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Exploring the relationship between child-to-mother violence, types of  
aggression and family dynamics

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Journal the paper is written for: **Journal of Family Violence**

## **Project Proposal**

**Project Title:** Exploring the relationship between child-to-mother violence, types of aggression and family dynamics

### **Outline of study:**

#### Rationale

Child-to-parent violence (CPV) is defined as "any harmful act by a child intended to gain power and control over a parent. The abuse can be physical psychological or financial." (Cottrell, 2001). Between 2009 and 2010, 1,892 cases of CPV were reported to the Metropolitan Police (Condry & Miles, 2014) but the true figures may be much higher. This issue is complex and underreported due to fear of stigmatisation and parental blame. However, the UK government has increased awareness of and support for CPV as it is estimated to affect at least 1 in 10 families (Wilcox et al, 2015).

Evidence suggests that perpetrators of CPV learn violent schemas and behavioural strategies, causing them to become isolated from their friends and providing fewer opportunities to develop adequate social skills (Wilcox et al, 2015). This may increase their risk of using violence in future relationships or against the public (Wilcox et al, 2015).

Proactive aggression style has been identified as a risk factor for increased CPV in adolescents (Calvete, Orue & Gámez-Guadix, 2013) as a method of gaining power from parents and avoiding unpleasant tasks. Whereas, reactive aggression is theorised to increase CPV risk as children use violence as a coping mechanism to regain control and feelings of safety from overly strict parents (Pagani et al, 2009). Family dynamics may mediate the expression of CPV, acting as protective or risk factors. Dysfunctional family interaction styles have been linked to increased incidence of CPV (Calvete et al, 2014). This study has chosen to investigate types of aggression and family functioning as possible risk factors for CPV, as research suggests these factors have large effect on vulnerability to CPV engagement, yet there is limited UK based research in this area. In recent years the UK government has recognised the importance of family violence issues such as CPV and its link to later violent offending. This has led to government focus on improving existing intervention and support programmes that strengthen family functioning, as unresolved CPV problems increase the risk of family breakdown and dysfunctional family interaction styles, which have been associated with later aggression and violent behaviour. Whereas functioning and adaptable families provide supportive environments for adolescents, reducing the risk of later offending. Therefore the results of this study could be used to inform CPV interventions, as targeting family interactions or preferred aggression type may be an effective method to improve family functioning and reduce violence, as working with the adolescent and their family has potential for success and reinforcement of changes.

#### Research Question/s

Is there a relationship between CMV and the type of aggression displayed by adolescents?

Is there a relationship between CMV and family interaction dynamics?

Is there a relationship between CMV, the type of aggression displayed by adolescents and family interaction dynamics?

#### How access to participants will be gained

Participants will voluntarily self-select to take part in the study by accessing a website link to the online survey, which will be shared on the researcher's Facebook profile and can be shared by "friends" of the researcher on Facebook. An advert with a link to the study will also be posted on the University of Nottingham page on [www.callforparticipants.com](http://www.callforparticipants.com).

### Participants

Participants will be members of the UK public over 16 years old, as these individuals have the capacity to provide informed consent and do not require additional parental consent according to BPS guidelines. In addition participants will require online access and adequate literacy ability in order to read and understand the questions and provide appropriate responses. Demographic details will be recorded, including age, gender, family structure, current living arrangements, education level, employment status and nationality.

### How data will be collected

Data collection will take place via a self-report online survey. The survey will record responses to a demographic questionnaire, an adapted CPV scale, a triggers of CPV behaviour questionnaire to determine common preceding factors which may influence CPV, the reactive-proactive questionnaire (RPQ) (Raine et al, 2006) which measures preferred style of aggression and the self-report family inventory (SFI) (Beavers & Hampson, 1990) to assess family functioning.

### Where data will be collected

Data collection will take place online using SurveyGizmo, which is a secure survey tool with encrypted data.

### Justification of materials and measures

- The demographic questionnaire is used to collate background details about participants.
- The adapted Child-to-Mother Violence Scale and triggers of CMV behaviour questionnaire assess which CMV behaviours have been used by participants, frequency of CMV and preceding events which may trigger these behaviours. Listed example items were adapted from the Child-to-Mother Violence Scale (CMVS) (Edenborough, Wilkes, Jackson & Mannix, 2011) to assess CPV against mothers. The Adapted CMVS and Triggers of CMV have not been validated in themselves, however are likely to be valid and reliable measures as only minor changes were made to the original CMVS which has high reliability, internal consistency and construct validity. As 3 variables will be measured in the study, shorter length measurement tools are preferable because they will decrease likelihood of participant fatigue during survey completion. Therefore the Adapted CMVS is suitable as it measures 22 behavioural items on a 4-point likert scale (Never=0, Occasionally=1, Most weeks=2, Daily=3) to generate a total CMV score. The Triggers of Behaviour questionnaire measures presence or absence of 16 social, psychological, physiological and emotional factors relating to instances of CMV as self-reported in the Adapted CMVS, to generate a total Triggers of CMV score.
- The RPQ (Raine et al, 2006) measures 23 aggressive behaviour items on a 3-point likert scale (Never=0, Sometimes=1, Often=2) to obtain a total aggression score and reactive and proactive aggressive behaviour subscale scores, which can indicate a preferred aggression style of the participant. The validity of reactive and proactive

aggression subscales as opposed to a generalised aggression scale were supported by confirmatory factor analysis. The RPQ has strong internal reliability, criterion validity, convergent validity and discriminant validity (Raine et al, 2006), making it a suitable reliable and valid measure of aggressive behaviour types.

- The SFI (Beavers & Hampson, 1990) assesses internal family functioning. 36 items on family health/competence, conflict resolution, cohesion, leadership and expressiveness are rated for fit to the respondent's family during their childhood (1=Fits my family very well, 3=Fits my family some, 5=Does not fit my family). Lower scores indicate greater family competence and scores can be classified into one of nine family categories ranging from optimal functioning families to severely dysfunctional families. The SFI has high internal consistency, strong reliability and both high construct and clinical validity (Beavers & Hampson, 2000; Hamilton & Carr, 2015), making it a suitable measure of family style for this study.

#### Justification of final sample size

Required sample size was calculated with G\*Power Statistical Power Analyses programme (Faul et al, 2009) using a linear multiple regression F test power calculation. Input parameters used were a small to medium effect size  $f^2 = 0.10$ ,  $\alpha$  error probability = 0.05, power (1- $\beta$  error probability) = 0.80 and 2 predictors. The calculated sample size was 100. An additional 15% of the calculation should be sampled to account for the possibility that data and residuals may be non-normally distributed (Lehmann & Romano, 2006). The proposed final sample size is 115.

#### Key references

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Dear Ms Mackay

<b>Ethics Reference No:</b> 30-1705 – please always quote	
<b>Study Title:</b> Exploring the relationship between child-to-parent violence, types of aggression and family dynamics.	
<b>Chief Investigator/Supervisor:</b> Dr Shihning Chou, Assistant Professor & Forensic Psychologist, Centre for Forensic & Family Psychology, Division of Psychiatry & Applied Psychology.	
<b>Lead Investigators/student:</b> Kirstie-Louise Mackay, MSc Forensic & Criminological Psychology student.	
<b>Type of Study:</b> PG student, online questionnaires, qualitative	
<b>Proposed Start Date:</b> 19/05/17	<b>Proposed End Date:</b> 31/07/17 2 mths
<b>No of Subjects:</b> 115	<b>Age:</b> 18+years
<b>School:</b> Medicine	

Thank you for submitting the above application which was considered by the Committee at its meeting on 19 May 2017 and the following documents were received:

- DPAP Student Project Application form and supporting documents version 1.0: 10/05/2017.

These have been reviewed and are satisfactory and the study has been given a favourable opinion.

A favourable opinion is given on the understanding that the conditions set out below are followed:

1. You should follow the protocol agreed and inform the Committee of any changes using a notification of amendment form (please request a form).
2. You must notify the Chair of any serious or unexpected event.
3. An End of Project Progress Report is completed and returned when the study has finished (Please request a form).

Yours sincerely

**Professor Ravi Mahajan**  
Chair, Faculty of Medicine & Health Sciences Research Ethics Committee

## **Exploring the relationship between child-to-mother violence, types of aggression and family dynamics**

### **Abstract**

Relationships between child-to-mother violence (CMV) subtypes, aggression styles and level of family functioning were explored using a retrospective self-report design. Results from 86 participants revealed high frequencies of verbal and emotional CMV and low frequencies of financial and physical CMV. Regressions showed that high reactive and proactive aggression and dysfunctional family styles predicted verbal and emotional CMV. Whereas only high proactive aggression predicted financial and physical CMV. Psychological theories are considered to explain relationships between risk factors and CMV subtypes. Other relevant risk factors which interact with aggression styles and family functioning, such as mental health and substance misuse are discussed. Implications for preventative policies include collaborative multidisciplinary practice focusing on rehabilitation and tailored interventions for specific CMV and relevant risk factors.

### **Keywords**

Child-to-Parent Violence; Aggression; Family Dynamics; Interventions

### **Introduction**

Child-to-parent violence (CPV) is defined as "any harmful act by a child intended to gain power and control over a parent. The abuse can be physical, psychological or financial" (Cottrell & Finlayson, 2001). 1,892 cases of CPV were reported to the Metropolitan Police between 2009 to 2010 (Condry & Miles, 2014) but the true figures may be much higher as it is under-reported due to fear of parental blame, shame, stigmatisation and concerns of criminalisation. Existing legislation relating to CPV is limited and lacks clarity in identifying what constitutes abusive behaviour. This contributes to research difficulties in determining the amount and type of aggression required to be considered CPV, as

often only severe cases reach attention of the youth justice system. However the UK government has increased political and public awareness of CPV and increased availability of support services, as CPV is estimated to affect at least 1 in 10 families (Wilcox et al, 2015).

CPV is a global issue, present throughout the world in every culture (Condry & Miles, 2014). Over 30 years ago the first CPV research found high prevalence rates and theorised potential causes, including child psychopathology, family pathology, personality disorder or developing delinquency and family pathology interaction with child psychopathology (Charles, 1986). Certain risk factors for CPV have long been identified, such as exposure to violence within the family (Cornell & Gelles, 1982). However other risk and protective factors have only been empirically supported more recently, such as emotional intelligence (Contreras & Cano, 2016b). Many psychological theories have attempted to explain CPV, however supporting evidence for monocausal theories are inconsistent, suggesting an integrated framework explanation is needed to fully explain all CPV behaviours (Agnew & Huguley, 1989; Cottrel & Monk 2004). Evidence suggests that CPV perpetrators learn violent schemas and behavioural strategies through social learning from their experiences (Contreras & Cano, 2016a). CPV behaviours are associated with isolation from friends and fewer opportunities for adequate social skills development, increasing perpetrators' risk of using violence in future relationships or against members of the public (Wilcox et al, 2015). This would suggest CPV in adolescence may act as an offending pathway to violence and aggression in later life if high levels of aggression and other risk factors are maintained (Condry & Miles, 2014).

