH RISK OF CLINICALLY SIGNIFICANT EMOTIONAL OR BEHAVIOURAL DIFFICULTIES

Almost one quarter (24.0 per cent; CI: 21.9%–26.1%) of Aboriginal children aged 4–17 years were assessed from carer responses to the SDQ as being at high risk of clinically significant emotional or behavioural difficulties. Another one in every ten children (11.4 per cent; CI: 10.3%–12.6%) were assessed to be at moderate risk of clinically significant emotional or behavioural difficulties.

3.2 AGE OF CHILD

In terms of age groups, 26.3 per cent (CI: 23.9%–28.8%) of Aboriginal children aged 4–11 years were at high risk of clinically significant emotional or behavioural difficulties compared with 20.5 per cent (CI: 17.7%–23.6%) of children aged 12–17 years. By way of comparison, a CATI survey of non-Aboriginal children conducted in September 2004, found that 16.9 per cent (CI: 14.0%–19.8%) of non-Aboriginal children aged 4–11 years and 12.5 per cent (CI: 9.6%–15.3%) of non-Aboriginal children aged 12–17 years were at high risk of clinically significant emotional or behavioural difficulties (Figure 3.1).
The proportion of Aboriginal children aged from 4–14 years at high risk of clinically significant emotional or behavioural difficulties was estimated to be in the range 20 per cent to 30 per cent. The proportion of 15-17 year-olds were markedly lower at around 16 per cent (Figure 3.2).

**FIGURE 3.2: ABORIGINAL CHILDREN AGED 4–17 YEARS — PROPORTION AT HIGH RISK OF CLINICALLY SIGNIFICANT EMOTIONAL OR BEHAVIOURAL DIFFICULTIES, BY AGE**

3.3 **SEX OF CHILD**

Over one quarter (27.3 per cent; CI: 24.4%–30.3%) of male Aboriginal children aged 4–17 years were assessed from the SDQ as being at high risk of clinically significant emotional or behavioural difficulties. This was significantly higher than the proportion of 4–17 year-old females (20.5 per cent; CI: 18.3%–23.0%). For non-Aboriginal children aged 4–17 years, there was no significant difference in the proportion of males and females who were at high risk of clinically significant emotional or behavioural difficulties (males 15.8 per cent; CI: 12.9%–18.8%; females 14.0 per cent; CI: 11.2%–16.9%) (Figure 3.3).
3.4 LEVEL OF RELATIVE ISOLATION

The proportion of Aboriginal children at high risk of clinically significant emotional or behavioural difficulties was significantly lower in the most isolated areas of the state. In areas of extreme isolation, just over one in ten children (10.8 per cent; CI: 7.4%–15.0%) were at high risk of clinically significant emotional or behavioural difficulties compared with 23.3 per cent (CI: 16.9%–30.6%) in areas of high isolation and 27.4 per cent (CI: 23.5%–31.3%) in the Perth metropolitan area (Figure 3.4).

3.5 ATSIC REGION

The lowest proportion of children at high risk of clinically significant emotional or behavioural difficulties was recorded in the Broome (13.6 per cent; CI: 9.2%–18.6%) and Warburton (13.3 per cent; CI: 8.2%–21.0%) ATSIC regions. Regions recording the highest proportion of children at high risk of clinically significant emotional or
behavioural difficulties in Aboriginal children and young people were South Hedland (28.6 per cent; CI: 19.0%–39.0%), Perth (27.4 per cent; CI: 23.8%–31.3%) and Geraldton (25.6 per cent; CI: 19.6%–32.6%) (Figure 3.5).

**FIGURE 3.5: ABORIGINAL CHILDREN AGED 4–17 YEARS — PROPORTION AT MODERATE OR HIGH RISK OF CLINICALLY SIGNIFICANT EMOTIONAL OR BEHAVIOURAL DIFFICULTIES, BY ATSIC REGION**

![Graph showing the proportion of Aboriginal children aged 4–17 years at moderate or high risk of clinically significant emotional or behavioural difficulties, by ATSIC region.](image)

**COMPARISON OF WAACHS SDQ RESULTS WITH NEW SOUTH WALES SDQ RESULTS**

It was possible to compare the SDQ scores collected on Aboriginal children in the WAACHS with information reported by the New South Wales Health Department. The NSW Health Department collected information about children aged 5–15 years on emotional and behavioural difficulties using Goodman’s parent-reported Strengths and Difficulties Questionnaire via Computer Assisted Telephone Interviewing. This random sample contain a proportion of carers of Aboriginal children. The NSW version of the SDQ made some slight modifications to the wording of some of the questions, but otherwise maintained the original scale as published by Goodman. Whilst these modifications are minor, this may translate into some impact on the SDQ scores. Note, that the modifications made by the NSW Health Department were different to those made by the WAACHS (details of the wording used in the NSW SDQ questions can be found at www.health.nsw.gov.au).

Using these data, it was estimated that 22.9 per cent (CI: 10.4%–35.3%) of Aboriginal children in New South Wales were at high risk of clinically significant emotional or behavioural difficulties. This was a similar proportion to that found in Aboriginal children in Western Australia (24.0 per cent; CI: 21.9%–26.1%). For non-Aboriginal children in New South Wales the proportion at high risk of clinically significant emotional or behavioural difficulties was 9.0 per cent (CI: 7.2%–10.9%). This was a significantly lower proportion than that found for non-Aboriginal children in Western Australia using the CATI survey (15.0 per cent; CI: 12.9%–17.0%).
Chapter 4

FORCED SEPARATIONS FROM NATURAL FAMILY AND SOCIAL AND EMOTIONAL WELLBEING OF ABORIGINAL CHILDREN AND THEIR CARERS

The 1997 Report of the National Inquiry into the Separation of Aboriginal and Torres Strait Islander Children From Their Families, *Bringing them Home*, has documented the past laws, practices and policies which resulted in the separation of Aboriginal and Torres Strait Islander children from their families by ‘compulsion, duress or undue influence’. Separation took three general forms: putting children into government run institutions; the adoption of children by white families; and the fostering of children into white families. This occurred across the country from the late 1800s until well into the 1960’s. Over this period, as many as 100,000 Aboriginal children are believed to have been forcibly separated, or ‘taken away’, from their families. Submissions to the *Bringing them Home* Inquiry also described the immediate and subsequent effects on individuals who were forcibly removed, institutionalised, denied contact with their Aboriginality and in some cases traumatised and abused. The report also includes references to entire communities being forcibly relocated away from traditional lands of special cultural and spiritual significance.

It is generally recognised that both forced separation and forced relocation have had devastating consequences in terms of social and cultural dislocation and have impacted on the health and well-being of subsequent generations. Until recently there has been little or no empirical data to document the nature and extent of these intergenerational effects. (For other related data, see commentary box on page 28, *Forced Separations: Data from the National Aboriginal and Torres Strait Islander Social Survey*). The Western Australian Aboriginal Child Health Survey (WAACHS) sought to ascertain the number of children and young people currently living in households in which parents, carers and/or grandparents were forcibly separated from family or who had been forcibly relocated away from traditional lands. The association between forced separation and relocation and health and wellbeing outcomes are investigated in the following sections.
FORCED SEPARATIONS: DATA FROM ABS NATIONAL ABORIGINAL AND TORRES STRAIT ISLANDER SURVEYS

Background

In 1994, the Australian Bureau of Statistics (ABS) conducted the National Aboriginal and Torres Strait Islander Survey (NATSIS). This was a landmark collection as it made available a range of important social and cultural statistics that had not been collected before.

