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**Ethnic identity and exposure to maltreatment in childhood: Evidence from a New Zealand birth  
cohort**

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## Abstract

Exposure to maltreatment in childhood, including sexual abuse, severe physical punishment, and interparental violence, is an issue of growing concern in New Zealand. The present study examined the associations between ethnic identity and exposure to childhood maltreatment amongst a longitudinal birth cohort of individuals born in Christchurch in 1977. Participants of Māori ethnicity reported higher rates of exposure to physical punishment and interparental violence, but did not report higher rates of exposure to sexual abuse. Control for a range of socioeconomic and family functioning factors reduced the magnitude of the associations between ethnicity and both physical punishment and interparental violence, but did not fully account for the associations between ethnicity and maltreatment exposure. Furthermore, adjustment for variations in Māori cultural identity indicated that cohort members of sole Māori identity were at significantly increased risk of exposure to both physical punishment and interparental violence, but at lower risk of exposure to sexual abuse. It was concluded that Māori, and in particular those of sole Māori cultural identity, were at higher risk of exposure to physical punishment and interparental violence, and that the associations could not be fully explained by either socioeconomic deprivation or exposure to family dysfunction in childhood.

Exposure to child maltreatment including sexual abuse, physical abuse, and interparental violence can have a deleterious impact on healthy child development. Damaged attachment bonds, impaired physical and mental health, poorer psychosocial adjustment and cognitive performance leading to lower educational achievement are outcomes that have all been linked with childhood maltreatment (Boden, Horwood & Fergusson, 2007; Cicchetti & Toth, 2005; Collishaw, Dunn, O'Connor, Golding and the ALSPaC Study Team, 2007; Daignault & Hebert, 2004; Fergusson & Horwood, 1998; Fergusson, Horwood & Lynskey, 1996; Fergusson & Lynskey, 1997; Mullen & Tonge, 2000; Noll, Shenk & Putnam, 2008; Salzinger, Feldman, Ng-Mak, Mojica & Stockhammer, 2001; Woodward, Fergusson & Horwood, 2001).

The problem of child maltreatment may be of particular concern in New Zealand. In a UNICEF assessment of child maltreatment across 27 nations, New Zealand was ranked as having the third highest rate (1.2 per 100, 000 averaged over a 5-year period) of deaths from maltreatment of those under the age of 15 years (UNICEF, 2003). Even though this category represents the most extreme outcome of child maltreatment, the data provide an indication of the likely rate of non-fatal child maltreatment in each of the nations examined. In a further assessment examining child well-being (UNICEF, 2007), it was reported that, of the 25 wealthy nations reviewed, New Zealand had the second lowest rate of child health and safety as measured by averaging scores across three indicators (i.e. infant health, preventative health services, and child safety).

In addition to the above statistics, it is the over-representation of Māori children in the nation's child abuse statistics, which often attracts both professional and public attention (Kiro, 2000; Mansell, 2006; Pinto, 2006; Wynd, 2006). Evidence suggests that, when compared with other ethnic groups in New Zealand, Māori children are at greater risk of being exposed to physical, emotional, and sexual abuse, and more likely to experience neglect than children from any other ethnic group (Adolescent Health Research Group, 2004; Lievore, Mayhew & Mossman, 2007; Ministry of Social Development, 2004, 2006). According to official statistical data the rate of substantiated abuse per 1000 children

under the age of 17 was 11.9 for Māori in 2003, compared to 5.9 for non-Māori. This pattern of ethnic asymmetry with Māori children being approximately twice as likely to be assessed as abused or neglected when compared with other children has been consistently observed (Department of Social Welfare, 1988; Kotch, Chalmers, Fanslow, Marshall & Langley, 1993; Ministry of Social Development, 2002, 2004).

These findings raise important questions about the factors that lead to Māori children being more vulnerable to exposure and experience of child maltreatment. While the results from various data sources concur about Māori children being over-represented in child abuse statistics; limited empirical research has been conducted into the risk and protective factors associated with the higher rate of child maltreatment amongst Māori. However, three explanatory frameworks have been employed to account for the current ethnic disparities in child abuse in New Zealand.

One explanation for the higher rate of childhood maltreatment amongst Māori involves the issue of socio-economic disadvantage. Specifically, it has been well-established that on a range of socio-economic indicators including housing, income, welfare dependence, unemployment, and educational achievement, Māori are at an increased risk of experiencing poverty and disadvantage (Chapple, 2000; Marie, Fergusson & Boden, 2008a; Ministry of Social Development, 2007; Statistics New Zealand, 2002). Social deprivation has been strongly linked to risk of child maltreatment and this factor has in particular been prominent in attempts to explain the higher child abuse rates of indigenous and ethnic minority group members in other nations (Cross, Earle & Simmons, 2000; Duran, Halinka Malcoe, Sanders, Waitzkin, Skipper & Yager, 2004; Gordon, 2006; Moisan, Sanders-Phillips & Moisan, 1997; Sanders-Phillips, Moisan, Wadlington, Morgan & English, 1995) Thus it could be proposed that the higher rate of childhood maltreatment amongst Māori can be explained by the higher rate of socio-economic disadvantage experienced by Māori.

