

Differentiating patterns of aggression in the family

Running head: Patterns of family aggression

By

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The feasibility and prevalence of Reciprocal, Hierarchical and Paternal patterns of family aggression hypothesised by Dixon and Browne (2003) were explored within a sample of maltreating families. The psychological reports of 67 families referred to services for alleged child maltreatment that evidenced concurrent physical intimate partner violence and child maltreatment were investigated. Of these, 29 (43.3%) cases were characterised by Hierarchical; 28 (41.8%) Reciprocal and 10 (14.9%) Paternal patterns. Significant differences in the form of child maltreatment perpetrated by mothers and fathers and parent dyads living in different patterns were found. In Hierarchical sub-patterns, fathers were significantly more likely to have been convicted for a violent and/or sexual offence than mothers and were significantly less likely to be biologically related to the child. The findings demonstrate the existence of the different patterns in a sample of families involved in the Child Care Protection process in England and Wales, supporting the utility of a holistic approach to understanding aggression in the family.

Key words: family aggression; family violence; intimate partner violence; child maltreatment; domestic violence.
Implications for policy making

This paper:

- Highlights the frequent overlap of intimate partner violence and child maltreatment in the family home and the complex nature of violent families.
- Highlights the importance of understanding males and females may perpetrate both intimate partner violence and child maltreatment.
- Highlights the need for professionals to adopt a holistic, family-focused perspective in order to fully understand the interactions between and effects of aggression upon all family members.
Introduction

There is a great deal of empirical support for the co-occurrence of intimate partner and child maltreatment within the family (Bowen, 2000; Cox, Kotch & Everson, 2003; Hayzen, Connelly, Kelleher, Landsverk & Barth, 2004; Slep & O’Leary, 2005). Researchers have highlighted co-occurrence rates of 30-60% (Edleson, 1999), 46-53% (Browne & Hamilton, 1999) and 40%, using a conservative definition of child abuse (Appel and Holden, 1998). In addition to co-occurrence, the risk factors identified for each form of family maltreatment overlap considerably (Slep & O’Leary, 2001). However, despite this evidence, the majority of studies examine the aetiology, maintenance and intervention of partner and child maltreatment separately, treating them as discrete entities. Resultantly, services and interventions for partner and child maltreatment remain distinct enterprises (Slep & O’Leary, 2001).

Historically, different theoretical perspectives have been proposed to account for the aetiology of intimate partner violence in comparison to the more traditional theoretical approaches to aggression and family violence. The feminist perspective (Pence & Paymar, 1993) has been very influential in understanding the aetiology of intimate partner violence. Whilst it has greatly increased public awareness about male aggression toward female partners, developed shelters, public education, laws and policies (Koss, Heise & Russo, 1994) and contributed to intervention programmes with abusive men (Browne, Falshaw & Dixon, 2002), it is essentially an ideologically driven perspective. Intervention programmes designed from this perspective do not traditionally address any psychological or emotional issues the offender may have (Dutton, 2007). The central feature of this theory is that men’s violence against women is used as a form of control stemming from patriarchal
attitudes and therefore cessation of aggression rests with changing or removing the violent man. The suggestion that females may also aggress against male intimate partners is dismissed, or proposed to be an act of self defence (Dutton, 2007). Thus, from this perspective it is a male perpetrated crime. In comparison there is some suggestion that child maltreatment research has predominately focused on women as the main perpetrators (Slep & Heyman, 2001). Indeed, this may provide some explanation as to why these forms of family aggression have been responded to and dealt with as separate entities.

Adopting an interactionist approach to family aggression, researchers have suggested that aggression is a product of the person-environment interaction (Frude, 1991). Indeed, research at a dyadic level has shown that the interaction between two people in an aggressive exchange is an important determinant of behaviour. For example, Johnson (1995) classified people in couples on the basis of their own and their partner’s use of controlling behaviours and violence, highlighting the importance of understanding Common Couple Violence and Mutual Violence Control in addition to the more traditionally understood Intimate Terrorist. Bartholomew, Henderson and Dutton (2001) report different patterns of aggression between couples as a result of the interacting attachment styles. Furthermore, the child maltreatment literature denotes that child characteristics, such as difficult temperament, behavioural problems and mental/physical disabilities are associated with parental aggression toward the child (Wolfe, 1987). Indeed, Jouriles and Norwood (1995) found significant correlations between child externalising behaviour problems and parent-child aggression.

