

# Agreement and discordance of parents' and teachers' reports of behavioural problems among Pacific children living in New Zealand

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## Abstract

*Research suggests that ratings of child psychopathology by parents and teachers are generally not highly correlated. We examined the agreement and discordance between the child behaviour ratings of parents and teachers of a cohort of 6-year-old Pacific children living in New Zealand, based on scores from the Child Behaviour Checklist and the Teacher Report Form. Mother's reports were obtained for 1019 children, of whom, 602 also had father's reports and 559 had teacher's reports. Rater agreement was low between all pairs of informants. Fathers and teachers had higher agreement than mothers and fathers, the latter in turn had higher agreement than mothers and teachers, and agreement was generally higher for Externalizing problems than Internalizing problems. In terms of discordance, mothers reported more aggressive behaviour than fathers, while fathers reported more Internalizing and Total problems than mothers. Mothers and fathers generally reported more behaviour problems than teachers. The higher agreement found between informants from different settings (fathers and teachers) than between informants from similar settings (mothers and fathers) is in contrast with some of the literature. Further research is needed to investigate how child, informant, and setting characteristics affect ratings of children's behaviour.*

## Introduction

A substantial body of research has attempted to assess the agreement between parent and teacher measures of child behaviour. A review of the literature suggests that parent, teacher, and self-report measures of psychopathology are generally not highly correlated.<sup>1,2</sup> A large meta-analysis on childhood emotional and behavioural problems revealed an average correlation of 0.60 between similar informants (e.g., pairs of parents) and 0.28 between different types of informants (e.g., parents/teachers).<sup>1</sup>

De Reyes and Kazdin summarised the importance of studying informant discrepancies.<sup>3</sup> The most important point is that there is no single measure or method of assessing psychopathology in children that provides a definitive account or 'gold standard' to gauge which children are experiencing a given set of problems or disorders.<sup>4</sup> Investigations examining the relations among informant discrepancies and informant characteristics have given the most attention to examining how child characteristics – such as age,



gender, ethnicity/race, social desirability, and problem type – are related to informant discrepancies.<sup>3</sup> With regard to the effect of the child's gender, Duhig et al. reported that gender moderated *correspondence* between mothers' and fathers' ratings but did not moderate *discrepancies* in mothers' and fathers' ratings,<sup>2</sup> whereas Achenbach et al. did not find an effect of gender on inter-informant consistencies.<sup>1</sup> As to the types of behaviour problems, Achenbach et al. reported that agreement tended to be higher for Externalizing problems (aggression, rule-breaking) than for Internalizing problems (anxiety, depression, inhibition), with mothers reporting more Internalizing problems than fathers and both mothers and fathers reporting more Internalizing problems than teachers.<sup>1</sup> This finding is supported by several other studies which suggest that parents, in particular mothers, tend to report more problems than professional workers (e.g., teachers or caregivers).<sup>5,6</sup>

The low to moderate agreement between any pair of informants in assessing child emotional/behavioural problems indicates that no single data source can substitute for all others. Instead there is a need for obtaining data from multiple sources and integrating them in order to get a fuller picture of child behaviour. There is limited research that has investigated these issues among Pacific populations in New Zealand or in Pacific countries. Findings drawn from mainly Western populations may not be applicable to Pacific populations, who may have different norms and expectations of child behaviour.

The Pacific Islands Families Study (PIFS) is following a cohort of Pacific infants born in New Zealand in the year 2000. At 6-years follow up, maternal, paternal and teacher reports of child behaviour were obtained. This has allowed us to explore the agreement and discordance among multiple informants for the first time not only within this study of Pacific children, but in any New Zealand group. We hypothesised that the agreement would be moderate between parents, but low between parents and teachers, and that mothers would report more problems than fathers or teachers. In addition, we hypothesised that child gender would not moderate the agreement or discordance between different informants.

## Methods

### Participants

The PIFS is following a cohort of 1398 Pacific infants including multiple births born to 1376 mothers at Middlemore Hospital in Auckland, New Zealand between 15 March and 17 December 2000. All potential participants were selected from births where at least one parent identified as being of a Pacific ethnicity and was a New Zealand permanent resident. Participants were identified through the Birthing Unit, in conjunction with the Pacific Islands Cultural Resource Unit, and initial information about the study was provided and consent was sought to make a home visit.

