Psychological wellbeing and needs of parents and carers of children and young people with mental health difficulties: a quantitative systematic review with meta-analyses

Faith Martin1*, Dania Dahmash2, Sarah Wicker1, Sarah-Lou Glover3, Charlie Duncan4, Andrea Anastassiou4, Lucy Docherty5, Sarah Halligan5

1School of Psychology, Cardiff University, 70 Park Pl, Cardiff CF10 3AS
2Centre for Intelligent Healthcare, Coventry University, Richard Crossman Building, Jordan Well, Coventry CV1 5RW, UK
3Parental Minds Community Interest Company, UK.
4Research Department, British Association for Counselling and Psychotherapy
5Department of Psychology, University of Bath, Claverton Down Campus, Bath BA2 7AY

*Corresponding author: Dr Faith Martin, School of Psychology, Cardiff University, 70 Park Pl, Cardiff CF10 3AS. Email: martinf8@cardiff.ac.uk
ABSTRACT

Question: For parents of children and young people (CYP) with diagnosed mental health difficulties, what are the levels of parents’ wellbeing and psychological need?

Study selection and analysis: Medline, PsycInfo, EMBASE, AMED, CINAHL, Web of Science, and Cochrane Library of Registered Trials were searched from inception to June 2023. Inclusion criteria: parents of CYP 5-18 years old with formal mental health diagnosis. Data were extracted from validated measures of wellbeing or psychological needs with established cut-off points or from a controlled study (PROSPERO CRD42022344453).

Findings: 32 of the 73,310 records screened were included. Pooled means showed clinical range scores for one measure of depression, and all included measures of anxiety, parenting stress and general stress. Meta-analyses showed greater depression (g=0.24 95%CI0.11-0.38) and parenting stress (g=0.34 95%CI0.20-0.49) in parents of CYP with mental health difficulties versus those without. Mothers reported greater depression (g=0.42 95%CI 0.18-0.66) and anxiety (g=0.73 95%CI 0.27-1.18) than fathers. Narrative synthesis found no clear patterns in relation to CYP condition. Rates of parents with clinically relevant levels of distress varied. Typically, anxiety, parenting stress and general stress scored above clinical threshold. Quality appraisal revealed few studies with a clearly defined control group, or attempts to control for important variables such as parent gender.

Conclusions: The somewhat mixed results suggest clinical anxiety, parenting- and general stress may be common, with sometimes high depression. Assessment and support for parents of CYP with mental health problems is required. Further controlled studies, with consideration of pre-existing parental mental health difficulties are required.
What is already known on this topic

- Mental health difficulties are common amongst children and young people. There are known, complex bi-directional links between parent and child mental health. However, there has been no synthesis of quantitative research examining the psychological wellbeing and needs specifically of parents of children and young people with mental health difficulties.

What this study adds

- Our findings suggest depression, anxiety, parenting stress and general stress may be high in parents of CYP with mental health difficulties, with greater depression and parenting stress compared to parents of CYP without mental health difficulties, and greater distress in mothers compared to fathers of CYP with mental health difficulties. The state of the current research makes clear recommendations for future studies.

How this study might affect research, practice or policy

- This study highlights the need for more case-controlled studies to address this issue, and for studies that attempt to measure distress in parents specific to their CYP’s mental health difficulty. Clinicians should be mindful of the likelihood of parents’ difficulties and consider interventions to support them.
BACKGROUND

Many mental health difficulties, including anxiety disorders, obsessive compulsive disorder, eating disorders, and mood disorders, have their onset in childhood and youth, many before age 18.[1, 2] Approximately 1 in 5 young people (aged 5-18) in Europe have a diagnosed mental health difficulty.[3] Importantly, many of these young people live with their families or with an adult caring for them, who may be impacted by the young person’s distress. Often there are long waiting lists for assessment and diagnosis[4], and limited access to clinical intervention[5] and therefore families may be managing the situation without professional support.