A closely related explanation involves an ecological 'at risk' model of familial adversity (Ramey & Landesman Ramey, 1998; Repetti, Taylor & Seeman, 2002). This perspective suggests that

there is a range of factors or stressors either internal or external to the family that interact and accumulate to impair healthy family functioning. Factors that may characterise poorly functioning families include: parental alcohol and drug abuse, parental criminality, and loose or unstable family structure often involving teen parenting, sole-parenting, or serial changes of adults responsible for performing a care giving role to children in a family (Cicchetti & Toth, 2005; Freisthler, Merritt & LaScala, 2006; Tolan, Gorman-Smith, & Henry, 2006; Zielinski & Bradshaw, 2006). Each of these factors has been associated with the maltreatment of children and as research indicates, separate from economic disadvantage, Māori also have greater exposure to these factors of family dysfunction (Fanslow et al, 2007; Fergusson, 2003; Ministry of Social Development, 2004, 2007). It may be argued that the higher degree of family adversity experienced by Māori families accounts for the greater exposure of Māori children to childhood maltreatment.

A third framework, focussing on the role of cultural identity has, over the preceding two decades, been the dominant explanation employed to account for the ethnic asymmetry in child maltreatment rates in New Zealand (Balzer, Haimona, Henare & Matchitt, 1997; Keddell, 2007; Kiro, 2000; Ministry of Social Development, 2006; Pihama, Jenkins & Middleton, 2003; Stanley, 2000; Stanley & Thompson, 1999). This view proposes that it is the degree of association that Māori families have with Māori kin groupings and the level of commitment that they show to traditional customary practices that will either increase or mitigate the likelihood of Māori children experiencing maltreatment. From this perspective, strength of Māori identity of families is a protective factor of child abuse and a lesser identification with Māori cultural domains may increase the risk of children being exposed to maltreatment. Intervention guidelines for child abuse have therefore been specifically developed for Māori, by Māori (Kruger *et al.* 2004; Stanley, 2000; Stanley & Thompson, 1999). These focus on determining the levels of affiliation Māori families have to cultural domains and the strength of cultural identity of individuals who reside in the family. Reattachment of Māori families to cultural domains and customs has therefore become a key feature of current child abuse intervention efforts.

Whilst each of these frameworks – *socio-economic disadvantage, family functioning, and cultural identity* – could potentially explain ethnic differences in child maltreatment in New Zealand, to our knowledge there have been no empirical studies conducted, that examine the way in which these factors may mediate linkages between Māori ethnicity and maltreatment. In addition, while each of the frameworks is not necessarily mutually exclusive, it proves possible, using longitudinal data, to determine the approximate contribution of each set of factors to abuse exposure outcomes.

Against this background, this paper reports on analyses of the linkages between ethnic status (Māori/ Non Māori) and rates of childhood maltreatment (childhood physical abuse; childhood sexual abuse; interparental violence) in a birth cohort of New Zealand children studied to the age of 21. The aims of this research were to:

- 1) Ascertain the rates of childhood maltreatment reported by Māori and non-Māori respondents at the ages of 18 and 21;
- 2) Examine the extent to which ethnic differences in childhood maltreatment could be explained by socio-economic and family functioning factors; and,
- 3) Document the extent to which risks of childhood maltreatment vary with cultural identity after socio-economic factors and family functioning have been taken into account.

## **Methods**

The data were gathered during the course of the Christchurch Health and Development Study (CHDS). In this study a birth cohort of 1265 children (635 males, 630 females) born in the Christchurch (New Zealand) urban region in mid-1977 has been studied at birth, 4 months, 1 year and annually to age 16 years, and again at ages 18, 21 and 25 years (Fergusson and Horwood 2001; Fergusson et al. 1989). The analyses reported here were based on the 1011 study participants (80% of the original sample) for whom information was available concerning ethnic identity at age 21. All study information was collected on the basis of signed and informed consent from study participants.