At six-weeks, 12 and 24 months, and 4 and 6 years postpartum, maternal interviews were carried out in the home by female interviewers of a Pacific ethnicity who were fluent in English and a Pacific language. Once informed consent was obtained, mothers participated in one-hour interviews concerning family functioning and the health and development of the child. The interview was conducted in the preferred language of the mother. Detailed information about the PIFS cohort and procedures is described elsewhere.<sup>7,8</sup>



At 6 years, 1001 (72.7%) mothers were interviewed in relation to 1019 (72.9%) children (including 36 twins), 500 (49.1%) of whom were girls and 519 (50.9%) boys. Eight hundred and forty eight of the mothers interviewed at 6 years consented to the child's biological father or her partner to act as a collateral respondent, of whom 591 (69.7%) consented and completed interviews in relation to 602 children. Five hundred and fifty nine teachers completed the teacher report regarding the child's academic status and social behaviour. This represented 54.9% of the 1019 children whose mothers had been interviewed at six years.

## Measures

### *Child Behaviour Checklist*

Mothers and fathers completed the Child Behaviour Checklist (CBCL). The CBCL/6-18 is a 120 item standardised questionnaire designed to obtain ratings of emotional/behavioural problems by parents (or guardians or caregivers) of children aged between 6 and 18 years of age.<sup>9</sup> The respondent rates each problem item as 0=not true, 1=somewhat or sometimes true, and 2=very true or often true, based on behaviour over the preceding six months.

The CBCL includes Total problem scores, two broad-band syndromes, Internalizing and Externalizing, and eight narrow-band syndromes: Anxious/depressed, Withdrawn/depressed, Somatic complaints, Social problems, Thought problems, Attention problems, Rule-breaking behaviour and Aggressive behaviour. Total problem scores are the sum of the eight narrow-band syndrome scores plus scores from an Other problems category. Internalizing scores are the sum of Anxious/depressed, Withdrawn/depressed, and Somatic complaints; Rule-breaking and Aggressive behaviour are the components of Externalizing scores.<sup>9</sup> All scores can be classified into a normal, borderline, or clinical range, using percentiles or standardized *t* scores. In this study, classification of participants into normal, borderline, or clinical ranges is based on sex-specific cut-off points derived from American samples since there is no reference available in New Zealand or for Pacific children. For the syndrome cut-offs, the borderline range spans from the 93<sup>rd</sup> to the 97<sup>th</sup> percentile of the normative sample of non-referred children. Scores in the borderline range are high enough to be of concern, but are not as clearly deviant as scores above the 97<sup>th</sup> percentile. Scores above the 97<sup>th</sup> percentile indicate that the person who completed the CBCL reported enough problems to be of clinical concern. Scores below the 93<sup>rd</sup> percentile are in the normal range.<sup>9</sup> For the Internalizing, Externalizing and Total problem scores, the cut-offs are the 84<sup>th</sup> and 90<sup>th</sup> percentiles.<sup>9</sup>

### *The Teacher Report Form*

Teachers completed the Teacher Report Form (TRF), the teacher-version of the CBCL.<sup>9</sup> The 120-item TRF requests respondents to rate behavioural, emotional, and social problems as 0, 1, or 2, as per the CBCL scale. However, respondents were asked to base their ratings on the preceding two months, rather than the six month period used for the parent CBCL.<sup>9</sup> As with the parent version of the CBCL, the TRF includes Total problem scores, two broad-band syndromes, Internalizing and Externalizing, and eight narrow-band syndromes, and uses the same cut-off percentiles to classify the three groups: the normal, borderline, and clinical ranges.<sup>9</sup>



The CBCL and the TRF have good psychometric properties, with high internal consistency, test–retest reliability, and external validity, and have been widely used in both clinical and community populations. Extensive information about their reliability and validity is available.<sup>9</sup> In our study, internal consistency was tested with Cronbach's  $\alpha$  and gave the following results: 0.74 for Internalizing, 0.62 for Externalizing, and 0.87 for Total problems in mothers' reports; 0.70 for Internalizing, 0.62 for Externalizing, and 0.86 for Total problems in fathers' reports; and 0.65 for Internalizing, 0.71 for Externalizing, and 0.75 for Total problems in teachers' reports.

