



## Mental health in mothers and fathers of children with chronic disorders

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### ABSTRACT

**Objective:** This study applied the Family Systems Illness Model to examine how child disorder severity influences mental health in mothers and fathers of children with chronic (mainly developmental) disorders (CD).

**Methods:** We measured parental mental health and perceived child disorder severity among 204 mothers and 125 fathers of 220 children with CD and compared the mental health scores with norms. We analyzed how much of the variance in parental mental health was explained by child disorder severity, including discrepancy between maternally and paternally perceived severity.

**Results:** Compared to norms, we found elevated mental health problems in both mothers ( $d = 0.45$ ) and fathers ( $d = 0.20$ ) of children with CD. Mothers had higher scores than fathers on both mental health problems ( $d = 0.63$ ) and severity ( $d = 0.43$ ). Perceived disorder severity was similarly associated with mental health problems for mothers ( $\beta = 0.23$ ) and fathers ( $\beta = 0.34$ ). Discrepancy between maternal and paternal perceived disorder severity did not influence parental mental health.

**Conclusion:** Findings suggest gender-specific challenges in parenting children with CD. Subjective perception of disorder severity plays a substantial role for parental mental health.

**Innovation:** This comparative study of mothers and fathers contributes to a predominantly mother-focused field.

### 1. Background

Children with chronic disorders (CD), defined herein as enduring developmental, physical, or psychological impairments that are either congenital or manifest before the age of 18 years, often require specialized care and support [1,2]. These specialized care needs can place a significant emotional and psychological burden on parents [3-5]. Numerous studies have explored the impact of child CDs on parental physical and mental health [3]. Across studies, parents of children with CD score above norms on measures of mental health problems [3,6,7]. A meta-analysis [3] showed significantly higher anxiety and depression scores among parents of children with CD compared to the parents of children without CD. Further, child disorder severity has been shown to be more strongly associated with parental mental health than specific

diagnostic characteristics or categories [8,9].

Due to the long-term impact of chronic disorders, a systemic theoretical framework for investigating the mental health of parents is warranted. The Family Systems Illness Model (FSI) [10] emphasizes the systemic interaction between an illness and the family style of functioning as prime determinants of successful versus dysfunctional coping and adaptation. The FSI offers a typology for understanding family functioning and development. Instead of using specific diagnostic categories as the point of departure, FSI clusters disorders based on onset, course, outcome, disability and predictability [10], and thus supports empirical findings of diagnosis severity or level of impact affecting family functioning more than specific diagnostic characteristics [8,9]. The model further posits an interplay between type of disorder, illness development in the family and family cultural and social belief systems. Family belief

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systems about gender-based expectations of caretaking, for example, play a substantial role in family functioning and coping with a chronic disorder [10].

The roles and responsibilities of mothers and fathers often differ within families [11], and societal expectations and gender norms may shape their experiences and responses to the challenges posed by their child's diagnosis [12,13]. Despite this fact, the majority of studies on parental mental health have predominantly used mothers as participants. 15 of 26 studies in a recent meta-analysis examined only mothers [3]. 10 studies examined both mothers and fathers in unified or separate cohorts [3], but only one of these compared maternal and paternal mental health [14]. Fathers raising children with disabilities tend to report lower levels of parenting stress compared to mothers [4]. However, fathers have described that they cope by withholding their emotions and “being strong” for their wife and family [13]. Further, parental coping has been shown to be influenced by perceived roles in the co-parenting unit [15] and more research is needed on how children's CD may affect maternal and paternal mental health differently. Grounded in the assumptions of gendered expectations regarding caretaking within the FSI [10], this paper seeks to address this need by examining the predictive value of parent perceived severity of child disorder and considering how impact may vary between mothers and fathers. Understanding the distinct experiences of mothers and fathers in parenting a child with CD is essential for tailoring effective interventions.