The survey was developed in response to recommendations made by the Royal Commission into Aboriginal Deaths in Custody. The Royal Commission found that statistical information required for a thorough analysis of the issues to be addressed was not available for Aboriginal and Torres Strait Islander people. The subsequent completion of the NATSIS resulted in a data set that included key social, demographic, health and economic data on Aboriginal and Torres Strait Islander people available at the national, state and ATSIC region level.

In 2002, the ABS conducted its second national social survey of Aboriginal and Torres Strait Islander people, titled the National Aboriginal and Torres Strait Islander Social Survey (NATSISS). The sample comprised some 9,400 Aboriginal and Torres Strait Islander Australians aged 15 years and over from all states and territories, including 1,500 from Western Australia. People from both remote and non-remote areas were represented.

Forced separations, Australia – NATSIS compared with NATSISS

The data items relating to forced separation show strong consistency of reporting over time, with no statistically significant difference in the proportions of persons removed from their natural family (for selected age group cohorts based on closest equivalent age at enumeration) between the 1994 NATSIS and the 2002 NATSISS. For example, for Aboriginal and Torres Strait Islander people aged 25 years or over in 1994, 10.3 per cent (CI: 8.6%–12.0%) reported having been forcibly separated from their natural family, compared to 10.2 per cent (CI: 8.9%–11.5%) for those aged 35 years and over in 2002. For those aged 15 years or over, the 1994 figure was 8.3 per cent (CI: 6.7%–9.9%), compared to 8.6 per cent (CI: 7.4%–9.8%) for those aged 25 years or over in 2002. Finally, for all Aboriginal and Torres Strait Islander people aged 15 years or over at the time of NATSISS 2002, the figure was 8.4 per cent (CI: 7.2%–9.6%).

Forced separations, Western Australia – NATSIS compared with NATSISS

The 1994 NATSIS report for Western Australia showed that for those Aboriginal and Torres Strait Islander people aged 45 years and over, 17.8 per cent (CI: 11.7%–23.9%) reported having been forcibly separated from their natural family, as did 16.4 per cent (CI: 12.7%–20.1%) of those aged 25–44 years. This compares with findings at the national level of 10.7 per cent (CI: 9.0%–12.4%) and 10.1 per cent (CI: 9.1%–11.1%) respectively for the same age groups. For those aged 25–44 years, the difference was statistically significant.

Continued . . .
A significant finding from the 2002 NATSISS was that 53.7 per cent (CI: 48.6%–58.9%) of Western Australian Aboriginal and Torres Strait Islanders aged 15 years and over had either been forcibly separated from their natural family themselves or had a relative who had been. This rate was substantially higher than the 37.6 per cent (CI: 35.5%–39.7%) reported for the whole of Australia.

Forced separations – WAACHS perspective

Keeping in mind that the WAACHS methodology is different, most importantly in that it concentrates on Aboriginal and Torres Strait Islander children and their carers rather than all Aboriginal and Torres Strait Islander people (NATSIS 1994) or Aboriginal and Torres Strait Islander people aged 15 years and over (NATSISS 2002), it is valuable to recap a few key findings on forced separations from natural families published in volume one of the WAACHS.

The WAACHS asked primary and secondary carers of Aboriginal or Torres Strait Islander descent if they had been taken away from their natural family by a mission, the government or welfare. WAACHS used the same question wording as NATSISS. For primary carers, 12.3 per cent (CI: 10.6%–14.3%) reported being forcibly separated from their natural family while, for secondary carers, the estimate was very similar at 12.3 per cent (CI: 9.7%–15.4%) with a wider confidence interval.

The WAACHS also found that over one-third (35.3 per cent; CI: 32.8%–37.8%) of all Aboriginal children in Western Australia were living in households where a carer, or a carer’s parent, was reported to have been forcibly separated from their natural family by a mission, the government or welfare.

Forced separations and life outcomes – NATSISS findings

The NATSISS provided the ability to investigate relationships between the forced separation of Aboriginal and Torres Strait Islander people from their natural family and certain life outcomes, from both a national and state perspective.

Self reported health status. NATSISS found that at the national level 40.0 per cent (CI: 33.4%–46.6%) of Aboriginal and Torres Strait Islander people aged 15 years and over reported their health to be fair or poor if they had been forcibly separated from their natural family. This compares with only 21.8 per cent (CI: 20.2%–23.4%) for those who had not been forcibly separated from their natural family. For Western Australian Aboriginal and Torres Strait Islander people aged 15 years and over, the equivalent rates were 43.5 per cent (CI: 32.0%–55.0%) and 21.5 per cent (CI: 18.2%–24.8%) respectively.

For the Western Australian general population in 2002 a significantly lower 14.1 per cent (CI: 12.6%–15.6%) of adults described their overall health status as being either fair or poor.

Continued . . .
FORCED SEPARATIONS: DATA FROM ABS NATIONAL ABORIGINAL AND TORRES STRAIT ISLANDER SURVEYS (continued)

**Smoking.** At the national level, of those Aboriginal and Torres Strait Islander people who had been forcibly separated, a significantly higher proportion reported being a current daily smoker (64.6 per cent; CI: 57.5%–71.7%) compared with those who had not been forcibly separated (46.8 per cent; CI: 44.5%–49.1%).24

In Western Australia, a higher proportion of Aboriginal and Torres Strait Islander people were daily smokers (58.7 per cent; CI: 47.9%–69.5%) if they had been forcibly separated from their natural family compared with those who had not been forcibly separated (42.4 per cent; CI: 37.5%–47.3%).24

For the general population in 2001, at the national level a significantly lower 22.4 per cent (CI: 21.9%–22.9%) of adults reported themselves to be current daily smokers.26

**Stressful life events.** At the national level, reporting the presence of a stressor in the last 12 months occurs in a higher proportion of those who had been forcibly separated from their natural family (89.0 per cent; CI: 85.3%–92.7%) than those who had not been forcibly separated (81.5 per cent; CI: 79.7%–83.3%). Findings for Western Australia were not statistically significant, partly due to the reduced statistical power caused by a smaller sample at the state level.24

For the general population in 2002, at the national level, a significantly lower 57.4 per cent (CI: 56.7%–58.0%) of adults were reported to have experienced at least one stressor in the 12 months prior to being surveyed.26

**NATSISS findings and the WAACHS**

Despite there being some differences in methodology between the two surveys, the NATSISS and the WAACHS both demonstrate that a link does exist between adverse life outcomes and the forced separation of Aboriginal people from their natural families. From the NATSISS these adverse outcomes include inferior overall self reported health status, higher levels of smoking and stressful life events. Adverse outcomes found in the WAACHS include a higher likelihood of living in households where alcohol and gambling cause problems, being more likely to have been arrested or charged with an offence, more likely to have had contact with Mental Health Services and less likely to have someone with whom to share their problems.

In addition to this, the WAACHS was also able to show a link between forced separation of Aboriginal carers and some adverse outcomes for their children. The NATSISS did not collect multi-generational data.

Overall, the data from the 2002 NATSISS support the findings presented in this chapter that show there are real differences in life outcomes for those Aboriginal and Torres Strait Islander peoples who were forcibly separated from their natural families.
4.1 HOUSEHOLDS AFFECTED BY FORCED SEPARATION FROM THEIR NATURAL FAMILY

The survey asked primary and secondary carers of Aboriginal and/or Torres Strait Islander origin whether they had been ‘taken away’ from their natural family by ‘a mission, the government or welfare’. Around 12.3 per cent of primary carers (CI: 10.6%–14.3 %) and 12.3 per cent of secondary carers (CI: 9.7%–15.4%) reported they had been subject to such separation. Carers were given the option of not providing answers to questions relating to forced separations and relocations and 5.0 per cent of primary carers (CI: 3.4%–6.8%) and 3.8 per cent of secondary carers (CI: 2.4%–5.6%) chose not to answer these questions.