### *Ethnicity and cultural identity*

At age 21 years respondents were asked about their ancestry, cultural identification, level of participation in Māori cultural domains, and proficiency in the Māori language (Broughton et al. 2000). Participants were asked to indicate whether they belonged to or identified with several ethnic groups, including New Zealand Māori, and were asked whether they were of Māori descent. On the basis of this questioning, 11.1% of sample members self-identified as New Zealand Māori. A further breakdown of this group showed 45.9% reporting sole Māori cultural identity and 54.1% reporting Māori cultural identity and identity with another cultural group. For the purposes of the present analyses, those reporting sole Māori identity were classified as having a sole Māori identity, while those reporting both Māori identity and another identity were classified as having Māori/other cultural identity. All other participants were classified as being non-Māori. Comparisons of the sole Māori and Māori/other group showed consistent differences between the groups in terms of several aspects of Māori culture, including: frequency of marae visits ( $p < .001$ ); being a member of a Māori group, organisation or sports team ( $p < .05$ ); being a member of a kapa haka (cultural performance) group ( $p < .001$ ); attending tangi (funeral) or unveiling ( $p < .001$ ); listening to Māori language radio programmes and watching Māori language television programmes ( $p < .001$ ); and listening and watching programmes in the English language about Māori ( $p < .001$ ). The descriptors of ‘sole Māori’, ‘Māori/other ethnic identity’, and ‘non-Māori’ were originally recommended by Pomare, Keefe-Ormsby, Ormsby, Pearce, Reid, Robson & Watene-Haydon (1995) in their analyses examining ethnic trends in public health epidemiology.

In addition, evidence suggests that patterns of ethnicity may shift over time, with respondents indicating differing ethnicities at different points in the life span (e.g. Baldwin, 2008). In order to examine this issue, self-reports of ancestry and cultural identification at age 25, analogous to those collected at age 21, were also used to classify respondents as sole Māori, Māori/other identity, and non-

Māori. In addition, maternal reports of the cohort member's ethnicity that were obtained when the cohort member was aged 14 years were again used to classify respondents into the same three groups.

Finally, it could be argued that it is the ethnicity of the family, rather than the ethnicity of the child, that is critical in determining outcomes (e.g. Callister, Didham, Newell, & Potter, 2007; Fergusson, Horwood, & Shannon, 1982). To examine this issue, cohort members were classified as sole Māori, Māori/other identity, and non-Māori using: a) self-reported maternal ethnicity obtained when the cohort members were aged 14 years; b) mother-reported paternal (or mother's partner's) ethnicity obtained when the cohort members were aged 14 years; and c) a combination of maternal and paternal (or partner's) ethnic identity classified into three groups: i) Māori only (both parents sole Māori) ; ii) mixed Māori/other identity (at least one parent Māori/other identity); and iii) non-Māori (neither parent reporting Māori identity).

*Childhood exposure to sexual abuse, physical punishment, and interparental violence.*

Retrospective reports of exposure to childhood sexual abuse and physical abuse prior to age 16 were obtained from cohort members at ages 18 and 21 years. Sexual abuse was assessed using the following methods. At each assessment, participants were asked whether, before the age of 16, anyone had ever attempted to involve them in any of a series of 15 sexual activities when they did not want this to happen, including: (a) non-contact episodes involving indecent exposure, public masturbation or unwanted sexual propositions; (b) episodes involving sexual contact in the form of sexual fondling, genital contact or attempts to undress the respondent; and (c) episodes involving attempted or completed vaginal, oral or anal intercourse. Sample members who reported an incident of abuse were then questioned in depth about the context of abuse including the frequency of abuse episodes, the characteristics of the perpetrator(s), abuse disclosure and related factors (Fergusson, Horwood and Lynskey 1996; Fergusson, Lynskey and Horwood 1996). Using the check and narrative data gathered at each age (18, 21), participants were classified into one of four exposure groups reflecting the

extent/severity of sexual abuse reports. These groups were: (a) no sexual abuse (85.9% of the sample); (b) non-contact sexual abuse only (2.7% of the sample); (c) contact sexual abuse not involving attempted or completed sexual penetration (5.1% of the sample); (d) attempted or completed sexual penetration including vaginal, oral and anal intercourse (6.3% of the sample). In the present analysis, respondents were classified as belonging to the group corresponding to the most severe form of abuse reported at either age 18 or 21.

The assessment of childhood physical punishment was based on cohort members' reports of parental use of physical punishment. At 18 and 21 years, respondents were asked to report on the extent to which their parents used physical punishment during their childhood (prior to age 16 years). Reports were made on a five point scale ranging from "parent never used physical punishment" to "parent treated me in a harsh and abusive way" (Fergusson and Lynskey 1997). Separate ratings were made for mother figures and father figures (if available). Ratings for both parents were then combined into a single rating at each age by classifying the participants into one of four groups based on the greatest level of exposure to physical punishment reported for either parent: (a) parents never used physical punishment (6.4% of the sample); (b) parents seldom used physical punishment (11.2% of the sample); (c) at least one parent regularly used physical punishment (78.0% of the sample); (d) at least one parent used frequent or severe punishment or treated the participant in a harsh/abusive manner (4.5% of the sample). In common with information on childhood sexual abuse, in the present analysis, participants were classified into the group corresponding to the most severe level of punishment/abuse reported at either age 18 or 21 years.

