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## **Assessment of Physical Child Abuse Risk in Parents with Children Referred to Child and Adolescent Psychiatry**

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Given the vulnerability of the child psychiatric population, this study examined whether parenting a child referred to a child and adolescent psychiatry department leads to a higher risk of physical child abuse and if that risk is associated with a specific child psychopathology. The clinical sample consisted of caregivers with a six-to-11-year-old child who consulted child and adolescent psychiatry for a psychiatric assessment. The Dutch Child Abuse Potential Inventory (CAPI), socio-demographic data and child psychiatric diagnosis were collected from 59 caregivers of 59 children. Ten per cent of the sample obtained an Abuse scale score indicative of a potential risk for physically maltreating their child. Compared to a non-clinical sample, this study showed a two and a half times higher risk potential for physical child abuse in caregivers with children referred to child and adolescent psychiatry. The elevated risk was not associated with a specific child psychiatric diagnosis. The caregivers at risk were more unhappy and experienced more problems with their child, their family and with others. Results support the need for implementing a standard risk assessment for physical child abuse in a child psychiatric setting.

### **KEY PRACTITIONER MESSAGES:**

- Compared to a non-clinical sample, there is a two and a half times higher risk potential for physical child abuse in caregivers with children with mental health problems examined with the self-report screening questionnaire CAPI.
- Child psychopathology in general is associated with an elevated potential for physical child abuse; there is no correlation with a specific child psychiatric disorder.
- There is a need for implementing a standard risk assessment for child abuse in a clinical child psychiatric setting.

**KEY WORDS:** assessment; risk; child physical abuse; child psychiatry; child mental health

Physical child abuse can lead to long-term negative consequences on the development of children and adolescents. Several studies show that physically abused children and adolescents experience multiple problems. Victims of child abuse experience high rates of post-traumatic disorder (Widom, 1999). The study of Wise et al. (2001) showed an increased risk of depression in women who reported physical abuse as a child or adolescent. Persons who experienced childhood abuse are more likely to have personality disorders and personality disorder symptoms in early adulthood (Johnson et al., 1999). Harrison et al. (1997) found that physical abuse is associated with an increased likelihood of multiple substance use. Persons reporting child abuse show lower levels of cognitive ability and academic outcomes in young adulthood compared with matched controls (Perez and Widom, 1994). Other problems associated with physical abuse are anxiety disorders, antisocial behaviour and suicidal ideation (Silverman

et al., 1996; Springer et al., 2007).

Many of these problems persist through the lifespan and extend into adulthood (Copeland et al., 2013). Approximately 80 per cent of the victims of physical child abuse will have at least one psychiatric diagnosis at the age of 21 years (Silverman et al., 1996). Physical child abuse is associated with more diagnosed illnesses, physical symptoms, anxiety, anger and depression nearly four decades after the abuse took place (Springer et al., 2007). Persons reporting a history of physical child abuse show significantly higher rates of lifetime psychopathology (MacMillan et al., 2001). Research showed that one-third of physically abused adolescents will become an abusive parent to their own children (Prevent Child Abuse New York, 2003). Detecting potential abusive caregivers is essential to prevent physical child abuse and its harmful consequences.

Levels of parenting stress have been associated with abusive parenting and could discriminate between groups of abusive and non-abusive parents (Chan, 1994). Several studies have documented that high parenting stress is one factor which is strongly associated with characteristics and attitudes predictive of physical child abuse risk (Chan, 1994; Rodriguez and Green, 1997). The terms caregiver burden, caregiver stress and caregiver strain are used to define the problems, difficulties or adverse events of caring for a dependant relative (Angold et al., 1998). Research showed that providing care for a child with mental health problems is a significant source of stress and burden for parents and caregivers (Angold et al., 1998; Meltzer et al., 2011). Internalising problems are associated with higher levels of parenting stress (Duchovic et al., 2009; Vaughan et al., 2013). Several studies indicated that parents of children with externalising disorders report significantly elevated levels of caregiver strain related to their child's disorder (Anastopoulos et al., 1992; Johnston, 1996). Multiple studies showed that mothers of children with autism spectrum disorder experience more distress (Karst and Van Hecke, 2012).