Aboriginal carers were also asked whether either of their parents had been forcibly separated from their natural family by a mission, the government or welfare. Some 20.3 per cent (CI: 18.2%– 22.6%) of the mothers of primary carers (e.g. grandmothers of the survey children) had been forcibly separated from their natural family. In contrast, 12.6 per cent (CI: 10.9%–14.6%) of the fathers of primary carers (e.g. grandfathers of the survey children) had been forcibly separated. Some 16.1 per cent (CI: 13.4%–18.9%) of secondary carers reported their mothers had been forcibly separated and 11.0 per cent (CI: 8.8%–13.6%) reported their fathers were separated from their natural family.

Of the 29,800 Aboriginal and Torres Strait Islander children and young people living in Western Australia, 35.3 per cent (CI: 32.8%–37.8%) were found to be living in households where a carer or a carer’s parent (e.g. grandparent) was reported to have been forcibly separated from their natural family. While the proportion of households affected by forced separation did not vary significantly by level of relative isolation (LORI), some differences were observed between ATSIC regions. This variation is shown in Figure 4.1 where it can be seen that the Broome ATSIC region had the highest proportion of children in families affected by forced separation (53.0 per cent; CI: 36.6%–71.2%) in contrast to other regions such as South Hedland (27.3 per cent; CI: 18.8%–36.2%) and Kununurra (26.1 per cent; CI: 18.4%–34.9%).

**FIGURE 4.1:** CHILDREN AGED 4-17 YEARS – PROPORTION LIVING IN HOUSEHOLDS WITH EXPERIENCE OF FORCED INTERGENERATIONAL SEPARATION OR RELOCATION
Measuring the Social and Emotional Wellbeing of Aboriginal Children and the Intergenerational Effects of Forced Separation

4.1.1 HOUSEHOLDS AFFECTED BY FORCED RELOCATION FROM TRADITIONAL COUNTRY OR HOMELAND

Primary and secondary carers were also asked if either they or their parents had been forcibly relocated from an area that was their traditional country or homeland. Around 23.8 per cent (CI: 21.6%–26.0%) of children were living in households that had been affected by such relocation. Figure 4.1 shows that this percentage varied by ATSIC region, ranging from 41.8 per cent (CI: 30.3%–55.2%) in the Broome ATSIC region to 14.0 per cent (CI: 10.0%–19.2%) in the Geraldton ATSIC region.

4.1.2 HOUSEHOLDS AFFECTED BY FORCED SEPARATION AND/OR FORCED RELOCATION

Around 40.9 per cent (CI: 38.4%–43.5%) of children were living in households where at least one primary or secondary carer had been affected by forced separation from their natural family or forced relocation from traditional country or homeland. The proportion of children thus affected varied across the state with a range from 57.5 per cent (CI: 39.2%–74.5%) in the Broome ATSIC region to 32.1 per cent (CI: 25.2%–39.1%) in the Geraldton ATSIC region.

BRINGING THEM HOME1 – EXPERIENCES AND EFFECTS OF FORCED SEPARATION OF CHILDREN FROM THEIR FAMILIES

Children’s experiences

When removed from their families, children could have been put into an institution or mission dormitory, fostered or adopted. In many cases children experienced several moves from homes and institutions. Children who had been removed were discouraged from contacting their families and, in many cases, were told falsely that their parents did not want them or that their parents were dead. They were taught to feel contempt for Aboriginal culture and for other Aboriginal people. For removed children who were old enough to be aware of their cultural heritage, this contempt for their culture was often internalised.

The Bringing Them Home Inquiry found, in many instances, that the conditions of missions, institutions and children’s homes were poor, with insufficient resources preventing improvement or provision of adequate clothing or food. As well as the poor conditions, institutional regimes were often very strict, with severe punishments administered when rules were broken.

Many Aboriginal children who had been fostered, adopted or sent to institutions were subject to excessive physical punishments and/or at risk of sexual abuse. One in four witnesses to the Inquiry reported being physically assaulted in their foster or adoptive placements while one in six institutionalised children reported physical assault. The Inquiry concluded that there was a failure by welfare officials to protect Aboriginal wards from such abuses.

Continued . . .
While some children were taken compulsorily (legally or illegally), others had been given up as a consequence of duress or undue influence. Parents were told that relinquishing their child was in the child’s best interests in that they would receive a good education. The reality was, however, that education in institutions was essentially preparation for menial labour.

There were some witnesses to the Inquiry who reported finding affection and happiness in their adoptive family, or children’s home. The Inquiry found that where child placements were more enlightened, many of the damaging effects of removal were overcome.

**Effects on the children**

The experience and effects of forced removal of children from their families and communities have been multiple, continuing and profoundly disabling. The trauma of separation and attempts at ‘assimilation’ have damaged their self-esteem and wellbeing, and impaired their parenting and relationships. In turn their children suffer. There is a cycle of damage which people find difficult to escape unaided.

**Loss of primary carer in early childhood**

Over half of all children forcibly removed were removed before the age of five years. Expert witnesses to the Inquiry presented substantial evidence of the ill effects of separating children from their mother at an early age. It was argued that the quality of social relationships is profoundly affected by experiences as a baby. Separation can lead to insecurity and lack of self-esteem, depression and suicide, delinquency and violence, alcohol and drug abuse and or lack of trust and intimacy. The Australian Association of Infant Mental Health reported that ‘early loss of a mother or prolonged separation from her before age 11 is conducive to subsequent depression, choice of an inappropriate partner, and difficulties in parenting the next generation. Anti-social activity, violence, depression and suicide have also been suggested as likely results of the severe disruption of affectional bonds. In its submission to the 2000 Senate Inquiry into the Federal Government’s implementation of recommendations made in Brining Them Home, the Mental Health Council of Australia argued that the ‘likelihood of an individual developing a mental illness is pronounced when a history of childhood separation from biological parents, neglect or institutionalisation exists. This makes Indigenous people particularly vulnerable.’

There had been a commonly held view that forcibly removing children from their families was in their best interests at the time. However, a 1994 Australian Bureau of Statistics (ABS) survey found that a higher proportion of people who were forcibly taken away in childhood assessed their health status as ‘fair’ or ‘poor’ compared with people who had not been taken away. The survey also found that people who had been forcibly removed were not better educated, not more likely to
Loss of parenting skills

The Inquiry found that, as parents, many who had been removed from their families as children have problem children of their own. This next generation of children are at risk of removal by welfare and juvenile justice as a direct result of the lack of opportunity by their parents to acquire good parenting skills caused by being brought up in institutions or a succession of foster homes. Furthermore, their own personal experiences with government and other services make parents of difficult children reluctant to seek support from mainstream services for fear of their own children being taken from them.

Loss of culture

Many people who had been forcibly removed as children, as well as their own children, have lost their culture, languages, heritage and lands as well as families and communities. Forcible removal has left many with nowhere to belong, and no sense of identity and has meant loss of opportunity to assert rights under land rights or native title legislation.

Effect on those left behind

The children who were removed were not the only victims of forcible removal policies and actions. The Inquiry found that whole families and communities suffered long term harm as a consequence of the removal of their children. In some cases, families who feared having their children removed denied their Aboriginality and isolated themselves from their communities and families. The loss of so many children has contributed to the poor health and low morale of many Aboriginal communities resulting, in many instances, in alcohol abuse, hospitalisation following accidents or assaults or behaviour leading to incarceration or early death.

4.2 FORCED SEPARATIONS AND THE MENTAL HEALTH AND WELLBEING OF ABORIGINAL CARERS

Aboriginal carers were asked whether they were taken away from their natural family by a mission, the government or welfare. Respondents were not asked to identify which of these entities took them, where or when they were taken or under what circumstances this took place. The only information collected was whether they were taken away.