Another gap in the field is the lack of studies considering the influence of discrepancies between parents in perceived disorder severity ratings. Several studies have found significant differences in mothers' and fathers' reporting of child symptom severity, without a clear pattern of one gender scoring higher than the other [16-18]. This is unsurprising, as informant discrepancy is the rule rather than the exception in assessing child and adolescent symptoms [19]. Informant discrepancies can be understood as expressions of differing attributions of the child's behavior due to different perspectives on whether the behavior is context driven or individually inherent [20]. According to De Los Reyes and Kazdin [20], mother-father discrepancies in child behavior reporting stems from different recall based on differing perspectives. In other words, an informant's assessment of the child will be negatively biased if the attribution is negative as well [20]. Previous studies have found that higher maternal and paternal self-rated mental health problems, were significantly associated with higher parent-rated adolescent symptoms [21]. Discrepancy in parents' perception of the severity of their child's diagnosis may complicate caregiving. Co-parenting disagreement is a risk factor for parental burnout [22] because differences in perception of the child's diagnosis may lead to more stress and less partner support within the family unit, ultimately impacting the mental health of both parents. Consequently, the current study aims to investigate the relationship between mother-father discrepancy in perceived disorder severity and parental mental health.

The current study is based on measures of mental health and perceived child disorder severity in parents of children with CD. We test the following hypotheses (Hs):

H1: Parents of children with CD have significantly higher levels of mental health problems compared with Norwegian norms.

H2: There is a significant difference in the levels of mental health problems between mothers and fathers of children with CD.

H3: There is a significant difference in the perceived severity of child disorder between mothers and fathers of children with CD.

H4: Perceived child disorder severity significantly explains variance in parental mental health problems.

H5: The discrepancy between maternally and paternally perceived child disorder severity significantly explains variance in parental mental health problems.

## 2. Methods

### 2.1. Participants

The present study utilizes baseline data from a randomized controlled trial of the “SIBS”-intervention (SIBS-RCT), which aims to improve sibling well-being and communication between parents and siblings of children with CD [23]. All participating families ( $N = 220$ ) had a child aged 0 to 18 years with CD (37.3% girls, 62.7% boys, see Table 1 for all included diagnoses). The mean age of children was 10.5 years ( $SD = 3.3$ ; range 3–18). The mean age of mothers was 42.2 years ( $SD = 5.4$ ; range = 28–54). The mean age of fathers was 44.5 years ( $SD = 6.7$ ; range = 30–66). The mean education level among parents was high, with 79.4% of mothers and 62.1% of fathers having completed four or more years of university education.

### 2.2. Procedures

Recruitment for the SIBS-RCT was done through municipality and specialist health care services, adverts, user organizations and specialist centers. The inclusion criteria were: (1) being the sibling of a child diagnosed with CD who is aged 0 to 18 years and who receives specialist and/or municipal health services; (2) sibling age 8–16 years; and (3) one parent able to attend the intervention [23]. Families lived in both rural and urban parts of Norway. Prior to data collection, written informed consent was obtained from parents for themselves and for children under the age of 16 years. Children, siblings and parents were informed of the voluntary nature of their participation, retaining the right to end their involvement at any point. The study was approved by the local institutional research ethics board. All data in the current report were collected electronically at baseline before the SIBS intervention.

### 2.3. Measures

#### 2.3.1. Parent mental health

The 90-item Symptom Checklist (SCL-90) [24] was used to measure parent mental health. All items were answered on a 5-point Likert scale (0 = *Not at all*, 1 = *A little*, 2 = *Moderate*, 4 = *Quite a lot*, 5 = *Very much*), reflecting the extent to which the corresponding symptom or ailment has been experienced during the past week. The SCL-90 comprises nine primary symptom scales and three global scales. The nine subscales measure Somatization (SOM), Obsessive-Compulsive symptoms (OCD), Interpersonal Sensitivity (I–S), Depression (DEP), Anxiety (ANX), Hostility (HOS), Phobia (PHOB), Paranoia (PAR) and Psychoticism

**Table 1**  
Child diagnoses represented in the sample.

Diagnoses	Primary <i>N</i> (%)	Secondary <i>N</i> (%)	Tertiary <i>N</i> (%)
ADHD	50 (22.7)	17 (7.7)	0 (0)
Tourette Syndrome	12 (5.5)	10 (4.5)	1 (0.5)
Asperger Syndrome	29 (13.2)	0 (0)	0 (0)
Autism	31 (14.1)	2 (0.9)	0 (0)
Specific Developmental Disorder	2 (0.9)	3 (1.4)	0 (0)
Emotional or Conduct Disorder	8 (3.6)	13 (5.9)	4 (1.8)
Eating Disorders	11 (5.0)	1 (0.5)	0 (0)
Cerebral Palsy	5 (2.3)	1 (0.5)	1 (0.5)
Intellectual Disability	7 (3.2)	9 (4.1)	1 (0.5)
Down Syndrome	22 (10)	0 (0)	0 (0)
Rare Disorders	41 (18.6)	0 (0)	0 (0)
Somatic Disorders	2 (0.9)	3 (1.4)	6 (2.7)