A family systems perspective (Minuchin, 1974) takes a broad approach to understanding family aggression, considering that each member of the family exerts
an effect on the probability of aggression occurring. Thus, individuals in the family are not viewed as simply passive recipients of abuse; rather they are seen as part of a dynamic process that changes the chances of aggression occurring within the family unit (Hughes & Fantuzzo, 1994). Such holistic approaches are considered more promising for prevention of maltreatment in comparison to those aimed at individual psychopathology (Cahn, 1996).

Several research studies have investigated co-occurrence of partner and child maltreatment by examining differences in risk profiles between families who experience one or both forms of family aggression. Several different characteristics have been attributed to parents who maltreat both their partner and child in comparison to parents who maltreat their child only (Coohey, 2004; Hartley, 2002; O'Keefe, 1995). Social stressors, caregiver mental health problems, substance abuse, paternal criminal convictions (Hartley, 2002), maternal childhood abuse (Coohey, 2004) and poor quality of parent-child relationships (O'Keefe, 1995) are more prevalent in families with concurrent maltreatment. However, as empirical research has provided evidence for the interactive nature of aggression and violence within the family, more family focused research, exploring differences between mothers and fathers who reside in different types or patterns of aggressive families, is warranted. Research can then move toward examining which combinations of individuals and dynamics are more likely to result in family conflict.

In an attempt to adopt an integrated approach to family aggression, research has investigated the different patterns of aggression and violence that occur in families (Appel & Holden, 1998; Dixon and Browne, 2003; Slep & O'Leary, 2005). Dixon and Browne (2003) proposed three hypothetical patterns of co-occurring abuse, which conceptualise the role of each member in the family. In the Paternal
pattern the aggressive father is seen as the main perpetrator within the family unit. In some instances the child may also aggress against the mother seeing her as powerless. Hierarchical patterns involve a hierarchy of aggression where the father is violent to the mother and the mother maltreats the child, but does not retaliate toward the father. In some cases the father may also maltreat the child. The Reciprocal pattern is characterised by reciprocal intimate partner violence, with both parents having the potential to abuse and/or neglect their child. Indeed, the potential to emotionally abuse the child through witnessing partner violence is high. In all of the scenarios, it is suggested that children require support and intervention as victims of family aggression.

The present study goes beyond an examination of the aggressive man to encompass the family unit and examines the feasibility and prevalence of the Paternal, Reciprocal and Hierarchical patterns proposed by Dixon & Browne (2003) within a sample of maltreating families. The forms of maltreatment explored will be restricted to partner and child maltreatment and the number of individuals to one mother, one father and one child for simplicity. Specifically, the following research questions are addressed:

1. Examine the prevalence of patterns of family aggression in the present sample.
2. Examine the demographic characteristics of family patterns.
3. Examine the type of child maltreatment perpetrated by mothers and fathers in each pattern.
4. Examine the extent to which parenting couples (dyads) who both maltreat their child use the same form of child maltreatment.
5. Examine individual differences in variables theoretically associated with risk of family aggression between mothers and fathers residing in the same patterns.
6. Examine individual differences in variables theoretically associated with risk of family aggression between mothers residing in different patterns and fathers residing in different patterns.

Method

Participants
The sample consisted of 67 families from the English Midlands or South Wales in the UK, who were involved in the Child Care Protection process. Each family had been assessed by a Forensic Psychology consulting service for assessment on their suitability to parent their child/ren, following allegations of child maltreatment. Psychological reports of parents assessed between June 1996 and June 2003 were examined. All families evidenced both physical partner violence and child maltreatment.

Both parents had been interviewed separately to derive the psychological report in 37 cases and for the remaining 30 cases only one parent was interviewed. Thus, individual details of 104 parents were available (49 men and 55 women) whose ages ranged from 18 – 48 years (mean age 29.7; SD = 7.4). The age of the index child ranged from 1 month to 15 years (mean age = 4.3, SD = 4.1). Information on the ethnicity of parents was available in 37 (36%) cases. Of these, 33 (89.2%) parents were classified as white UK, 1 (2.7%) Asian, 1 (2.7%), African Caribbean and 2 (5.4%) African-Caribbean/White UK. In terms of marital status, 36 (53.7%)
parents were cohabiting at the time the allegations were made and 29 (43.3%) were married.