To the best of our knowledge, there is no study that indicates an association between physical child abuse and children with mental health problems. Given the vulnerability of this population, the prevalence of psychiatric diagnoses in this group and the strain that this puts on the parents involved, it is meaningful to explore this hypothesis.

The Child Abuse Potential Inventory (CAPI) (Milner, 1986) is a widely used and validated instrument to assess the risk of physical child abuse (Milner, 1986, 1994). The validity and reliability of this risk screening tool

have been confirmed by numerous studies (Milner, 1986, 1994). The CAPI, in different translations, has shown its importance within research and in various clinical settings (e.g. Ammerman et al., 1999; Wells et al., 2011). Although the CAPI is used to determine the risk of physical child abuse in different populations, to our best knowledge there is no study using the CAPI in a child psychiatric population to define the risk of physical child abuse, nor is there a systematic assessment of child abuse in a child psychiatric department.

This pilot study investigates whether parenting a child referred to a child and adolescent psychiatry department leads to a higher risk of physical child abuse and if a higher risk is associated with a specific child psychopathology. A correlation between the demographic characteristics and child physical risk potential of the participating families was explored since previous research indicated that different demographic, familial, parental and child factors are associated with risk for physical child abuse (such as low maternal education, maternal youth, single parenting, low parental involvement) (Brown et al., 1998). There is no validated instrument that has been used in this specific population. The risk of child abuse is mainly assessed during the clinical process using interviews. This brief report explores if the CAPI is a useful and practical screening device to assess the risk of physical child abuse in a child psychiatric population.

The article reflects on the results of this study, suggests guidelines for the child and adolescent psychiatrist in a clinical environment and contemplates the role of the CAPI in a child psychiatric setting.

## **Method**

### *Sample Selection and Participants*

Participants were recruited from the child and adolescent psychiatry department of the Ziekenhuis Netwerk Antwerpen (ZNA) Erasmus hospital (Antwerp) in the period from April until December 2013. All primary caregivers of children between six and 11 years old with a request for a child psychiatric assessment were selected as potential participants for this study (N = 156). Child psychiatric assessment consisted of developmental history, interview about present psychiatric functioning and questionnaires about problem behaviour. There was no prior selection; all primary caregivers (meaning biological parents, step-parents, foster parents,

adoption parents and other adults who have the primary responsibility for the child) were considered the target population for this research. Fifty-nine caregivers of 59 children between six and 11 years old returned the completed questionnaires and the informed consent.

## **Measures**

### *Socio-Demographic Questionnaire*

The questionnaire collects socio-demographic information about the age of the caregiver, the relation to the child (biological parent, step-parent, foster parent, adoption parent or other relation to the child), the nationality of the caregiver, the spoken language of the caregiver, the family composition (regular family, one-parent family, divorced family or new composed family), the educational level of the caregiver, the marital status (living alone or with a partner), the child's age, the child's sex, the child's nationality, the child's spoken language, the number of children and the birth order of the child. We also collected the same socio-demographic characteristics from the non-participants.

### *Dutch CAPI*

The CAPI (Milner, 1986, 1994) is a self-report screening questionnaire consisting of 160 statements that have to be scored with a forced-choice format (agree/disagree). The statements measure certain attitudes and beliefs to assess the risk to physically abuse children. The CAPI has an Abuse scale that contains 77 items. The Abuse scale is based on comprehensive literature studies to differentiate between abusive and non-abusive caregivers (Milner et al., 1988). The Abuse scale contains six factor scales including three factor scales that describe psychological problems such as Distress, Rigidity and Unhappiness and three factor scales that include interactional problems such as Problems with child and self, Problems with family and Problems with others. The CAPI also has three validity scales including a Lie scale, a Random Response scale and an Inconsistency scale to detect response distortions. If one of the validity scales is elevated, it is necessary to determine the factor indexes (Faking-good index, Faking-bad index and Random response index) to define if the score on the Abuse scale is valid. Following the guidelines proposed by Milner (1986, p. 11), the scores obtained from the Lie, Random Response and Inconsistency scales were compared with the scale cut-off scores of