There is significant evidence linking pre-existing parental mental health difficulties and parenting behaviours with CYP mental health outcomes, highlighting bi-directional links.[6-8] A review focusing on reported prevalence of mental illness in parents of CYP receiving mental health treatment, found rates of between 16 and 79% of parental mental illness, highlighting the importance of attention to parental wellbeing.[9] However, that review focused on prevalence only, and did not address wider issues of parenting or general stress, nor an examination of data for parents of CYP with and without mental health difficulties. Parents influence CYP mental health, for example through parent-child interaction[7] and parenting practices such as discipline and communication.[10, 11] CYP mental health can influence parents’ wellbeing owing to the distress of seeing your child struggle.[12] This can then influence the family environment and parenting behaviours, creating a cycle of interactions.[13] Thus, a crucial step in understanding how families can be supported with CYP mental health problems requires identifying the extent of distress in parents who may need support themselves. Furthermore, supporting parents may not only improve the parents’ wellbeing, but also improve CYP outcomes through better communication with their CYP, a better family environment, and increased parental modelling of coping strategies, for example.
Potential consequences of CYP mental health difficulties for parental wellbeing have been documented across multiple problems and domains. Parents of CYP who self-harm described significant distress.[14] Qualitative studies have shown the impact on parents’ lives and wellbeing, linked to their CYP’s mental health.[15] In relation to CYP anxiety and depression, qualitative evidence highlighted parental feelings of guilt, helplessness and sadness, and needing to hide their own support needs.[16, 17] Parental experiences in relation to ADHD have been particularly well-studied, with existing systematic reviews highlighting that parents of CYP with ADHD had relatively higher rates of mental health difficulties[18]; higher levels of parenting stress[19]; and worse quality of life[20]; as well as elevated levels of depression specifically in mothers.[21]

The wellbeing of parents of CYP with other mental health difficulties is less well-documented and detailed synthesis is lacking. Given that mothers tend to be most engaged in CYP service use, and an observed tendency to place greater responsibility or even blame on mothers,[22] it may be that the impact differs by parent type. Mothers’ continue to typically be responsible for the majority of childcare and report high levels of responsibility and self-blame for CYP mental health.[23, 24] However, the majority of participants in studies with parents of CYP with mental health difficulties are mothers, meaning it remains important to examine the wellbeing of fathers also. A comprehensive picture of parental wellbeing in the context of wider CYP mental disorders is currently lacking, which limits the extent to which potential parental support needs are being acknowledged and met.

OBJECTIVE

This review aimed to synthesise the quantitative studies that measure current wellbeing and psychological needs in parents of CYP with mental health difficulties. The objectives were to
investigate reported levels of wellbeing, compare wellbeing between parents of child with and without a mental health diagnosis, comparing mothers and fathers of CYP with mental health difficulties, to highlight gaps in knowledge about these parents’ wellbeing, and to examine potential need for intervention to support these parents.

**STUDY SELECTION AND ANALYSIS**

A protocol was registered (PROSPERO CRD42022344453) and published.[25] Changes were made: separation of reporting of qualitative and quantitative needs/wellbeing studies into two manuscripts; focus on parents of CYP with mental health conditions other than ADHD, owing to existing ADHD-focused reviews[19, 21]; removal of Open Grey, Social Policy and Practice, and Applied Social Sciences Index searches, as scoping found few relevant records via these sources; and inclusion of meta-analyses.

**Search methods for identification of studies**

Medline, PsycInfo, EMBASE, AMED, CINAHL, Web of Science (complete core collection), and Cochrane Library of Registered Trials were searched, covering all records from database inception until June 23rd 2023. English language limits were applied at search stage. The search was composed of four blocks, with terms for 1) parents, 2) children and young people, 3) mental health diagnostic terms, and 4) psychological state, impact/experiences/needs. (Full search strategies in Supplementary Materials 2).

**Study selection**
The titles and abstracts of all identified studies were downloaded and managed in Rayyan software.[26] Duplicates were removed automatically and checked manually. Titles and abstracts were screened independently by at least two reviewers, with discrepancies resolved by a third. Full-texts were accessed (or requested) for all studies that were included at this stage and were also assessed independently by two reviewers, and discrepancies resolved by a third reviewer if necessary.

**Inclusion and exclusion criteria**

Inclusion criteria were:

1. Adults in a parent/carer role (biological, step-parents, relatives assuming parenting role, non-biological and adoptive parents, foster carers, and other adults with a legal guardian role).
2. Parents had a CYP aged 5-18 (at least 50% of sample), aligning with many Child and Adolescent mental health services (CAMHS) in UK, Australia, and many European services.[27]
3. CYP diagnosed by an appropriate professional with a mental health condition, for example depression disorders, anxiety disorders, obsessive compulsive disorder (OCD), oppositional defiant, conduct disorder, internalising and externalising disorders, eating disorders, bipolar or psychoses, and emerging personality disorders.
4. Provided quantitative data relating to “current” (rather than lifetime or historic) parents’ wellbeing and needs: including but not limited to knowledge, parents’ mental health, parenting satisfaction, family relationships, parenting self-efficacy.
5. Used validated measure that *either* has established cut-off scores *or* was used with a control group of parents of CYP without mental health difficulties, to allow interpretation of the results.
Exclusion criteria were:

1. Qualitative studies; reviews.

2. Studies focused on post-traumatic stress disorder (PTSD), given potential overlap with parents’ own experiences of any shared traumatic events and existing reviews of relationships of CYP PTSD to parental psychological health.[28]

3. Studies focused on parents of CYP with special educational needs, including autism spectrum conditions or developmental language disorders, owing to likely additional needs for these parents, existing reviews[29, 30], and our focus specifically on CYP with mental health conditions.

4. Studies not in English.

Whilst we included studies focused on ADHD in our search, due to a very large number of studies all studies with parents of CYP with ADHD are excluded from this report and will be reported separately (in preparation).

Data extraction

Data were extracted into an Excel spreadsheet by one reviewer and checked by another for accuracy. Data relating to study location, design, CYP age, CYP diagnosis, sample sizes, parent gender, measurement tools used, and results on included measures were extracted. Mean scores with standard deviations were extracted where possible, to allow calculation of pooled means where appropriate. Where not reported, counts of number of parents reaching clinical levels of distress, median scores, or other summary scores as reported were extracted. To enable meta-analyses, results were extracted separately, where reported, for case versus control groups (parents of children without mental health difficulties), and for mothers versus fathers.
Where an intervention was reported, only baseline data were extracted as the focus of this review is on overall wellbeing and needs, rather than intervention effectiveness. Baseline scores of intervention or control groups were pooled where necessary. All relevant data were extracted.

**Data analysis**

Pooled means, pooled standard deviations and 95% confidence intervals (95% CI) of the pooled means were calculated, where the same measure had been used in at least three studies overall. These were then compared to published measurement cut-off points, to indicate if mean scores were within clinical range. To facilitate this, a table of cut-off scores for all included measures was created (Supplementary materials 3).

For studies that included either a) a control group (i.e. parents of CYP without any mental health condition), allowing comparison between case-control parents or b) provided data separately for mothers and fathers of CYP with mental health difficulties to allow comparison, meta-analysis was conducted where \( k \geq 3 \)[31] provided usable data on the same variable. No prior meta-analyses results were included, as no relevant prior analyses were identified. Reported data were used to calculate standardised mean differences (SMD). This was done for continuous data, and dichotomous data, to allow combination in analysis with continuous data.[32-34] SMD were calculated using RevMan[35] using reported N, standard deviations for continuous data. For reported dichotomous data (for example, count of parents reaching clinical depression vs not), OR and SE were calculated using RevMan, converted to SMD using a standard formula \( \text{SMD} = \left( \sqrt{3}/\pi \right) \ln \text{OR} \) and \( \text{SE} = \sqrt{3}/\pi \).[32, 34] A random effects model was used in all cases, (using RevMan 5.4[35]), owing to heterogeneity (measures and samples). To assess heterogeneity \( \tau^2 \) and \( I^2 \) were calculated, with cut-offs of 0%, 25%, 50% and 75% applied to indicate no, low, moderate or considerable heterogeneity respectively.[36]
Effect size Hedge’s $g$ is reported.[37] For analyses including dichotomous data (alone or in combination), a generic inverse variance approach random effects model generated pooled effect sizes. Sensitivity analysis was conducted by excluding one study at a time.

A narrative synthesis was also conducted.[38] We also synthesised findings from repeated measures/ longitudinal studies that provide data (not related to intervention) over time to understand changes in parental state.

**Quality appraisal**

We conducted quality appraisal using an adapted Newcastle Ottawa Scale[39], covering issues around participant selection, comparability, and outcomes. The adaptations are detailed in Supplementary Materials 4, with the results.

**FINDINGS**

**Study characteristics**

A total of 32 studies were included in the review. Figure 1 provides PRISMA flow-chart.
The study characteristics are summarised in Supplementary Materials 1. Measures used covered depression, anxiety, parenting stress, general stress, overall mental health, work and social adjustment, and coping. Several excluded studies included measures of parenting self-efficacy, for example. However without a control group nor established cut-offs, it was not possible to interpret these scores and therefore they were excluded.

The majority of studies were conducted in Northern Europe (k=10), USA (k=8), Asia (k=7), and Australia (k=5), with others from southern Europe / Middle East (k=2). No studies were from South America nor Africa.