Procedure
Data are based on the psychological report of each family. This report is constructed from separate interviews with the parent/s and cross-verification of parent self report with additional sources such as medical records, social services, school and police reports and reports from witnesses and family members. Therefore, reports are evidenced based and do not solely rely on the self report of parent/s interviewed. The clinical interviews detail the direction and form of abuse between family members, therefore families were easily categorised into the stipulated patterns. Specifically, psychological reports contained information on childhood, criminal and romantic relationship histories, details of mental health problems and parenting factors. Parents were deemed to be partners if a level of romantic/intimate attachment was discussed in the report and/or parents were married or cohabiting at the time of the alleged offence. In those cases where one or more children were considered to be at risk of child maltreatment (physical, sexual abuse or neglect), parenting information relating to the child involved in the most recent incident of maltreatment (index child) was considered for the sake of clarity.

For the purpose of this study, cases which reported one or more forms of active child abuse by individual parents (physical and/or sexual) are concatenated into one category of ‘physical and/or sexual child abuse’. Cases where reports show the child was only neglected and did not suffer any other forms of abuse from a parent were classified as ‘child neglect’.
Content analysis of psychological reports was conducted using a standardised proforma. Three independent raters extracted theoretically driven variables associated with a high risk of family violence in the literature (see Appendix 1). Demographic information was also collected. To ensure reliability, variables were systematically extracted from reports using definitions outlined in the coding dictionary (Appendix 1). Inter-rater and intra-rater reliability was measured, with agreement reaching a 100% concordance for both.

Results

Examining patterns of family aggression

1. Examining the prevalence of patterns of family aggression in the present sample

Examination of the 67 cases with co-occurring partner and child maltreatment resulted in 3 patterns of family aggression, with varying subtypes (see Figure 1).

Hierarchical family aggression \( (n = 29, \ 43.3\%) \): This involves a hierarchy where one dominant parent is violent towards the other. The victimised parent maltreats their child but does not retaliate violently to their aggressor. This describes both Paternal Hierarchical \( (n = 6; \ 20.7\%) \) and Maternal Hierarchical \( (n = 1; \ 3.4\%) \) patterns depicted in Figure 1(ia and ib). In Paternal Hierarchical Complete \( (n = 20; \ 69\%) \) and Maternal Hierarchical Complete \( (n = 2; \ 6.9\%) \) patterns (see Figure ic and id) both parents maltreat the child.

The Hierarchical pattern constitutes the most common type of family in this sample. In the majority of these families mothers are the sole victim of physical partner violence, whilst they perpetrate child maltreatment \( (n = 26, \ 89.7\%) \). This is in comparison to the majority of fathers who perpetrate both partner violence and child
maltreatment. Thus, the majority of children are victimised by both their mother and father (n = 22; 75.9%) in this pattern.

Paternal family aggression (n = 10, 14.9%): In this pattern the father aggresses against both mother and child. The mother does not maltreat the child (see figure 1 ii). This pattern accounted for the least cases of family aggression in this sample.

Reciprocal family aggression (n = 28, 41.8%): This involves reciprocal physical violence between mother and father. Both parents have the potential to maltreat their child, as shown by the Reciprocal Complete (n = 21; 75%) pattern in Figure 1 (iiiia). This sub-pattern accounts for the majority of Reciprocal cases in this sample. In the Reciprocal Maternal (n = 5; 17.9%) and Reciprocal Paternal (n = 2; 7.1%) patterns only one of the two parents maltreat their child (see Figure 1, iiib and iiiic).

2. Examining the demographic characteristics of family patterns.

Table 1 highlights the mean age of the index child, mother and father and parent marital status for each pattern of family aggression. No significant differences were found between patterns or within patterns.

3. Examining the type of child maltreatment perpetrated by mothers and fathers in each pattern.

Table 2 shows the form of child maltreatment that mothers and fathers administered in each of the 51 cases. Only sub-groups deemed large enough for meaningful statistical analysis were considered.
Within group analysis showed Paternal fathers conducted physical and/or sexual abuse in every case. Paternal Hierarchical Complete fathers were significantly more likely to conduct physical and/or sexual abuse than neglect ($\chi^2_1 = 14.40, p = 0.000$). No significant differences resulted between forms of abuse used by Reciprocal Complete fathers. Paternal Hierarchical Complete mothers were significantly more likely to neglect than physically/sexually abuse their child ($\chi^2_1 = 10.00, p = 0.002$). No significant difference was found between the forms of abuse used by Reciprocal Complete mothers.