the Manual. Scales scores at or above the validity scale cut-off scores (Lie scale: 7, Random Response scale: 6, Inconsistency scale: 6) were considered elevated. Based on these cut-off scores, the response distortion indexes (Faking-good index, Faking-bad index and Random response index) were calculated. In our study, the mean score on the Lie scale was 6.80. Thirty-four respondents (57.6%) had an elevated score on the Lie scale. The mean score on the Random Response scale was 3.19. Only four caregivers (6.8%) had an elevated score on the Random response scale. The mean score on the Inconsistency scale was 4.25. Thirteen respondents (22.0%) showed an elevated score on the Inconsistency scale. Twenty-six caregivers (44.1%) had an elevated Faking-good index, three caregivers (5.1%) an elevated Faking-bad index and no caregivers had an elevated Random response index. In general, the CAPI Abuse score is considered invalid when any of the response distortion indexes are elevated. There are two exceptions to this rule where the abuse score can still be used for classification (if the Abuse score is elevated and the Faking-good index is elevated or if the abuse score is below the Abuse scale cut-off and the Faking-bad index is elevated). All elevated Abuse scale scores in our study were valid. A cut-off score on the Abuse scale of 215 or higher is indicative of a high risk of physical abuse. Using signal detection theory, a cut-off score of 166 or higher is set (Milner, 1986). A great number of studies emphasise the validity and reliability of the CAPI as a risk screening tool with correct classification rates ranging from 89 per cent to 96 per cent (Milner, 1986, 1994). The Abuse scale has a high internal consistency (coefficients ranging from 0.92–0.98) and adequate temporal stability estimates (0.91, 0.90, 0.83 and 0.75 for 1-day, 1-week, 1-month and 3-month intervals, respectively) (Milner, 1986).

The CAPI is currently translated into more than 26 languages. This study used the Dutch translation of the CAPI (Grietens et al., 2000). The study of Grietens et al. (2007) showed a high internal consistency ( $\alpha(362) = 0.90$ ) and split-half reliability (Guttman's  $r(362) = 0.89$ ) of the Abuse scale of the Dutch CAPI. Our clinical pilot study also confirmed a high internal consistency of the Abuse scale ( $\alpha(59) = 0.892$ ). In the study of Grietens et al. (2007), 4.4 per cent of the participants obtained an Abuse scale score that was indicative of a high potential for child physical abuse. Table 1 shows the sample characteristics of Grietens et al.'s (2007) study.

Table 1. Characteristics of the sample in the study by Grietens et al. (2007)

Characteristics Value

Mothers' age (years) Range 25–50 Mean 36.43 SD 4.16

Marital status Mother with partner 318 Single mother 41

Mother's educational level Mean 2.64 SD 0.76

Child's sex Boys 214 Girls 148

Child's age (years) Range 4–11 Mean 7.49 SD 1.86

Number of children Range 1–7 Mean 2.16 SD 0.90

Birth order of target child Range 1–6 Mean 1.64 SD 0.87

## Procedure

Participants were asked to complete the CAPI during the phase of psychiatric assessment and return the questionnaires in a closed envelope to the child psychiatrist. At the end of the screening, an Axis I diagnosis was obtained using the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR). We classified the mental health problems in two ways. Firstly, we clustered the psychiatric diagnoses (Axis I) according to the DSM-IV-TR into four groups. The internalising group consisted of internalising mental disorders such as dysthymia, depression and anxiety disorder (group I). Attention-deficit hyperactivity disorder, attention-deficit disorder, oppositional and defiant disorder and conduct disorder were clustered in the group of externalising mental disorders (group II). The group of developmental disorders consisted of autism spectrum disorder, learning disorder, language development disorder, development coordination disorder, Tourette syndrome and attachment disorder (group III). Group IV ('no psychiatric diagnosis') contained children who did not meet all the diagnostic DSM-IV-TR criteria for an Axis I psychiatric diagnosis (clinical disorder): not otherwise specified, diagnosis deferred or no restricted psychiatric diagnosis obtained. This group (IV) also consisted of children with an intellectual disability such as mild, moderate and severe mental retardation ( $IQ < 70$ ) or children with borderline intellectual functioning ( $IQ 71–84$ ) (labelled on Axis II of the DSM-IV-TR). The children with an intellectual disability or borderline intellectual functioning and an additional clinical Axis I disorder were classified into groups I, II or III. Secondly, we used a descriptive approach to classify the mental health

problems. We clustered the psychological problems into four groups, respectively, the internalising problems' group (such as depressive complaints, anxiety, traumatic symptoms), the externalising problems' group (e.g. behaviour problems, concentration problems), the developmental problems' group (e.g. learning difficulties, tics, problems in attachment) and the 'asymptomatic' group (children with no psychological problems and children with an intellectual disability such as mild, moderate and severe mental retardation (IQ < 70) or children with borderline intellectual functioning (IQ 71–84) who do not face psychological problems).