Unresolved CPV problems increase the likelihood of family breakdown and dysfunctional family interaction styles, which have been associated with later aggression and violent behaviour (Calvete et al, 2014). Whereas functioning and adaptable families provide supportive environments for adolescents, reducing the risk of later offending. Despite increased Government awareness and increased research into family violence issues in recent years, the complexity of CPV and its link to later violent offending is still not fully



understood. There is lack of psychological theoretical frameworks which adequately explain CPV offending across various circumstances. Ongoing debates between legislators and support services question whether CPV should be considered a domestic violence, child welfare or youth justice issue (Contreras & Cano, 2016b). Current CPV prevalence estimates could indicate a failure by services to provide accessible and effective interventions. There is need for Government focus on improving existing intervention and support programmes using empirical evidence based practice to strengthen family functioning.

## **Child-to-Mother Violence**

CPV can be further categorised into physical, verbal, emotional, financial and sexual abuse subtypes (Wilcox & Pooley, 2015) according to psychological intention of CPV behaviour. Child-to-mother violence (CMV) accounts for the majority of CPV behaviour, as approximately 77% of victims are female. CMV appears to be a gendered phenomenon as 87% of perpetrators are males (sons against mothers) (Condry, 2016). Modelling and social learning theory explains gendered CMV behaviour as sons and some daughters learn to imitate observed aggression, violence and conflict strategies as acceptable responses (Bandura, 1978). Modelling is reinforced in cases where intrafamilial violence occurs; learning of violence from father figures is reinforced in males and passive victim behaviour or non-physical violence is reinforced from mother figures in females (Cottrell & Monk, 2004).

Peak age of CMV offending occurs between 14 to 17 years old (Contreras & Cano 2016a). Research shows single mothers (Livingston, 1986; Retford, 2016) and younger mothers are at higher risk of experiencing CMV (Edenborough et al 2007) and perpetrators are more likely to come from larger families (Livingston 1986). CMV appears to occur across all socioeconomic backgrounds, whilst some findings are conflicting, it is possible they reflect the nature of samples accessed, as police and youth justice figures are more likely to encompass lower socioeconomic status families whereas

private therapeutic practice samples will include more wealthy and higher status families (Agnew & Huguley 1989; Condry & Miles 2014). In a self-report sample from mothers, the most frequent types of CMV are swearing, silent treatment, name calling, demeaning parenting skills, damaging the home or belongings and aggressive demands. However their greatest concerns were bullying, hitting or threats of self-harm (Edenborough, 2007), which may indicate a disparity between the reality of parent abuse behaviours and public perceptions. This could be due to parental attribution of triggers for CPV, which are most commonly; anger, arguments, disagreements, "normal" teenage behaviour and lack of respect (Edenborough, 2007).

CMV as a conflict resolution strategy is problematic not only due to negative impact on physical health and child-parent relationships, but also due to association with increased risk of later violence in relationships or wider society through social learning behaviours (Wilcox et al, 2015). Evidence shows those arrested for CPV offences are more likely to be arrested for other violent offences, suggesting they may also be more violent outside of the home due to learned violence schemas (Kennedy, Edmonds, Dann & Burnett, 2010). Psychological theories may explain CMV in some situations, strain theory suggests that stress factors within or outside the home create aggressive or violent responses as forms of self-protection against stress (Kratcoski, 1984; Livingston 1986). Modelling and social learning theory suggest perpetrators are exposed to violence and model or learn aggression vicariously, with behaviours being reinforced (Bandura, 1978; Cottrell & Monk, 2004). Nested ecological model proposes interactions between macrosystem (cultural beliefs), exosystem (social factors), microsystem (family dynamics) and ontogeny (youth factors) factors which affect risk of CPV (Cottrell & Monk, 2004). However, most theoretical models of CPV are non-specific and require further testing. Many intervention approaches based on theories or models lack empirical evidence (Kennair & Mellor 2007) as much research is inconclusive and methodologically flawed, with small samples and limited follow-up research.

## **Reactive and Proactive Aggression**

There is conflicting research evidence on the link between CPV and aggression types in adolescents, whether violence is an impulsive emotional reaction or planned with intention to accomplish an ulterior goal. It has been suggested that reactive aggression acts as a coping mechanism response to past childhood traumas, creating a shift from survival coping to victim coping, which is motivated by desire to regain feelings of safety or control (Ford, Chapman, Mack & Pearson 2006). Alternatively, CPV may be reactive aggression against strict limit setting or authoritarian parenting styles in attempt to challenge authority (Pagani et al, 2009), but this association is only significant for father-directed CPV. Substantial evidence commonly suggests CMV is a form of proactive or instrumental aggression that occurs when parents lose control or have overly permissive parenting styles. In that adolescents use aggression to attain positive reinforcements of money or avoiding tasks (Calvete, Orue & Gamez-Guadix 2012). Moreover proactive aggression is associated with higher rates of CMV than reactive aggression due to common struggles between parent and child over control and power relations during adolescence, in attempts to gain power (Calvete et al, 2014). It is possible CPV has a proactive or reactive function depending on parenting style, with context of family dynamics and socio-environmental factors mediating expression of violence. However, only proactive aggression style has been identified as a risk factor for CPV in adolescents, not reactive style (Calvete, Orue & Gámez-Guadix, 2012).

## **Family Dynamics**

Family dynamics may mediate the expression of CPV, acting as protective or risk factors. Dysfunctional family interaction styles have been linked to increased incidence of CPV (Calvete et al, 2014). Problematic attachment history in childhood is associated with adolescent and adult offending. Healthy attachment styles promote healthy normal brain

development, whereas maladaptive attachments can inhibit successful development of cortex responsible for social and emotional behaviours increasing CPV risk as maladaptive responses are used (Mitchell & Beech, 2011). Impaired functioning in cortico-limbic brain regions responsible for social responses are associated with violence and instrumental aggression such as CMV (Blair, Peschardt, Budhani, Mitchell & Pine, 2006). Therefore dismissive attachment style relationships could be due to hypo-amygdala functioning, causing the emotional deficits seen in CPV offenders. Social difficulties are exacerbated by emotional neglect in dysfunctional families (Calvete et al, 2014).

In addition to maladaptive attachment styles, dysfunctional families with generalised patterns of negative relationships and interactions are linked to increased CPV risk (Paulson, Coombs & Landsverk, 1990). Quality of communication can act as a risk or protective factor for CPV as negative family communication styles are associated with adolescent aggression (Kratcoski 1984). Warmth and supportiveness of communication and parenting style appear to be critical factors in causing CPV, as parenting dynamics which lack warmth are correlated with development of narcissistic views and rejection schemas, which subsequently predict later CPV (Calvete, Orue & Gamez-Guadix, 2015). Narcissism schemas develop as a coping response to compensate for emotional deprivation by parents and when beliefs are challenged, aggressive response mechanisms are engaged.

CPV could also be caused by power struggles and role reversal between parent and child, where dysfunctional family dynamics result in adolescents gaining authority and power (Contreras & Cano 2015). In other cases CPV may result from parental inability to establish control or overly permissive parenting styles (Calvete et al 2014). However, contrasting evidence found low associations between the control aspect of parenting style and CPV, whereas quality of communication and support-responsiveness parenting distinguishes CPV perpetrators from other offenders (Contreras & Cano, 2014). This highlights bidirectional effects of family interactions and dynamics on CPV, as non-supportive families characterised by negative communication patterns are more likely to

cause children to develop emotional deficits and illicit aggressive responses towards parents. Increasing likelihood of negative interactions and creating a negative cycle, whereas optimal or adequate family functioning is likely to result in beneficial parenting styles with clear expectations and boundaries, effective communication, supervision and reinforcement of positive behaviours, acting as a protective factor reducing likelihood of CPV (Herrenkohl et al 2003).

Borderline and severely dysfunctional families are at higher risk for physical, verbal, psychological and emotional abuse, neglect and maltreatment of children, which increases risk of maladaptive development and later CPV in adolescence (Browne & Hamilton, 1998). Dysfunctional family dynamics are characterised by poor communication, poor support and low parent-child involvement. CPV perpetrators have more communication problems in family than other types of offenders (Contreras & Cano, 2014). Social learning and modelling theories suggest children are significantly more likely to adopt conflict behaviours and tactics used by their parents than by persons outside the family, suggesting dysfunctional families with aggressive interaction styles are a prominent risk factor for CPV (Browne & Hamilton 1998).

Findings can be used to increase awareness of CMV and its causes amongst families and adolescents. Acting as basis for further investigation to inform evidence based intervention practices and policy makers. For example targeting family interactions or preferred aggression type may be an effective method to improve family functioning and reduce violence, as working with both adolescents and their family has potential for increased success rates and maintenance of change.

## **Study Aims**

Primary aims:

- To explore the influence of aggression style and family functioning as predictors of CMV engagement during adolescence in the UK.

- To determine the proportion of variance in CMV accounted for by aggression and family functioning risk factors.

Secondary aim:

- To explore whether predictor variables differ across CMV behaviour subtypes.

Research Questions:

- Is there a relationship between CMV and the type of aggression displayed by adolescents?
- Is there a relationship between CMV and family functioning styles of adolescents?

## **Methodology**

### **Participants**

Participants included 102 individuals over 16 years of age, living in the UK. Respondents required internet access and literacy ability. Individuals were recruited through social media websites and academic participant finding forums. Responses that did not provide informed consent for all consent items, provided inattentive answers to control questions or were incomplete, were excluded from the data analysis (n = 86). 72.1% of participants were female, 25.6% were male and 2.4% listed gender as other or prefer

not to say. Participant age range was 16-64 years old, with a sample skew towards younger respondents as 66.3% were 25 or under. Intact families were the most common family structure, reported by 64% of participants. Other common family structures were lone mothers 16.3%, mother and step parent 10.5% and blended families with either mother or father, step parent and step siblings 11.7%. Participants came from varied educational backgrounds as 15.1% completed secondary school, 19.8% completed A levels, 40.7% completed undergraduate degrees, 20.9% completed postgraduate qualifications, 2.3% completed other qualifications and 1.2% had no qualifications. Most participants were of White ethnicity at 90.7%. Remaining participants reported East Asian, South Asian and mixed ethnicities.

## **Measures**

Data were collected using an online survey, which was created by using 3 existing adapted or developed validated self-report measures of CPV, aggression styles and family functioning. Retrospective questionnaires asked participants about their family interactions and aggressive behavioural experiences during adolescence. Participants' demographic information were obtained.

## **Outcome Measures**

### **Child-to-Mother Violence**

Participants responded to 22 items adapted from the Child to Mother Violence Scale (CMVS) and 16 items adapted from the Triggers of Behaviour Questionnaire (ToBQ) (Edenborough, Wilkes, Jackson & Mannix, 2011) to determine frequency of CPV towards the mother and whether single or multiple antecedent trigger events caused CMV behaviours. These scales were selected and adapted as the validated measures focus on aggressive CMV behaviours as well as the consequences and social contexts surrounding the behaviours. The two scales have demonstrated high reliability and internal

consistency, with test-retest intra-class correlation coefficient of 0.97 and high internal consistency ( $\alpha \geq 0.90$ ) (Edenborough et al, 2011). Whilst the adapted CMVS has not been validated, only small changes were made to create statements from the listed items and are unlikely to significantly alter the scales' validity or reliability. CMVS items included physical, psychological and emotional aggression and violence, financial exploitation, and intimidation, such as "*Have you ever shoved, pushed or grabbed your mother?*". Respondents rated how often they displayed described behaviours towards their mother on a scale ranging from 0 (never) to 3 (daily). This generated a Total CMV score ranging from 0-66, with a higher score indicating greater experience and frequency of CPV. Items can be categorised into discrete subtypes according to most common psychological intention of behaviour; verbal, emotional, financial and physical CMV (Wilcox & Pooley 2015). Participants were asked to state their age when any CMV behaviours first began. ToBQ items included emotional, mental health, communication and physiological factors, and adverse events. Participants indicated presence of triggers that preceded CMV behaviours they had disclosed, such as "*When we argue or disagree with each other*". This generated a Total Triggers for CMV score ranging from 0-16, with a higher score indicating greater number of preceding triggers and suggesting multiple reasons for CMV behaviour, whereas lower scores suggest CMV may be attributed to a single cause or a few linked causes.