Between group analysis explored the forms of child maltreatment used by fathers in each of the 3 patterns, using a criterion $\alpha = 0.016$ to correct for inflated type 1 errors across 3 tests. Differences between mothers were also explored. No significant differences were found in the form of child maltreatment administered by fathers in Paternal and Paternal Hierarchical Complete; Paternal and Reciprocal Complete; or Paternal Hierarchical Complete and Reciprocal Complete patterns. In addition, no significant differences were found between the form of maltreatment perpetrated by mothers in the Paternal Hierarchical Complete and Reciprocal Complete patterns.

Finally, differences between the forms of child maltreatment used by mothers and fathers in each pattern of family aggression were examined, using a criterion $\alpha = 0.008$ to correct for inflated type 1 errors across 6 tests. Cross gender comparisons showed Paternal fathers significantly perpetrated more physical and/or sexual child abuse than mothers in the Paternal Hierarchical Complete pattern ($\chi^2_1 = 15.00, p = 0.000$). Differences between Paternal fathers and Reciprocal Complete mothers did not reach significance. Paternal Hierarchical Complete fathers significantly perpetrated more physical and/or sexual child abuse than mothers of the same
pattern ($\chi^2_1 = 12.13, p = 0.000$). No significant difference was found between Paternal Hierarchical Complete fathers and Reciprocal Complete mothers. Differences between Reciprocal Complete fathers and Hierarchical Complete and Reciprocal Complete mothers did not reach significance.

In summary, Paternal and Paternal Hierarchical Complete fathers are significantly more likely to perpetrate child physical and/or sexual abuse than neglect. Hierarchical mothers are significantly more likely to neglect than physically and/or sexually abuse their child. Furthermore, they are significantly likely to neglect in comparison to their male partners. Both mothers and fathers in Reciprocal Complete patterns adopt physical and/or sexual abuse or neglect with approximate equal frequency.

4. Examining the extent to which parent couples (dyads) who maltreat their child use the same form of child maltreatment.

Table 3 details the form of child maltreatment perpetrated by mothers and fathers in couples where both parents maltreated their child. The Maternal Hierarchical Complete subcategory was not included in analysis due to small numbers.

Within group analysis demonstrated parents in Reciprocal Complete dyads were significantly more likely to conduct the same form of child maltreatment as each other in comparison to adopting different forms of child maltreatment ($\chi^2_1 = 16.095, p = 0.000$). Paternal Hierarchical Complete parents were not significantly likely to carry out the same forms of child maltreatment as their partner.

Cross-group analysis found parents in Reciprocal Complete Patterns were not significantly more likely to adopt the same child maltreatment strategy as their partner in comparison to parents in Paternal Hierarchical Complete patterns.
Examining parent characteristics within patterns

Characteristics of parents in Paternal Hierarchical Complete and Reciprocal Complete patterns of family aggression were examined; all other patterns were deemed too small for meaningful statistical analysis. Table 4 details the proportion of characteristics displayed by mothers and fathers within these patterns for whom data was available. A criterion $\alpha = 0.0125$ was used to correct for inflated type 1 errors across 4 tests.

5. Examining individual differences in variables between mothers and fathers residing in the same pattern.

Fathers in Paternal Hierarchical Complete patterns had a significantly higher prevalence than mothers in this pattern for ‘conviction for violent and/or sexual offence’ ($\chi^2 = 9.169$, $p=0.002$) and ‘not being biologically related to the index child’ (Fishers Exact = 0.006).

No significant differences were found between fathers and mothers residing in Reciprocal Complete patterns.

6. Examining individual differences in variables between mothers residing in different patterns and fathers residing in different patterns.

No significant differences resulted between fathers or mothers in Paternal Hierarchical Complete and Reciprocal Complete families.
Discussion

This study classified families experiencing concurrent intimate partner physical violence and child maltreatment into patterns of Reciprocal, Hierarchical and Paternal family aggression in a sample of families undergoing parenting assessments following allegations of child maltreatment in England and Wales. Thus, the three hypothesised patterns of family aggression, proposed by Dixon and Browne (2003), exist in this sample. The interactive nature of family aggression is highlighted verifying the need for service provision and professionals to recognise the coexistence of different forms of maltreatment within the family unit. It is important for professionals to consider how each person in the family is influenced and affected by every other member. This is especially important considering the repetitive nature of family aggression and violence from one generation to the next.