The studies included parents of CYP with mood disorders (total k=15): anxiety (k=7), anxiety and OCD (k=1), anxiety and depression (k=2), depression alone (k=3), depression and bipolar (k=1), and bipolar alone (k=1). Several included CYP with externalising difficulties (k=8). Eating disorders were also represented (k=7). The remaining two covered any mental health diagnosis and psychoses.

Quality appraisal (Supplementary Materials 4) found that 14/32 studies (44%) had scores indicating poor quality (using cut-off less than 5 stars).[40] This also highlighted a lack of studies that include a clearly defined, well selected control group, together with an overall poor level of quality in relation to comparability and control for confounding factors, such as parent’s gender.

Pooled means
Table 1 reports pooled means and whether in clinical range for each measure. Depression was predominately not in the clinical range, whereas anxiety, parenting stress and general stress typically have pooled means in the clinical range.
Table 1 Pooled means of parents’ depression, anxiety, parenting stress and general stress, presented by measure

<table>
<thead>
<tr>
<th>Variable</th>
<th>Measure</th>
<th>k</th>
<th>n</th>
<th>Pooled</th>
<th>95% Cl</th>
<th>Pooled mean in clinical range?</th>
<th>Measure cut-off scores for reference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>mean</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(pooled s.d.)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>BDI-II</td>
<td>6</td>
<td>882</td>
<td>11.1</td>
<td>10.6-</td>
<td>No</td>
<td>0-13 minimal,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(8.05)</td>
<td>11.6</td>
<td></td>
<td>14-19 mild,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>20-28 moderate,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>29 – 63 severe.</td>
</tr>
<tr>
<td>Depression</td>
<td>BDI-II</td>
<td>779</td>
<td>11.4</td>
<td>10.8-</td>
<td>No</td>
<td>As above</td>
<td>As above</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(8.03)</td>
<td>12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>DASS – as DASS-42</td>
<td>5</td>
<td>1283</td>
<td>15.1</td>
<td>14.2-</td>
<td>Moderate</td>
<td>10-13 Mild,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(16.23)</td>
<td>16</td>
<td></td>
<td>14-20 Moderate,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>21-27 Severe,</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>+ 28 Extremely severe.</td>
</tr>
<tr>
<td>Depression</td>
<td>CES-D</td>
<td>3</td>
<td>781</td>
<td>13.6</td>
<td>13-</td>
<td>No</td>
<td>16+ clinically significant</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(9.11)</td>
<td>14.2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>STAI state</td>
<td>4</td>
<td>430</td>
<td>43.7</td>
<td>42.7-</td>
<td>Yes</td>
<td>&gt; 40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(11.0)</td>
<td>44.7</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>STAI trait</td>
<td>3</td>
<td>398</td>
<td>41.0</td>
<td>40-</td>
<td>Yes</td>
<td>&gt; 40</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(10.01)</td>
<td>42</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>DASS – as</td>
<td>#</td>
<td>Mean</td>
<td>SD</td>
<td>Mild</td>
<td>4-5 Mild,</td>
<td></td>
</tr>
<tr>
<td>---------</td>
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<td></td>
</tr>
<tr>
<td>DASS-42</td>
<td>4</td>
<td>1283</td>
<td>9.0</td>
<td>8.34-9.66</td>
<td>Mild</td>
<td>4-5 Mild,</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6-7 Moderate,</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>8-9 Severe,</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>10+: Extremely Severe</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parenting stress</td>
<td>PSI-SF Total</td>
<td>509</td>
<td>106.6</td>
<td>105-108</td>
<td>Yes</td>
<td>&gt; 90 clinical stress</td>
<td></td>
</tr>
<tr>
<td>General stress</td>
<td>DASS – as 3</td>
<td>752</td>
<td>28.4</td>
<td>27.1-Severe</td>
<td>Severe</td>
<td>15-18 Mild, 19-25 moderate, 26-33 severe, 34+ extremely severe</td>
<td></td>
</tr>
<tr>
<td></td>
<td>DASS-42</td>
<td></td>
<td>(18.47)</td>
<td>29.7</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Meta-analyses**

A total of five studies were case-control[41-45] and nine studies[42, 45-52] provided data from mothers and fathers separately, although one did not provide sample size details, so was excluded from synthesis.[46] Four meta-analyses were conducted: two case-control comparisons (depression, parenting stress), and two mother-father comparisons (depression and anxiety). Forest plots are provided in Supplementary Materials 5.