$N = 220$ . Diagnoses were parent reported and cross-checked with clinic registry. In cases where more than one diagnosis was reported, they were ranked as secondary and tertiary according to the understandings of The ICD-10 classification of mental and behavioral disorders [37].

(PSY). The global General Symptom Index (GSI), the mean of all 90 items, was utilized as the main measure of parental mental health in the current study. Good reliability has been demonstrated for all subscales, with Cronbach's alphas between 0.79 and 0.89 [25]. The reliability of the SCL-90 in the current study was also good, with Cronbach's alphas of 0.97 for both mother ( $N = 204$ ) and father ( $N = 125$ ) GSI.

### 2.3.2. Perceived child disorder severity

The 96-item Developmental Behavior Checklist Primary Carer Version (DBC-P) [26] was used to measure perceived child disorder severity. The DBC-P is a parent reported assessment of behavioral and emotional symptoms in children aged 4 to 18 years, and is an indication of perceived disorder severity. The DBC covers a wide range of behavioral and emotional symptoms, hence it incorporates various aspects of the child's functioning. Our decision to use a measure of emotional and behavioral symptoms in the current study builds on an assumption that these are the symptoms that will "play out" in the family setting, as opposed to for example somatic symptoms. Measuring such a psychosocial impact of the chronic disorder is in line with the typology of the FSI model [10]. The DBC has been shown to perform well across unequal samples of children with intellectual disability [27], and is thus a good measure of severity across diagnostic categories.

All items were answered by parents on a 3-point Likert scale (0 = *Untrue*, 1 = *Somewhat or Sometimes True*, 2 = *Very/Often True*), reflecting the degree to which the statement is true for their child. The cumulative score is known as the Total Behavior Problem Score (TBPS). The DBC comprises five subscales: disruptive/antisocial, self-absorbed, communication disturbance, anxiety, and social-relating. Satisfactory or above internal consistency, inter-rater and test-retest reliability, and concurrent validity is reported for caregivers reporting about their children with intellectual disabilities [26]. In the current study, the DBC-P was distributed to families of children both with and without intellectual disabilities. Internal consistency of the DBC-P was therefore checked for all diagnostic groups separately, resulting in acceptable Cronbach's alphas all above 0.70. Altogether, Cronbach's alpha for the DCB-P TBPS score was 0.94 for both mothers ( $N = 203$ ) and fathers ( $N = 135$ ).

### 2.4. Data analytic plan

First, parent SCL-90 scores were compared to Norwegian norms [25] using one sample  $t$ -tests (H1). Mother and father SCL90- scores, and mother and father DBC-P scores were compared using a paired sample  $t$ -test (H2 and H3).

Next, we performed linear regressions for SCL-90 GSI scores with DBC-TBPS score as predictor for both mothers and fathers, controlling for child age and sex (H4).