Understanding patterns of family aggression

The most prevalent pattern was Hierarchical family aggression, where, for the majority of cases, the father aggressed against the mother and child whilst the mother maltreated the child. Results of this study found mothers were significantly more likely to neglect their child than fathers in this pattern. Appel and Holden (1998) suggest 4 mechanisms that may explain why the victimised mother maltreats the child. Firstly, negative marital interactions become incorporated into parent-child interactions; secondly, mothers learn violence as a means of control; thirdly, the stress of abuse from their partner results in harsh parenting styles; finally, the father coerces the mother into maltreating the child. It is plausible that mothers in this
pattern neglected their child in response to the stress of the environment and aggression they experienced at the hands of their partner. Furthermore, differences in the personal and social resources of mothers residing within patterns of family violence have been hypothesised (Appel & Holden, 1998). It would be useful for further research to specifically explore mothers’ coping styles and resilience in different patterns. Finally, it is worthy of note that the mother was the primary aggressor in 3 cases. Whilst this is only a very small number of cases in a small sample, it nevertheless demonstrates that some women do physically aggress against their male partner in the context of the wider family unit. However, this occurred at a much lower rate than male unidirectional physical aggression in this pattern in the present sample.

The second most prevalent family pattern was Reciprocal family aggression. In this pattern over 40% of parents engaged in reciprocal intimate partner violence with their partner, whilst both or one of the parents maltreated their child. As Reciprocal families are not characterised by one dominant parent, it is possible that child maltreatment may result as part of a coercive family spiral. The theory of coercive family relationships (Patterson, 1982) describes how cycles of escalating aversive behaviours can characterise the majority of interactions in the household (Burgess & Conger, 1978) and as these behaviours increase in duration they are more likely to result in physical aggression between family members (Browne & Herbert, 1997). Thus, parents may learn to adopt child maltreatment as a result of the family environment. In addition, unlike Paternal Hierarchical Complete parents, mothers and fathers in the Reciprocal Complete pattern did not each adopt a different form of child maltreatment, rather they used physical and/or sexual maltreatment with equal frequency. This may be explained by adopting a social
cognitive perspective, whereby parents learn to adopt abuse styles toward their child through modelling the violence they experience and deliver toward their partner and/or via the maltreatment that each parent subjects their child to. Thus, negative and abusive family interactions displayed between adults may become incorporated into the parent-child interactions (Appel & Holden, 1998). Alternatively, assortative partnering (Krueger, Moffitt, Caspi, Bleske & Silva, 1998) may play a role, whereby individuals seek out romantic partners who display similar characteristics and behaviours to their own.

It should be noted here that although research has shown heterosexual intimate partners to engage in aggressive acts at congruent rates (Archer, 2000; Stets & Straus, 1990; Straus, 1997; Wilson & Daly, 1992), research has also shown that women come off worse more frequently in terms of injury and psychological upset (Archer, 2002; Holtzworth-Munroe, Smutzler & Bates, 1997). Furthermore, this study did not take into account the severity or injury of partner violence and so it is difficult to gain a complete understanding of the mother’s aggression. Nevertheless, whilst further investigation is needed for greater insight, it is evident that this pattern characterises a large proportion of abusive families in this study.

Whilst Paternal patterns of family aggression were prevalent in this sample, they only characterised 14.9% of families. Some research has attributed the aetiology of intimate partner violence to intra-individual factors of the father, such as antisocial characteristics and learning experiences from childhood (Appel & Holden, 1998; Holtworth-Munroe & Stuart, 1994). However, as this research has demonstrated the involvement of women in patterns of family aggression it is evident that research needs to look further than the man to gain a full understanding of family aggression. It has been suggested that within Paternal families, the mother
who does not aggress against the child may have good personal and social resources which prevent her from doing so, in comparison to mothers residing in Hierarchical families (Appel & Holden, 1998).

Parent characteristics

Over 60 percent of fathers in the Paternal Hierarchical Complete and Reciprocal Complete patterns had previous convictions for violent/sexual offences and non-violent offences. In addition, at least 50 percent of mothers in these patterns had been treated for mental illness or depression. Therefore, a large number of these parents have frequently come into contact with law enforcement agencies or mental health professionals and so the potential for interagency collaboration exists. For example, the Police are in a position to provide child protection agencies and NHS trusts with information on instances of intimate partner violence where a child is present in the home. Indeed, current Multi Agency Risk Assessment Conference (MARAC) procedures allow for this collaboration to take place (CAADA, 2006).