**Case-control comparisons**

For depression scores (where dichotomous and continuous outcomes were combined), the overall combined difference was statistically significant (k=4, n=1518 (case 623, control 895), g=0.24, 95% CI 0.11-0.38, p=0.0003), with a small effect size. Parents of children with mental health problems had worse (higher) depression scores than parents of children without mental health problems.
Heterogeneity was low ($I^2=13\%$), with effect sizes all favouring control. Results must be interpreted with caution owing to the small $k$.

Comparing case-control scores for parent stress scores (where all data were continuous), the overall combined difference was statistically significant ($k=3$, $n=1302$ (case 487, control 815), $g=0.34$, 95% CI 0.20-0.49, $p<0.00001$), with a small effect size. Parents of children with mental health problems had worse (higher) parenting stress scores than parents of children without mental health problems. Heterogeneity was low ($I^2=27\%$). Effect sizes all favoured control. Results must be interpreted with caution owing to the small $k$.

Comparing scores from mothers-fathers

Comparing mothers’ and fathers’ scores for depression scores (where dichotomous and continuous outcomes were combined), the overall combined difference was statistically significant ($k=7$, $n=3552$ (mothers 1818, fathers 1734), $g=0.42$, 95% CI 0.18-0.66, $p<0.003$), with a small effect size. Mothers had worse depression (higher scores) than fathers. Heterogeneity was low ($I^2=27\%$), with effects all in the same direction. Although $k=7$, this remains a small number of studies, and together with the large 95% CIs and several SMD’s that cross 0, these results must be interpreted with caution.

Comparing mothers’ and fathers’ scores for anxiety scores (where dichotomous and continuous outcomes were combined), the overall combined difference was statistically significant ($k=3$, $n=334$ (mothers 197, fathers 137), $g=0.73$, 95% CI 0.27-0.1.18, $p<0.002$), with a medium-large effect size. Mothers had worse anxiety (higher scores) than fathers. Heterogeneity was moderate-considerable ($I^2=70\%$), although all effects were in the same direction. However, with a small number of included
effect sizes, based on data from 334 participants in total, high heterogeneity and one SMD 95%CI that crosses 0, results are tentative.

Sensitivity analyses

The results did not persist following sensitivity analysis for two comparisons (Supplementary material 6). For case-control depression, removing He et al[44] led to greater weight for the two studies where 95% CI of SMD crossed zero.[41, 45] For mother-father anxiety, removing Duclos et al[48] led to greater weight similarly to a study where 95% CI of SMD crossed zero.[42]

Narrative synthesis

Clinical levels of distress

Table 2 summarises if mean scores were within clinical range by study, in relation to variable, CYP condition, and measure used. This highlights variation in levels of non/clinical distress reported.
Table 2 Summary of parents’ mean scores in relation to clinical threshold for each measure

<table>
<thead>
<tr>
<th>Measure used</th>
<th>Child-Diagnosis</th>
<th>Results below threshold</th>
<th>Results above threshold</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PARENTAL DEPRESSION</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| BDI | Anxiety or depression<sup>a</sup> | Tan et al. (2005)  
Racey et al. (2018) | - |
| | Eating disorder (any) | Schwarte et al. (2019)  
Truttman et al. (2020)  
Duclos et al. (2023) | Zeiler et al (2023) |
| CES-D | Externalising<sup>b</sup> | Hamovitch et al. (2019)  
He et al. (2020)  
He et al. (2021) | Gerksmseyer et al. (2008) |
| DASS | Anxiety or depression | Johnco et al. (2021) | Poole et al. (2018)  
Halldorsson et al. (2018) |
| | Eating disorder (any) | | Wilksch et al. (2023) |
| Other | Anxiety or depression | Alqahtani et al. (2020) | Fields et al. (2012) |
| | Eating disorder (any) | Stewart et al. (2017) | |
| | Externalising | | Lim et al. (2021) |
| | Other diagnoses | - | Algorta et al. (2018)  
Sengupata et al (2017) |
| **PARENTAL ANXIETY** | | | |
| DASS | Anxiety or depression | Johnco et al. (2021) | Poole et al. (2018)  
Halldorsson et al (2018)<sup>c</sup> |
<p>| | Eating disorder (any) | - | Wilksch et al (2023) |
| STAI | Eating disorder (any) | - | Truttman et al. (2020) |</p>
<table>
<thead>
<tr>
<th></th>
<th>Anxiety or depression</th>
<th>Other diagnoses</th>
</tr>
</thead>
<tbody>
<tr>
<td>PSI</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety or depression</td>
<td>-</td>
<td>Farley et al. (2023)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Lebowtiz et al. (2020)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tan et al. (2005)</td>
</tr>
<tr>
<td>Externalising</td>
<td>Timmer et al. (2019)</td>
<td>Acri et al. (2016)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>He et al. (2020)</td>
</tr>
<tr>
<td>Other</td>
<td>Internalising</td>
<td>Aggarwal et al (2018)</td>
</tr>
<tr>
<td>Other diagnoses</td>
<td>Carroll et al. (2022)</td>
<td>-</td>
</tr>
</tbody>
</table>