The impact that forced separations may have had on the social and emotional wellbeing of Aboriginal carers of Aboriginal children was investigated by examining the association between forced separations from natural family and carer reports of mental health and wellbeing. This was done by comparing the proportions of carers who reported the following items:
Problems caused by overuse of alcohol in the households
Problems caused by gambling in the household
Cigarette smoking
Whether the primary carer has a partner
Whether the primary carer was ever arrested or charged with an offence
Were social support networks available to the primary carer
Had any children of the primary care ever been placed in foster care
Levels of financial strain in the household.

These proportions were further broken down by whether the primary carer had been forcibly separated from their natural family.

A higher proportion of primary carers who were forcibly separated from their natural family by a mission, the government or welfare had been arrested or charged with an offence (47.4 per cent; CI: 39.6%–55.5%) than primary carers who were not forcibly separated (36.9 per cent; CI: 34.3%–39.6%) (Table 4.1).

<table>
<thead>
<tr>
<th>Primary carer taken away?</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>No</td>
<td>36.9% (34.3 - 39.3)</td>
</tr>
<tr>
<td>Yes</td>
<td>47.4% (39.6 - 55.5)</td>
</tr>
</tbody>
</table>

TABLE 4.1: PRIMARY CARER EVER ARRESTED OR CHARGED, BY WHETHER FORCIBLY SEPARATED FROM NATURAL FAMILY BY A MISSION, GOVERNMENT OR WELFARE

None of the other items analysed resulted in a statistically significant difference. However, primary carers were also asked if they had anyone to yarn to about their problems. While the findings were not significant, they suggest that fewer carers who were forcibly separated from their natural family had somebody to yarn to about their problems. Among carers who had been forcibly separated from their natural family, 20.3 per cent (CI: 13.1%–28.9%) did not have anyone they can yarn to about their problems, compared with 11.8 per cent (CI: 10.2%–13.5%) of carers who had not been separated from their natural family.

The impact of forced separations has been further analysed using Logistic regression modelling. This technique accounts for confounding factors in the bi-variate analysis described above (see Logistic Regression in Glossary and commentary box on page 36 Exploring Relationships with Modelling for more information). Using this model, it was found that after accounting for age, sex and level of relative isolation, carers who had been forcibly separated from their natural families were:

- 1.95 times more likely (CI: 1.42–2.68) to have been arrested or charged with an offence
- 1.61 times more likely (CI: 1.12–2.32) to report the overuse of alcohol caused problems in the household
- 2.10 times more likely (CI: 1.25–3.54) to report that betting or gambling caused problems in the household
- Less than half as likely to have someone they can ‘yarn’ to about problems (Odds Ratio 0.45; CI 0.30–0.68).
EXPLORING RELATIONSHIPS WITH MODELLING

Statistical modelling can be used to assess the simultaneous impact of multiple factors. Models can be fit to determine the association between forced separations of carers and emotional and behavioural difficulties in their children that account for the effects of age, sex and LORI. Logistic regression models (see Logistic Regression in Glossary) were used to explore these relationships. The modelling techniques used in this survey account for the use of survey weights and the hierarchical structure of the data with selection of children within families and communities.

The results of logistic regression models are expressed in terms of odds ratios (see Odds Ratio in Glossary). The odds ratios are calculated relative to an index category for each variable. For instance in the model examining the probability that a child had emotional and behavioural difficulties the category ‘child’s primary carer was not forcibly separated from his or her natural family by a mission, government or welfare’ was used as the index category. Where the primary carer was forcibly separated from his or her natural family the Odds Ratio was 2.3 (CI: 1.3–4.3). This can be interpreted as saying that children whose primary carers were forcibly removed from their natural family were 2.3 times more likely to have emotional or behavioural difficulties than children whose primary carers had not been forcibly removed from their natural family.

Each model adjusts for the independent effects of the other variables in the model. Thus, for example, the association between forced separation of the primary carer and the likelihood that the child had emotional or behavioural difficulties is not an artefact of different ages of the children or different rates of forcible separations in areas of different levels of relative isolation.

The statistical significance of an odds ratio can be judged by whether the confidence interval includes the reference value of one. For example, the Odds Ratio of 2.3 (CI: 1.3–4.3) given above is statistically significant as the confidence interval does not include the reference value of one.

4.2.1 CARER FORCED SEPARATION FROM THEIR NATURAL FAMILY AND CONTACT WITH THE MENTAL HEALTH SYSTEM

As noted in Chapter 2, it has also been possible to examine children and carers use of Mental Health Services by linking survey responses with administrative health records.

When this data was analysed, we found that 22.8 per cent (CI: 20.9%–24.8%) of carers had some contact with Mental Health Services in WA prior to the survey.

Further analysis by forced separation shows that a higher proportion of primary carers who were forcibly separated from their natural family have had contact with West Australian Mental Health Services (29.5 per cent; CI: 22.7%–37.5%). For primary carers who were not forcibly separated the corresponding proportion was 21.3 per cent (CI: 19.2%–23.4%) (Table 4.2)
TABLE 4.2: PRIMARY CARER CONTACT WITH MENTAL HEALTH SERVICES, BY WHETHER FORCIBLY SEPARATED FROM NATURAL FAMILY BY A MISSION, GOVERNMENT OR WELFARE

<table>
<thead>
<tr>
<th>Contact with mental health services?</th>
<th>Primary carer taken away? No</th>
<th>95% CI</th>
<th>Yes</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>21.3% (19.2 - 23.4)</td>
<td></td>
<td>29.5% (22.7 - 37.5)</td>
<td></td>
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</tbody>
</table>

This is strongly suggestive, but not a statistically significant difference at the bi-variate level.

Logistic regression modelling however confirmed that after adjusting for age, sex and LORI, those carers who had been forcibly separated from their natural family were 1.50 times more likely (CI: 1.12–1.99) to have had contact with Mental Health Services in Western Australia.

4.3 FORCED SEPARATION OF CARERS AND EMOTIONAL OR BEHAVIOURAL DIFFICULTIES IN THEIR CHILDREN

Until recently there has been little or no empirical data that allows the assessment of intergenerational effects caused by policies of forced separations of people from their natural family and forced removals from their traditional homelands. As far as we can ascertain, the WAACHS is the first large scale survey to allow such an investigation.

To assess Aboriginal children’s emotional and behavioural difficulties, a modified version of Goodman’s Strength and Difficulties Questionnaire (SDQ) was used. For more details see, the commentary box on page 10, Measuring Emotional and Behavioural Difficulties in Aboriginal Children.

As shown in Chapter 3, almost one quarter (24.0 per cent; CI: 21.9%–26.1%) of Aboriginal children aged 4–17 years were assessed from carer responses to the SDQ as being at high risk of clinically significant emotional or behavioural difficulties.

This measure of Aboriginal children’s emotional or behavioural difficulties has also been analysed by forced separation of their primary carer from their natural family. It was found that of the children whose primary carer was forcibly separated from their natural family by a mission, the government or welfare, nearly one third (32.7 per cent; CI: 26.3%–39.3%) were at high risk of clinically significant emotional or behavioural difficulties. This proportion is significantly higher than that found in children looked after by primary carers who had not been forcibly separated from their natural family (21.8 per cent; CI: 19.6%–24.1%) (Figure 4.2).

The mean SDQ score was higher for children with a primary carer who was forcibly separated from their natural family by a mission, the government or welfare (Mean 12.9; CI: 11.9–14.0) than children looked after by primary carers who were not separated (Mean 10.9; CI: 10.5–11.3)
In comparison, 15.0 per cent (CI: 12.9%–17.0%) of non-Aboriginal Western Australian children aged 4–17 years were found to be at high risk of clinically significant emotional or behavioural difficulties.