No factors were found to significantly distinguish fathers in Paternal Hierarchical Complete and Reciprocal Complete families. The same result was found for mothers. It is possible that the few differences in intrapersonal factors were found because the interpersonal interaction of the father and mother in the context of the family is more important in differentiating between patterns. Indeed, researchers have stressed the importance of considering interpersonal relationships to fully understand the violent interaction between partners (Bartholomew, Henderson & Dutton, 2001; Holtzworth-Munroe, Smutzler & Bates, 1997). Furthermore, other intrapersonal variables not measured here may better distinguish parents residing in
different patterns, such as their beliefs about aggression (Archer & Graham-Kevan, 2003) or hostility towards women and attitudes to violence in general (Holtzworth-Munroe & Stuart, 1994).

Methodological considerations

Whilst problems with the validity of self-report data have been documented (Widom & Shepard, 1996), this retrospective study partly addresses issues of self-report by corroborating claims of partner and child maltreatment with other referenced sources where possible, increasing the validity of the file based information. However, the potential bias inherent in the nature of the sample must be noted. This study investigated family units that were undergoing legal child care proceedings after allegations of child maltreatment had been made about one or both parents within that family. Accessing families via other routes, such as those attending accident and emergency for domestic assault or mothers and children living in shelters may yield different rates of patterns in comparison to the population explored in this study. Furthermore, this research should be interpreted in light of the small sample size and population studied, that is families involved with child care protection system in England and Wales.

Longitudinal research, observational methods and more in-depth interviews are needed to assess the context in which maltreatment occurs, the interactions between family members and the child’s behaviour. In addition, the temporal sequence of patterns could be assessed to determine whether patterns evolve and change over time. For example, reciprocal partner violence may evolve into reciprocal family aggression, with family members learning forms of control and
coercive interactions. Such questions need to be addressed for risk assessment and prevention. However, this costly design is difficult to achieve (Salzinger et al, 2002).

Conclusion

It is evident that important distinctions exist between the patterns of family aggression outlined by Dixon and Browne (2003), in terms of the type of child maltreatment administered by mothers and fathers as well as parental characteristics. As family interactions and relationships tend to be highly reciprocal and repetitive across generations (McGoldrick, Gerson & Shellenberger, 1999), adopting a holistic, family-focused perspective is useful in order to fully understand the interactions between and effects upon family members. It is important to understand that intimate partner violence and child maltreatment should not be stereotypically viewed as gendered offences. Rather the overlap between partner and child maltreatment in the family should be recognised and understood. If it is assumed that each person in the family is influenced and affected by every other person in that unit it is important to include all family members in any assessment and problem solving process. Indeed, research has suggested that both etiological and intervention models would be improved by considering all forms of possible maltreatment in the family together (Dixon & Browne, 2003; Slep & O’Leary, 2001). Therefore, it may be appropriate for professionals to examine families from a systems perspective in initial assessments before identifying victims and perpetrators and their intrapersonal problems.
Appendix 1   Coding Dictionary

• **Definitions of acts of physical intimate partner violence** are defined by the Conflict Tactic Scale 2 (Straus, Hamby, Boney-McCoy & Sugarman, 1996).
• **Definitions of acts of physical and sexual child maltreatment and neglect** are defined by Browne and Herbert (1997).
• **Physically/sexually abused as a child** - Record as present if the parent discloses that they were physically and/or sexually abused during their childhood (prior to 16 years of age).
• **Factors associated with juvenile delinquency:**
  - **Juvenile substance abuse** – Record as present if they used alcohol, cannabis, cocaine, heroin, amphetamine or other illegal drugs during their adolescence.
  - **Fighting with peers at school** – Record as present if there is evidence of involvement in several fights during their school years (3 or more).
• **Criminal history:**
  - **Conviction for violent/sexual offence** – record as present if the parent has received 1 or more criminal convictions for a violent and/or sexual offence.
  - **Conviction for non-violent criminal offence** – record as present if the parent has received 1 or more conviction for theft, fraud or driving offences.
• **Adult dependency for drugs or alcohol:** - Record as present if the parent disclosed during interview and/or professional reports stated that they had a dependency for alcohol, cannabis, cocaine heroin amphetamine or other illegal drugs during adulthood.
• **Relationship History:**
  - **Involvement in a past violent relationship/s** – record as present if the parent discloses/stated in professional reports, that they have been physically/sexually violent, physically or sexually abused or involved in reciprocal physical and/or sexual abuse in a past romantic relationship/s. Romantic relationship is defined by the parents perception/disclosure that a level of romantic and intimate attachment existed with that person.
  - **Current relationship difficulties** – record as present if the parent discloses frequent arguing or feels that the partner is not supportive or does not provide enough care in the relationship, or if it was stated in professional reports.
• **Mental health factors:**

  Previous suicide attempt/ideation – record as present if the parent has attempted/ruminated about committing suicide in the past, or during/immediately after the index offence.