## **Predictor Measures**

### **Aggression Style**

Aggressive behaviour was assessed using the Reactive-Proactive Questionnaire (RPQ) (Raine et al, 2006). Individuals rated how frequently they displayed 23 aggressive behavioural items during adolescence on a scale of 0 (never) to 2 (often). Items are split into reactive and proactive subscales according to the intention or motivation behind the described aggressive behaviour, to create subscale scores ranging from 0-24 and 0-22 respectively. Reactive items include hostile, defensive and impulsive aggressions, such



as *"How often have you gotten angry when frustrated?"*. Proactive items include organised aggressive behaviours for instrumental purpose or to achieve a goal separate to the aggression itself, such as *"How often have you hurt others to win a game?"*. Subscale scores can indicate a tendency towards one distinct aggression style or a combination of both styles. Total aggression scores are obtained ranging from 0-46, indicating amount of aggression expressed overall. The RPQ was selected as a reliable and valid measure which encapsulates a broad variety of frequent aggressive behaviours, whilst encouraging non-defensive responding. The total scale and two subscales have high internal reliability ( $\alpha \geq 0.83$ ) and construct validity, with significant correlations over .136 (Raine et al, 2006).

### **Family Functioning**

The Self-Report Family Inventory (SFI) (Beavers & Hampson, 1990) was used to measure family functioning, including family competence, conflict resolution, cohesion, leadership and expressiveness. Participants rate 36 items, such as *"We say what we think and feel"* on a scale from 1 (Fits my family very well) to 5 (Does not fit my family) according to their family dynamics during childhood. Scores range from 36-180 and can be classified into nine distinct family categories according to their family competence and style, from optimal functioning to severely dysfunctional families (Hamilton & Carr, 2016). Family competence reflects adaptability to cope effectively in stressful situations. Style is the family's preferred method of interactions, ranging from centripetal where satisfaction comes within the family to centrifugal where satisfaction comes from others outside the family. Optimal functioning families would experience a shift from centripetal to centrifugal style as children grow up. Higher scores indicate poorer family functioning. SFI is a valid and reliable measure of family dynamics as it has high construct validity (.40 to .93 correlations)(Hampson, Hulgus & Beavers, 1991), high internal consistency ( $\alpha = 0.84$  to  $0.93$ ) and good test-retest reliability (.70 correlation)(Hampson, Beavers & Hulgus, 1989).

## **Procedure**

A research project ethics review proposal was submitted to the Faculty of Medicine and Health Sciences the Division of Psychiatry and Applied Psychology at the University of Nottingham and favourable opinion was received (Ethics Reference number: 30-1705) as the study adheres to British Psychological Society ethical guidelines (The British Psychological Society, 2010). Ethical considerations of participant anonymity, confidentiality and psychological wellbeing were addressed, due to the sensitive nature of CPV issues, ensuring all respondents would not be identifiable and responses kept secure. Whilst no significant psychological harm was expected from the study, some questions such as those related to family dynamics could be upsetting. Therefore contact information of the researcher, supervisor and a number of support services were provided in the participant debrief should anyone experience distress. Due to the stigma associated with CPV the true purpose of the research was hidden from participants in order to prevent social desirability bias or defensive responding, however the deception was revealed in the participant debrief.

This study used a retrospective self-report design about participant experiences of CPV, aggression and family functioning during their adolescence. Participants accessed the online survey website link on Survey Gizmo, which directed them to Participant Information about the questionnaires and study background. Informed consent was obtained online. Participants then completed 5 survey sections: demographic information, adapted CMVS, ToBQ, RPQ and SFI. Responses took approximately 15 minutes. Upon completion, participants were directed to the debrief information page.

## **Data Analysis**

Raw data were scored to create generate total CMV scores, the four CMV subtype scores, total RPQ aggression scores, two RPQ aggression subscale scores and five SFI family

functioning subscale scores. SFI health/competence subscale scores were used to calculate equivalent Observational Competence Scale scores, both scores were used to categorise participants into family functioning style according to Beavers & Hampson's interpretation framework (1990). Reliability tests were conducted for the questionnaire scales.

The first set of analyses presented correlations between control, outcome and predictor variables. To examine CMV correlates in greater depth, four hierarchical linear regressions (CMV subtypes and aggression types) and four forced entry linear regressions (CMV subtypes and family functioning style) were conducted. For CMV and aggression analyses, proactive aggression scores were included in Block 1 and reactive aggression scores were included in Block 2 as previous research suggests proactive aggression is more likely to predict CMV than reactive aggression. For CMV and family functioning regressions the 9 categorical family functioning styles were transformed into 5 functioning level dummy variables, as the values assigned to each group did not directly represent equal units of change in functioning and the sample did not include participants in every family style but did have participants across every functioning level. Assumptions of multiple regressions were tested and met. Analyses were conducted using SPSS 23.0 and a probability level of .05 was used to establish statistical significance.

## **Results**

### **Frequency of CMV**

Table 1 presents a description of study variables. The means for total CMV and various CMV subtypes were towards the lower end of the scale. However 84.9% of participants reported engaging in some form of CMV in childhood, more specifically 55.8% admitted verbal CMV and 79.1% admitted emotional CMV; whereas only 19.8% admitted financial

CMV and 10.5% admitted physical CMV. The mean scores for total aggression, reactive and proactive aggression predictor variables were slightly lower than population means (Raine et al, 2006). For family functioning style as a dichotomous predictor variable, just over half of participants scored as optimal or adequate functioning (51.2%), with the rest scoring non-healthy styles (48.8%).

**Table 1** – Description of study variables (N= 86)

Variables	<i>M</i>	<i>SD</i>	Range
Age	27.22	9.77	48
Gender	1.78	0.52	3
Total CMV	3.41	2.96	15
Verbal CMV	1.00	1.11	5
Emotional CMV	1.94	1.57	6
Financial CMV	0.29	0.72	4
Physical CMV	0.17	0.58	3
Total number of Triggers	2.44	2.44	11
Total Aggression	6.83	5.00	30
Reactive Aggression	5.87	3.92	22
Proactive Aggression	0.95	1.46	8
Family Health/Competence	44.51	15.98	67
Family Conflict	25.24	9.81	36
Family Cohesion	13.58	4.10	19
Family Leadership	8.23	2.10	9
Family Expressiveness	11.23	5.42	19
Family Functioning Style	3.67	2.04	8

*M* - Mean; *SD* - Standard Deviation

### **Predictors of CMV**

Reliability tests of scales and bivariate correlations among control, predictor and outcome variables were computed prior to conducting regression analyses (Tables 2a & 2b). Cronbach's alphas for the adapted CMV, RPQ total aggression, RPQ reactive aggression, SFI family health-competence, conflict, cohesion and expressiveness were all over .70 indicating acceptable scale reliability (Cronbach, 1951). The RPQ proactive aggression subscale generated an alpha of .61, which may be cause for concern for its

reliability. SFI leadership subscale generated an alpha of only -.03 suggesting it is not a reliable measurement of the leadership facet of family functioning.

**Table 2a** – Bivariate correlations among control, outcome and predictor variables and Cronbach's alphas for CMV, RPQ and SFI scales (N = 86)

<b>Variables</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>
1. Age	-							
2. Gender	-.03	-						
3. Total CMV	-.04	-.03	<span style="border: 1px solid black; padding: 2px;">α=.72</span>					
4. Verbal CMV	-.13	.00	<b>.82**</b>	-				
5. Emotional CMV	.05	-.03	<b>.87**</b>	<b>.57**</b>	-			
6. Financial CMV	-.03	-.05	<b>.53**</b>	<b>.28**</b>	<b>.23*</b>	-		
7. Physical CMV	-.07	.01	<b>.56**</b>	<b>.35**</b>	<b>.32**</b>	<b>.27*</b>	-	
8. Number of CMV Triggers	<b>-.22*</b>	.12	<b>.46**</b>	<b>.49**</b>	<b>.46**</b>	.13	.02	-
9. Reactive Aggression	-.06	-.08	<b>.51**</b>	<b>.41**</b>	<b>.50**</b>	<b>.27*</b>	.15	<b>.38**</b>
10. Proactive Aggression	-.05	-.04	<b>.59**</b>	<b>.49**</b>	<b>.48**</b>	<b>.41**</b>	<b>.25*</b>	<b>.35**</b>
11. Total Aggression	-.06	-.08	<b>.57**</b>	<b>.46**</b>	<b>.53**</b>	<b>.33**</b>	.19	<b>.40**</b>
12. Family Health/Competence	-.20	-.02	<b>.51**</b>	<b>.38**</b>	<b>.49**</b>	<b>.27*</b>	.19	<b>.53**</b>
13. Family Conflict	<b>-.29**</b>	-.11	<b>.51**</b>	<b>.41**</b>	<b>.51**</b>	<b>.25*</b>	.13	<b>.59**</b>
14. Family Cohesion	<b>-.22*</b>	.04	<b>.37**</b>	<b>.25*</b>	<b>.35**</b>	<b>.28**</b>	.14	<b>.38**</b>
15. Family Leadership	<b>-.30**</b>	-.18	.08	.06	.00	<b>.21*</b>	.01	.06
16. Family Expressiveness	<b>-.21*</b>	-.12	<b>.51**</b>	<b>.44**</b>	<b>.44**</b>	<b>.29**</b>	.19	<b>.47**</b>
17. Family Functioning Style	-.15	-.04	<b>.43**</b>	<b>.33**</b>	<b>.43**</b>	.21	.15	<b>.47**</b>

\* $p < .05$ , \*\* $p < .01$

As seen in Tables 2a and 2b, there were a number of statistically significant associations between outcome and predictor variables, as well as amongst predictor variables. The majority of correlations were in the expected direction, with strong positive associations between CMV and total aggression, CMV and family functioning style, and total aggression and family functioning. Contrary to expectation, physical CMV only had significant positive correlation with proactive aggression.