4.3.1 ANALYSIS BY AGE, SEX, LEVEL OF RELATIVE ISOLATION, AND CHILD CARE ARRANGEMENT

Differences were also found between age groups. A higher proportion of children aged 4–11 years whose primary carer was forcibly separated from their natural family by a mission, the government or welfare were at high risk of clinically significant emotional or behavioural difficulties (34.6 per cent; CI: 26.8%–42.8%) than children aged 4–11 years looked after by primary carers who were not forcibly separated (24.2 per cent; CI: 21.7%–26.8%). For children aged 12–17 years the corresponding proportions were 30.5 per cent (CI: 22.3%–40.5%) and 18.0 per cent (CI: 14.8%–21.4%) (Figure 4.3).
Only females showed statistically significant differences. A higher proportion of female children whose primary carer was forcibly separated from their natural family by a mission, the government or welfare were at high risk of clinically significant emotional or behavioural difficulties (29.8 per cent; CI: 21.9%–38.1%) than children looked after by primary carers who were not forcibly separated (17.8 per cent; CI: 15.5%–20.4%) (Figure 4.4).

**FIGURE 4.4:** CHILDREN AGED 4-17 YEARS – RISK OF CLINICALLY SIGNIFICANT EMOTIONAL OR BEHAVIOURAL DIFFICULTIES, BY WHETHER PRIMARY CARER WAS FORCIBLY SEPARATED FROM NATURAL FAMILY BY A MISSION, GOVERNMENT OR WELFARE AND SEX

No significant differences were found by LORI according to whether the child’s primary carer was forcibly separated from their natural family by a mission, the government or welfare (Figure 4.5).

**FIGURE 4.5:** CHILDREN AGED 4-17 YEARS: PROPORTION AT HIGH RISK OF CLINICALLY SIGNIFICANT EMOTIONAL OR BEHAVIOURAL DIFFICULTIES, BY WHETHER PRIMARY CARER WAS FORCIBLY SEPARATED FROM NATURAL FAMILY BY A MISSION, GOVERNMENT OR WELFARE AND LEVEL OF RELATIVE ISOLATION
The relationship between child care arrangement and whether the primary carer was forcibly separated from natural family by a mission, the government or welfare was examined (Figure 4.6). The largest difference due to forced separation from natural family was seen for children who are cared for by both original parents. For these children, 17.1 per cent (CI: 14.2%–20.5%) were at high risk of clinically significant emotional or behavioural difficulties if the primary carer had not been forcibly separated from natural family, whereas 30.9 per cent (CI: 19.9%–45.2%) were at high risk of clinically significant emotional or behavioural difficulties if the primary carer had been forcibly separated from natural family. By contrast, for children cared for by a sole parent, 27.7 per cent (CI: 23.9%–32.0%) were at high risk of clinically significant emotional or behavioural difficulties if the primary carer had not been forcibly separated from natural family, compared with 34.7 per cent (CI: 25.2%–46.4%) where the primary carer had been forcibly separated from natural family.

**FIGURE 4.6:** CHILDREN AGED 4-17 YEARS – PROPORTION AT HIGH RISK OF CLINICALLY SIGNIFICANT EMOTIONAL OR BEHAVIOURAL DIFFICULTIES, BY WHETHER PRIMARY CARER WAS FORCIBLY SEPARATED FROM NATURAL FAMILY BY A MISSION, GOVERNMENT OR WELFARE AND CHILD CARE ARRANGEMENT

The relationship between forced separation of the primary carer from their natural family and SDQ scores of the children in their care were also examined by looking at the scores on a continuous scale. As shown in Figure 4.7, the proportion of children whose primary carer had been forcibly separated from their natural family increased steadily with increasing total SDQ score of the child. The rate of increase was greatest for children whose SDQ scores were above 22.
Western Australian Aboriginal Child Health Survey

Forced separations from natural family and social and emotional wellbeing of Aboriginal children and their carers

FIGURE 4.7: CHILDREN AGED 4–17 YEARS – PROPORTION OF CHILDREN WHOSE CARER WAS FORCIBLY SEPARATED FROM HIS OR HER NATURAL FAMILY BY A MISSION, GOVERNMENT OR WELFARE, BY TOTAL SDQ SCORE OF THE CHILD

Once again, logistic regression modelling was used to analyse the likelihood of Aboriginal children experiencing emotional or behavioural difficulties after accounting for a number of factors.

The model adjusts for:
- Age group of child (4-7, 8-11, 12-14, 15-17 years)
- Level of relative isolation
- Sex of child
- Birth mother status of primary carer (i.e. natural mother/non-natural mother).

It is found that independently of these factors, children whose primary carer had been forcibly separated from their natural family by a mission, government or welfare were 2.34 times more likely (CI: 1.27–4.32) to be at high risk of clinically significant emotional or behavioural difficulties than children whose carers were not forcibly separated.

4.3.2 SPECIFIC ADVERSE BEHAVIOURS

Carers were asked about a set of specific behaviours observed for children in their care for the six-month period prior to the survey.

A significantly higher proportion of children with a primary carer who was forcibly separated from their family by a mission, the government or welfare had:

- Drunk alcohol or gotten drunk in the past six months (15.2 percent CI: 11.4%–19.9%) compared with children looked after by primary carers who were not forcibly separated (8.8 percent CI: 7.4%–10.3%) (Figure 4.8).
- Used drugs other than alcohol or inhalants (glue, petrol, aerosols) in the past six months (10.5 percent CI: 6.9%–15.3%) compared with children looked after by primary carers who were not forcibly separated (4.4 percent CI: 3.4%–5.7%) (Figure 4.8).
With regard to the other specific adverse behaviours that were investigated, no statistically significant differences were found by whether a child had not wanted to go to school; run away from home; sniffed glue, petrol or aerosols; deliberately harmed themselves; spoken about death or suicide, or attempted suicide. However, all show a trend in the direction that anecdotal evidence has suggested, and most are close to being significant.

4.4 ANALYSIS OF SPECIFIC DIFFICULTIES

Goodman’s SDQ also enables the total measure of emotional and behavioural difficulties to be divided into five specific problems, providing measures of:

- Emotional symptoms
- Conduct problems
- Hyperactivity
- Peer relationship problems, and
- Prosocial behaviour.

The effect of forced separations of carers from their natural family on emotional and behavioural difficulties in their children was investigated further by looking at the outcomes of the five SDQ sub-scales in this setting. There were significant differences in the proportion of children with scores in the high risk category of clinically significant emotional symptoms, conduct problems and hyperactivity. However, there were no significant findings for carer reported peer problems or problems with prosocial behaviour, where the child’s primary carer was separated from their natural family by a mission, the government or welfare.

Children with a primary carer who was forcibly separated from their natural family by a mission, the government or welfare were more likely to:

- Suffer high risk of clinically significant emotional symptoms (30.7 per cent; CI: 24.9%–37.1%) than children looked after by primary carers who were not forcibly separated (20.7 per cent; CI: 18.4%–23.1%)
Have a higher mean emotional symptoms score (3.24; CI: 2.88–3.61) than children looked after by primary carers who were not forcibly separated (2.56; CI: 2.41–2.70).

Suffer high risk of clinically significant conduct problems (41.5 per cent; CI: 35.0%–48.4%) than children looked after by primary carers who were not forcibly separated (31.8 per cent; CI: 29.3%–34.4%).

Have a higher mean conduct problems score (3.24; CI: 2.89–3.59) than children looked after by primary carers who were not forcibly separated (2.65; CI: 2.51–2.79).

