

# Brief Report: The Accuracy of Parents for the Thoughts and Feelings of Their Adolescent Suffering from Chronic Fatigue: A Preliminary Study of Empathy

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**Objective** This study examined the *actual* and *estimated* empathic accuracy (EA) of the parents of adolescents with chronic fatigue syndrome (CFS). **Methods** The actual EA of both parents ( $n = 24$ ) was assessed in relation to the thoughts and feelings of their child ( $n = 14$ ) about CFS and about other life events. Adolescents were also asked to estimate the parents' EA. **Results** For the actual EA, both parents were significantly less accurate regarding the adolescent's thoughts and feelings about CFS than about other life events. Fathers were just as empathically accurate as mothers. For the estimated EA, however, results indicated that adolescents perceived their mother to be more empathically accurate than their father. Actual EA and estimated EA about CFS were negatively correlated for fathers, not for mothers.

**Conclusions** Results are discussed in terms of the importance of assessing EA in relation to other dimensions of empathic understanding and distress in the observer.

**Key words** adolescents; chronic fatigue syndrome; empathy; parents.

## Introduction

The ability of parents to accurately judge their child's pain and illness experiences is considered to have adaptive benefits for the child by fostering tailored care and help (Craig, 2004; Goubert et al., 2005). However, studies indicate that the accuracy of parental judgments regarding children's pain and illness experiences is low. Overall, parents underestimate their child's pain and illness experiences. Waters, Stewart-Brown and Fitzpatrick (2003) found that when adolescents' reports were compared with the estimates of their parents, parents were more likely to estimate less pain, fewer (mental) health problems, and a lesser impact of their health on family activities. Also, Chambers, Reid, Craig, McGrath and Finley (1998) found that parents displayed low levels of accuracy in identifying when their children were experiencing clinically significant pain.

Despite numerous findings of parental *inaccuracy*, our understanding of parental accuracy and its underlying processes remains limited, and is probably hampered by several issues. Throughout the literature, accuracy has been defined differently, for example, as level of agreement (Chambers et al., 1998), intersubjective understanding (Sillars, Koerner, & Fitzpatrick, 2005), or accurate interpretation of infant signals (Ainsworth, 1989). All of these definitions share an implicit emphasis on the ability of parents to *accurately empathize* with their child, that is, to accurately infer the content of the thoughts and feelings of their child. Most studies, however, have focused upon the accuracy of symptom report, and not upon the accuracy of the thoughts and feelings related to illness. It is also not known whether inaccuracy is specific to understanding the illness experiences of their child, or whether it extends to other substantial aspects of the daily life experiences of

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their child. Furthermore, the focus of studies regarding the parental assessment of childhood illness is almost exclusively on the mother–child relationship. The possible differential effects of mother and father are ignored (Phares, Lopez, Fields, Kamboukos, & Duhig, 2005). Finally, it is unclear whether *actual* levels of parental accuracy reflect *estimated* or perceived levels of parental accuracy by the adolescent. Investigating both may shed light on the extent to which parental accuracy is communicated and translated into parenting behavior towards the child.

To date, no study has explored these issues in parents of ill children. There is, however, a growing research literature on *empathic accuracy* (EA) in the context of other close relationships in adults (Ickes, 2003). This research focuses on the ability of one person (the perceiver) to accurately infer the specific content of another person's (the target person's) thoughts and feelings. Ickes and colleagues (2001) have developed a paradigm to measure EA. EA is a measure of how accurately perceivers can infer 'on line' the specific content of other people's thoughts and feelings while viewing a videotape of the target person in a naturally occurring conversation with another interaction partner. Accuracy is defined in terms of the degree to which the content of a perceiver's inference matches the corresponding content of the target person's actual thought or feeling. To the best of our knowledge, the EA method has been used widely in adults, but only once in healthy adolescents (Sillars et al., 2005).

In the present study, this paradigm was used to investigate the EA of parents with respect to their child with chronic fatigue syndrome (CFS). CFS is characterized by severe, disabling fatigue, together with a variety of other symptoms such as muscle pain, sore throat, headache, and concentration problems (Fukuda et al., 1994). We explored whether parental *actual* and *estimated* EA for the thoughts and feelings of adolescents with CFS varied as a function of (a) the *topic* of the adolescent's thoughts and feelings ('illness experience' vs. 'other life events'), (b) the parental *perceiver* (mother vs. father), and (c) whether estimated EA reflects actual EA.