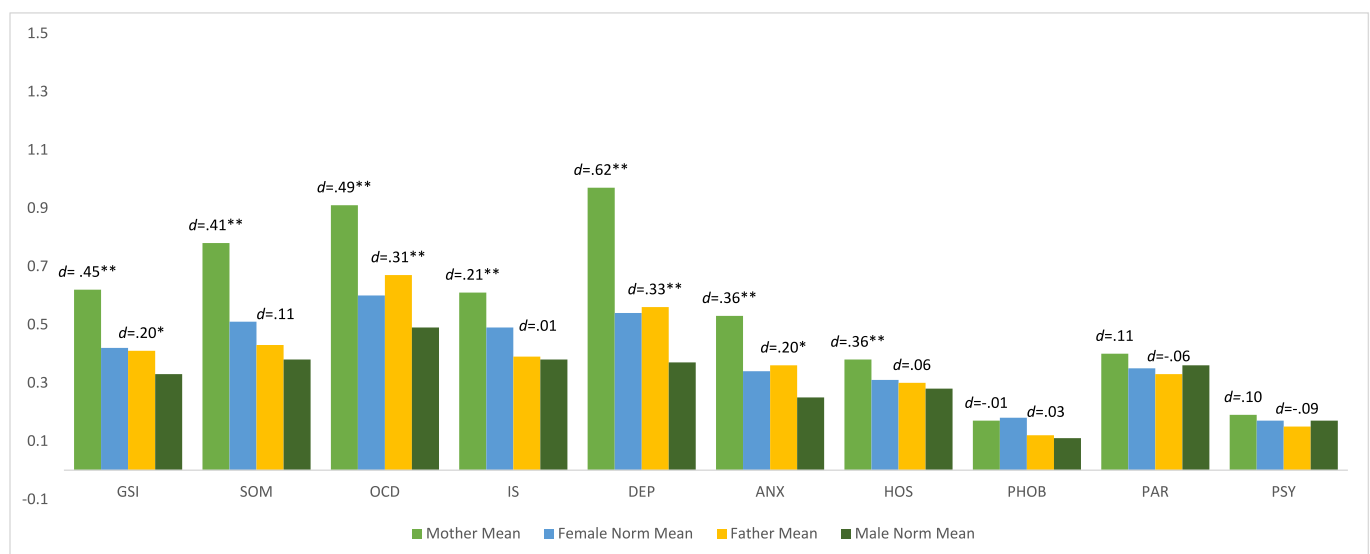
Finally, discrepancy variables were computed by subtracting the DBC-P TBPS father scores from mother scores and linear regressions were done with the discrepancy variable entered as predictor (H5). All analyses were conducted using IBM SPSS 29. Statistical significance was set at  $p < 0.05$ .

### 3. Results

**H1: Parents of children with CD have significantly higher levels of mental health problems compared with Norwegian norms.** Mother Global Severity Index (GSI) scores were significantly higher than the normative mean for women ( $M = 0.62$ ,  $SD = 0.44$ );  $t(df) = 6.38(203)$ ,  $p \leq 0.001$ , and father GSI scores were significantly higher than the normative mean for men ( $M = 0.41$ ,  $SD = 0.39$ );  $t(df) = 2.26(124)$ ,  $p = 0.025$ . Mothers scored significantly higher than the normative mean on subscales SOM, OCD, IS, DEP, ANX and HOS. Fathers scored significantly higher than the normative mean on subscales OCD, DEP and ANX. See Fig. 1 for column charts of the differences including effect sizes.

**H2: There is a significant difference in the levels of mental health problems between mothers and fathers of children with CD.** There was a significant difference in the GSI score between mothers ( $M = 0.66$ ,  $SD = 0.46$ ) and fathers ( $M = 0.36$ ,  $SD = 0.34$ );  $t(df) = 6.61(108)$ ,  $p \leq 0.001$ . Significant differences between mother and father scores were also found in all subscales. See Table 2 for mean differences and effect sizes.

**H3: There is a significant difference in the perceived child disorder severity between mothers and fathers of children with CD.** Paired  $t$ -tests showed a significant difference in Total Behavior Problem Score between mothers ( $M = 48.1$ ,  $SD = 24.7$ ) and fathers ( $M = 40.6$ ,  $SD = 22.5$ );  $t(df) = 4.61(111)$ ,  $p \leq 0.001$ . There were significant differences between mothers and fathers on all but one subscale, Social Relating, and all



**Fig. 1.** Parent SCL90 Scores Compared to Norwegian Norms. GSI = General Symptom Index, SOM = Somatization, OCD = Obsessive-Compulsive symptoms, IS = Interpersonal Sensitivity, DEP = Depression, ANX = Anxiety, HOS = Hostility, PHOB = Phobia, PAR = Paranoia, PSY = Psychoticism. Effect sizes are Cohen's d. with small, medium, and large effect sizes represented by 0.2, 0.5, and 0.8.

\*Significant at the 0.05 level when compared with Norwegian norms.\*\* Significant at the 0.01 level when compared with Norwegian norms.