At the age of 18, sample members were questioned concerning their experience of interparental violence during their childhood (prior to age 16 years). The questioning was based on a series of eight items derived from the Conflict Tactics Scale (CTS: Straus 1979). The items were chosen on the basis that the behaviours could have been readily observed and reported on by the participant, and also to span the potential range of violent behaviour from verbal abuse to physical assault. The eight items

used included: a) threaten to hit or throw something at the other parent; b) push, grab, or shove other parent; c) slap, hit, or punch other parent; d) throw, hit, kick, or smash something (in the other parent's presence); e) kick other parent; f) choke or strangle other parent; g) threaten other parent with a knife, gun, or other weapon; h) call other parent names or criticize other parent (put other parent down).

Participants were asked to rate the frequency with which they observed each behaviour on a 3-point scale (never, occasionally, frequently). Separate questioning was conducted for violence initiated by the father against the mother and for violence initiated by the mother against the father. A scale score was constructed by summing the 16 items to produce a measure reflecting the extent of reported exposure to interparental violence in childhood ( $\alpha = .88$ ). For the purposes of the present investigation, the scale scores were classified into four groups on the basis of the overall interparental violence score. These groups comprise: those who reported no interparental violence (60% of the sample); those whose scores placed them within the 61<sup>st</sup> to 75<sup>th</sup> percentiles of the score distribution; those whose scores placed them within the 76<sup>th</sup> to 90<sup>th</sup> percentiles of the distribution; and those whose scores placed them in the most violent 10% of the distribution

### *Covariate factors*

*Socio-economic background.* The socio-economic background of cohort members was assessed using several indicator measures chosen from the database of the study. These included:

*Maternal age.* Assessed at the cohort member's birth.

*Maternal education (at birth).* The education level of the child's mother was assessed at the time of the survey child's birth using a three point scale which reflected the highest level of educational achievement attained (1 = mother lacked formal educational qualifications; 2 = mother had secondary level educational qualifications; 3 = mother had tertiary level qualifications).

*Family living standards (0-10 years).* At each year a global assessment of the material living standards of the family was obtained by means of an interviewer rating on a five point scale ranging

from “very good” to “very poor”. These ratings were summed over the 10 year period and divided by 10 to give a measure of typical family living standards during this period.

*Family socioeconomic status (at birth).* This was assessed at the time of the survey child’s birth using the Elley-Irving scale (Elley and Irving 1976) of socioeconomic status for New Zealand. This scale classifies SES into 6 levels on the basis of paternal occupation ranging from 1 = professional occupations to 6 = unskilled occupations.

*Family functioning and individual factors.* Measures of family functioning and individual adjustment were also chosen from the study database. These measures included:

*Parental illicit drug use (0-11 years).* When sample members were aged 11, information was obtained from parents as to whether any parent had a history of illicit drug use. The young person was classified as having a parent history of illicit drug use if one of his/her parents was reported to have a history of illicit drug use.

*Parental alcohol problems (0-15 years).* Assessed at age 15 years via parental report. These reports were used to form a dichotomous measure of whether or not the young person's parents reported experiencing alcoholism or problems with alcohol.

*Parental criminality (0-15 years).* When sample members were aged 15 years, their parents were questioned as to whether any parent had a history of criminal offending. The young person was classified as having a parent history of criminality if one of his/her parents was reported to have a history of offending.

*Changes of parents (to age 15 years).* At each assessment from birth to 15 years, comprehensive information was gathered on changes in the child’s family situation since the previous assessment. Using this information an overall measure of family instability was constructed on the basis of a count of the number of changes of parents experienced by the child up to age 15. Changes of

parents included all changes resulting from parental separation/divorce, reconciliation, remarriage, death of a parent, fostering, and other changes of custodial parents.

## Results

### *Associations between childhood sexual abuse, childhood physical punishment, exposure to interparental violence, and ethnicity*

Table 1 shows the cohort classified into two groups on the basis of self-reported ethnic identity at age 21: Māori (n = 114) and non-Māori (n = 897). For each group the Table shows the distribution of the group on four-point ordinal measures of: (a) sexual abuse; (b) physical punishment; and (c) interparental violence. For each comparison the Table shows the results of a chi square test derived from an ordinal logistic regression model. The Table shows:

1. The distribution of scores for Māori and non-Māori on the measure of sexual abuse exposure was not statistically significant,  $\chi^2(1) = 1.86, p > .10$ .
2. In contrast, cohort members of Māori ethnicity reported significantly ( $p < .0001$ ) greater exposure to more severe forms of physical punishment than non-Māori. For example, 19.3% of Māori, as compared to 10.1% of non-Māori, reported exposure to regular physical punishment. Also, 14.0% of Māori, as compared with 5.5% of non-Māori, reported exposure to harsh/abusive levels of physical punishment.
3. Individuals of Māori ethnicity also reported significantly ( $p < .001$ ) greater levels of exposure to interparental violence during childhood and early adolescence than non-Māori. For example, 20.9% of Māori, as compared with 7.2% of non-Māori, reported levels of interparental violence that fell within the highest 10% of scores on the measure of interparental violence.