Suffer high risk of clinically significant hyperactivity (21.1 per cent; CI: 16.0%–26.5%) than children looked after by primary carers who were not forcibly separated (13.7 per cent; CI: 12.0%–15.5%).

Have a higher mean hyperactivity score (3.88; CI: 3.49–4.27) than children looked after by primary carers who were not forcibly separated (3.34; CI: 3.19–3.48).

**FIGURE 4.9:** CHILDREN AGED 4-17 YEARS – PROPORTION AT HIGH RISK OF CLINICALLY SIGNIFICANT PROBLEMS WITH SPECIFIC DIFFICULTIES, BY WHETHER PRIMARY CARER WAS FORCIBLY SEPARATED FROM NATURAL FAMILY BY A MISSION, GOVERNMENT OR WELFARE

**4.5 MODELLING FORCED SEPARATION OF PRIMARY CARER FROM NATURAL FAMILY BY A MISSION, GOVERNMENT OR WELFARE — ASSOCIATION WITH SPECIFIC DIFFICULTIES SCORES**

Modelling found significant associations between forced separations of primary carers from their natural family and three of the specific difficulties scores in their children – emotional symptoms, conduct problems and hyperactivity.

**Emotional symptoms:** For the SDQ emotional symptoms scale, children whose primary carers had been forcibly separated from their natural families were 1.56 times more likely (CI: 1.07–2.29) to be at high risk of clinically significant emotional symptoms, compared with children with Aboriginal primary carers who were not forcibly separated from their natural family.
Children with the highest emotional symptoms scores were most likely to be cared for by a primary carer who had been forcibly separated from their natural family. The rate of increase in this trend was greatest for children at the most severe end of the scale (Figure 4.10).

**FIGURE 4.10:** CHILDREN AGED 4–17 YEARS – PROPORTION OF CHILDREN WHOSE CARER WAS FORCIBLY SEPARATED FROM HIS OR HER NATURAL FAMILY BY A MISSION, GOVERNMENT OR WELFARE, BY EMOTIONAL SYMPTOMS SCORE OF THE CHILD

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Conduct problems: Children whose primary carers had been forcibly removed from their natural families were 1.75 times more likely (CI: 1.07–2.89) to be at high risk of clinically significant conduct problems.

For the conduct problems score, the likelihood that a child’s primary carer had been forcibly separated from his or her natural family peaked at a score of around 8. Children with high risk of clinically significant conduct problems scores up to about 8 were more likely to be living with a carer who had been forcibly separated from his or her natural family (Figure 4.11).

**FIGURE 4.11:** CHILDREN AGED 4–17 YEARS – PERCENTAGE OF CHILDREN WHOSE CARER WAS FORCIBLY SEPARATED FROM HIS OR HER NATURAL FAMILY BY A MISSION, GOVERNMENT OR WELFARE, BY CONDUCT PROBLEMS SCORE OF THE CHILD
**Hyperactivity:** Children whose primary carers had been forcibly separated from their natural families were 2.61 times more likely (CI: 1.43–4.77) to be at high risk of clinically significant hyperactivity.

For the hyperactivity scale, children with the highest hyperactivity scores were most likely to be cared for by a primary carer who had been forcibly separated from their natural family. Again, the rate of increase in this trend was greatest for children at the most severe end of the scale (Figure 4.12).

**FIGURE 4.12:** CHILDREN AGED 4–17 YEARS – PROPORTION OF CHILDREN WHOSE CARER WAS FORCIBLY SEPARATED FROM HIS OR HER NATURAL FAMILY BY A MISSION, GOVERNMENT OR WELFARE, BY HYPERACTIVITY SCORE OF THE CHILD

**Peer problems and prosocial behaviour:** For the remaining two specific difficulties – peer problems and prosocial behaviour – there was no difference in the likelihood of a child being at high risk of clinically significant peer problems or problems with prosocial behaviour regardless of whether their primary carer had been forcibly separated from their natural family or not. For the peer problems scale, the Odds Ratio was 1.15 (CI: 0.77–1.73) and for the prosocial behaviour scale the Odds Ratio was 1.09 (CI: 0.53–2.21).
**BRINGING THEM HOME** – GOVERNMENT RESPONSES

*Bringing Them Home* made 54 recommendations to address issues relating to past forced removal policies. For the purposes of more consistent monitoring, these recommendations were grouped under the following themes by the Senate Inquiry into the Federal Government’s Implementation of Recommendations made in *Bringing Them Home:* 28

- Acknowledgment and apology
- Records, family tracing and reunion
- Rehabilitation
- Education and training
- Guarantees against repetition
- Reparation
- Issues of contemporary separation
- Consultation, monitoring and coordination.

These themes were used in an independent evaluation of government and non-government responses to the recommendations of *Bringing Them Home* conducted by the Ministerial Council for Aboriginal and Torres Strait Islander Affairs (MCATSIA) in response to the Senate Inquiry into the Stolen Generation. The subsequent report *Success Works – Evaluation of Responses to Bringing Them Home Report December 2003* represented the period up until the end of 2002. The findings of this report are outlined below.

**Acknowledgment and Apology**

On 26 August 1999, the Australian Parliament passed an historic motion expressing its ‘deep and sincere regret that Indigenous Australians suffered injustices under the practices of past generations, and for the hurt and trauma that many Indigenous people continue to feel as a consequence of those practices’. No formal apology has yet been made on the grounds that it could imply that present generations are responsible and accountable for the actions of earlier generations even though those actions were sanctioned by the laws of the time and were believed to be in the best interests of the children.

All jurisdictions have expressed regret and formal apologies have been made at state and territory level.

*Continued . . .*
Records, family tracing and reunion

The Australian Government’s response to the recommendations of Bringing Them Home has focussed on the finding that assisting family reunions was the most urgent and significant need of separated families. As a consequence, family tracing and reunion has received significant attention from Commonwealth and State Governments. The Australian Government’s initial response was dedication of $117 million dollars to be spent on a variety of initiatives addressing records, family tracing and reunion. Included was $11.25 million to be allocated over four years to fund a single dedicated Aboriginal family reunion Link-Up service based on the existing services run by ATSIC. The main role of Link-Up is to provide information, dissemination and community contact; provide access to records and family reunion processes; and to establish and maintain service standards and networks.

Rehabilitation

As well as providing funding for Link-Up and its associated services, the Australian Government has provided funding for a range of counselling and other services including:

◆ Funding to provide for 100 full time Bringing Them Home counsellors
◆ Funding for Aboriginal family support and parenting programs which are administered by the Australian Government Department of Family and Community Services (FaCS)
◆ $1.3 million supplied to the Innovative Grants program administered by the Department of Health and Ageing. This funding is to provide innovative and culturally appropriate alternatives to individual counselling services.

The Australian Government also provided funding for various research projects to evaluate the mental health of Aboriginal people and assess effectiveness of certain therapeutic methods. Among these was funding to support the Western Australian Aboriginal Child Health Survey (WAACHS). The WAACHS is also a contribution to the response to recommendation 49 of the Royal Commission into the Aboriginal Deaths in Custody that proposed a national survey covering a range of social, demographic, health and economic characteristics of the Aboriginal population with full Aboriginal participation at all levels be supported. While not a national survey, WAACHS was a comprehensive statewide survey, conducted with full participation from Aboriginal people in the strategic management of the survey, the design of the questionnaire and the collection, analysis and dissemination of the data.

In Western Australia, the State Government committed funding for counselling positions for the ‘Building Solid Families’ program, trialling resource materials for parenting skills groups for Aboriginal people and undertaking to finalise the Aboriginal Mental Health Plan.