**Table 2**  
Differences between mother and father mental health scores.

SCL90 scale	Mean difference (SD)	t	Sig. (p)	Effect size (d)
General Symptom Index	0.29 (0.47)	6.606	<0.001	0.63
Somatization	0.43 (0.70)	6.459	<0.001	0.61
Obsessive-Compulsive Symptoms	0.35 (0.68)	5.100	<0.001	0.49
Interpersonal Sensitivity	0.36 (0.62)	5.729	<0.001	0.55
Depression	0.57 (0.77)	7.758	<0.001	0.74
Anxiety	0.26 (0.66)	4.121	<0.001	0.40
Hostility	0.16 (0.47)	3.600	<0.001	0.35
Phobia	0.09 (0.47)	2.012	0.047	0.19
Paranoia	0.13 (0.46)	2.868	0.005	0.28
Psychoticism	0.07 (0.25)	3.030	0.003	0.29

N = 109. Effect sizes are Cohen's d. with small, medium, and large effect sizes represented by 0.2, 0.5, and 0.8, respectively.

differences were in the same direction with mothers scoring higher than fathers. See Table 3 for paired differences and effect sizes.

H4: Perceived child disorder severity significantly explains variance in parental mental health problems. Linear regressions showed significant explained variance of the DBC-P total score on SCL-90 GSI score for both mothers and fathers. See Table 4 for regression coefficients. Controlling for child age and sex, the explained variance of DBC-P scores on SCL-90 GSI scores were unchanged for mothers and fathers. Due to the non-significant effects of child age and sex, we removed these variables from subsequent analyses. The strength of the association between the DBC TBPS and SCL-90 GSI for mothers and fathers differed, but not significantly ( $Z = -1.01, p = 0.15$ ).

H5: The discrepancy between maternally and paternally perceived child disorder severity significantly explains variance in parental mental health problems. Variation in the discrepancy DBC-TBPS score was large (range = -30-72,  $M = 7.5, SD = 17.2$ ), reflecting that in some cases mothers scored higher than their partner, while in other cases fathers scored higher. The discrepancy DBC-P TBPS score was not significantly related to parents' SCL-90 GSI score. See Table 5 for regression coefficients. This means that, contrary to our expectations, discrepancy in perceived diagnosis severity did not explain variance in parent SCL-90 GSI scores.

#### 4. Discussion and conclusion

##### 4.1. Discussion

We examined mental health in parents of children with CD, and the potential predictive value of perceived child disorder severity and parental discrepancy. The results showed that both mothers and fathers of children with CDs scored significantly higher on mental health measures compared to Norwegian norms. Mothers showed elevated

**Table 3**  
Differences between mother and father perceived child disorder severity.

DBC scale	Mother mean (SD)	Father mean (SD)	t	Sig. (p)	Effect size (d)
Total Behavior Problem Score	48.1(24.7)	40.6 (22.6)	4.597	<0.001	0.43
Disruptive/Antisocial	17.6 (10.3)	14.5 (9.07)	4.447	<0.001	0.42
Self-Absorbed	12.3 (8.71)	10.3 (8.02)	3.809	<0.001	0.36
Communication Disturbance	5.08 (4.02)	4.46 (3.60)	2.184	0.031	0.21
Anxiety	6.04 (4.10)	5.16 (3.88)	3.764	<0.001	0.36
Social Relating	4.18 (3.12)	3.88 (3.08)	1.248	0.215	0.12

N = 112. Effect sizes are Cohen's d. with small, medium, and large effect sizes represented by 0.2, 0.5, and 0.8.

**Table 4**  
Statistical effects of perceived child disorder severity on parental mental health.

Variable	B	$\beta$	SE	R <sup>2</sup>	95% CI	
					LL	UL
Mother mental health						
Mother report	0.004**	0.23	0.001	0.055**	0.002	0.007
Father mental health						
Father report	0.006**	0.34	0.002	0.115**	0.003	0.009

Mother N = 189, father N = 119. CI = Confidence interval; LL = lower limit; UL = upper limit. We examined the explained variance of perceived disorder severity on parental mental health. Parent SCL-90 GSI was entered as dependent variable, while DBC-P was entered as independent.

\*p < 0.05. \*\*p < 0.01.

**Table 5**  
Statistical effects of discrepancy in maternal and paternal perceived child disorder severity on parental mental health.