**Table 2b** - Bivariate correlations among control, outcome and predictor variables and Cronbach's alphas for CMV, RPQ and SFI scales (N = 86)

Variables	9	10	11	12	13	14	15	16	17
9. Reactive Aggression	$\alpha=.85$								
10. Proactive Aggression	<b>.66**</b>	$\alpha=.61$							
11. Total Aggression	<b>.98**</b>	<b>.81**</b>	$\alpha=.86$						
12. Family Health/Competence	<b>.40**</b>	<b>.30**</b>	<b>.40**</b>	$\alpha=.94$					
13. Family Conflict	<b>.44**</b>	<b>.43**</b>	<b>.47**</b>	<b>.84**</b>	$\alpha=.90$				
14. Family Cohesion	<b>.28**</b>	.16	<b>.26*</b>	<b>.86**</b>	<b>.63**</b>	$\alpha=.78$			
15. Family Leadership	<b>.28**</b>	.10	<b>.25*</b>	<b>.22*</b>	.15	.20	$\alpha=-.03$		
16. Family Expressiveness	<b>.38**</b>	<b>.30**</b>	<b>.38**</b>	<b>.85**</b>	<b>.75**</b>	<b>.64**</b>	.18	$\alpha=.90$	
17. Family Functioning Style	<b>.33**</b>	<b>.30**</b>	<b>.35**</b>	<b>.94**</b>	<b>.75**</b>	<b>.81**</b>	<b>.22*</b>	<b>.77**</b>	-

\* $p<.05$ , \*\* $p<.01$

## Aggression Types

Relationships between CMV subtypes and aggression types were explored further using four hierarchical multiple regressions; with verbal CMV, emotional CMV, financial CMV, physical CMV and reactive and proactive aggression. Assumptions of multiple regressions were met as data were independent, showed homoscedasticity of errors and multicollinearity (Field, 2013) according to Durbin-Watson figures, normal probability plots and variance inflation factor figures in regression outputs. Age and gender were not controlled for in the models as no strong associations with CMV and aggression were reported in Table 2a. No outliers were identified from standardized residual histograms of each regression.

As indicated by the final model in Table 3 ( $F(2, 83)= 13.86, p= .000$ ), individuals who scored higher for both proactive and reactive aggression engaged in significantly more verbal CMV during adolescence. Moreover high scoring individuals in proactive and reactive aggression also engaged in significantly more emotional CMV in adolescence, as indicated by the final model in Table 4 ( $F(2, 83)= 16.95, p= .000$ ).

**Table 3** – Linear model of aggression style predictors of verbal CMV, with 95% confidence intervals reported in parentheses ( $N = 86$ )

		<i>b</i>	SE	$\beta$	<i>p</i>
Model 1					
	Constant	0.65 (0.40, 0.90)	0.13		.000
	Proactive Aggression	0.37 (0.23, 0.51)	0.07	.49	.000
Model 2					
	Constant	0.47 (0.08, 0.86)	0.20		.018
	Proactive Aggression	0.29 (0.10, 0.48)	0.10	.39	.003
	Reactive Aggression	0.04 (-0.03, 0.11)	0.04	.15	.234

Note.  $R^2 = .24$  for Step 1;  $\Delta R^2 = .01$  for Step 2  
*b* – Unstandardized Coefficient; SE – Standard Error;  $\beta$  – Standardized Beta Coefficient

**Table 4** – Linear model of aggression style predictors of emotional CMV, with 95% confidence intervals reported in parentheses ( $N = 86$ )

		<i>b</i>	SE	$\beta$	<i>p</i>
Model 1					
	Constant	1.45 (1.09, 1.80)	0.18		.000
	Proactive Aggression	0.52 (0.32, 0.73)	0.10	.48	.000
Model 2					
	Constant	0.92 (0.38, 1.45)	0.27		.001
	Proactive Aggression	0.30 (0.03, 0.56)	0.13	.28	.027
	Reactive Aggression	0.13 (0.03, 0.23)	0.05	.31	.013

Note.  $R^2 = .23$  for Step 1;  $\Delta R^2 = .06$  for Step 2  
*b* – Unstandardized Coefficient; SE – Standard Error;  $\beta$  – Standardized Beta Coefficient

Those with high scores in proactive aggression engaged in significantly more financial CMV during adolescence, as shown by the first model in Table 5 ( $F(1, 84) = 16.54, p = .000$ ) whilst reactive aggression scores did not predict further increase in financial CMV ( $\Delta R^2 = .00$ ). Finally, individuals scoring high for proactive aggression engaged in significantly more physical CMV in childhood as indicated by the first model in Table 6 ( $F(1, 84) = 5.43, p = .022$ ), but reactive aggression scores did not predict physical CMV engagement ( $\Delta R^2 = .00$ ).

**Table 5** – Linear model of aggression style predictors of financial CMV, with 95% confidence intervals reported in parentheses ( $N = 86$ )

		<i>B</i>	SE	$\beta$	<i>p</i>
<hr/>					
Model					
1	Constant	0.10 (-0.07, 0.27)	0.09		.238
	Proactive Aggression	0.20 (0.10, 0.30)	0.05	.41	.000
<hr/>					
Model					
2	Constant	0.11 (-0.16, 0.37)	0.13		.432
	Proactive Aggression	0.20 (0.07, 0.33)	0.07	.41	.003
	Reactive Aggression	0.00 (-0.05, 0.05)	0.02	-0.01	.967
<hr/>					

*Note.*  $R^2 = .16$  for Step 1;  $\Delta R^2 = .00$  for Step 2  
*b* – Unstandardized Coefficient; SE – Standard Error;  $\beta$  – Standardized Beta Coefficient



**Table 6** – Linear model of aggression style predictors of physical CMV, with 95% confidence intervals reported in parentheses ( $N = 86$ )

		<i>b</i>	SE	$\beta$	<i>p</i>
Model 1					
	Constant	0.08 (-0.06, 0.23)	0.07		.265
	Proactive Aggression	0.10 (0.01, 0.18)	0.04	.25	.022
Model 2					
	Constant	0.10 (-0.13, 0.32)	0.11		.406
	Proactive Aggression	0.10 (-0.01, 0.21)	0.06	.26	.069
	Reactive Aggression	0.00 (-0.05, 0.4)	0.02	-0.2	.878

*Note.*  $R^2 = .06$  for Step 1;  $\Delta R^2 = .00$  for Step 2  
*b* – Unstandardized Coefficient; SE – Standard Error;  $\beta$  – Standardized Beta Coefficient

Regression models indicate that 25.0% and 29.0% of variance in verbal and emotional CMV frequency are explained by proactive and reactive aggression predictors. Estimated standardised effect sizes of proactive and reactive aggression on verbal and emotional CMV in Tables 3 and 4 are small to medium (Cohen, 1992). 16.4% of financial and 6.1% of physical CMV outcome variance is explained by proactive aggression predictor factor in regression models and report small to medium effect sizes in Tables 5 and 6.

## Family Functioning

Relationships between CMV subtypes and family functioning during adolescence were explored in detail using four forced entry multiple regressions; with verbal, emotional, financial and physical CMV and optimal, adequate, midrange, borderline and severely dysfunctional dummy variables of family functioning level. Assumptions of multiple regressions were met as data were independent, showed homoscedasticity of errors and multicollinearity according to Durbin-Watson figures, normal probability plots and

variance inflation factor figures in regression outputs (Field, 2013). Age and gender variables were not controlled due to no significant correlation with family functioning style reported in Table 2a. Standardised residual histograms of each regression did not identify any outliers.

Individuals with more dysfunctional family styles engaged in significantly more verbal CMV, as indicated by Table 7 ( $F(4, 81) = 2.75, p = .034$ ) and emotional CMV, as shown by Table 8 ( $F(4, 81) = 8.15, p = .000$ ) during childhood. In particular, individuals from borderline and severely dysfunctional families showed significant increase in reported emotional CMV.

**Table 7** – Linear model of family functioning level predictors of verbal CMV, with 95% confidence intervals reported in parentheses ( $N = 86$ )

	<i>b</i>	SE	B	<i>p</i>
Model 1				
Constant	0.29 (-0.51, 1.09)	0.40		.479
Adequate	0.50 (-0.37, 1.37)	0.44	.22	.259
Midrange	0.83 (-0.07, 1.72)	0.45	.35	.071
Borderline	1.36 (0.38, 2.34)	0.49	.46	.007
Severely Dysfunctional	1.71 (-0.55, 3.98)	1.14	.17	.135

Note.  $R^2 = .12$  for Model 1

*b* – Unstandardized Coefficient; SE – Standard Error;  $\beta$  – Standardized Beta Coefficient

**Table 8** – Linear model of family functioning level predictors of emotional CMV, with 95% confidence intervals reported in parentheses (N = 86)

	<i>b</i>	SE	B	<i>p</i>
Model 1				
Constant	0.71 (-0.31, 1.74)	0.52		.169
Adequate	0.88 (-0.24, 2.00)	0.56	.28	.121
Midrange	1.06 (-0.09, 2.21)	0.58	.32	.069
Borderline	2.93 (1.67, 4.18)	0.63	.69	.000
Severely Dysfunctional	3.29 (0.39, 6.18)	1.46	.23	.027

Note.  $R^2 = .29$  for Model 1

*b* – Unstandardized Coefficient; SE – Standard Error;  $\beta$  – Standardized Beta Coefficient

As indicated in Table 9 ( $F(4, 81) = 2.00, p = .102$ ) family functioning did not affect frequency of financial CMV engagement in adolescence. Nor did family functioning levels predict individuals' use of physical CMV during adolescence, as shown in Table 10 ( $F(4, 81) = 0.69, p = .601$ ).

**Table 9** – Forced entry linear regression for family functioning level predictors of financial CMV, with 95% confidence intervals reported in parentheses (N = 86)

	<i>b</i>	SE	B	<i>P</i>
Model 1				
Constant	0.00 (-0.53, 0.53)	0.27		1.000
Adequate	0.22 (-0.36, 0.79)	0.29	.15	.456
Midrange	0.22 (-0.37, 0.81)	0.30	.15	.457
Borderline	0.71 (0.07, 1.36)	0.32	.37	.031
Severely Dysfunctional	1.00 (-0.49, 2.49)	0.75	.15	.186

Note.  $R^2 = .09$

*b* – Unstandardized Coefficient; SE – Standard Error;  $\beta$  – Standardized Beta Coefficient

**Table 10** – Forced entry linear regression for family functioning level predictors of physical CMV, with 95% confidence intervals reported in parentheses (N = 86)

	<i>b</i>	SE	$\beta$	<i>p</i>
Model 1				
Constant	0.00 (-0.44, 0.44)	0.22		1.000
Adequate	0.11 (-0.37, 0.59)	0.24	.09	.654
Midrange	0.22 (-0.27, 0.71)	0.25	.18	.371
Borderline	0.36 (-0.18, 0.89)	0.27	.23	.189
Severely Dysfunctional	0.00 (-1.24, 1.24)	0.62	.00	1.000

Note.  $R^2 = .03$

*b* – Unstandardized Coefficient; SE – Standard Error;  $\beta$  – Standardized Beta Coefficient

Regression models indicate that level of family functioning as a predictor accounts for 11.9% of variance in verbal CMV frequency and 28.7% of variance in emotional CMV frequency. Medium to large standardised effect sizes for borderline and small effect sizes for severely dysfunctional levels are reported in Tables 7 and 8 (Cohen, 1992). Models show that family functioning does not significantly predict financial or physical CMV.

## Discussion

### Findings

This study built on existing research using a UK sample and retrospective design, considering influence of family dynamics and aggression styles on various CMV subtypes. Over 84% of participants reported using some form of CMV during childhood, which is in line with prevalence findings of previous CPV studies (Condry, 2016). Findings for CMV subtype frequencies are also in line with previous research, with verbal and emotional CMV most frequently reported and financial and physical CMV less common (Edenborough, 2007). Varied strength of associations between aggression styles, family

functioning and CMV subtypes may indicate that various subtypes have different predictor factors and may be used to serve distinct purposes.