INSET TABLE 1 HERE

### *The role of socio-economic factors and family functioning*

One explanation for the higher rates of exposure to abuse in childhood amongst Māori is that these increases in rates of physical punishment and interparental violence were due to social, economic, and related disadvantages to which Māori are more likely to be exposed than non-Māori. This issue is explored in Table 2, which shows the associations between ethnicity and a range of socio-economic and family functioning factors. Socio-economic factors included: maternal age; family socio-economic status at birth; maternal education; average family living standards from ages 0-10; and average family income from ages 0-10. Family functioning factors included: parental history of alcohol problems; parental history of illicit drug use; parental history of criminal offending; the number of parental changes to age 15; and parental attachment at age 15. The Table shows a consistent tendency for those cohort members of non-Māori background to have had a relatively advantaged childhood in the areas of family socio-economic background and family functioning as compared to Māori cohort members.

INSERT TABLE 2 HERE

### *Adjustments for socio-economic factors and childhood/family factors*

It could be argued that the results in Table 1 reflect the confounding influence of exposure to higher levels of adverse socio-economic and family functioning factors amongst Māori cohort members as shown in Table 2. In order to examine the extent to which the associations between abuse exposure and ethnicity could be explained by confounding factors, the associations between ethnicity and abuse exposure were adjusted for the socio-economic factors and family functioning factors in two stages. In the first stage, ordinal logistic regression models were used to assess the associations between each measure of abuse exposure and ethnicity, net of the measures of socio-economic factors in childhood. Covariates were entered into the models in forward and backward stepwise fashion to arrive at stable

models. In the second step, the ordinal logistic regression models adjusted for socio-economic factors were extended to include the measures of family functioning in childhood. The results of these analyses are presented in Table 3, which shows adjusted percentages for each outcome for each of the two ethnic groups, following adjustment for: (a) socio-economic factors; and (b) socio-economic and family functioning factors. Adjusted percentages for each level of classification were estimated according to procedures outlined in the Reference Guide for Stata v. 8.0 (StataCorp 2003). The Table shows:

1. After adjustment for socio-economic factors, and both socio-economic and family functioning factors, the association between exposure to sexual abuse in childhood and ethnicity remained statistically non-significant ( $p > .90$ ). Statistically significant ( $p < .05$ ) covariate factors included: family living standards; maternal education; parental changes; and parental illicit drug use.
2. Adjustment for socio-economic factors, and adjustment for both socio-economic and family functioning factors reduced the magnitude of the association between exposure to physical punishment in childhood and ethnicity; however, the association remained statistically significant ( $p < .05$ ) in both cases. Statistically significant ( $p < .05$ ) covariate factors included: socio-economic status at birth; parental alcohol problems; parental offending; and parental changes. Examination of the adjusted percentages showed that cohort members of Māori ethnicity reported higher levels of exposure to physical punishment than non-Māori, across both adjusted models.
3. Similarly, adjustment for socio-economic factors, and adjustment for both socio-economic and family functioning factors reduced the magnitude of the association between exposure to interparental violence in childhood and ethnicity. In the case of adjustment for socio-economic factors, the association remained statistically significant ( $p < .01$ ). In the case of adjustment for both socio-economic and family functioning factors, however, the association was reduced to marginal significance ( $p = .06$ ). Statistically significant ( $p < .05$ ) covariate factors included: family living standards; parental alcohol problems; and parental changes. Examination of the adjusted

percentages showed that cohort members of Māori ethnicity reported higher levels of exposure to interparental violence than non-Māori after adjustment for socio-economic factors and family functioning factors.

INSERT TABLE 3 HERE

#### *Adjustments for cultural identity*

It could further be suggested that the results presented in Table 3 could be accounted for by differences in cultural identity. Specifically, it may be possible that differences in Māori cultural identity may account for the elevated rates of exposure to physical punishment and interparental violence amongst Māori cohort members. In order to examine this issue, those cohort members reporting Māori ethnicity were classified into two groups: those reporting sole Māori cultural identity ( $n = 52$ ), and those reporting Māori cultural identity ( $n = 62$ ) in addition to another ethnic identity. The analyses presented in Table 2 were repeated using the three group classification of cultural identity (sole Māori; Māori/other identity; non-Māori) in place of the two group measure of ethnicity, using design variates to represent the three cultural identity groups. The results of these analyses are presented in Table 3, which shows the adjusted percentages for each abuse exposure classification outcome measure for the three cultural identity groups, after adjustment for both socio-economic and family functioning factors. The Table also reports the overall significance test for cultural identity, derived from chi square tests from the ordinal logistic regression models. The Table shows:

1. After adjustment for confounding factors, there was no significant main effect for cultural identity on the measure of exposure to sexual abuse ( $p > .05$ ). Planned comparisons confirmed that there were no statistically significant differences between any of the three cultural identity groups ( $p > .05$ ). However, the adjusted percentages suggest that rates of exposure to sexual abuse were lower amongst the sole Māori group than in the Māori/other or non-Māori groups.