Continued . . . .
The Building Solid Families program – a joint initiative of ATSIC and the Western Australia Department of Health – provides comprehensive information and support services for Aboriginal and Torres Strait Islander people, families and communities who have been affected by family separation, trauma grief and loss, mental health problems or self harm and is recognised as a national best practice model.  

Other strategies delivered by the State, include the ‘Building Blocks Program’ to support Aboriginal newborns and their parents and the ‘Family Futures Program’ which has the aim of providing health programs for Aboriginal people that were holistic and culturally appropriate.

Education and Training

Bringing Them Home emphasized a twofold need for education and training. Firstly, the need for the community to be educated about the history of forcible removal and the effects this has had on Aboriginal communities and individuals and secondly, for Aboriginal communities to have access to skills and information to enable them to retain their cultural identity and language. Recommendations included arrangement of a national commemorative ‘sorry’ day; inclusion of compulsory modules in primary and secondary school curricula on the history of forcible removal; funding to Aboriginal history, cultural and language centres; training and scholarships for Aboriginal archivists, genealogists, historians, researchers and counsellors; and development of in-service training for employees and students on the history and effects of forcible removal.

The Australian Government has provided $12 million for training and support to workers supporting people who were forcibly removed and $9.5 million additional funding to expand the Emotional and Social Wellbeing Regional Centres that provide workforce support and skills development to the Aboriginal and Torres Strait Islander health sector. Over $1.5 million has been provided to support other education and training activities to workers in services responding to grief, loss and trauma caused by past separation practices.

At the time of the report, the Western Australian Government had met six of eight education and training commitments including the allocation of $82,000 for the development of a training program on Aboriginal understandings of mental health issues. Other initiatives delivered include Aboriginal language fluency as a general curriculum option, workshops for Aboriginal studies, training for triage and remote area nurses and general practitioners and an Aboriginal interpreting service.

Guarantees against Repetition

Most jurisdictions have established a range of initiatives to support the care and wellbeing of Aboriginal people in prison and in juvenile justice centres.

Continued . . .
BRINGING THEM HOME: GOVERNMENT RESPONSES (continued)

In Western Australia, the focus of commitments were justice and corrections; implementation of a plan to transfer Aboriginal land to Aboriginal organisations and development of the Aboriginal Justice Plan (2000); children and families; and the appointment of a Commission of Elders to advise Government on matters of significance to Aboriginal people.

Reparation

The issue of monetary compensation remains controversial and unresolved. The Australian Government’s view is that there is not an equitable way to provide financial compensation to people affected by removal policies. Rather, the Australian Government views as more important the provision of practical assistance such as facilities for family reunion and emotional health and wellbeing, and has invested $117 million in Bringing Them Home initiatives.

The Western Australian focus has been on the development of a Jurisdictional Justice Plan to achieve practical outcomes in Aboriginal Affairs. A contribution of $800,000 has been made through the Department of Health for counselling and support for individuals affected by forcible separation and their families.

Issues of Contemporary Separation

Aboriginal children are still being removed from their families for child protection reasons at a rate higher than in non-Aboriginal families. Recommendation 51a of Bringing Them Home stated that when a child is removed, placement is to be made in accordance with the Indigenous Child Placement Principle, which in part recommends that an Aboriginal child be placed in an Aboriginal home. Due to a shortage of Aboriginal foster carers, this is not always possible.
Chapter 5

CONCLUSION

While concerns about the mental health of Aboriginal people feature prominently on the health, education and social policy agendas of governments at all levels, there is a critical deficiency with respect to the planning and delivery of services due to the absence of systematic, comprehensive and reliable information on the nature and prevalence of stress and mental health disorders among Aboriginal people. The WAACHS methodology was designed to help fill this information gap, assisting governments and policy makers by providing a solid basis for decision making in relation to the social and emotional wellbeing of Aboriginal children.

To collect information on the emotional and behavioural difficulties of Aboriginal children, we first needed to identify a suitable tool to gather such data. After a search of the international literature, a standardised instrument, the Strengths and Difficulties Questionnaire (SDQ) was chosen (Goodman, 1999). This instrument has been well tested and used successfully around the world on children from a variety of cultural and language backgrounds.

However, this is the first time the SDQ questions have been asked in an Australian Aboriginal context. Permission was obtained from Professor Robert Goodman (Goodman, 2000, personal correspondence) to assess the SDQ for its appropriateness of use in Australian Aboriginal populations. The SDQ was subsequently used in the pilot phases of the Survey. Feedback from this pilot testing dictated that slight modification of the instrument was necessary before it could be successfully administered in an Aboriginal context.

This modified version of the SDQ was used in the WAACHS to collect data on the emotional and behavioural difficulties of Aboriginal children aged 4–17 years. Before we could use the SDQ as a measure of children’s clinically significant risk of emotional and behavioural difficulties, we first needed to assess how reliably the measurement instrument performs. This step is critical because if we were not confident that the SDQ is adequately capturing the mental health dimensions it purports to measure, then any conclusions we draw from subsequent analysis of the SDQ may be misleading.

Using a statistical technique called Confirmatory Factor Analysis, we found the SDQ’s reliability and consistency to be of a high standard. This allows us to be relatively confident that the SDQ is capturing the concept of emotional and behavioural difficulties in Aboriginal children. Confirmation of the reliability of the SDQ is important, not just in of itself, but because it provides the opportunity to explore the relationship between emotional and behavioural difficulties and other life outcomes.

An area of considerable interest is the effect of forced separation of Aboriginal people from their natural family and how this has impacted on future generations within their care. For many years, anecdotal evidence of there being a link between forced separation of Aboriginal carers from their natural family and negative life outcomes of their children has been recorded. Previous to WAACHS, researchers were only able to observe outcomes of the generation directly affected. The unique design of the WAACHS allows researchers for the first time to test not only the negative life outcomes of carers who were forcibly separated, but to look at outcomes...
for their children as well. This includes the risk of clinically significant emotional or behavioural difficulties, amongst other things.

Analysis of the WAACHS demonstrates that a link does exist between adverse life outcomes and the forced separation of Aboriginal people from their natural families. Specific life outcomes of carers have been investigated within a logistic modelling framework. We have found an impact of past policies of forced separation with respect to various measures of carer wellbeing. After accounting for age, sex and Level of Relative Isolation (LORI) of carers, those carers who were forcibly separated from their natural families were:

- About twice as likely to have been arrested or charged with an offence
- About one and a half times more likely to report that the overuse of alcohol caused problems in the household
- A little over twice as likely to report that betting or gambling caused problems in the household
- About half as likely to have someone they could talk to about their problems
- One and a half times more likely to have had contact with Mental Health Services in Western Australia.

We have also investigated intergenerational effects caused by policies of forced separation and removal.

A higher proportion of those children whose primary carer had been forcibly separated from their natural family were at high risk of clinically significant emotional or behavioural difficulties (almost one-third) compared with those children whose primary carer was not forcibly separated (about one-fifth).

Moreover, these children had levels of both alcohol and other drug use that were approximately twice as high as those children whose primary carer had not been forcibly separated from their natural family.

After applying logistic modelling that controls for a child’s sex, age, (LORI) and birth mother status, we found that children who are cared for by a primary carer who was forcibly separated from their natural family, were:

- Over twice as likely to be at high risk of clinically significant emotional or behavioural difficulties when compared with children whose Aboriginal primary carers were not forcibly separated.