Applying the criterion that recommends excluding those reports that have more than 8 missing items from analyses,<sup>9</sup> 1018, 602 and 545 reports of the behaviour of 6-year-old children from mothers, fathers, and teachers were available, respectively, in our study.

### *Statistical Analysis*

Student's *t*-test was used to compare the syndrome and problem scales between boys and girls in maternal, paternal and teacher reports; Fisher's exact test was employed to compare the prevalence of borderline/clinical range between boys and girls.

For analysis of the continuous scales of the behaviour reports, Pearson's correlation coefficient (*r*) was computed for the agreement between different informants on syndrome and problems scales. Fisher's *z*-transformation was used to compute the mean *r* and to test for the equality of the two population *r*s between boys and girls.<sup>10</sup> According to Cohen's criteria, correlations between 0.1 and 0.3 are considered as low, correlations between 0.3 and 0.5 as moderate, and correlations higher than 0.5 as high.<sup>11</sup>

Since all items are the same in the maternal and paternal reports, the difference on the same syndrome or problem scores was explored using a Paired *t*-test. Student's *t*-test was used to compare the difference in scores between boys and girls.

For analysis of the dichotomous classification of behaviour reports into normal range versus borderline/clinical range, agreement between different informants' reports of borderline/clinical behaviour classification was measured using the kappa ( $\kappa$ ) statistic. Using Landis and Koch's characterization,  $\kappa > 0.75$  was taken to represent strong agreement,  $0.40 \leq \kappa \leq 0.75$  was taken to represent moderate agreement, and  $\kappa < 0.40$  was taken to represent poor agreement.<sup>12</sup> Discordant observations were investigated using McNemar's test to assess the significance of the difference between two correlated proportions. All analyses were performed using SAS (version 9.1, SAS Institute Inc., Cary, NC, USA) and a significance level of  $\alpha=0.01$  was considered as statistically significant to offset the inflated type I error rate due to numerous tests.

## Results

### *Gender differences in maternal, paternal, and teacher reports of syndrome and problem behaviour scores*

Maternal, paternal, and teacher reports of syndrome and problem behaviour scores among children in the PIFS are described in Table 1. Across maternal, paternal, and teacher reports, boys in the study unanimously showed elevated levels of behaviour problems on the Attention syndrome compared to girls. In addition, mothers and teachers also reported higher levels of Externalizing problem behaviour in boys than in girls. Teachers reported more Thought problems and Total problems in boys than in girls. No statistical difference was found on any Internalizing syndrome (Anxious/depressed, Withdrawn/depressed, Somatic complaints) or on Internalizing problems itself between boys and girls across all three types of informants.

### *Gender differences in prevalence of borderline/clinical range from maternal, paternal, and teacher reports of syndrome and problem behaviour*

Boys were more likely to be classified as displaying Aggressive behavior than girls in maternal reports (22.4% vs 9.4%,  $p<0.001$ ), but not in paternal or teachers' reports. Fathers reported more Thought problems in girls than in boys (5.7% vs 1.3%,  $p=0.003$ ). Both mothers and fathers reported more Externalizing problems in boys than in girls (maternal reports: 35.5% vs 22.4%,  $p<0.001$ ; paternal reports: 30.4% vs 20.2%,  $p=0.005$ ). Regarding teachers' reports, no statistical difference was found in any syndrome or problem scale.