2. After adjustment for socio-economic and family functioning factors, there was a significant association between cultural identity and exposure to childhood physical punishment ( $p < .05$ ). Planned comparisons revealed that cohort members of sole Māori cultural identity reported significantly ( $p < .05$ ) higher rates of exposure to physical punishment than non-Māori. However, those of Māori/other cultural identity reported rates of exposure to physical punishment that were not significantly different ( $p > .05$ ) from either sole Māori or non-Māori.
3. Also after adjustment for socio-economic and family functioning factors, there was a significant main effect for cultural identity ( $p < .01$ ). Planned comparisons showed that those cohort members of sole Māori cultural identity reported significantly ( $p < .05$ ) higher rates of exposure to interparental violence than either those of Māori/other cultural identity, or non-Māori.

INSERT TABLE 4 HERE

#### *Supplementary analyses*

It could be argued that the results presented above were dependent upon the fact that the ethnicity categories were measured at a single point in time, and that shifting patterns of self-reported ethnicity may affect the associations between ethnicity/cultural identity and abuse exposure (see Methods). In order to address this issue, the analyses reported above were repeated using both: a) ethnicity/cultural identity categories based on self-report data obtained when the respondents were aged 25 years; and b) ethnicity/cultural identity categories based on mother-reported data when the respondents were aged 14 years (see Methods). In both cases, the results of the analyses were congruent with those reported above, suggesting that the associations between ethnicity/cultural identity and abuse exposure were robust to variations in self-reported ethnicity.

It could further be argued that abuse exposure in childhood may be influenced by environmental factors, rather than factors pertinent to the individual. That is, it may be the case that abuse exposure

was a function of the ethnicity/cultural identity of the parents of cohort members, rather than the ethnicity/cultural identity of the cohort member (see Methods). In order to examine this issue, the analyses reported above were repeated using ethnicity/cultural identity categories based on: a) the mother's self-reported ethnic identity when the respondent was aged 14 years; b) the father/partner's self-reported ethnic identity when the respondent was aged 14 years; and c) a combination of maternal and paternal (or partner's) ethnic identity classified into three groups: i) Māori only; ii) mixed Māori/other identity; and iii) non-Māori. In each case, the results of the analyses were congruent with those reported above, suggesting that the associations between ethnicity/cultural identity and abuse exposure were similar, irrespective of whether they were based on the ethnicity/cultural identity of the respondent or the respondent's family.

## **Discussion**

In this paper we have used data gathered over the course of the CHDS to examine the relationship between ethnicity and exposure to childhood maltreatment. The key findings of this analysis and their implications are reviewed below.

### *Ethnic Disparities in rates of childhood maltreatment.*

While it is widely believed that Māori children are at increased risks of all types of maltreatment, the results of this study do not support that view. Specifically, while young Māori adults reported more childhood physical abuse and exposure to interparental violence, rates of reported childhood sexual abuse were similar for Māori and non-Māori. This finding is not consistent with previous reports of higher rates of sexual abuse for Māori (Adolescent Health Research Group, 2004; Ministry of Social Development, 2002; 2004; Lievore, Mayhew & Mossman, 2007). The reasons for this difference are not clear; however it may be due to sample selection factors. The recent study conducted by Fanslow

and colleagues (2007) for example, whereby Māori women were twice as likely to self report having experienced child sexual abuse than non-Māori women, used a selected sample that was not representative of the population in general. In contrast the CHDS results are based on a representative birth cohort of children born in Christchurch in 1977. It may be that these different sampling methods account for the discrepancy in conclusions about the linkages between ethnicity and childhood sexual abuse. A further plausible explanation for the divergence in findings is that there may be an over-reporting by child care and protection agencies of cases of child sexual abuse involving Māori children, because Māori families are more likely to come to the attention of these agencies. This explanation remains speculative however, and requires further examination.

While there was no detectable association between ethnicity and child sexual abuse, young Māori people reported far greater exposure to physical maltreatment and interparental violence than did non-Māori respondents. For example, 14% of Māori respondents reported being exposed to harsh and abusive punishment compared to 5.5% of non-Māori. Similarly 20.9% of Māori children came from families with a high level of reported interparental violence compared to 7.2% of non-Māori. These figures suggest that Māori had rates of exposure to physical child abuse and interparental violence that were approximately 3 times higher than non-Māori. Such findings are comparable to those of other studies, which have shown links between the over-representation of ethnic minorities in prevalence rates of child maltreatment and children from these groups being more exposed to strict parenting styles including harsher punishment regimes (Ibanez, Borrego Jr, Pemberton & Terao, 2006; Haskett, Allaire, Kreig & Hart, 2008).