## Method

### Participants

Twenty-one adolescents with CFS and their parents were contacted by mail and invited to participate. They were contacted either through the tertiary care unit of a regional children's medical centre or through a self-help

group for CFS. Eligibility criteria included: (a) the adolescent was Dutch-speaking and between the ages of 12 and 20 years; and (b) the adolescent had been diagnosed with CFS by a physician specialized in CFS. Fourteen adolescents (response rate 66.6%; 4 boys and 10 girls; mean age = 18.1 years,  $SD = 2.4$ ; with four adolescents in the 12–16 year range; mean duration of CFS = 45.8 months,  $SD = 28.9$ ), 2 from the self-help group and 12 from the tertiary care unit, agreed to participate. All 14 adolescents met inclusion criteria. For four adolescents, the father or the mother was unable to take part, mainly because of relational problems. The mean age of the mothers ( $n = 13$ ) and the fathers ( $n = 11$ ) was 46.1 years ( $SD = 4.5$ ) and 49.0 years ( $SD = 5.8$ ), respectively. Most parents ( $n = 12$ ) were married or co-habiting. Two had parents who were divorced. 79.2% of the parents had a higher education beyond the age of 18 years. Because both parents did not always participate, degrees of freedom varied across statistical analyses.

### Procedure

A letter explaining the purpose of the study was sent to the adolescents with CFS and their parents. Next, a researcher phoned all adolescents and parents to discuss participation. When they agreed to take part, adolescents and their parents were invited to the tertiary care unit or to a lab at Ghent University where the study was conducted. Informed consent was obtained from all parents and adolescents. The procedures used in this study were approved by the university's institutional review board.

### Measures

#### EA Paradigm

The EA paradigm was used to assess the EA of both the mothers and the fathers for their child with CFS. The EA paradigm has been shown to be both valid and reliable (Ickes, 2001, 2003). The measurement of EA involved three separate phases: collection of the videotape data, collection of the thoughts and feelings, and the computation of the EA scores.

*Collection of the videotape data.* The adolescent was taken into the observation room by the experimenter while the parents waited in an adjacent room. The experimenter explained to the adolescent that two interviews of 8 min each, one about CFS and one about other life events, would be conducted and videotaped. The order of the 2 interviews was counterbalanced across participants. The camera was always focused on the adolescent's whole body from the same angle

and distance. The adolescents were asked to talk freely about their experiences with “CFS” (during the interview about “CFS”) or to talk freely about “other life events” (during the interview about “other life events”). The interviewer maintained a non-directive and neutral stance as much as possible while (nonverbally) showing interest and support. When the adolescent stopped talking during the interview for more than 3 s, the interviewer gave verbal encouragement by asking one of four standard questions (e.g., for the interview about “CFS”; “Can you describe the impact of CFS upon your life” or for the interview about “other life events”; “Can you tell me something about your hobbies”). This semi-structured interview technique differed from the original EA procedure (i.e., videotaping of unstructured conversation between two interacting partners) as described by Ickes (2001). After each interview, the adolescents were asked to rate the degree to which they felt they had been talking about their illness. Ratings were made on an 11-point scale (from 0 = not at all to 10 = very much).

*Collection of the thought/feeling data.* After collecting the videotape data, the adolescents and their parents were seated in separate areas of a test room and asked to view the videotapes. Each videotape was stopped by the experimenter every 30 s. At each of these “stop points” (16 per videotape), the adolescents were asked to provide a written record of the specific thought or feeling they had experienced at that point in time, and the parents provided a written inference about the content of the specific thought or feeling reported by their child at that point in time. Family members were asked not to discuss their experiences with each other until the study was complete. They were all encouraged to write down either their actual thoughts and feelings (adolescent) or their inferred thoughts and feelings (parents) in a way that would provide the most accurate and complete report possible.

*Computation of empathic accuracy scores.* The EA of each parent was computed by comparing the actual and inferred thought/feeling entries. EA is an index of the degree to which the content of the parent’s thought/feeling inferences matched the actual content of the corresponding thoughts and feelings reported by the adolescent (Ickes, 2001). Both the adolescent-generated thought/feeling entries and the parent-generated thought/feeling entries were typed into word processor files. Five independent coders compared each of the adolescent’s reported thoughts and feelings with the parent’s corresponding inference and rated their similarity on a 3-point scale, with 0 meaning “essentially different content,”

1 meaning “similar, but not the same, content,” and 2 meaning “essentially the same content.”