**Table 1.** Gender differences in child behaviour CBCL scores reported by parents and teacher

Scales	Maternal reports					Paternal reports					Teacher reports				
	Boys (N=519)		Girls (N=499)		t-test p value	Boys (N=306)		Girls (N=296)		t-test p value	Boys (N=285)		Girls (N=260)		t-test p value
	Mean	SD	Mean	SD		Mean	SD	Mean	SD		Mean	SD	Mean	SD	
	Syndrome Scales														
Anxious/Depressed	2.25	2.44	2.58	2.58	0.037	2.85	2.41	3.34	2.69	0.019	1.95	2.52	1.88	2.60	0.725
Withdrawn/Depressed	1.32	1.55	1.42	1.75	0.351	1.47	1.85	1.57	2.00	0.523	1.48	2.00	1.23	1.90	0.130
Somatic Complaints	1.04	1.64	1.10	1.77	0.591	1.42	1.97	1.65	2.03	0.153	0.56	1.20	0.45	1.09	0.259
Social Problems	2.77	2.54	2.79	2.59	0.906	3.92	2.21	4.17	2.33	0.188	1.34	1.97	1.01	1.79	0.040
Thought Problems	1.65	2.20	1.43	2.11	0.116	1.46	1.42	1.55	1.51	0.453	0.56	1.19	0.30	1.00	0.007
Attention Problems	3.72	3.01	2.99	2.51	<0.001	4.12	3.09	3.33	2.95	0.002	10.98	10.61	5.31	7.28	<0.001
Rule-Breaking Behaviour	2.24	1.99	1.73	1.77	<0.001	2.81	1.94	2.47	1.69	0.023	1.60	2.30	0.82	1.54	<0.001
Aggressive Behaviour	7.11	5.53	5.80	4.46	<0.001	6.23	4.59	5.43	4.11	0.026	2.89	4.47	1.44	3.69	<0.001
Problem Scales															
Internalising	4.61	4.57	5.09	5.12	0.113	5.74	5.04	6.56	5.45	0.0543	4.00	4.54	3.56	4.52	0.2554
Externalising	9.34	7.07	7.53	5.79	<0.001	9.04	6.07	7.91	5.32	0.0153	4.49	6.32	2.26	4.86	<0.0001
Total Problems	26.06	17.54	23.51	16.79	0.018	28.59	15.88	27.89	15.73	0.5820	22.11	21.46	12.93	16.77	<0.0001



**Table 2.** Gender difference in prevalence of borderline/clinical range reported by parents and teacher

Scales	Maternal reports			Paternal reports			Teacher reports		
	Boys (N=519)	Girls (N=499)	Fisher exact p value	Boys (N=306)	Girls (N=296)	Fisher exact p value	Boys (N=285)	Girls (N=260)	Fisher exact p value
<b>Syndrome Scales</b>									
Anxious/Depressed	3.7	6.8	0.025	4.9	8.5	0.101	5.0	2.3	0.116
Withdrawn/Depressed	8.5	6.4	0.237	13.4	10.5	0.315	6.0	3.1	0.150
Somatic Complaints	4.4	6.4	0.168	8.5	10.1	0.575	8.4	6.6	0.422
Social Problems	9.8	6.4	0.052	11.8	8.1	0.173	3.9	5.7	0.320
Thought Problems	8.3	9.6	0.510	1.3	5.7	0.003	3.9	2.7	0.482
Attention Problems	4.3	3.2	0.412	6.6	7.1	0.872	6.3	3.9	0.244
Rule-Breaking Behaviour	6.0	7.0	0.526	7.9	12.8	0.045	7.1	6.6	0.866
Aggressive Behaviour	22.4	9.4	<0.001	13.1	10.1	0.309	3.6	3.5	0.999
<b>Problem Scales</b>									
Internalising	17.4	14.4	0.031	20.3	21.0	0.841	13.7	12.7	0.015
Externalising	35.5	22.4	<0.001	30.4	20.2	0.005	15.1	13.1	0.539
Total Problems	20.7	17.8	0.267	23.8	23.3	0.924	17.6	11.2	0.038



## Agreement and discordance among maternal and paternal CBCL and TRF

### *Continuous Scales*

The correlation coefficients (*r*s) between any pair of informants in terms of the syndrome and problem scales are presented in Table 3. In addition, the difference of mean scores between maternal and paternal reports is presented in the last two columns. Overall, there was low agreement in all syndrome and problem scales between any pair of informants if applying the Cohen criteria, although the agreement was more promising for the following: on the Externalizing scale, its component syndrome subscales, and Attention problems between maternal and paternal reports; between paternal and teachers' reports except on Anxious/depressed, Somatic complaints, Thought problems, and Internalizing problems; while the only significant *r* between mothers and teachers was Attention problems ( $r=0.12$ ,  $p=0.006$ ). The mean *r* was 0.08 between mothers and fathers, 0.04 between mothers and teachers, and 0.14 between fathers and teachers. The tests of equality of correlations in boys and girls did not show any differences for all the syndrome and problem scales between any pair of informants ( $p>0.01$ ), except for the Internalizing problems between fathers and teachers, where the correlation was larger for girls than for boys (0.32 and 0.05, respectively,  $p=0.007$ ).