The Commission for Medical Ethics from the ZNA approved this study (approval n° 4187).

## **Statistics**

The statistical analyses were carried out using the Statistical Package for the Social Sciences (SPSS) Version 23. The Abuse score was originally a categorical variable with three levels: normal, elevated (score  $\geq 166$ ) and strongly elevated (score  $\geq 215$ ). This variable was recoded into two distinct variables:

- Abuse Score cut-off: the normal score and elevated score combined versus the strongly elevated score.
- Abuse Score signal: the elevated score and strongly elevated score combined versus the normal score.

Descriptive statistics (mean, median quartiles, range) were calculated for the three validity scales (Lie, Random response and Inconsistency) and response distortion indexes (Faking-good, Faking-bad, Random response index).

The Mann–Whitney U test, chi-square test, Fisher's exact test and Monte Carlo chi-square test were performed to explore an association between the socio-demographic characteristics of the participants and the socio-demographic characteristics of the non-participants in our study.

Single sample t-tests compared the Abuse scale scores and the different factor scale scores from our experimental group with those of the norm group of the CAPI. These analyses were repeated to compare the Abuse scale scores from the sample with those of the non-clinical sample in the



study by Grietens et al. (2007).

Monte Carlo chi-square tests were used to investigate a correlation between the Abuse scale scores and Abuse Score signal and the mental health problems, respectively for the psychiatric diagnoses and for the psychological problems. Since some diagnostic categories were rare, several of the cells in the contingency table had an expected count of less than five. Therefore, we calculated the empirical p-value of our contingency table using a Monte Carlo chi-square test, with 10 000 runs, as implemented in the SPSS Version 23.

One-way ANOVA, Fisher's exact test, the Monte Carlo chi-square test and Kruskal-Wallis test were performed to explore an association between the Abuse cut-off scores and the different demographic characteristics of the sample. As mentioned above, the abuse score was recoded into a dichotomous variable, either comparing individuals with a normal versus an elevated score (Abuse Score signal) or comparing individuals with a very elevated score with the rest (Abuse Score cut-off).

All tests were two-tailed and statistical significance was set at  $p \leq 0.05$ .

## **Results**

### *Sample Characteristics*

The sample consisted of 59 caregivers of 59 children aged between six and 11 years old at the start of the psychiatric assessment. Table 2 shows the characteristics of the sample. The majority of the respondents were mothers (N = 76.3%). Almost all respondents reported that they lived in a regular family composition (64.4%), only 24 per cent reported to be living without a partner. The majority of respondents reported that the child with psychiatric problems was a boy (71.2%). Nearly all the children and caregivers had Belgian nationality (96.6% and 86.4%, respectively) and used Dutch as their spoken language (94.9% and 93.2%, respectively).

### *Comparison of Socio-Demographic Characteristics in Participants and Non- Participants*

The chi-square test showed that the frequency of non-biological parents was significantly increased in the non-responding group compared to that in the responding group,  $\chi^2(1) = 10.49$ ,  $p = 0.001$ . All other comparisons

between the socio-demographic variables of both groups were not significant (the age of the caregiver, the nationality of the caregiver, the spoken language of the caregiver, the family composition, the educational level of the caregiver, the marital status, the child's age, the child's sex, the child's nationality, the child's spoken language, the number of children and the birth order of the child).

#### *Distribution of the Abuse Scale Scores and Factor Scale Scores*

The mean score on the Abuse scale was 112.93 (SD = 82.90). Six respondents (10.2%) had a higher score than the cut-off point of 215. Twenty-five per cent of the participants (N = 15) scored higher than the signal cut-off point of 166.

The mean score on the Distress scale was 55.66 (SD = 55.51). The mean score on the Rigidity scale was 12.75 (SD = 12.07). The mean score on the Unhappiness scale was 16.36 (SD = 12.35).