Verbal CMV was predicted by both proactive and reactive aggression styles, explaining 25% of engagement variance within the sample. However, although inclusion of reactive aggression to the regression model improved prediction, the improvement was non-significant, suggesting that proactive aggression may be the best aggression predictor for verbal CMV and is consistent with previous research (Calvete et al, 2014; Calvete, Orue, Gamez-Guadix, 2012). Increased verbal CMV was predicted by increased family dysfunction, as the family functioning regression model explained 11.9% of engagement variance. This supports previous research (Contreras & Cano, 2014; Herrenkohl et al, 2003), indicating that family dysfunction, specifically borderline and severely dysfunctional level, is a risk factor for verbal CMV. As this subtype usually has less severe effects and includes a wide range of behaviours, it may serve a variety of purposes, such as coping mechanisms for stress or undermining parental authority (Calvete, Orue & Gamez-Guadix, 2015; Pagani et al 2009).

Emotional CMV occurred most frequently, as over 79% of participants reported using this subtype. Use was predicted by both proactive and reactive aggression styles, with the final regression model explaining 29% of engagement variance in the sample. Prediction was significantly improved by including both aggression styles which suggests that high aggression levels in either style are a risk factor for emotional CMV and is supported by previous research (Calvete et al 2014; Ford, Chapman, Mack & Pearson 2006). Emotional CMV was also predicted by family functioning, which explained 28.7% of engagement variance, supporting previous research findings that family dysfunction is a risk factor for this subtype (Paulson, Coombs & Landsverk, 1990). Emotional CMV encompasses a broad range of behaviours, which may explain why both aggression styles and family dysfunction are predictive risk factors for abuse as there are many psychological intentions which may drive use of emotional abuse, from gaining control,

narcissistic schemas to bidirectional learned patterns of negative communication (Browne & Hamilton, 1998; Calvete, Orue & Gamez-Guadix, 2015).

Neuropsychosocial theories would explain the relationships between verbal and emotional CMV, aggression styles and family functioning through interactions between risk factors. For instance they might suggest that a biological predisposition to increased levels of aggression and violence, such as low MAOA expression genes (Kim-Cohen et al, 2006; Widom & Brzustowicz, 2006) are moderated by family functioning (Raine, 2002). Therefore in borderline and severely dysfunctional families where adolescents have high aggression, poor family functioning could act as a moderator, triggering increased verbal and emotional CMV during stressful events.

Financial CMV was predicted only by proactive aggression, which explained 16.4% of variance in engagement, whereas reactive aggression and family functioning did not predict use. Findings indicate that high proactive aggression is a risk factor for financial CMV and are in line with previous research as expected (Calvete et al, 2014; Calvete, Orue & Gamez-Guadix, 2012), as such abuse has clear purpose of personal gain and positive reinforcement, whether financial incentive, removing control from parent or causing emotional distress to parent.

Prevalence of physical CMV was just over 10%, however low detection levels were expected according to previous studies and due to fewer male respondents, as physical CMV is a gendered phenomenon (Edenborough, 2007). This initial figure does not allude to the temporal frequency of physical abuse, as all scores were below 4 on a scale up to 18, suggesting that whilst physical CMV was reported by some individuals, it occurred infrequently. Proactive aggression predicted use of physical CMV, accounting for 6.1% of sample variance, whereas reactive aggression and family functioning did not. It is not surprising that low levels of physical abuse were detected and engagement was only predicted by proactive aggression, as physical abuse is arguably the most extreme form of abuse, usually following on from extended periods of use of other CMV subtypes

(Contreras & Cano, 2016b). Therefore it could be inferred that physical violence has an alternative purpose to physical harm, instead being used strategically to achieve control, power and cause emotional harm to parents (Calvete et al, 2014).

Social learning theory (Bandura, 1978) can explain aggression styles as risk factors for all CMV forms and family functioning as a risk factor for verbal and emotional CMV, as perpetrators may observe external role model or family aggression and violence, subsequently learning abusive behaviours as acceptable conflict resolution strategies (Ibabe, Jaureguizar & Bentler 2013; Kennair & Mellor 2007). This suggests bidirectionality of family violence, as patterns of negative family interactions increase chance of observing conflict where strategies are learned; adolescents with higher aggression are more likely to use CMV, which increases family dysfunction, possibly causing parents to behave in abuse triggering ways (Contreras & Cano, 2016a). Social learning of aggressive CMV behaviours are reinforced both positively and negatively, through gaining control, receiving financial rewards and avoiding unpleasant tasks.

CMV can also be explained by stress theory (Farrington, 1986) as an inability to cope with stress in adaptive manner. Higher levels of reactive or proactive aggression and poorer family functioning will decrease an individual's resilience against stressful events, increasing the likelihood that maladaptive coping strategies such as parent abuse will be used. However adolescents most vulnerable to using CMV, those with high aggression or dysfunctional families, experience greater stress due to their heightened anger and poor family interactions.

## **Risk and Protective Factors**

The present study's findings show significant relationships between CMV, aggression styles and family functioning, with specific predictive risk factors varying according to CMV subtype. However these predictors do not account for all variance in CMV use, suggesting that there must be other risk and protective factors which influence

predisposition towards parent abuse and could affect the relationships of CMV with aggression style and family functioning predictor factors.



## **Mental Health**

Evidence shows that mental health problems are a risk factor for adolescent CPV (Charles, 1986), as previous research reports depression in up to 20% of CPV perpetrators (Kennedy et al, 2010) with low happiness, self-esteem and self-worth (Paulson, Coombs & Landsverk, 1990) also strongly correlated with CMV. It has been suggested that poor mental health causes adolescents to feel isolated from family relationships, creating greater tensions and reducing effective communication (Kennedy et al, 2010) which is clearly associated with family functioning as a predictor variable for CMV.

## **Substance Misuse**

Substance misuse has been repeatedly shown to predict risk of CPV, with particular emphasis on the frequent abuse of cannabis and alcohol amongst perpetrators (Calvete et al, 2014; Calvete, Orue & Gamez-Guadix, 2012; Kennair & Mellor, 2007). This risk factor has a clear link to CMV, as adolescents with an addiction may resort to financial abuse for funding. Substance misuse is highly likely to interact with aggression predictor factors, as disinhibition resulting from intoxication reduces emotional regulation, lowering the threshold for reactive and proactive aggression, increasing probability of conflicts and acquisitive abuse (Contreras & Cano, 2015). Family functioning risk factors are highly likely to interact with substance misuse, as addiction decreases quality of communication and heightens conflict with parents over substance use and other issues (Kennair & Mellor, 2007). However substance use is common amongst offending adolescents and does not differentiate CPV perpetrators (Contreras & Cano 2015).

## **Exposure to Violence**

Exposure to violence has been shown to have a direct predictive effect on CPV across a range of environments including, witnessing intrafamilial or domestic violence (Browne & Hamilton, 1998; Calvete, Orue & Gamez-Guadix, 2015; Cornell & Gelles, 1982; Ibabe, Jaureguizar & Bentler, 2013), experiencing prior parent-to-child violence (Ibabe,

Jaureguizar & Bentler, 2013; Margolin & Baucom, 2014), affiliation with gangs or gang members (Kennedy et al, 2010) and exposure to violence in the community, school or media (Contreras & Cano, 2016a). Exposure to violence is likely to interact with aggression and family functioning predictors of CMV as violence within the family home indicates poor functioning and social learning of observed maladaptive aggressive behaviours could lead to later CMV.

### **Childhood Trauma and Adverse Events**

Traumatic childhood events such as abuse (Browne & Hamilton, 1998; Cornell & Gelles, 1982) and experiencing greater psychological aggression and physical punishment in childhood increase risk of CPV during adolescence (Lyons, Bell, Frechette & Romano 2015). Trauma risk factors could be associated to family functioning as previous traumas will impact family dynamics, interactions and attachment styles, especially if intrafamilial abuse occurred or individuals experience lack of protection and safety from parents (Kennair & Mellor, 2007).

## **Parenting Style**

Overly permissive or strict parenting styles are associated with increased CPV (Cottrell & Monk 2004) as children attempt to gain control and power from their parents. It is possible cognitive schemas resulting from parenting styles mediate aggression and will impact upon family dynamics and functioning (Calvete, Orue & Gamez-Guadix, 2015).

## **Family Relationships**

Family functioning as a risk factor for CMV interacts with other relationship variables, as individuals' perception of self-value to their family is a strong predictor for CPV even after other variables controlled and is mediated by self-esteem and attitudes towards violence (Elliot, Cunningham, Colangelo & Gelles, 2011). Adolescents perceived parental relationships also predict CPV, as those with caring and supportive relationships are less likely to use verbal CPV even when disagreement and punishment occurs (Lyons et al, 2015). This indicates family functioning is not a distinct variable, as there are many other contributing influential factors to family dynamics.

Above described risk and protective factors may affect individuals' aggression styles and family functioning. Interpretation and generalisation of results should be tentative as CMV is highly unlikely to be caused by predictive factors investigated in this study alone. Research suggests that as few as one protective factor against CPV, such as high quality family communication or responsive supportive parenting, significantly reduces CPV risk, even when exposed to other risk factors (Herrenkohl et al, 2003).

## **Implications for Prevention Policies and Family Interventions**

Current interventions for CPV can be limited, difficult to access and vary across regions. Parenting training programmes are most commonly available, focusing on development of positive parenting styles and improving family functioning to reduce risk through showing warmth, support and family adaptability to stress or challenges (Calvete et al

2014; Kennair & Mellor 2007). Family counselling is less a commonly available and more expensive intervention, which provides management techniques for CPV behaviours whilst conducting family or individual therapy attempting to rebalance of parental power and strengthen supportive relationships. (Wilcox et al, 2015). Moderate intensity CBT informed anger management is an effective and more easily accessible intervention targeting aggression style CMV risk factors, reducing risk of violence by recognising and replacing dysfunctional schemas with anger-inhibiting cognitions (Hemwood, Chou & Browne, 2015).

Implications for preventative practice for CMV focus on multidisciplinary collaborative practice (MDT) between clinician-researchers, mental health practitioners and legal professionals in order to target children vulnerable to CPV, as proactive aggression and family dysfunction risk factors can be identified across various professional disciplines (O'Hara, Duchscher, Beck & Lawrence, 2017). Implementing restorative approach interventions, such as the Step Up Programme or Break4Change Programme (Miles & Condry, 2015), would reduce stigma and shame surrounding CPV, as non-punitive outcomes are more supportive of perpetrators and families. Focusing on developing respectful family relationships could increase CPV reporting and intervention-seeking, leading to fewer long term negative psychological effects (Kirklees Council, 2014).

CMV interventions should be tailored to individuals, considering CMV subtypes used, relevant aggressions style, family functioning and other risk factors in order to inform therapies delivered (Calvete, Orue & Gamez-Guadix, 2015). Adolescents committing physical or financial CMV would not benefit from family-based interventions, but therapy targeting aggression would be appropriate. Individuals using emotional and verbal CMV should respond best to both aggression-reducing therapies and interventions improving family functioning. Quality of family functioning should inform levels of support needed, as midrange and borderline families may need simple psychoeducation on CMV effects and aggression or skills sessions to improve communication quality; whereas severely dysfunctional families will require more intensive group interventions on emotional

regulation, coping mechanisms and interactions where the therapist takes more power over the sessions to act as a mediator for the family (Beavers & Hampson, 2000).