In terms of the differences between maternal and paternal reports, most comparisons were statistically significant: mothers reported more problems on the Aggressive syndrome; whereas fathers reported more problems on Anxious/depressed, Somatic complaints, Social problems, Rule-breaking behaviour, Internalizing problems, and Total problems. However, Student's *t*-test did not suggest heterogeneity across boys and girls (all  $p>0.01$ ). Due to this result and equality for most correlations between any pair of informants across child gender, and to increase the sample size, gender was not used to stratify the analyses in the next section.

**Table 3.** Cross-Informant Agreement on Scale Scores

Scales	Mother vs. Father (N=602)		Mother vs. Teacher (N=545)		Father vs. Teacher (N=352)		Difference (Mother-Father)		
	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	<i>r</i>	<i>p</i>	Mean	SD	Paired <i>t</i> -test
Anxious/Depressed	0.03	0.524	-0.03	0.549	0.10	0.050	-0.63	3.48	<0.001
Withdrawn/Depressed	0.01	0.763	0.10	0.019	0.15	0.005	-0.14	2.53	0.171
Somatic Complaints	0.09	0.027	0.02	0.715	0.07	0.182	-0.44	2.50	<0.001
Social Problems	-0.07	0.097	0.02	0.635	0.15	0.005	-1.21	3.43	<0.001
Thought Problems	0.07	0.086	-0.08	0.077	-0.03	0.595	0.12	2.57	0.234
Attention Problems	0.15	<0.001	0.12	0.006	0.23	<0.001	-0.13	3.69	0.378
Rule-Breaking Behaviour	0.17	<0.001	0.03	0.537	0.19	<0.001	-0.54	2.35	<0.001
Aggressive Behaviour	0.21	<0.001	0.09	0.035	0.16	0.003	1.18	5.88	<0.001
Internalising Problems	-0.03	0.533	0.01	0.771	0.12	0.021	-1.22	6.97	<0.001
Externalising Problems	0.22	<0.001	0.09	0.038	0.19	<0.001	0.65	7.52	0.035
Total Problems	0.07	0.082	0.02	0.629	0.20	<0.001	-2.38	21.65	0.007
Mean <i>r</i>	0.08		0.04		0.14				

### *Dichotomous classification*

The agreement and discordance in terms of the prevalence of borderline/clinical range behaviours on Internalizing, Externalizing, and Total problems are presented in Table 4. In terms of agreement, the *k* scores were all less than 0.40, indicating poor agreement on classification of problem behaviours between any





pair of informants. Despite this, the agreement was relatively better between fathers and teachers on all Internalizing, Externalizing, and Total problems ( $\kappa$ : 0.16, 0.16, and 0.18, respectively) and between mothers and fathers on Externalizing ( $\kappa$ : 0.19).

In terms of discordance, McNemar's test showed significant differences on most comparisons except on Internalizing and Total problems between mothers and fathers and on Internalizing problems between mothers and teachers. Mothers were more likely to report Externalizing problems than fathers. The discordance between mothers and teachers showed that mothers had an elevated likelihood to report Externalizing and Total problems than did teachers, as did fathers compared to teachers as well as on Internalizing problems.

**Table 4.** Agreement and discordance of prevalence of borderline/clinical range between different informants

Informants	Number of Pairs	Neither Borderline/Clinical (%)	1st Borderline/Clinical (%)	2nd Borderline/Clinical (%)	Both Borderline/Clinical (%)	$\kappa$ Score	McNemar Test p value
<b>Internalising</b>							
Mother (1st) vs. Father (2nd)	602	67.6	11.8	16.1	4.5	0.08	0.045
Mother (1st) vs. Teacher (2nd)	545	70.1	16.7	11.4	1.8	-0.05	0.019
Father (1st) vs. Teacher (2nd)	352	68.7	16.5	9.1	5.7	0.16	0.006
<b>Externalising</b>							
Mother (1st) vs. Father (2nd)	602	54.6	19.9	13.5	12.0	0.19	0.006
Mother (1st) vs. Teacher (2nd)	545	58.5	27.3	9.4	4.8	0.01	<0.001
Father (1st) vs. Teacher (2nd)	352	67.1	19.0	7.9	6.0	0.16	<0.001
<b>Total Problems</b>							
Mother (1st) vs. Father (2nd)	602	61.3	15.1	18.9	4.7	0.00	0.108
Mother (1st) vs. Teacher (2nd)	545	66.4	19.1	11.6	2.9	-0.02	0.006
Father (1st) vs. Teacher (2nd)	352	66.8	17.3	9.1	6.8	0.18	0.003