**GENERAL STRESS**

<table>
<thead>
<tr>
<th></th>
<th>Anxiety or depression</th>
<th>Other diagnoses</th>
</tr>
</thead>
<tbody>
<tr>
<td>DASS</td>
<td></td>
<td>Poole et al (2018)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Halldorsson et al. (2018)</td>
</tr>
<tr>
<td>Eating disorder (any)</td>
<td>-</td>
<td>Wilksch et al. (2023)</td>
</tr>
</tbody>
</table>

**OVERALL MENTAL HEALTH**

<table>
<thead>
<tr>
<th></th>
<th>Anxiety or depression</th>
<th>Other diagnoses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Various measures</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety or depression</td>
<td>Derisley et al. (2005)</td>
<td>Ozyurt et al. (2016)</td>
</tr>
<tr>
<td>Eating disorder (any)</td>
<td>Truttmann et al. (2020)</td>
<td>Truttman et al. (2020)</td>
</tr>
<tr>
<td></td>
<td>(SCL-90)</td>
<td>(GHQ12)</td>
</tr>
<tr>
<td>Externalising</td>
<td>Costin et al. (2004)</td>
<td>-</td>
</tr>
<tr>
<td>Other diagnoses</td>
<td>-</td>
<td>Algorta et al. (2018)</td>
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</tbody>
</table>
in all cases, includes OCD.  in all cases, includes oppositional defiance disorder and conduct disorder

Anxiety was moderate for mothers of children with social anxiety and mild for those fathers, whilst it was mild for mothers of children with other anxiety and normal for those fathers. Anxiety was normal in the fathers in this study, but mild in the mothers and mild overall. Anxiety was mild for mothers in this study, but not clinical for fathers.

Study design and participant characteristics

Overall, the studies that were RCTs typically reported parent’s outcomes above threshold, and therefore within the clinical range. The only exception is Timmer et al[53] who reported below threshold scores of parenting stress. This is unsurprising, as we extracted only baseline scores (scope of this review relates to wellbeing, rather than interventions), and it is likely that those with higher levels of distress would be more attracted to take part in intervention studies. No patterns of results were observed in relation to the location of the study, nor the age of the CYP.

Parents’ depression scores

Of the 20 studies reporting parental depression scores, nine had mean scores above the measures’ clinical cut-off, across different CYP diagnoses.

Seven studies reported percentage of sample with a clinical level of depression. Two used structured clinical interviews: 18% of parents overall had depression[54]; and 12.9% of mothers but just 3.9% of fathers (OR 3.64, 95% CI 0.77-17.15, p=0.102) had current major depression.[42] The self-report studies reported depression rates ranging from 4.7% of fathers and 6.8% of mothers (of CYP with
depression or anxiety) to 88% of mothers and 56% of fathers (of CYP with various psychiatric diagnoses).[51]

**Parents’ anxiety scores**

All ten studies were with parents of CYP with anxiety and/or depression, or eating disorders. Eight of ten studies reported means above the clinical range.

Four studies reported the percentage with clinical levels of anxiety. One study used a structured clinical interview, reporting clinical anxiety in 26.7% of mothers and 14.7% of fathers of children with anxiety[42]. The studies using self-report data found clinical levels of anxiety in 27% of parents of CYP with eating disorder[55], 57.2% where CYP had an anxiety disorder[56], and 4.5% mothers and 0% fathers of CYP with depression or anxiety.[52]

**Parents’ parenting stress scores**

None of these studies were with parents of CYP with eating disorders. Six of eight studies revealed means in the clinical range.