#### *Comparison between the Experimental Group and the Norm Group of the CAPI (Milner, 1986)*

The single sample t-test revealed that the mean score of the Abuse scale of our sample was significantly higher than the Abuse scale of the norm group,  $t(893) = 26.03, p < 0.05$ . Single sample t-tests indicated that the mean scores on the Unhappiness factor scale ( $t(893) = 7.48, p < 0.0001$ ), the Problems with child factor scale ( $t(893) = 8.09, p < 0.0001$ ), the Problems with family factor scale ( $t(893) = 2.20, p < 0.05$ ) and the Problems with others factor scale ( $t(893) = 2.97, p < 0.05$ ) were significantly higher than the values of the norm group of the CAPI. Single sample t-tests showed no significant difference between the mean scores of the Distress factor scale ( $t(893) = 0.24, p > 0.05$ ) and the Rigidity factor scale ( $t(893) = 1.73, p > 0.05$ ) of our clinical sample and the values of the norm group of the CAPI.

Table 2. Sample characteristics of the participating families

<b>CHARACTERISTICS</b>	<b>VALUES</b>			
<b>Of the caregiver:</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>N missing</b>
<i>Age</i>	57	3.88	6.722	2
<i>Relation to the child</i>				
*biological mother	43			
*biological father	13			
*stepfather	1			
*other relation	2			
<i>Family composition</i>				1
*regular family	38			
*one-parent family	6			
*divorced family	6			
*new composed family	8			
<i>Educational level</i>				1
*primary school	5			
*secondary school ASO	7			
*secondary school TSO	11			
*secondary school BSO	16			
*special education	2			
*highschool	13			
*university	4			
<i>Marital status</i>				7
*living together with partner	42			
*living alone	10			
<b>CHARACTERISTICS</b>	<b>VALUES</b>			
<b>Of the child:</b>	<b>N</b>	<b>Mean</b>	<b>SD</b>	<b>N missing</b>
<i>Age</i>	59	8.51	1.369	
<i>Sex</i>				
* girl	16			
* boy	43			
<i>Number of children</i>				
* one child	6			
*two children	27			
*three children	11			
*four children	9			
*five children	2			

*more than 5 children, ... children	4		
<i>Birth order of the child</i>			
*first child	25		
*second child	19		
*third child	8		
*fourth child	5		
*fifth child	1		
*other order	1		

ASO: General secondary school; TSO: technical secondary school; BSO: practical secondary school

### *Comparison between the Experimental Group, Clinical Group and Non-Clinical Group (Grietens et al., 2007)*

Comparison shows that the Abuse scale score from our experimental group ( $M = 117.66$ ,  $SD = 89.47$ ) is higher than that of the non-clinical sample in the study by Grietens et al. (2007) ( $M = 66.26$ ,  $SD = 61.10$ ). The single sample t-test showed that the mean score of the Abuse scale of the experimental sample was significantly higher than the Abuse scale of the norm group of the non-clinical sample in the study by Grietens et al. (2007),  $t(419) = 55.67$ ,  $p < 0.0001$ .

### *Relations between the Abuse Scale Scores and Child Mental Health Problems*

In the psychiatric diagnoses group, 10.2 per cent of the children had internalising problems, 40.7 per cent externalising problems and 27.1 per cent showed developmental problems. No diagnosis was obtained in 22 per cent of the children.

In the group with psychological problems, 11.9 per cent of the children had internalising problems, 44.1 per cent externalising problems and 37.3 per cent showed developmental problems. No diagnosis was obtained in 6.8 per cent of the children.

The Monte Carlo chi-square test showed that the Abuse Score signal and the Abuse Score cut-off are not significantly correlated with the psychiatric diagnoses nor with the psychological problems (see Tables 3 and 4).

Table 3. Relations between mental health problems and the Abuse Score signal Significance

<b>Mental health problems</b>	<b>Value</b>	<b>df</b>	<b>Significance (2-sided)**</b>	<b>N valid cases</b>
Psychiatric diagnoses	1.06	3	0.785	58
Psychological problems	0.09	3	1.00	58

\*\*p ≤ 0.05.