Variable	B	$\beta$	SE	R <sup>2</sup>	95% CI	
					LL	UL
Mother mental health						
Discrepancy	0.001	0.06	0.003	0.003	-0.004	0.007
Father mental health						
Discrepancy	0.000	-0.01	0.002	0.000	-0.004	0.004

Mother N = 110, father N = 100. CI = Confidence interval; LL = lower limit; UL = upper limit. We examined the explained variance of discrepancy in maternal and paternal perceived child disorder severity on parental mental health. DBC-P discrepancy variable was entered as independent. \*p < 0.05. \*\*p < 0.01.

scores on the global score and all subscales of the SCL-90, while fathers showed elevated scores on the global score and three of the subscales. Earlier studies have shown that parents of children with CDs suffer from poorer overall mental health compared with parents of only typically developing children [3]. As expected, our findings were in line with this. Significant differences were found between mother and father mental health scores, with mother scores being higher, suggesting a greater psychological burden on mothers. This aligns with the broader literature on gender roles and responsibility in caregiving, suggesting that mothers tend to have a primary caregiver role [11], and hence are more exposed to their children's difficulties and more at risk for mental health issues of their own. Of note, previous research has suggested that the Norwegian context fosters less gender inequality in families with increased caregiver responsibilities compared to other high-income countries [28]. Since the 1990s, Norway has implemented policies to encourage paternal involvement in childcare [29]. Our finding of profound gender differences in parental mental health suggests a gap between the intention of Norwegian policies and the reality that these families experience. However, caution is needed when interpreting what these findings mean for fathers: In qualitative studies, fathers have addressed feeling perceived as a lesser parent when compared with their child's mother [30]. Fathers have also described that they withhold their own psychological pain in order to "stay strong" for their wife and family [13]. Separating the questions about what fathers experience, and what fathers report, is thus essential. Interestingly, our study also reveals a more pronounced difference between male and female mental health symptom load in our sample of parents than in the general population. That is, our study revealed significant gender differences on the subscales Hostility, Paranoia and Psychoticism – subscales that do not differ significantly between men and women in the normative sample [25]. Norwegian norms show significant gender differences on the subscales Somatization, Obsessive-Compulsive symptoms, Interpersonal Sensitivity, Anxiety, and Phobia, while our findings show significant gender differences on the GSI and all subscales. This underpins the suggestion of an elevated psychological burden for mothers in our sample.

Our study revealed a significant variance explained by parent



perceived disorder severity on their own mental health scores. This finding was in line with our expectations. It suggests that the specific CD affecting a child does not significantly contribute to variance in parent mental health symptom load. Further, the finding emphasizes the universal challenges faced by parents of children with CDs, irrespective of the specific diagnosis. This finding is supported by the FSI model [10] and earlier empirical findings [8,9] that posit that elements of diagnosis severity, rather than specific diagnostic characteristics, explain impact on parents.

Significant differences were also found between mother and father perceived disorder severity scores, with mothers scoring higher. The FSI model stresses how gendered expectations of caretaking play a substantial role in family functioning facing childhood CD [10]. In line with this, our finding may suggest that mothers are taking on a more invested caretaker role, being more exposed to child symptoms, compared to fathers. This is supported by studies finding that mothers and fathers take on different roles in parenting when facing childhood illness [31]. Previous studies using the DBC-P have typically had predominantly mother participants [32], or have asked parents to fill out the DBC-P form together [33]. Thus, our finding of significant differences between mothers and fathers is a new contribution to knowledge about parents of children with CDs.

Contrary to our expectations, discrepancy in perceived diagnosis severity between mothers and fathers did not significantly explain mental health scores for parents. This is contrary to earlier research showing that co-parenting disagreement puts parental well-being at risk [22]. Of note, the discrepancy score in the current study is not an explicit measure of co-parenting disagreement, but could reflect that parents' views of how to rear the child are unsimilar [34]. While shared perceptions of child behavior may contribute to mutual understanding and spousal support, the lack of a significant impact on mental health outcomes in the current study suggests that individual interpretations of child behavior play a substantial role. However, multi-informant discrepancies has been argued to provide important information about child functioning [35,36]. However, research on multi-informant discrepancies typically consider parent-child or parent-teacher discrepancies. In light of the understanding of mother-father discrepancy suggested by De Los Reyes and Kazdin [20] – that parent attribution and perspectives will be reflected in their assessment of child symptoms - it is possible that the significant discrepancy in perceived disorder severity scores to some extent just reflects the significant discrepancy in parental mental health scores, knowing that mother scores were significantly higher on both measures. This would be in line with previous studies finding significant associations between parent self-rated mental health problems and their rating of adolescent symptoms [21].