#### *The Role of Socio-economic Factors and Family Functioning.*

As would be expected from existing literature that reports on ethnic disparities in New Zealand (Fergusson, 2003; Ministry of Social Development, 2004, 2007; Marie, Fergusson & Boden, 2008b, 2008c, 2008d), young Māori people were more often reared in socio-economically disadvantaged home

environments and had greater exposure to various forms of family adversity including: youth of parents; parental criminality and substance use; and, higher rates of family change. Statistical adjustment for these adversities reduced the size of the associations between ethnicity and exposure to physical abuse and interparental violence, but did not completely eliminate the differences.

There are two explanations for the failure of controlling for socio-economic and family factors to account for ethnic disparities in childhood maltreatment. The first explanation is that, of necessity, control for these factors was incomplete and it may be that there were omitted covariate factors, which if included, in the analysis, would have explained the ethnic differences in rates of childhood maltreatment. The alternative explanation is that ethnic disparities in rates of maltreatment after adjustment for socio-economic and family factors reflects the role of cultural factors in determining rates of childhood maltreatment.

#### *The Role of Cultural Identity.*

To explore the possible role of cultural identity in mediating associations between ethnicity and childhood maltreatment, the group of Māori respondents was subdivided into those of sole Māori identity and Māori/other identity. The data were then re-analysed to examine the premise undergirding current theories in New Zealand that claim strength of Māori cultural identity mitigates the risk of young Māori people being exposed to child maltreatment. Following adjustment for socio-economic and family functioning factors, this re-analysis revealed a complex set of relationships between cultural identity and risks of childhood maltreatment. In terms of childhood sexual abuse those of sole Māori identity had the lowest adjusted rate of exposure. While these differences failed to reach statistical significance the findings provide some support for the view that being of sole Māori identity may be a protective factor that reduces risks of exposure to childhood sexual abuse. However, quite the opposite pattern was observed for exposure to childhood physical abuse and exposure to interparental violence with those of sole Māori identity being at greater risks of these outcomes. The results suggest that sole

Māori identity may be a risk factor for exposure to physical child abuse and interparental violence. The findings are in general agreement with research by Kukutai (2003), who suggested that the degree to which an individual identifies with Māori cultural identity may be associated with increased risks of social and economic disadvantage.

These findings, however, are not consistent with the assumptions underpinning influential theories, social policies, and a number of intervention guidelines (Department of Social Welfare, 1988; Ministry of Social Development, 2002; Balzer, Haimona, Henare & Matchitt, 1997; Stanley & Thompson, 1999; Kiro, 2000; Stanley, 2000; Kruger *et al.*, 2004), which claim that strengthening Māori identity and links with traditional Māori cultural practices will lead to reduced rates of child abuse amongst Māori. To the contrary, while the findings of this study suggest that this approach may lead to reduced risks of childhood sexual abuse, it may also be associated with increased risks of childhood physical abuse and exposure to interparental violence. These findings do pose a challenge to current policies aimed at reducing the over-representation of Māori children in rates of child maltreatment, which emphasise ‘identity interventions’ that are not evidence-based, and are largely ideologically driven. Even though such policies are no doubt well-intentioned and observe statutory requirements unique to the New Zealand context, following the view expounded by UNICEF (2003, 2007), they must as a necessity, be exposed to ongoing critical scrutiny and empirical evaluation.

### *Strengths and Limitations*

Like all research this study has a number of strengths and limitations. Strengths of the research include: a) comprehensive evaluation of exposure to maltreatment using repeated measures gathered at 18 and 21 years; b) prospective collection of data on socio-economic and family factors; c) evaluation of both ethnicity and cultural identity; and, d) high levels of cohort retention. To date, no New Zealand study of child maltreatment has had all of these features.

However the study also has a number of limitations. First, the data were gathered on a specific cohort, born in a specific region of New Zealand, and studied over a specific historical period. There is no guarantee that findings from this cohort will generalise to other cohorts or geographical contexts. In particular all members of this cohort were born in the South Island, and the extent to which the findings of this study can be generalised to the New Zealand population is unclear. In addition the number of Māori studied (N= 114) was relatively small, limiting the precision of the analysis. Similarly, while it may have been of some interest to conduct parallel analyses examining the outcomes of those individuals reporting other ethnic affiliations, the number of participants in the present cohort indicating additional affiliations was too small to allow comparative analyses. Also, it could be argued that respondents may have had differing motivations for answering the questions regarding ethnicity which may have affected their responses. However, while this issue might also have been of interest, identifying the motivations that influenced individuals changing their ethnic identification overtime was not the objective of this study. Finally, ethnicity data concerning spouses and partners, and other members of social networks were not obtained, limiting the scope of the present analyses to the ethnicity of the respondent and the parents of the respondent.

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Table 1. Percentage reporting differing levels of exposure to sexual abuse, physical punishment and interparental violence (to age 16) by ethnicity.