Targeted secondary and tertiary CPV prevention services for families that have been identified as at risk or previously experienced CPV difficulties use MDT delivered treatments for relevant risk factors (Browne, 2014) such as family functioning, through Early Prevention Programmes teaching healthy family functioning skills, parental education on recognising child's needs and anger management skills (Calvete, Orue & Gamez-Guadix, 2015).

Long term efficacy of CMV interventions improves with increased session attendance and concrete goal-setting (Beavers & Hampson, 2000). Evaluated, evidence-based interventions specific to CPV risk factors are more effective than generic anger-management-based family interventions (Kennair & Mellor, 2007).

Government funding budget cuts pose risks to availability of integrative CPV preventative services. Decreased provision could have long term impact, increasing prevalence of CPV and violent schema development, leading to further offending within wider society in adulthood.

## **Limitations and Future Research**

The current study has several limitations. Firstly the final sample size for valid responses was small and under-powered, as under the required 100 participants calculated by G\*Power were included in the data analysis. This means subtle effects between CMV and predictive factors were less likely to be detected or false detection of no interaction effects.

Secondly there could be sample bias as social media and academic forum recruitment methods attracted younger, well-educated participants as sample was skewed towards under 25's and females. The data will not be representative of all socioeconomic backgrounds and effects cannot be generalised to individuals with different backgrounds.

Lack of clear wording of questionnaire items with regard to whether items referred to childhood or current experiences, could have caused invalid participant responding. This would effect interpretation of results, as reported participant CMV behaviours, aggression styles and family functioning may not be referring to the same childhood period. However concerns are reduced, as the sample was heavily skewed to under 25's whose reported risk factors are more likely to accurately reflect childhood experiences.

Finally, participant responses may be socially desirable and dishonest due to the sensitive nature of CMV and family dynamics issues. Participants' memories CMV, aggression and family dynamics may have deteriorated or positively distorted over time, generating less accurate responses due to retrospective study design.

Future research could use longitudinal design to explore the interactions between CMV, aggression styles and family functioning. Neuropsychological methods could investigate whether family functioning style effects development of proactive aggression style as a conflict solving response and behavioural processes of CMV engagement. Family functioning may act as a moderator variable protecting against or increasing risk of CMV engagement in individuals with high proactive aggression, extent of protection against risk factors provided at each level of family functioning could be explored. Further research could assess efficacy of CPV interventions.

## **Conclusion**

Study findings identified proactive and reactive aggression styles and dysfunctional families as risk factors that are associated with CMV. Verbal and emotional CMV were predicted by high proactive and reactive aggression and lower family functioning, whereas financial and physical CMV were predicted by high proactive aggression only. Implications for preventative policies and interventions include multidisciplinary collaborative practice, attitude shifts towards family rehabilitation and tailored therapies relevant to individual CMV cases and risk factors.

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## **Executive Summary**

This executive summary of "Exploring the relationships between child-to-mother violence, aggression styles and family dynamics" is intended for members of the general public. The purpose is to increase awareness of child-to-mother violence (CMV) issues and educate adolescents and families on interactions between CMV and possible risk or protective factors.

## **Background & Rationale for Study**

### **CMV**

Child-to-parent violence (CPV) is a global issue, affecting all cultures. It includes any harmful verbal, emotional, financial or physical behaviour by children intended to gain power or control over a parent. CPV is a very common problem affecting at least 1 in 10 families (Wilcox et al, 2015), yet remains stigmatised and therefore under reported due to shame, fear of blame and parental criticism. CPV behaviours are associated with isolation from friends and fewer opportunities for adequate social skills development, which increases future risk of violence against partners or members of society in adulthood.

The majority of parent abuse victims are mothers, with research reporting 77% of CPV against mothers and peak CMV age of 14 – 17 years old (Condry, 2016). CMV as a conflict resolution strategy can be learned from observing violence within or outside the home or modelled after parental violence. CMV may also be triggered by stressful family periods or events.

### **Aggression Styles**

Aggression and violence can be either a reactive response to anger or other emotions, or a proactive response whereby the aggression accomplishes an alternative goal. Research suggests that reactive aggression leads to CMV as a coping mechanism for previous childhood trauma or in response to very strict or very lax parenting styles, in order to give the child a sense of control (Pagani et al, 2009). Whereas evidence indicates that

proactive aggression causes CMV to be used in order to avoid unpleasant tasks or gain desired rewards and reduce parental confidence and authority (Calvete et al, 2014).

### **Family Functioning**

There is a wealth of evidence indicating that dysfunctional families with generalised negative interaction cycles are at increased CMV risk (Calvete, Orue & Gamez-Guadix, 2015). It is theorised that unhealthy family functioning styles lead to CMV, due to low quality communication and family inability to respond flexibly to challenges, which cause adolescents to develop maladaptive CMV behaviours as conflict solving strategies. Overly strict or permissive parenting style also increases risk of CMV as children may attempt to remove power and control from their parents (Calvete et al, 2014).

### **Research Aims**

- To explore the influence of aggression style and family functioning on CMV engagement during adolescence in the UK.
- To determine the degree to which aggression and family functioning risk factors can predict CMV use.
- To explore whether different risk factors predict the various CMV behaviour subtypes.

### **Methods**

A brief online retrospective self-report survey was completed by 86 UK participants to assess CMV use, aggression styles and family functioning.

Survey sections included:

- Demographic Information

- Adapted Child to Mother Violence Scale
- Triggers of Behaviour Questionnaire
- Reactive-Proactive Questionnaire
- Self-Report Family Inventory

### **Data Analysis**

Raw data were collated, scored and interpreted to generate the following scores for each participant; total CMV score, verbal CMV score, emotional CMV score, financial CMV score, physical CMV score, total number of CMV triggers score, total aggression score, total proactive aggression score, total reactive aggression score and family functioning style.

Correlations between CMV outcome and aggression style and family functioning predictor variables were calculated, which suggested significant relationships. These relationships were investigated further using regression analyses to determine strength of relationship effects.

### **Key Findings**

- Verbal CMV reported by 55.8% of participants.
- Emotional CMV reported by 79.1% of participants.
- Financial CMV reported by 19.8% of participants.
- Physical CMV reported by 10.5% of participants.
  
- Verbal CMV and emotional CMV were predicted by high proactive and reactive aggression and low levels of family functioning.
- Financial CMV and physical CMV were only predicted by high proactive aggression. Reactive aggression and family functioning did not predict use of these CMV subtypes.

## **Implications**

Verbal and emotional CMV were the most common forms of parent abuse and are likely to have greater negative psychological harm effects for families as opposed to physical harm. Therefore families require support services providing treatment for psychological effects in order to reduce aggression expression and improve family functioning. Tailored interventions and therapy specific to individual CMV cases, according to relevant risk factors and CMV subtype will be most effective at reducing CMV. Anger management based CBT could be used to improve emotional regulation and reduce aggression levels. Family therapy and parental training programmes would educate families about positive parenting styles and supportive-responsive communication skills. This would improve family functioning, as families would develop flexible interaction styles which adapt according to challenges and stressful events (Calvete et al, 2014).

## **Conclusion**

Proactive and reactive aggression styles and dysfunctional families were identified as risk factors that are associated with CMV. Verbal and emotional CMV were predicted by high proactive and reactive aggression and lower family functioning, whereas financial and physical CMV were predicted by high proactive aggression only. Implications for preventative policies and interventions include multidisciplinary collaborative practice, attitude shifts towards family rehabilitation and tailored therapies relevant to individual CMV cases and risk factors.

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## Exploring the relationship between child-to-mother violence, types of aggression and family dynamics

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## Rationale & Aims

- Child-to-mother violence (CMV) is a highly stigmatised issue yet it affects as many as 1 in 10 families
- Reactive and proactive aggression styles and poor family dynamics are associated with increased CMV as children attempt to gain control and power from parents, within a context of negative interaction cycles
- Aims of the study were to explore the influence of aggression style and family functioning as predictors of CMV engagement during adolescence in the UK

## Methods

- Online retrospective self-report questionnaires
  - Demographics
  - Adapted Child to Mother Violence Scale
  - Triggers of Behaviour Questionnaire
  - Reactive-Proactive Questionnaire
  - Self-Report Family Inventory
- Multiple regressions
  - Verbal CMV & proactive and reactive aggression
  - Emotional CMV & proactive and reactive aggression
  - Financial CMV & proactive and reactive aggression
  - Physical CMV & proactive and reactive aggression
  - Verbal CMV & family functioning
  - Emotional CMV & family functioning
  - Financial CMV & family functioning
  - Physical CMV & family functioning

## Key Findings

- High frequency of verbal and emotional CMV
- Low frequency of financial and physical CMV
- Verbal CMV is predicted by proactive and reactive aggression & family dysfunction
- Emotional CMV is predicted by proactive and reactive aggression & family dysfunction
- Financial CMV is predicted by proactive aggression
- Physical CMV is predicted by proactive aggression

## Implications & Future Research

- High aggression styles, particularly proactive, and poor family functioning are risk factors for CMV.
- Preventative policies and interventions should use multidisciplinary practice to deliver tailored interventions, targeting risk factors for the specific type of CMV.
- Future research could explore family functioning as a moderator variable for aggression expression resulting in CMV.
- Longitudinal design to determine degree of protection or risk for CMV associated with each level of family functioning.

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## **Reflective Report**

The reflective style I have chosen to use is Gibbs' model of reflection (1988). The model aids reflective writing by considering different stages of an event or process. The model stages are described below:

- Description: What happened?
- Feelings: What were you thinking and feeling?
- Evaluation: What was good and bad about the experience?
- Analysis: What sense can you make of the situation?
- Conclusion: What else could you have done?
- Action Plan: If it arose again, what would you do?

### **Research Activities**

#### *Conceptualisation:*

In order to conceptualise my research project, I considered what my psychological areas of interest were in order to direct my background reading. My previous work experience with Youth Offending Teams has furthered my enthusiasm and interest in the effects of family dynamics upon offending. This led me to research child-to-parent violence (CPV); eventually deciding to investigate risk factors of CPV for my Masters Forensic Research Project. I enjoyed the conceptualisation process as I was given the freedom to select a research area of interest, and consider what feasible research I could conduct that would provide new findings to the area. However, this process took much longer than expected and in the future I would begin conceptualisation earlier, in order to ensure



adequate time to consider what specific research avenues would be possible to explore.

*Preparation:*

I used my background reading to consider which psychological measures might be appropriate to assess chosen CMV risk factors in participants. I completed a project proposal to assist with research design and utilised my background knowledge on the area. One of my strengths within this process was that I researched the reliability and validity of risk factor measurement questionnaires prior to selection to ensure I was using high quality assessment tools. In addition I considered whether the measurement was suitable for the chosen sample population and rejected an early possible aggression measurement tool as the wording was too academic for use with the general public. This analysis process helped to ensure I would collect reliable, valid and accurate results. I will use this same stringent process for research design in the future.