#### 4.1.1. Strengths and limitations

This study has several strengths. First, the recruitment of both parents in families of children with CD has resulted in a high number of father participants in our study, enabling the running of separate analyses for mothers and fathers. Second, the large variation in included diagnostic groups underpins the global nature of mental health risk in parents of children with CD. Limitations should also be noted. Our sample was not representative of the wider population, neither by socioeconomic status (SES) nor diagnostic groups. Therefore, results might not be generalizable to other SES or diagnoses. It is also a limitation that the chosen measure of perceived diagnosis severity assesses behavioral and emotional symptoms of the children rather than a broader symptom spectrum. Herein, the lack of assessment of the impact of somatic symptoms is a particular limitation. Further, the Norwegian norms for the SCL-90 are based on measures of men and women, not fathers and mothers of children without CD. This leaves room for other explanations of significant findings, for example that having children in itself is a predictor of mental health. Lastly, although we had a high number of father participants in our study, their participation rate was still lower than that of mothers. This disparity might influence the observed

differences in mental health between participating mothers and fathers, as the mental health of participating fathers may differ from that of non-participating fathers.

#### 4.2. Innovation

We included a large sample of mothers and fathers of children with a range of chronic disorders examining the impact of that disorder on parent mental health. Few studies on parents of children with a chronic disorder have conducted comparative analyses of mother and father mental health. Thus, including both mothers and fathers in several comparative analyses is a main innovative contribution of this study. Overall, our study provides new knowledge on how mothers' and fathers' experiences of parenting a child with CD may differ.

#### 4.3. Conclusions

Examining mental health in parents of children with CDs revealed elevated levels of symptoms, in line with earlier studies. A profound gender difference was found, with mothers scoring significantly higher than fathers on both measures. Our findings align with the systemic understanding of family functioning of the FSI model [10]. Further research on the association between caregiving role and mental health is suggested. Given our finding that individual interpretations had a stronger association with mental health than potential disagreement, future studies should explore potential differences in mental health and perceived diagnosis severity in single-mother and single-father families. Further, more extensive research on father experience, and potential discrepancy between experience and reporting is needed. Also, in accordance with our expectations, the study revealed significant variance explained by perceived diagnosis severity mental health scores for both mothers and fathers. Future studies should explore this association using a measure that more fully than the DBC captures the totality of the child's function.

In contrast to our expectation, the study shows no variance explained by discrepancy between mothers' and fathers' perceived disorder severity on mother or father mental health. This suggests that one's individual interpretation of child behavior plays a more substantial role for this group of parents than does perceived (dis)agreement. Future studies should investigate how potential discrepancy in mother-father mental health explains mother-father discrepancy in perceived disorder severity.

Our findings have clinical implications. Practitioners working to support and help families where a child has CD need to be attentive towards parental mental health. In our study, both mothers and fathers demonstrated elevated mental health symptoms, suggesting that both mothers and fathers may be in need of (professional) support. Therefore, both parents need to be involved in medical care for their children in order to assess the overall help need in each family. Our findings suggest a potential larger psychological burden on mothers and the involvement of fathers is thus an important aspect in trying to even the burden between parents.

#### CRediT authorship contribution statement

**Erica Zahl:** Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization. **Agnes M. Willemen:** Supervision, Formal analysis, Data curation, Conceptualization. **Trude Fredriksen:** Validation, Data curation. **Solveig M. Kirchhofer:** Validation, Data curation. **Torun M. Vatne:** Validation. **Stian Orm:** Validation, Data curation. **Matteo Botta:** Validation, Data curation. **Caitlin Prentice:** Validation. **Krister W. Fjermestad:** Validation, Supervision, Project administration, Funding acquisition, Conceptualization.

## Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests:

Erica Zahl reports financial support was provided by Norwegian Women's Public Health Association. Krister W. Fjermestad reports financial support was provided by Research Council of Norway. If there are other authors, they declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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