Table 4. Relations between mental health problems and the Abuse Score cut-off

<b>Mental health problems</b>	<b>Value</b>	<b>df</b>	<b>Significance (2-sided)**</b>	<b>N valid cases</b>
Psychiatric diagnoses	3.54	3	0.335	58
Psychological problems	2.28	3	0.471	58

\*\*p ≤ 0.05

### *Distribution of the Abuse Scale Scores and Relations with Demographic Characteristics*

The outcome of the tests indicated no significant correlation between the demographic characteristics and the Abuse Score signal and the Abuse Score cut-off (see Table 5).

Table 5. Relations between demographic characteristics and the Abuse Score

<b>Demographic characteristics</b>	<b>Abuse Score signal</b>	<b>Significance Abuse Scorecut-off</b>	<b>df</b>	<b>Test</b>
SD1: Age of the caregiver	0.663	0.329	1	ANOVA
SD2: Relation to the child	0.47	1	1	FET
SD3: Family composition	0.64	0.89	3	MC

SD4: Marital status	0.484	0.145	1	FET
SD5: Educational level	0.39	0.27	1	KrWallis
SD6: Sex of the child	1	1	1	FET
SD7: Age of the child	0.42	0.67	1	KrWallis
SD8: Number of children	0.34	0.84	1	KrWallis
SD9: Birth order of the child	0.95	0.978	1	KrWallis

FET: Fisher's exact test; MC: Monte Carlo chi-square test; KrWallis: Kruskal-Wallis test.

## Discussion

This pilot study investigated whether parenting a child referred to a child and adolescent psychiatry department is associated with a higher risk of physical child abuse and if so, whether an increased risk is linked with a specific child psychopathology.

Using the most stringent cut-off point of 215 on the Abuse scale of the CAPI in our pilot study, ten per cent of caregivers with a child with a psychiatric problem obtained an Abuse scale score indicative of a potential risk for physically maltreating their child. Using the signal cut-off point of 166, one out of four families (25%) in our child psychiatric population has a risk for child abuse. In a clinical setting, the goal is to reach the most vulnerable caregivers who show needs in parenting their child. Therefore, by using the less stringent cut-off point, care providers can reach parents who can benefit from extra support in parenting in order to prevent the score on the CAPI reaching the threshold of the most stringent cut-off point.

In the study by Grietens et al. (2007) who examined the reliability and the validity of the CAPI in a non-clinical sample in Flanders, 4.4 per cent of the participants obtained Abuse scale scores that were indicative of a high potential for child abuse. This means that the risk potential in our clinical sample is two and a half times higher compared to a non-clinical sample (or even five times compared to the signal score). There is evidence that externalising problems put a strain on parenting and form a challenge for parents in controlling their child's behaviour (Brannan and Heflinger, 2006). A large body of studies supports Patterson's coercion model (Patterson et al., 1992) suggesting a bidirectional correlation between

externalising child behaviour and the likelihood to use a harsh parenting style (Pardini et al., 2008). There is comprehensive evidence that physical child abuse is a predictor for externalising behaviour (Price et al., 2013). In our study, there were 11.9 per cent children with an intellectual disability (N = 7). Four of these children with an intellectual disability scored higher than the cut-off point of 166. Three children with an intellectual disability had a higher score than the cut-off point of 215. These findings can support previous research that an intellectual disability is a child risk factor for child abuse (Brown et al., 1998). Given the small number of children with an intellectual disability (N = 7) in our study, further research with a bigger sample size is required to investigate if these findings can be replicated.

There is a large difference in the percentages on the elevated Faking-good index reported in this clinical study and Grietens et al.'s (2007) non-clinical study (44.1% versus 6.7%, respectively). Since we followed the guidelines proposed by Milner (1986, p. 11) in the Manual, we used a less strict cut-off score for the Lie scale (at or above 7) in our clinical research than in the nonclinical study by Grietens et al. (2007) (at or above 13). This could explain the higher percentage on the Faking-good index in our study compared to that of the study by Grietens et al. (2007).

Our pilot study shows no correlation between an elevated potential for physical child abuse and a specific child psychiatric disorder nor a specific child psychological problem. These findings may support the hypothesis that child psychopathology in general is associated with an elevated potential risk of child abuse rather than a specific child psychiatric diagnosis. Our study also suggests that a caregiver who is dealing with challenging child behaviour who needs professional advice might be a risk factor for potential physical child abuse. Therefore, a risk assessment of caregivers with a child with any kind of psychiatric problem or challenging behaviour can be useful.