To explore the influence of attrition on the outcomes, we undertook supplementary analyses by only including children who had been assessed by all three informants (Total number is 352). The results were unchanged from the primary analyses and are therefore not presented.

## Discussion

In the present study we analysed child behaviour in 6-year-old Pacific children living in New Zealand and explored the agreement and discordance between mothers', fathers', and teachers' reporting. Compared with girls, boys had elevated scores on Attention problems reported from all three informants, on Externalizing problems from mothers and teachers, and on Thought problems from teachers. With regard to the prevalence of borderline/clinical range behaviours, mothers reported higher Aggressive behaviour in boys than in girls, and both parents reported higher Externalizing problems in boys than in girls. In contrast, fathers reported more Thought problems in girls than in boys. No gender difference was found in teachers'



reports for the prevalence of borderline/clinical range behaviours on any syndrome or problem scale. Our findings are partially in accordance with the reported 'gender of parent' by 'gender of child' interaction, with mothers reporting more problems for sons and fathers reporting more problems for daughters.<sup>13-15</sup>

There was a low level of informant agreement in our study. Combining the results from the mean *r*s and *k* scores, we conclude that mothers and teachers had the least agreement compared to the agreement between maternal and paternal reports and between paternal and teachers' reports, regardless of the area of problem behaviour reported. Agreement between fathers and teachers was higher than that between mothers and fathers on the Total problems and Internalizing scale. Furthermore, overall agreement was higher for the Externalizing scale compared to the Internalizing scale. Although the differences in reported behaviour were significant between boys and girls, gender did not seem to moderate the agreement between any pair of informants on most behaviour scales except between fathers' and teachers' reports on Internalizing problems, where the correlation was larger for girls than for boys.

Although contradictory to the findings of a meta-analysis that agreement between informants from similar settings is higher than agreement between informants from different settings,<sup>1</sup> our findings are supported by some studies that have found that agreement between mothers and teachers was lowest.<sup>16</sup>

More significant correlations were found for Externalizing than for Internalizing problems in our study. This is in accordance with the literature,<sup>1,2,16,17</sup> suggesting that informant agreement is better for problems that are more observable to informants (Externalizing) compared with problems that are less observable (Internalizing).

Another aspect of exploring ratings from multiple informants is to assess how different they are from each other. In terms of the discordance between mothers' and fathers' reports, mothers reported higher scores for Aggressive problems and a higher prevalence in the borderline/clinical range on Externalizing problems, whereas fathers reported more Internalizing and Total problems on continuous scales but not in dichotomous categories. Gender did not appear to moderate the discrepancies between mothers' and fathers' reports.

In general, mothers tend to have more contact with the child than fathers; they may become accustomed to some of these problems such as Internalizing behaviours and consequently no longer consider them as problems. This may help explain why mothers reported less Internalizing problems than fathers in our study.

Our study corroborates findings from other studies that suggest parents are more likely to report more child behaviour problems than teachers.<sup>5,6</sup> Differences in parent and teacher reports are attributable to contextual differences (e.g., home vs. classroom) in child behaviour as well as differences in informants' knowledge of normative child development and their personal or cultural expectations for child behaviour.<sup>18</sup> The school setting elicits behaviours that are different from the home setting. Often, teachers are viewed as important informants because they have the opportunity to observe children during a long period in the peer group.<sup>19</sup> This may help them to distinguish between behavioural disturbances and age-related, normative problem behavior,<sup>20,21</sup> and may explain the differences between parents and teachers on the Externalizing as well as the Internalizing scales.<sup>16</sup> Furthermore, Pacific peoples may have norms that are different from other cultures in terms of perceptions of child behaviour. In our study, less than 15% of teachers were of Pacific descent. Pacific parents' perceptions of proper behaviour might be viewed as problematic behaviour by teachers from other cultures, or vice versa.