The WAACHS data allows an extensive investigation of effects of past policies of forced separation and removal on the life outcomes of both Aboriginal carers and their children. When a range of indicators relating to social and emotional wellbeing are analysed, we find that children whose primary carers were forcibly separated experience many negative life outcomes when compared with children whose carers were not forcibly separated.
GLOSSARY

GOODNESS OF FIT MEASURES

Chi Square test

The minimum fit function chi-square reported by LISREL is a goodness (or badness) of fit measure in the sense that large $\chi^2$ values correspond to bad model fit. The degrees of freedom serve as a standard to judge whether $\chi^2$ is large or small.

This test measures the distance (difference, discrepancy, deviance) between the sample covariance (correlation) matrix and the fitted covariance (correlation) matrix.

Among others, Joreskog & Sorbom (1989)\textsuperscript{10} and Bearden, Sharma & Teel (1982)\textsuperscript{32} both note that the $\chi^2$ measure is sensitive to sample size. Large sample sizes and departures from normality tend to increase $\chi^2$ over and above that can be expected due to model specification error. Hair, et al (1998)\textsuperscript{13} further state that the use of the chi square measure is only appropriate for sample sizes between 100 and 200. It has also been shown that this measure also varies based on the number of categories in the response variable. As our models are estimated on large sample sizes (almost 4,000 observations), we chose to use additional goodness of fit statistics as described below.

Goodness of Fit Index (GFI) / Adjusted Goodness of Fit Index (AGFI)

The goodness of fit index (GFI) is another overall model fit measure. It gives the proportion of variance/covariance that is explained by the model.

Another way of interpreting the GFI is the proportion of variance in the unobservable variables that is explained by the observed indicators. (see Fullarton, 2002)\textsuperscript{12}. For example, a GFI value of 0.95 suggests that the observed indicators account for around 95% of the variance in the latent factor. The adjusted goodness of fit index (AGFI) is simply calculated as the GFI adjusted for the degrees of freedom in the model.

Fergusson \textit{et al} (2003)\textsuperscript{33} suggest from their experience that an acceptable fitting model has an AGFI value in excess of 0.95.

Root Mean Square Residual (RMR)

The RMR is a measure of the average of the fitted residuals. It gives the proportion of variance in the data unaccounted for by the model. Lower values indicate “better model fit”.

Hair \textit{et al} (1998)\textsuperscript{13} suggest that, as a rule of thumb, an RMR statistic less than 0.05 indicates a good model fit.

Root Mean Square Error of Approximation (RMSEA)

The use of chi-square as a central chi-square statistic is based on the assumption that the model holds exactly in the population. This may be an unreasonable assumption in most empirical research. A consequence is that models that hold approximately in the population will be rejected in large sample. Another fit measure that takes particular account of the error of approximation in the population is the RMSEA.
Brown and Cudeck (1993)\textsuperscript{11} suggest that a value of 0.05 indicates a close fit and values up to 0.08 represent reasonable errors of approximation in the population.

This measure also allows us to calculate the probability of obtaining the same results if a similar sample was taken from the ‘super population’. For example, a RMSEA value equal to 0.0433 indicates that this ‘probability’ would be (100 – 4.33) ~ 96%.

**LOGISTIC REGRESSION**

Logistic regression is a modelling technique that is used to investigate the relationship between the probability of a certain outcome (for example, a child having a particular health condition) and a set of explanatory variables. Logistic regression is discussed in several statistical publications – see, for example, Hosmer and Lemeshow (2000).\textsuperscript{34} In this report, logistic regression models have been fitted using a weighted version of multi-level modelling which allows for community, family and individual level factors to be included as explanatory variables in the models (see Pfeffermann \textit{et al} 1997).\textsuperscript{35}

**ODDS RATIO**

The odds of a given event is the ratio of the probability of its occurrence to the probability of its non-occurrence. For instance the odds of obtaining heads in a coin toss are one to one, the odds of any given face in the roll of a die are one to five. The odds ratios used in this report are a measure of relative risk, derived from a formula which examines the association between, in most of the survey cases, a risk factor (exposure), and an adverse health outcome. In this report, odds ratios have been estimated using logistic regression which estimates the effect of each risk factor included in the model after adjusting for the independent effects of all other factors included in the model.

**POLYCHLORIC CORRELATION MATRIX**

A critical feature of the Confirmatory Factor Analysis (CFA) models described in section 2 is that they assume interval scale measures that are normally distributed and continuous. In contrast the SDQ data are coarsely ordinal and markedly non-normal. Namely, carers rate children’s emotional behaviours on a no/sometimes/yes scale. When analysing such ordinal data, the use of product-moment correlations are inappropriate as these yield large negative biases (see Rowe, 2003\textsuperscript{36} for further details).

Instead polychloric correlations should be calculated. The polychloric correlation matrix is used as an input into the CFA model. Readers can find further technical details relating to the estimation of polychloric correlations in Rowe 2003.\textsuperscript{36}

**RAYKOV’S RHO**

Following Raykov (www.ssicentral.com), scale (or construct) reliability is calculated as:

$$
\rho_y = \frac{\left(\sum_{i=1}^{k} b_i^2\right)^2}{\left(\sum_{i=1}^{k} b_i^2\right)^2 + \sum_{i=1}^{k} \theta_i^2}
$$
Where:

- $b_i$ = the regression coefficients (i.e. $\lambda$ from section 2.2)
- $\theta_{ii}$ = the indicator measurement error (i.e. $\delta$ from section 2.2)

This coefficient is defined as the ratio of true variance in the indicators to its observed variance. With higher values indicating more ‘precise’ or ‘consistent’ measurement in the model. Hair et al (1998) recommend a level of at least 0.70 when assessing scale reliability using this measure.

**RECORD LINKAGE**

Carers were asked for consent to access their hospital and medical records, as well as the birth, hospital and medical records of their children. Carers who consented were given the opportunity to opt out at any stage should they change their mind. The vast majority of carers consented to these records being accessed. Of primary carers, 96.7 per cent consented to allow access to their hospital records, while 92.8 per cent of secondary carers gave similar consent. Overall, 96.3 per cent of carers gave consent for their children’s birth, hospital and medical records to be accessed.

The WA Record Linkage system is unique in Australia and one of only a handful of similar data collections in the world. It links together birth and death registrations with administrative hospital data from several sources to give a comprehensive record of health services contacts for the population of Western Australia. As there are no unique identifying numbers, probabilistic record linkage has been used to link the files together. This operates on matching names, dates of birth, hospital names and addresses. The procedure allows for possible changes in the matching fields by calculating the probabilities of records being correct matches. Records that are potential links are clerically reviewed, and the overall error rate has been estimated to be less than one per cent.

Key components of the record linkage system used in the survey are the birth records, the Hospital Morbidity Data System and the Mental Health Information System.

**WEIGHTED LEAST SQUARES ESTIMATION**

Weighted Least Squares is an estimation method that is used to fit the Confirmatory Factor Analysis (CFA) model described in Section 2. This method was developed by Joreskog and Sorbom to assist in minimising problems with non-normally distributed variables (a property of the SDQ data). For further details, see Joreskog et al (2001).
ENDNOTES


15. Scale reliabilities by LORI status are calculated by running confirmatory factor models for each LORI category and SDQ subscale. For example, the scale reliability for the EMOTION subscale for children living in LORI category 1 (0.709) is calculated using the regression coefficients and measurement errors estimated under a one factor congeneric model. This model is based on the polychoric correlation matrix generated from 1,214 children living in LORI category 1 and estimated via Weighted Least Squares.

16. In order to provide a benchmark for comparing the results from the WAACHS, a survey of 1,200 carers of children aged 4–17 years in Western Australia was commissioned by the WAACHS survey team. The sample was selected randomly from the Electronic White Pages and conducted in September 2004 using...
Computer-Assisted Telephone Interviewing (CATI) by the Survey Research Centre at the University of Western Australia.


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