Caregivers in our clinical child psychiatric sample who showed a high risk for child abuse also reported more unhappiness and experienced more problems with their child, with their family and with others compared to caretakers with no elevated risk.

Caregivers of children with mental health problems in our study showed no significant elevation for distress and rigidity. These findings are not in line with previous literature demonstrating that providing care for a child with mental health problems is a significant source of stress and burden for parents and caregivers (Angold et al., 1998; Meltzer et al., 2011). However,

our study did find a correlation between an elevated risk of physical child maltreatment and feelings of unhappiness and perceived problems in relationships with others instead. These results support previous literature that parenting a child with mental health problems creates a complex array of challenges and responsibilities. Caregivers face a constant struggle to keep the child's needs and the family's needs in balance (Ray, 2002). Taking care of a child with mental health problems is associated with high levels of depressive symptoms (Gerkenmeyer et al., 2011). The study of Gerkenmeyer et al. (2011) showed that caregivers' experience more depressive symptoms when they consider their environment as a threat due to perceptions of stigma and feeling blamed for the mental health problems of their child. Experiencing the world as more hostile, caregivers might hold back in maintaining their social contacts with persons and organisations outside their home. Isolation and withdrawal can add to the feelings of distress, which subsequently trigger even more withdrawal from social contacts. Given that the functioning of mothers should be the most optimal as feasible in order to improve the wellbeing of their child and to guarantee their own wellbeing (Kazdin and Wassel, 2000), the caretakers in our sample who were feeling more unhappy and who faced problems in the relationships with their relatives were vulnerable as they were not able to fulfil the special needs of their child.

This study also has some limitations that need to be addressed. Firstly, to increase the response rate during the data collection, the caregivers were informed about this study at the start of the psychiatric assessment. This allowed the participants to fill in the CAPI over a period of several weeks.

The child and adolescent psychiatrist also reminded the participants to return the forms. Despite these efforts to increase the response rate, there was a rather low response rate in this research (37.8%). The parents already have to fill out several questionnaires as a part of the psychiatric assessment; the CAPI could be an extra burden for parents. The CAPI is a questionnaire of 160 items that takes approximately 20 minutes to fill in. Using a brief form of the CAPI (B-CAP) (Ondersma et al., 2005) could possibly solve this problem and increase the response rate in future research. Parents who refuse to participate in the study may have a higher rate of parental stress and therefore can have a higher potential for child abuse. This can lead to a biased estimate of the potential abuse risk in this child psychiatric population. Thirdly, a selection bias could occur, as all respondents were caregivers who voluntarily turned to psychiatric care for perceived problems with their child. By doing so, they prevented an



escalation of problems and in this way possibly could have reduced the risk of abusing their child.

Given the findings of this study, further research is necessary to investigate if the current findings can be replicated in a bigger sample size. In our study, there was no significant difference in socio-demographic characteristics of the participants and the non-participants. This means that the participants in our study are representative of the caregivers and their children attending the child and adolescent psychiatry department. Also research on the prevalence of physical child abuse in a general population should be promoted in order to have a more accurate comparison with the prevalence rates found in a clinical child psychiatric population. Above that, further longitudinal research is needed to clarify whether the increased risk during the psychiatric assessment period in child psychiatry is reduced when an appropriate treatment is found for the child and its family.

The results of this study suggest that clinicians need to be assessing physical child abuse in a child psychiatric setting. Given the elevated risk of physical child maltreatment found in our pilot study, there is a need for implementing a standard risk assessment for child abuse in a clinical child psychiatric setting to identify families at risk as early as possible. Using a standard instrument such as the CAPI can help clinicians, together with other information and observations, to assess the risk in a systematic manner. A child and adolescent psychiatrist has to treat and advise children and their parents, and therefore he/she has a possible important task in detecting and preventing physical child abuse. We suggest using the B-CAP in order to minimise the burden for the caretakers. In a clinical setting, the results of the CAPI can be used to adjust and optimise the treatment to the specific needs and problems of the caretakers at risk. It can be expected that interventions to enhance the wellbeing of caretakers of children with psychiatric problems will help both the caregivers and their children (Gerkenmeyer et al., 2011).

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