Three studies used self-report data and reported a percentage of parents with clinical levels of parenting stress, reporting 44% for parents of CYP with externalising difficulties[53], 73% of parents of CYP with conduct disorder[47], and 27% of parents of CYP with diagnoses of psychosis.[57]

**Parents’ general stress scores**
Three studies reported general stress, all finding clinical levels.

One study reported the percentage scores in range of clinical general stress: 34.3% of parents of CYP with an eating disorder [55].

**Parents’ overall mental health**

For overall mental health, four of seven studies had scores in the clinical range.

One study with parents of CYP with depression or anxiety measured personality difficulties, finding 2.3% of mothers and fathers in the clinical range of somatic difficulties, 4.5% of mothers and zero fathers in clinical range for avoidant personality difficulties, and none in clinical range for antisocial personality difficulties.

**Other findings**

Aggarwal et al [47] measured work and social adjustment in parents of CYP with conduct disorder, reporting mean scores showing “severe impairment” for mothers but “low impairment” for fathers, with a significant difference. Wilksch et al [58] also reported of parents’ of CYP with eating disorders, 70.5% reported clinical levels of difficulties with their physical health and 92.7% reported clinical levels of difficulties with their romantic relationships. This study also reported that parents required a mean of 70 days leave in total to care for their child, although no data from a control group are provided for comparison, nor is the timeframe over which these days were taken.
Studies examining time and recovery

Two studies reported data from at least two time points. With parents of CYP with ODD in China, He et al 2020[44] used a three-wave, cross-lagged design and measured depression and parenting stress in parents at point one, one, and two years later in the same cohort of parents, finding that parental depression predicted parenting stress (rather than the other way around). Importantly however they were unable to control for the fact that only 42.7% of CYP were diagnosed with ODD by the three year follow-up point. They also found that the associations between parental depression and the PSI measures of parent-child dysfunctional interaction were bi-directional. Importantly, this was the case for their parents of CYP with ODD and their control group of parents of CYP without mental health difficulties, suggesting the finding is not specific to parenting CYP with mental health difficulties.

Wilksch et al[55] specifically examined scores of parents of CYP with a current eating disorder versus parents of CYP who had recovered. The “recovered” group had significantly better scores on all measured dimensions: physical health overall, emotional health overall, romantic relationship ratings, and DASS scores for depression, anxiety and general stress.

DISCUSSION

This review investigated levels of wellbeing/distress amongst parents of CYP with mental health difficulties, and in relation to control groups (parents of CYP Without mental health difficulties) where reported. There is an overall picture of poor wellbeing. Pooled means found depression was not typically in the clinical range, however anxiety, parenting stress and general stress were. However, the pattern of scores for individual studies is mixed, with some reporting below clinical threshold, particularly for depression. The percentages of participants with scores in the clinical
range were inconsistent among studies. This may relate to differences in study methodology. Indeed, given numerous different combinations of design factors, for example, study type, CYP diagnosis, location of study, age of CYP, and measure used, it is challenging to detect any patterns without studies specifically designed to do this. The data does not allow for clear comparisons to be made in relation to parental wellbeing by CYP diagnosis. Meta-analyses showed a pattern of higher distress in parents of CYP with mental health problems compared to parents of CYP without these diagnoses, and for mothers as compared to fathers of CYP with mental health problems, however sensitivity analysis finds some effects are not robust.

Sensitivity analysis for the meta-analyses showed the difference between case-control for parental depression was dependent on the presence of a study in China with parents of CYP with ODD.[44] The mother-father difference in anxiety was no longer detected when a study from France with parents of CYP with anorexia nervosa was removed.[48] These findings are difficult to interpret, owing to the divergence between the studies in measures, sample sizes, and CYP diagnosis. However, it may be that the CYP condition itself is relevant. ODD, qualitative research has shown that defiant behaviour can be experienced as a personal attack for parents[59], potentially linking to higher parental depression. For eating disorders, mothers report more fear than fathers and are more likely to be involved in highly significant moments, such as meal preparation[60], potentially amplifying anxiety in mothers.

A previous review, not limited to confirmed diagnoses, reported parental mental illness in between 16-79% of parents of children receiving treatment from mental health services.[9] Focusing on parents of CYP who self-harm, a review found mental health difficulties in between 67-86% of parents.[14] Rates of mental health difficulties in parents of CYP with ADHD were around 17%.[18] A high quality study using structured clinical interview found 18% of parents of CYP with mental health
difficulties had depression.[54] This variation continues in our review. Here, the studies reporting percentage of respondents scoring within the clinical range reported between 3.9-88% for depression, with highest observed percentages in parents of children with depression and 4.5-57.2% for anxiety, with highest observed percentages in parents of children with anxiety. This may relate to the impact of parental mental health on CYP’s mental health.[6] Overall, the prevalence of distress in parents of CYP with mental health difficulties, linked by parents to their CYP’s difficulties, remains unclear, as do the variables associated with greater distress, including CYP, parent, and family characteristics.