For each video interview, four indexes of EA were computed (EA scores for “CFS” and “other life events” for both the mother and the father). To compute these indices, we first summed the ratings assigned by the five coders across the 16 thought–feeling inferences within each interview (“CFS” and “other life events”) for each perceiver (mother and father). These summed values were divided by the total number of coders (5) and by 32, the maximum number of accuracy points that could be obtained in each phase (i.e., 16 inferences  $\times$  2 points possible per inference) to derive percentage-analogue accuracy scores having a potential range of 0 (no accuracy) to 100 (perfect accuracy). In the present study, the internal consistency (Cronbach’s  $\alpha$ ) of the five coders’ EA ratings was high (.88), justifying aggregation of ratings across the five coders. The four EA indices were used as dependent measures in the analyses reported below.

#### Self-report of Empathic Accuracy

After obtaining the actual EA data, the experimenter asked the adolescent to respond to two questions with regard to each theme that had been videotaped. They were asked to estimate how accurate they imagined their mother/father had inferred their thoughts and feelings with respect to the interviews about “CFS” and separately for “other life events”. Ratings were made on an 11-point scale (from 0 = not at all to 10 = very much) and provided indices of the adolescent’s *estimated* parental EA for both topics.

## Results

### Manipulation Check

As expected, adolescents reported that they talked significantly less about their illness in the interview about “other life events” ( $M = 4.3$ ,  $SD = 2.6$ ) than in the interview about “CFS” ( $M = 8.2$ ,  $SD = 1.9$ ), [ $t(12) = -4.81$ ,  $p < .0005$ ], confirming that our manipulation of topic of the interview was effective.

### Estimated Empathic Accuracy

Means and standard deviations of estimated EA are displayed in Table I. A 2 (perceiver: mother or father)  $\times$  2 (topic: “CFS” or “other life events”) within-factor ANOVA was performed for the measure of adolescent-*estimated* parental EA. There was a significant main effect of perceiver, [ $F(1, 8) = 5.22$ ,  $p < .05$ ]: Adolescents estimated that their mother ( $M = 6.8$ ,  $SD = 1.9$ ) was

**Table I.** Means (*M*) and standard deviations (*SD*) for the actual (range 0–100) and estimated (range 0–10) empathic accuracy (EA) for topic (“CFS” vs. “other life events”) and perceiver (mother vs. father)

	Actual EA				Estimated EA			
	CFS		Other life events		CFS		Other life events	
	<i>n</i>	<i>M</i> ( <i>SD</i> )	<i>n</i>	<i>M</i> ( <i>SD</i> )	<i>n</i>	<i>M</i> ( <i>SD</i> )	<i>n</i>	<i>M</i> ( <i>SD</i> )
Father	11	28.18 (13.23)	10	43.00 (9.61)	11	4.90 (1.87)	10	5.30 (1.70)
Mother	13	31.92 (15.23)	12	41.17 (8.62)	13	6.38 (1.98)	12	7.17 (1.80)

more likely to have been empathically accurate than their father ( $M = 5.1$ ,  $SD = 1.8$ ). According to the criteria of Cohen (1988), this effect size is large (unbiased  $d = .99$ , Hedges, 1981). There was no main effect of topic [ $F(1, 8) = 1.84$ , *n.s.*] (unbiased  $d = .30$ ), nor an interaction between topic and perceiver [ $F(1, 8) < 1$ , *n.s.*].

### Actual Empathic Accuracy

Table I displays the summary statistics for actual EA. A 2 (perceiver: mother or father)  $\times$  2 (topic: “CFS” or “other life events”) ANOVA conducted for the measure of the parents’ actual EA scores revealed no effect of perceiver and no interaction between topic and perceiver ( $F_s < 1$ ). However, there was a significant main effect of topic [ $F(1, 8) = 13.65$ ,  $p < .05$ ]: Actual EA scores were lower with respect to the adolescents’ “CFS”-relevant thoughts and feelings (mean for mothers = 31.9%; mean for fathers = 28.8%) than with respect to the adolescents’ “other life events”-relevant thoughts and feelings (mean for mothers = 41.2%; mean for fathers = 43.0%). The effect size for this effect was large for both the mother (unbiased  $d = .71$ ) and the father (unbiased  $d = 1.22$ ).