*Ethical Approval:*

My ethics application was submitted on 10/05/2017 following the completion of my project proposal. This made me feel relieved to be able to soon start the process of my data collection, however, it soon became evident that my approval (or any amendments necessary) may be delayed. I tried not to despair during this time and maintained motivation to complete the research process, however, the time constraints with my

original deadline made this time anxious for me. A weakness during this time was not feeling sure enough in my research methods altering, that I did not want to begin too much of my write up premature of an approved proposal. I did however, add to my initial reading and began to roughly draft my Research Paper Introduction. In the future, I would certainly aim to work towards all deadlines, whether suggested or not. Although this was not the reason for my ethical approval delay, I would hope that by completing my proposal and submitting an ethics application sooner, that delays would be less stressful as the original research timeline allowed for this. I received my ethics approval on the 7th of June 2017 and looked forward to immediately commencing with my data collection.

#### *Data Collection and Analysis:*

My data collection process began in quite a straightforward manner. I already had a plan for outreach using social media, family, friends and research platforms. This plan benefited me well as my initial data-set poured in with enthusiastic and interested participants. However, I eventually realised that this was not sufficient and further efforts of recruitment were necessary to increase my participant numbers. I unfortunately underestimated my participant goal being reached sooner rather than later. I quickly sought out survey swaps, research Facebook groups and recruited my original participants as people who could source participants, which became a daily task of communicating with people and inviting them to partake. I did not realise that because of my friendship

circle, the people I hoped to participate were somewhat exhausted from research participation opportunities that were circulated throughout the year and earlier in the summer. Where research is carried out in the future, I will make a daily plan for more personalised recruitment and put time into making participation in my research an opportunity that stands out from others. In order to increase the breadth of participant backgrounds for future studies, I would also allocate time in advance of data collection to contact support services relevant to the research area, asking for their help with participant recruitment through sharing the study with their clients. This would prevent over-representation of any one cultural or socioeconomic background, resulting from easier access to readily available participants with a shared background with the researcher.

My analyses were difficult to begin with because of the numerous datasets that I had. Once I had gathered the data and scored each scale the data did not fit into the analyses that I had initially planned to carry out, which caused me some concern and stress. However I resolved this by carrying out extra reading into methods, as well as seeking support from my supervisor and a fellow researcher at the University. This made me feel really confident in my personal abilities to carry out analyses because I was informed of the methods at hand, familiar with SPSS and after support learned that I was not far off from the appropriate analyses to carry out. This experience has furthered my skills in independent research and in future research I would aim to familiarise myself with the data

output from methods used in my data collection. This would allow me to make a tangible plan of analyses that is specific to the methods used and reduce the time spent adjusting analyses after data is collected.

### *Write Up:*

Prior to beginning research paper write up, I constructed a weekly timetable to help with my time management, as I was aware the write up process would always take me longer than expected. I considered which psychological research journals were relevant within CMV research and their impact scores, when deciding which Journal style to follow. I chose to use The Journal of Family Violence style for my paper, as it has a lower impact score than the other relevant journals I considered and would give more realistic prospects for research publication.

### **Supervision**

I had several meetings with my supervisor throughout the year to discuss my research project, asking any questions or voicing concerns if they arose. I found supervision to be a very useful tool, as face-to-face meetings reassured me I was heading in the right direction, increased my confidence in my professional and academic ability and helped with stress management. I worked independently following each meeting, utilising feedback and support provided to guide my work tasks and ensure progress was made. This aspect worked well, as I felt productive post-supervision and when I completed tasks I contacted my supervisor to

discuss the next stages of action prior to starting. The supervision process ensured I built up my resilience against motivation fatigue and helped to minimise my procrastination and improve my time management skills, which I have always struggled with, as I felt I was held accountable to complete things discussed in meetings. In the future I would continue to use supervision frequently, possibly even more frequently when I am unsure about something, instead of wasting time avoiding the task. Prior to commencing write up I had felt somewhat overwhelmed, as a 6000 word dissertation seemed like a huge task to complete. However, I created a rough plan and paper outline, including subheadings and my main points for each, which helped to break down the write up process into smaller manageable sections. This method worked well for myself and I would definitely use it again in the future. Despite creating a time management plan and self-awareness that I always take longer to write than expected, I still found myself feeling stressed about running behind my plan. Therefore in future I would create a more flexible write up timetable, with added spare time to allow myself more breaks to prevent decrease in focus and motivation. Hopefully this would avoid creating unnecessary stress for myself and strengthen my academic resilience.

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## **Appendices**

### **Appendix A. Questionnaires used in the research**

#### **1. Demographic questionnaire**

- 1) Do you currently live in the UK?
  - Yes
  - No
- 2) How old are you? (Open response)
- 3) What is your gender?
  - Male
  - Female
  - Other
  - Prefer not to say
- 4) What best describes your family?
  - Intact family (i.e. birth parents and child/ren live together)
  - Lone mother/father
  - Mother/father and step-parent
  - Blended parents and child/ren (i.e. a step-parent and their children from a previous relationship)
  - Same sex parents and children
  - Foster family
  - Adoptive family
  - Grandparents only
  - Other (Please specify)
- 5) Who do you live with? (please think of who you live with most of the time and tick all that apply)
  - No one
  - Partner or boy/girlfriend
  - My own children
  - Mother/female guardian
  - Father/male guardian
  - Step-mother/father's partner
  - Step-father/mother's partner
  - Foster parent(s)

- Brother/sister(s) (incl. adopted)
- Step-brother/sister(s)
- Foster brother/sister(s)
- Brother/sister(s)-in-law
- Grandparent(s)
- Other relative(s) (please state).....
- Other non-relative(s) (please state).....

6) How many siblings do you have? (open response)

7) What is your highest level of education?

- No qualifications;
- Secondary school (GCSE or equivalent);
- A-levels or equivalent;
- Undergraduate degree;
- Postgraduate qualification;
- Other

8) How would you describe your employment status?

- Working full-time (30 hrs/wk +);
- Working part-time (8-29 hrs/wk);
- Not working – unemployed
- Not working – student;
- Not working – volunteering;
- Not working – due to disability or health reasons.

9) What is your ethnicity?

- White
- African / Caribbean
- South Asian
- East Asian
- Middle East
- Mixed (please give information)
- Other (please give information)

- Prefer not to say.



## 2. Adapted Child to Mother Violence Scale

Have you ever...	Never	Occasionally	Most weeks	Daily
1) called your mother/father names or sworn at him/her?				
2) put your mother/father down in front of others?				
3) told your mother/father that he/she was crazy?				
4) demeaned your mother/father's parenting or parenting skills?				
5) given your mother/father the silent treatment (not speaking to him/her)?				
6) taken over family rooms?				
7) taken over the family car?				
8) taken your mother/father's money or belongings without asking him/her first?				
9) aggressively demanded money or things from your mother/father?				
10) incurred debts without telling your mother/father that s/he has then had to cover?				
11) threatened to harm yourself in an attempt to control your mother/father or get him/her to do what you want?				
12) broken or thrown things near your mother/father?				
13) broken or damaged things which were important to your mother/father?				
14) bullied or stood over your mother/father?				
15) aggressively demanded that your mother/father do what you want?				
16) hurt or killed any of your mother/father's pets?				
17) threatened to kill your mother/father or others?				
18) hit, punched, kicked your mother/father or twisted his/her arm?				
19) choked your mother/father?				
20) shoved, pushed or grabbed your mother/father?				
21) hit your mother/father with a hard or sharp object?				
22) made sexual threats to your mother/father?				
23) <i>This is a control question. Please mark 'occasionally' and move on.</i>				

If a participant selects anything other than 'never' to any of the above questions, they will be directed to answer how old they were when each of these behaviours started.

### 3. Triggers of Behaviour Questionnaire

(This will only be shown to those who selected anything other than ‘never’ in Questionnaire 2)

<p>You answered ‘occasionally, most weeks or daily’ to some of the questions in the previous page. Roughly what age were you when you started doing those things to your mother/father?</p>	
<p>You answered ‘occasionally, most weeks or daily’ to some of the questions in the previous page. When would you do those things to your mother / father? Please see below and tick all that apply.</p>	
<p>1) When my mother/father doesn’t listen to what I have to say</p>	
<p>2) When we argue or disagree with each other</p>	
<p>3) When feeling fed up with conflict or argument between my parents</p>	
<p>4) When he / she enforces house rules or asks me to share house work</p>	
<p>5) When he / she asks me to give them money towards spending around the house, e.g. bills, food, mortgage</p>	
<p>6) When he / she criticises what I do</p>	
<p>7) When family structure changed (e.g. parents separated / divorced or got a new partner, a new baby/child in the family)</p>	
<p>8) After we’ve lost someone in the family or when we are going through bereavement</p>	
<p>9) When I feel down or stressed about school / work</p>	
<p>10) When I get bullied at schools or by others in the neighbourhood</p>	
<p>11) After I’ve had a few drinks</p>	
<p>12) After I get high on drugs</p>	
<p>13) When I am going through mental health difficulty (e.g. depression, anxiety or bipolar)</p>	
<p>14) When I feel short of money</p>	
<p>15) When he / she refuses to give me what I want / need</p>	
<p>16) Other (please specify).....</p>	

#### 4. Reactive-Proactive Questionnaire (Raine et al, 2006)

How often have you...		Never	Sometimes	Often
1)	Yelled at others when they have annoyed you			
2)	Had fights with others to show who was on top			
3)	Reacted angrily when provoked by others			
4)	Taken things from other students			
5)	Gotten angry when frustrated			
6)	Vandalized something for fun			
7)	Had temper tantrums			
8)	Damaged things because you felt mad			
9)	Had a gang fight to be cool			
10)	Hurt others to win a game			
11)	Become angry or mad when you don't get your way			
12)	Used physical force to get others to do what you want			
13)	Gotten angry or mad when you lost a game			
14)	Gotten angry when others threatened you			
15)	Used force to obtain money or things from others			
16)	Felt better after hitting or yelling at someone			
17)	Threatened or bullied someone			
18)	Made obscene phone calls for fun			
19)	Hit others to defend yourself			
20)	Gotten others to gang up on someone else			
21)	Carried a weapon to use in a fight			
22)	Gotten angry or mad or hit others when teased			
23)	Yelled at others so they would do things for you			

### 5. The Self-report Family Inventory (Beavers & Hampson, 1990)

For each question, mark the answer that best fits how you see your family.