Exposure To Abuse		Ethnicity	
		Māori (n=114)	Non Māori (n=897)
<u>Sexual Abuse</u> (% reporting)	Exposure Level		
No abuse	0	81.6	86.3
Non-contact abuse only	1	2.6	2.8
Contact sexual abuse	2	7.9	4.9
Attempted/completed intercourse	3	7.9	6.0
$\chi^2 (1) = 1.86, p > .10$			
<u>Physical Punishment</u> (% reporting)	Exposure Level		
No physical punishment	0	2.6	4.4
Infrequent physical punishment	1	64.0	79.9
Regular physical punishment	2	19.3	10.1
Harsh/abusive physical punishment	3	14.0	5.5
$\chi^2 (1) = 20.75, p < .0001$			
<u>Interparental Violence Exposure Score</u> (% reporting)	Exposure Level		
1-60%	0	47.3	56.7
61-75%	1	17.3	22.5
76-90%	2	14.6	13.6
91-100%	3	20.9	7.2
$\chi^2 (1) = 9.49, p < .01$			

Table 2. Associations between ethnicity and measures of childhood (a) socio-economic factors; and (b) family functioning factors

Measure	Ethnicity		p <sup>1</sup>
	Māori	Non-Māori	
<u>Socio-economic Factors</u>			
Mean (SD) maternal age	23.36 (4.26)	26.25 (4.78)	<.0001
Mean (SD) family socio-economic status at birth <sup>2</sup>	4.32 (1.37)	3.46 (1.41)	<.0001
% Mother lacked formal educational qualifications	66.7	46.8	<.0001
Mean (SD) family living standards ages 0-10	3.14 (0.43)	2.81 (0.45)	<.0001
Mean (SD) family income decile ages 0-10	4.24 (2.04)	5.29 (2.05)	<.0001
<u>Family Functioning Factors</u>			
% Parental history of alcohol problems	23.8	10.7	<.0001
% Parental history of illicit drug use	38.7	22.2	<.001
% Parental history of criminal offending	29.5	11.2	<.0001
Mean (SD) number of changes of parents to age 15	2.24 (2.98)	1.04 (2.24)	<.0001
Mean (SD) parental attachment scale score age 15	69.26 (10.18)	73.42 (8.97)	<.0001

<sup>1</sup> t-test for continuous measures;  $\chi^2$  test of independence for percentage measures<sup>2</sup> Higher scores indicate lower levels of SES and living standards

Table 3. Adjusted percentages for measures of exposure to: sexual abuse; physical punishment; and interparental violence; by ethnicity, after controlling for: (a) socio-economic factors; and (b) both socio-economic and family functioning factors.

Exposure to Abuse	Exposure Level	Percentages adjusted for socio-economic <sup>1</sup> factors		Percentages adjusted for socio-economic & family functioning <sup>2</sup> factors	
		Māori	Non-Māori	Māori	Non-Māori
<u>Sexual abuse</u>	0	84.9	85.4	85.7	85.4
	1	3.0	2.9	2.8	2.9
	2	5.4	5.3	5.2	5.3
	3	6.7	6.4	6.3	6.4
			$\chi^2 (1) = 0.02, p > .90$		$\chi^2 (1) = 0.01, p > .90$
<u>Physical punishment</u>	0	2.4	4.3	2.5	4.4
	1	70.8	78.8	71.9	78.7
	2	16.4	10.9	15.8	10.9
	3	10.4	6.0	9.8	6.0
			$\chi^2 (1) = 7.50, p < .01$		$\chi^2 (1) = 6.09, p < .05$
<u>Interparental violence</u>	0	42.9	56.8	47.2	56.2
	1	24.5	21.5	23.6	21.3
	2	18.9	13.4	17.3	13.8
	3	13.7	8.3	11.9	8.7
			$\chi^2 (1) = 7.82, p < .01$		$\chi^2 (1) = 3.40, p < .10$

<sup>1</sup> Significant ( $p < .05$ ) covariate factors: maternal age; socio-economic status at birth; maternal education level; family living standards

<sup>2</sup> Significant ( $p < .05$ ) covariate factors: parental alcohol problems; parental illicit drug use; parental offending; changes of parents (to age 15)

Table 4. Adjusted percentages for measures of abuse exposure by cultural identity after controlling for both socio-economic status and family functioning.

Exposure to Abuse	Exposure Level	Cultural identity		
		Sole Māori	Māori/other identity	Non-Māori
<u>Sexual abuse</u>	0	88.7	83.4	85.5
	1	2.3	3.1	2.8
	2	4.0	6.0	5.2
	3	5.0	7.5	6.5
$\chi^2 (2) = 0.85, p > .60$				
<u>Physical punishment</u>	0	2.1	3.1	4.4
	1	68.1	75.0	78.8
	2	17.9	13.8	10.9
	3	11.9	8.1	5.9
$\chi^2 (2) = 7.47, p < .05$				
<u>Interparental violence</u>	0	32.8	58.2	56.2
	1	24.5	20.8	21.4
	2	23.3	13.1	13.9
	3	19.4	7.9	8.5
$\chi^2 (2) = 11.93, p < .01$				