  Treated for mental illness/depression – code as present if the parent discloses a history of being treated for mental illness or depression.

• **Parenting risk factors:**

  - **Static:**

    Under 21 at child’s birth – code as present if the parent was under 21 years of age at the time of the child’s birth.

    Not biologically related to the index child – code as present if the parent is not biologically related to the index child.

  - **Dynamic:**

    Residing with a violent adult - code as present if the parent is a known violent adult or is living with a known violent adult (i.e. that person has convictions for violence, or it is disclosed that they have been violent to past romantic partners, acquaintances, strangers or children).

    Feelings of isolation – code as present if the parent discloses that they felt isolated with no one to turn to.

    Serious financial difficulties - code as present if the parent discloses/stated in professional reports that they experienced serious financial difficulties (not being able to make payments for basic needs such as food or rent or parenting equipment).

    Single parenthood – code as present if the parents discloses that they are bringing up the index child or children on their own, without the help of a partner.

    NB: just because an individual discloses they are having a romantic intimate relationship with a partner does not mean that they perceive that partner to have an active role/responsibility to bring up the child.

  - **Child:**

    Index child has a physical or mental disability – code as present if the index child has a diagnosed mental or physical disability.
References


Table 1
Demographic information for each pattern of family aggression

<table>
<thead>
<tr>
<th></th>
<th>Hierarchical (n = 29)</th>
<th>Paternal (n = 10)</th>
<th>Reciprocal (n = 28)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean age of index child</strong></td>
<td>4.6 (SD: 3.8)</td>
<td>4.0 (SD: 3.9)</td>
<td>4.3 (SD: 4.7)</td>
</tr>
<tr>
<td><strong>Age of mother</strong></td>
<td>29.1 (SD: 8.1)</td>
<td>32.9 (SD: 9.3)</td>
<td>27.5 (SD: 5.3)</td>
</tr>
<tr>
<td><strong>Age of father</strong></td>
<td>29.4 (SD: 7.5)</td>
<td>31.6 (SD: 7.3)</td>
<td>31.0 (SD: 7.5)</td>
</tr>
<tr>
<td><strong>Cohabiting</strong></td>
<td>14 (51.9%)^a</td>
<td>5 (50%)</td>
<td>17 (60.7%)</td>
</tr>
<tr>
<td><strong>Married</strong></td>
<td>13 (48.1%)^a</td>
<td>5 (50%)</td>
<td>11 (39.3%)</td>
</tr>
</tbody>
</table>

^a Data describing the marital status of 2 parents was not available in this category, thus percentages are calculated using an n size of 27.
Table 2
The form of child maltreatment administered by mothers and fathers in Paternal, Paternal Hierarchical Complete and Reciprocal Complete patterns (n = 51 families)

<table>
<thead>
<tr>
<th>Pattern</th>
<th>MOTHERS</th>
<th>FATHERS</th>
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<tbody>
<tr>
<td></td>
<td>Physical and/or sexual child abuse</td>
<td>child neglect</td>
</tr>
<tr>
<td></td>
<td>n</td>
<td>%</td>
</tr>
<tr>
<td>Paternal (n = 10)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10 (100)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Paternal Hierarchical Complete (n = 20)</td>
<td>5 (25)</td>
<td>15 (75)</td>
</tr>
<tr>
<td>Reciprocal Complete (n = 21)</td>
<td>11 (52.4)</td>
<td>10 (47.6)</td>
</tr>
</tbody>
</table>
Table 3
The form of child maltreatment perpetrated by 41 parent dyads in Paternal Hierarchical Complete and Reciprocal Complete patterns, where both parents in the dyad maltreated their child (n = 27 couples).