### Correlations between Estimated and Actual EA

Pearson correlation coefficients between the actual EA and the estimated EA by the adolescents (for both topic and both perceivers; i.e., four correlation coefficients) were computed. Results revealed a significant negative correlation between the actual EA of the father for the thoughts and feelings of their child related to CFS and the corresponding estimated EA by the adolescent ( $r = -.63$ ,  $p < .05$ ). All other correlations yielded no significant effects.

### Discussion

A first aim of the current study was to determine whether parental actual and estimated EA for the thoughts and feelings of their child differs with respect to the topic

of the adolescent’s experiences. A second aim was to examine whether mothers and fathers are similarly or differentially accurate (actual and estimated) in inferring their child’s thoughts and feelings. A final aim of this study was to explore whether the EA estimated by the adolescent reflects the actual EA of the mother or father, respectively.

An important general finding was that both parents were less accurate with respect to “CFS” thoughts and feelings than for those pertaining to “other life events”. There are several possible reasons for this finding. First, the nature of the illness is “mysterious” (Richards, 2000), and its effects upon the adolescent are not always visible and observable, making it difficult to infer such thoughts and feelings. Second, although it is common to socially share many emotional experiences, individuals with chronic illnesses may sometimes be reluctant to share their illness experiences because they fear burdening others with their problems (Herbette & Rimé, 2004), or because they want to present themselves as competent and not different from healthy peers (Morley, Doyle, & Beese, 2000). Third, research on EA within close relationships has shown that perceivers are sometimes motivated to be empathically inaccurate in cases when accurate knowledge of the other person’s thoughts and feelings might be personally distressing (Simpson, Blackstone, & Ickes, 1995). In the present case, it is possible that parents were less accurate about their child’s CFS-related thoughts and feelings as a means of avoiding distress and the frustration of not being able to provide sufficient help. Crombez and Eccleston (2002) have proposed a similar explanation for the often-found underestimation of pain in children by their parents.

We also found that, although the adolescents believed that their mothers were more empathically accurate than their fathers, the results of the EA paradigm showed that the fathers and mothers were equally accurate in inferring the specific content of their child’s thoughts and feelings. The finding that fathers were, overall, as empathically accurate as mothers, despite

being perceived as less empathically accurate, is in line with other findings. These indicate that there are no overall gender differences in EA (Ickes, Gesn, & Graham, 2000), although women are generally being perceived as much more empathically accurate than men (Ickes, 2003). Possibly, the ability to be empathically accurate might be *differentially used* by fathers and mothers, giving rise to the adolescents' belief that their mothers are more empathically accurate than their fathers. Fathers might be less communicative and less inclined to act upon their knowledge compared to mothers, especially with regard to illness-related issues of their child (Seiffge-Krenke, 2002). Also, parental acknowledgment of illness-related thoughts and feelings of the child might, as suggested above, create distress. This might enhance the tendency for fathers to seek the benefit of withdrawal, whereas mothers might seek the benefit of engagement (Buysse et al., 2000). Our finding that paternal actual EA for CFS-related thoughts and feelings of the child is significantly negatively correlated with corresponding estimated EA by the adolescent further corroborates this idea.

To our knowledge, this is the first study investigating EA in parents of chronically ill adolescents. This EA approach offers new avenues for research. In particular, investigating EA in relation to observational measures of child–parent interactions is encouraged, to disentangle the different components (i.e., cognitive, affective and behavioral) of empathic understanding and its implications for child and family functioning (see e.g., Sillars et al., 2005). Furthermore, efforts should be dedicated to investigating why some parents are more empathically accurate than others. A recently described model of empathy for pain, (Goubert et al., 2005) emphasizes the importance of investigating the impact of bottom-up factors (i.e., features of the child such as verbal and nonverbal expressions), top-down factors (i.e., features of the parents' knowledge and other dispositions such as prior personal experiences), and contextual factors (such as the child's age or developmental status) upon empathic understanding. There are, however, some limitations to the study. First, this study was cross-sectional. We were not able to infer causal relationships. Second, the results need replication, because of the small sample size. Low statistical power could have resulted in the detection of large rather than medium or small effect sizes. Third, extended measures of perceived empathy are needed, beyond our one-item scale. Single-item scales are less reliable and decrease the statistical power to detect differences. Fourth, our sample comprised many

more females than males, which might have impacted upon the results of this study. Finally, as we did not use a comparison group, it is not clear whether these results are specific to CFS or may be true for other chronic illnesses or the general population.

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