	YES: Fits our family very well		SOME: Fits our family some		NO: Does not fit our family
1. Family members pay attention to each other's feelings	1	2	3	4	5
2. Our family would rather do things together than with other people.	1	2	3	4	5
3. We all have a say in family plans	1	2	3	4	5
4. The grownups in this family understand and agree on family decisions.	1	2	3	4	5
5. Grownups in the family compete and fight with each other	1	2	3	4	5
6. There is closeness in my family, but each person is allowed to be special and different	1	2	3	4	5
7. We accept each other's friends.	1	2	3	4	5
8. There is confusion in our family because there is no leader.	1	2	3	4	5
9. Our family members touch and hug each other.	1	2	3	4	5
10. Family members put each other down	1	2	3	4	5
11. We speak our minds, no matter what.	1	2	3	4	5
12. In our home, we feel loved	1	2	3	4	5
13. Even when we feel close, our Family is embarrassed to admit it.	1	2	3	4	5
14. We argue a lot and never solve problems.	1	2	3	4	5
15. Our happiest times are at home.	1	2	3	4	5
16. The grownups in this family are strong leaders	1	2	3	4	5
17. The future looks good to our family.	1	2	3	4	5
18. We usually blame one person in our family when things aren't going right	1	2	3	4	5
19. Family members go their own way most of the time.	1	2	3	4	5
20. Our family is proud of being close.	1	2	3	4	5
21. Our family is good at solving problems together.	1	2	3	4	5
22. Family members easily express warmth and caring toward each other.	1	2	3	4	5
23. It's okay to fight and yell in our family.	1	2	3	4	5
24. One of the adults in this family has a	1	2	3	4	5

favourite child.					
25. When things go wrong, we blame each other.	1	2	3	4	5
26. We say what we think and feel.	1	2	3	4	5
27. Our family members would rather do things with other people than together.	1	2	3	4	5
28. Family members pay attention to each other and listen to what is said.	1	2	3	4	5
29. We worry about hurting each other's feelings.	1	2	3	4	5
30. The mood in my family is usually sad and blue.	1	2	3	4	5
31. We argue a lot.	1	2	3	4	5
32. One person controls and leads our family.	1	2	3	4	5
33. My family is happy most of the time.	1	2	3	4	5
34. Each person takes responsibility for his/her behavior.	1	2	3	4	5
35. On a scale of 1 to 5, I would rate my family as:					
	1	2	3	4	5
My family functions very well together					My family does not function well together at all. We need help
36. On a scale of 1 to 5, I would rate the independence in my family as:					
	1	2	3	4	5
No one is independent. There are no open arguments. Family members rely on each other for satisfaction rather than on outsiders.			Sometimes independent. There are some disagreements. Family members find satisfaction both within and outside of the family.		Family members usually go their own way. Disagreements are open. Family members look outside of the family for satisfaction.

## Appendix B. Online Advertisements

### **Call for participants:**

#### **" Family dynamics and behavioural reactions to situations**

This research study aims to investigate whether various interactions between family members are effected by the dynamics of relationships with parents or

carers.

The online survey consists of 5 questionnaire sections about your background details, your childhood family life, your relationship with family members and your behavioural reactions in various situations. It should take about 15 minutes to complete.

This study has received ethical approval from Division of Psychiatry and Psychology, Faculty of Medicine and Health Sciences research ethics committee at the University of Nottingham.

Ethics Reference Number: 30-1705"

**Facebook:**

"Hello everyone. If anyone would like to take part in a quick online research study as part of my postgraduate degree, I would really appreciate it.

You will be asked to complete 5 survey sections about family dynamics and behavioural reactions to situations. It should take about 15 minutes to complete, but progress can be saved and returned to later. Further information is provided prior to starting the survey.

If you would like to participate just click the link below.

<http://sgiz.mobi/s3/056c06b2158f>

Thank you!

Please feel free to share this post."

## Appendix C. Participant Information Sheet



# PARTICIPANT INFORMATION

Division of Psychiatry & Applied Psychology  
School of Medicine, Faculty of Medicine & Health Sciences

**Project Title:** Family dynamics and behavioural reactions to situations

Researcher: Kirstie-Louise Mackay

msxkm9@nottingham.ac.uk

Supervisor: Shihning Chou

lwzsc1@exmail.nottingham.ac.uk

Ethics Reference Number: 30-1705

This is an invitation to take part in a research study about the link between family dynamics and our reactions to situations within the UK. This information is designed to tell you what it will involve.

Your participation is voluntary, and you may change your mind about being involved, or decline to answer a particular question. You are free to withdraw at any point before or during the study. Withdrawal does not require a reason. Once you have completed and submitted the questionnaire it is not possible to withdraw the data because we won't know who you are.

*What is the project about?*

This research study aims to investigate whether various interactions between family members are effected by the dynamics of relationships with parents/carers.

*Who is being asked to take part, and why?*

Anyone in the UK over the age of 16 is allowed to volunteer to take part in the study. In order to participate you will need access to the internet, then read and answer a number of statements. We would like to collect data from participants from a range of different backgrounds.

*What will I be asked to do?*

The online survey consists of 5 questionnaire sections, some of which may ask questions about sensitive topics. Remember all responses are confidential and you cannot be identified in any way, however you may withdraw from the study at any time by closing the browser window without giving a reason and the data will be discarded.

It takes approximately 15 minutes to complete.

[The first section asks you for some background details, but does not include identifying characteristics such as names or contact details.](#)

The second to the fifth sections consist of a range of questions related to childhood family life, your relationship with family members and your behavioural reactions in certain situations. The responses will be given in a likert scale of three to five options.

If you would like to make sure that no one is able to see that you have completed this survey, then you can use private mode on your browser. Information on how to do this can be found at the following webpage:

<https://www.howtogeek.com/269265/how-to-enable-private-browsing-on-any-web-browser/>

*Will the research be of any personal benefit to me?*

It is unlikely the research will be of personal benefit to you, however results of the research will increase understanding of family interactions and relationship dynamics which may influence interaction behaviours. This information could be used to help strengthen and improve family interactions and dynamics of other families in the future.

*What will happen to the information I provide?*

To ensure the confidentiality of the data you provide in the survey only the researcher and project supervisor have access to said data. The survey tool is secure with data encrypted. Anonymity of personal data is assured, as participants' identities are concealed by assigning responses a subject number and no identifying data such as contact information or names are recorded. Any data on the researcher's or supervisor's computer whilst the research is conducted will remain confidential and anonymous and will be securely stored in an encrypted file. Once the research is completed and the researcher has received final awards for the MSc postgraduate course, any copies of raw data in the researcher or supervisor's possession will be destroyed. A copy of raw data will be retained by the University.

We believe there are no known risks associated with this research study; however, as with any online related activity the risk of a breach is always possible. We will do everything possible to ensure your answers in this study will remain anonymous. We will minimize any risks by maintaining confidentiality, as recorded responses will only be identifiable through unique participant numbers and not by name, location or other identifying personal data. Furthermore the researcher and supervisor will be the only people with authorised access to the online survey and response data.

*What will you do with the data?*

The data collected will be analysed and subsequent findings discussed to complete a Forensic Research Project as part of a Forensic and Criminological Psychology MSc. Anonymised data may be shared with other researchers in the future and it is possible the research report may be submitted for publication to a relevant professional journal. Participants that wish to learn about the results of the study can contact the researcher from December 2017 to receive a summary of findings.

At the end of the project, all raw data will be kept securely by the University under the terms of the Data Protection Act. The data will not be kept elsewhere.

If you have any questions or concerns, please don't hesitate to ask. We can be contacted before and after your participation at the above address.

**THANK YOU FOR YOUR PARTICIPATION**



If you have any queries or complaints about this study, please contact the student's supervisor in the first instance. If this does not resolve the query to your satisfaction, please write to the Administrator to the Division of Psychiatry & Applied Psychology's Research Ethics Sub-Committee ([MS-DPAPEthics@nottingham.ac.uk](mailto:MS-DPAPEthics@nottingham.ac.uk), +44 (0)115 8232214) who will pass your query to the Chair of the Committee.

## Appendix D. Participant Consent Sheet



The University of  
**Nottingham**

UNITED KINGDOM • CHINA • MALAYSIA

# PARTICIPANT CONSENT

Division of Psychiatry & Applied Psychology  
School of Medicine, Faculty of Medicine & Health Sciences

Project Title: Family dynamics and behavioural reactions to situations

Researcher: Kirstie-Louise Mackay

msxkm9@nottingham.ac.uk

Supervisor: Shihning Chou

lwzsc1@exmail.nottingham.ac.uk

Ethics Reference Number: 30-1705

- Have you read and understood the Participant Information? YES/NO
- I agree to answer the questionnaire. YES/NO
- Do you know how to contact the researcher if you have questions about this study? YES/NO
- Do you understand that you are free to withdraw from the study without giving a reason? YES/NO
- Do you understand that for anonymous questionnaire studies, once you have completed the study and submitted your questionnaire, the data cannot be withdrawn? YES/NO
- Do you give permission for your data from this study to be shared with other researchers in the future provided that your anonymity is protected? YES/NO
- Do you understand that non-identifiable data from this study might be used in academic research reports or publications? YES/NO

---

Signature of the Participant .....

Date: .....

Name (in block capitals) .....

"By clicking the button above/below I indicate that I understand what the study involves and that my answers are anonymous. I agree to take part and I understand that once I click 'submit' at the end of the questionnaire it will not be possible to withdraw the data."

## Appendix E. Participant Debrief Sheet



The University of  
**Nottingham**

UNITED KINGDOM · CHINA · MALAYSIA

# PARTICIPANT DEBRIEF

Division of Psychiatry & Applied Psychology  
School of Medicine, Faculty of Medicine & Health Sciences

**Project Title:** Exploring the relationship between child-to-parent violence, types of aggression and family dynamics

Researcher: Kirstie-Louise Mackay

msxkm9@nottingham.ac.uk

Supervisor : Shihning Chou

shihning.chou@nottingham.ac.uk

Ethics Reference Number: 30-1705

Thank you for your participation in this study.

This research study aims to explore the relationship between family interactions and dynamics, reaction styles and aggressive / violent behaviour directed at parents/carers. Understanding how family dynamics may be associated with how we react to situations and how we interact with certain family members will help identify and devise appropriate support for individuals and families in need of such support.

We would like to reassure you that all data submitted is confidential and anonymous.

If any topic areas or questions in the questionnaire have caused you any upset or distress, contact details of relevant organisations and professionals that can provide support are listed below.

### **University Counselling Service (if you study at the University of Nottingham)**

Open term time: Monday to Friday 9am - 1pm and 2pm - 4:30pm

Open vacation periods: Monday to Friday 9am - 12:30pm and 2pm - 4:30pm

<http://www.nottingham.ac.uk/counselling/counselling@nottingham.ac.uk>

+44 (0)115 951 3695

### **Nightline**

Available every evening during term time 7pm - 8am

<http://www.nottinghamnightline.co.uk/nightlineanon@nottingham.ac.uk>

0115 951 4985

07786208408

### **YoungMinds**

<https://youngminds.org.uk/>

<https://youngminds.org.uk/find-help/feelings-and-symptoms/anger/>

**Family Action**

Search for family support services in your area

<https://www.family-action.org.uk/worried/in-your-area/>

**Respect**

<http://respect.uk.net/work/respect-young-peoples-service/adolescent-parent-violence-abuse/>

Open: Monday – Friday 9am-5pm

0808 802 4040 (free from landlines and most mobiles)

Email [info@respectphonenumber.org.uk](mailto:info@respectphonenumber.org.uk)

Alternatively, if you have any questions or concerns, please don't hesitate to ask. We can be contacted before and after your participation at the above address.

**THANK YOU FOR YOUR PARTICIPATION**

If you have any queries or complaints about this study, please contact the student's supervisor in the first instance. If this does not resolve the query to your satisfaction, please write to the Administrator to the Division of Psychiatry & Applied Psychology's Research Ethics Sub-Committee ([MS-DPAPEthics@nottingham.ac.uk](mailto:MS-DPAPEthics@nottingham.ac.uk), +44 (0)115 8232214) who will pass your query to the Chair of the Committee.