Several limitations should be noted in this study. To the best of our knowledge, this is the first time the CBCL has been completed by fathers and the TRF used with Pacific children. Therefore limited data are available on the validity and reliability of this measure with Pacific children. In particular, most teachers were not of Pacific descent, so they may have different views on Pacific children's behaviour compared to teachers of Pacific heritage. Moreover, smaller numbers of fathers' and teachers' reports might limit statistical power to manifest some important findings. Despite these limitations, the current study contributes to the limited data available worldwide on child behaviour problems from different ethnic groups. The lack of agreement and the evidence of discordance between mothers, fathers, and teachers in reporting Pacific children's behaviour raise the question of how to use the information obtained from multiple informants. Because many factors may differentially affect reports of different kinds of problems, complex models are needed to optimize the use of multi-informant data. Development of such models involves testing different informants' reports of different kinds of problems for large samples of people.<sup>22</sup>

Grietens summarised some guidelines on how to best use data from multiple informants, such as striving to collect reports from mothers, fathers, and teachers to obtain a more comprehensive, reliable, and valid picture and checking discrepancies against each other.<sup>16</sup> As for discrepancies between mothers and fathers, maternal reports are to be preferred to paternal reports. The discrepancies between mother and teacher reports are very high and can therefore provide complementary information. Those rated as being problem children by more than two raters should be given most attention.

Nevertheless, these guidelines may not be universally applicable to different populations and cultures. No previous studies in Pacific children have examined father or teacher contributions to ratings of child behaviour. Like mothers, fathers and teachers may have biases as well as differences in experience that might colour their perceptions of child behaviour. There is a need for further study within the PIFS to explore the impact of parents' and teachers' characteristics on the agreement and discrepancies in child behaviour reporting.

In the PIFS, the children and their families will be interviewed at 9- and 11-years follow up, which will provide good opportunities to explore the predictive power of mother, father, and teacher reports of child behaviour measured at the 6-year phase. In addition, the collection of youth self-report at the 11-year phase will provide further insight into the contributions of each type of informant. Furthermore, we call for further research to validate our findings and examine the degree to which our findings are unique to Pacific children living in New Zealand or whether they are applicable to indigenous Pacific children or other groups living in New Zealand.

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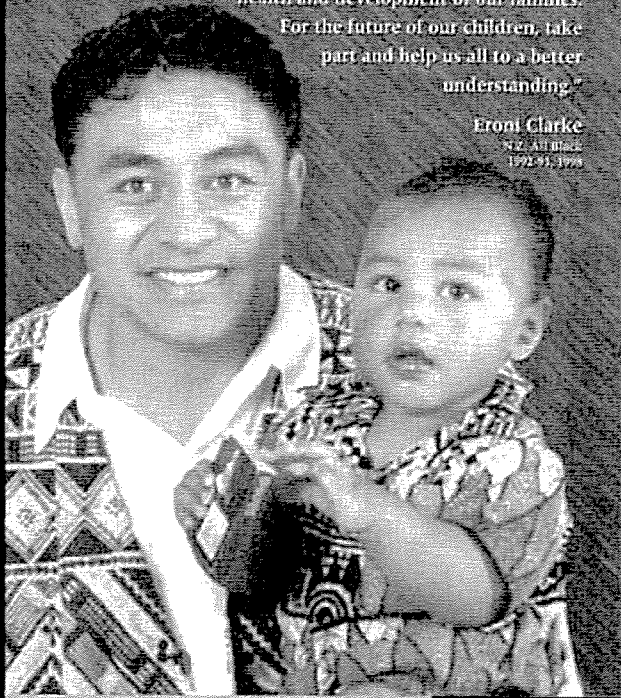


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**"For the future of our children"**


"We want healthy babies, happy children and families. The project 'PACIFIC ISLANDS FAMILIES: The First Two Years of Life' is about the health and development of our families. For the future of our children, take part and help us all to a better understanding."

Eroni Clarke  
N.Z. All Black  
1992-93, 1996



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Talk to Esther Tumama Cowley  
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