<table>
<thead>
<tr>
<th>Pattern of Family Violence</th>
<th>PARENTS ADOPTING SAME FORM OF CHILD MALTREATMENT</th>
<th>PARENTS ADOPTING DIFFERENT FORMS OF CHILD MALTREATMENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Paternal Hierarchical Complete (n = 20)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Both parents physically and/or sexually abuse or neglect their child 11 (55)</td>
<td>9 (45)</td>
<td></td>
</tr>
<tr>
<td>One parent physically and/or sexually abuses the child and the other parent neglects the child. 17 (81)</td>
<td>4 (19)</td>
<td></td>
</tr>
<tr>
<td>Reciprocal Complete (n = 21)*</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* p<0.001
Table 4
Prevalence of characteristics of mothers and fathers in Paternal Hierarchical
Complete and Reciprocal Complete patterns of family aggression

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>PATERNAL HIERARCHICAL COMPLETE</th>
<th>RECIPROCAL COMPLETE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mothers (n=17)</td>
<td>Fathers (n=16)</td>
</tr>
<tr>
<td></td>
<td>n %</td>
<td>n %</td>
</tr>
<tr>
<td>Physically/sexually abused as a child</td>
<td>8/17 (47.1)</td>
<td>8/15 (53.3)</td>
</tr>
<tr>
<td>Factors associated with juvenile delinquency</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Juvenile substance abuse</td>
<td>3/12 (25)</td>
<td>7/13 (53.8)</td>
</tr>
<tr>
<td>Fighting with peers at school</td>
<td>3/15 (20)</td>
<td>8/12 (72.7)</td>
</tr>
<tr>
<td>Criminal History</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Conviction for violent/sexual offence</td>
<td>2/17 (11.8)</td>
<td>10/16 (62.5)</td>
</tr>
<tr>
<td>Conviction for non-violent criminal offence</td>
<td>6/17 (33.3)</td>
<td>11/16 (68.8)</td>
</tr>
<tr>
<td>Adult dependency for drugs or alcohol</td>
<td>7/15 (44.7)</td>
<td>10/13 (76.9)</td>
</tr>
<tr>
<td>Relationship History</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Involvement in a past violent relationship/s</td>
<td>8/15 (53.3)</td>
<td>2/11 (18.2)</td>
</tr>
<tr>
<td><strong>Current relationship difficulties</strong></td>
<td>12/13 (92.3)</td>
<td>13/14 (92.9)</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>--------------</td>
<td>--------------</td>
</tr>
<tr>
<td><strong>Mental health factors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Previous suicide attempt/ideation</td>
<td>8/13 (61.5)</td>
<td>4/14 (28.6)</td>
</tr>
<tr>
<td>Treated for mental illness/depression</td>
<td>9/17 (52.9)</td>
<td>5/15 (33.3)</td>
</tr>
<tr>
<td><strong>Parenting risk factors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>- <strong>Static</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under 21 at child's birth</td>
<td>2/17 (11.8)</td>
<td>0/15 (0)</td>
</tr>
<tr>
<td>Not biologically related to the</td>
<td>0/17 (0)</td>
<td>6/15 (40)</td>
</tr>
<tr>
<td>index child</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- <strong>Dynamic</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Residing with a violent adult</td>
<td>15/17 (88.2)</td>
<td>14/15 (93.3)</td>
</tr>
<tr>
<td>Feelings of isolation</td>
<td>7/14 (50)</td>
<td>1/14 (7.1)</td>
</tr>
<tr>
<td>Serious financial difficulties</td>
<td>8/15 (53.3)</td>
<td>8/14 (57.1)</td>
</tr>
<tr>
<td>Single parenthood</td>
<td>2/17 (11.8)</td>
<td>1/15 (6.7)</td>
</tr>
<tr>
<td>- <strong>Child</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Index child has a physical or</td>
<td>0/17 (0)</td>
<td>1/15 (6.7)</td>
</tr>
<tr>
<td>mental disability</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*a* The initial figure in each cell refers to the number of parents who had the characteristic; the second is the valid n size of each characteristic once missing data had been taken into account.
HIERARCHICAL: n = 29 (43.3%)

ia. F

M

C

ib. M

F

C

ic. M ←→ F

id. M → F

Paternal Hierarchical (n = 6; 20.7%) Maternal Hierarchical (n = 1; 3.4%) Paternal Hierarchical Complete (n = 20; 69.0%) Maternal Hierarchical Complete (n = 2; 6.9%)

PATERNAL: n = 10 (14.9%)

ii F

M

C

Paternal (n = 10; 100%)

RECIPROCAL: n = 28 (41.8%)

iiia. M ←→ F

iiib. M ←→ F

iii c. M ←→ F

Reciprocal Complete (n = 21; 75%) Reciprocal Maternal (n = 5; 17.9%) Reciprocal Paternal (n = 2; 7.1%)

Figure 1
Depiction of abuse patterns in families experiencing co-occurring partner and child maltreatment (n = 67 families).

F = father figure; M = mother figure; C = index child