We identified few case-controlled studies. In research with parents of CYP with ADHD, case-controlled studies have established that these parents have higher levels of distress, compared with controls. Parenting stress was linked to the severity of CYP’s ADHD symptoms[19], however this question has not been addressed for parents of children with other conditions. Indeed, ADHD-focused systematic reviews identified k=53[18] and k=22 published studies[19], for this one condition. Our review, covering far more conditions, identified k=32, suggesting a dearth of attention to the wellbeing of parents of CYP with other mental health conditions.

Causality cannot be established from these studies. Taken together our findings suggest that parents of children with mental health difficulties had poorer mental health than those whose children did not have mental health difficulties. It is well established that parents with mental health difficulties are more likely to have children with mental health difficulties.[6-8] We cannot conclude from the included studies if the parents’ reported mental health was a consequence of their child’s distress, or had contributed to their child’s difficulties. Although all included measures were of “current” wellbeing, none of the identified studies sought to account for previous history of mental health
difficulties in parents. There were no measures of distress specifically relating to their CYP’s difficulties.

Parents of CYP with mental health difficulties experience anxiety and stress (parenting and general), and many experience elevated depression. Irrespective of underlying cause, it is important to make appropriate support available to parents, be that peer-support, parent-training, social services support, or psychological therapy. CAMHS clinicians should be mindful of parents’ wellbeing and offer signposting. This may include parents to adult mental health services, however there is a need to develop services and evidence-based interventions that address the distress linked to these parents’ specific experiences with their CYP’s mental health difficulties. Policies may include reference to family support[61], and should include the need to develop appropriate pathways to support parents themselves.

The review has strengths. We followed standard, reproducible methods. There are very few reviews focusing on the issue of parental wellbeing where CYP has a mental health difficulty. Developing from the only other review we are aware of that specifically addresses this issue[9], our review included only studies with parents of CYP with an established clinical diagnosis and only studies using validated measures, and examined parents of CYP with mental health difficulties to those of CYP without mental health difficulties, to specifically address issues around links between parental wellbeing and CYP diagnoses.

Our review has limitations. The age range may have excluded studies for psychoses, which typically emerges in late adolescence or early adulthood.[2] Only including articles in English may limit the representativeness of our results, thus future studies may need to investigate potential differences
with African and South American countries. The focus on measures with established cut-offs or designs with control groups was essential, however excluded knowledge, information needs, parenting satisfaction and parenting self-efficacy studies. A further review is required to examine predictors of parental psychological wellbeing. Authors were not contacted for missing information, such as detailed sample sizes, meaning one study was excluded from the meta-analyses.[46] Meta-analysis was conducted with few studies, and publication bias was not assessed[62]. The literature itself is limited by lack of studies with control groups (we identified only k=5 across all included CYP conditions), little consideration of confounding variables such as parents’ gender, and lack of consideration of parents’ previous mental health, and a lack of measures specific to the impact on parents of their CYP’s distress.

Areas for future research include sufficiently powered, well designed, representative studies that examine mental health in these parents, and quantify distress linked directly to the CYP’s conditions. The small number of case-controlled studies calls for a need for further research, to allow interpretation of findings and to truly begin to understand the level of distress amongst parents of CYP with mental health difficulties. Further longitudinal research is also required, along with greater consideration of factors associated with worse wellbeing for parents, e.g. CYP risk to self, parents’ age, ethnicity, socio-economic status, and social support. There is a lack of measures specific to distress linked to the CYP’s condition. Work is required to disentangle the reciprocal impact of parent and child mental health. Further attention is needed, particularly outside of the Global North, and with better reporting and inclusion of participants from a range of ethnic backgrounds, and those in different parenting roles. Further work on the psychological variables underpinning parent distress is required, to select/design appropriate support interventions. Parent training interventions, for example, may focus on improving parental self-efficacy, however the relationship of this variable to parent self-compassion or rumination, for example, is unknown.
CONCLUSIONS AND CLINICAL IMPLICATIONS

In summary, this review finds a mixed pattern, with some evidence for poor psychological wellbeing in parents have a CYP with a mental health difficulty. The meta-analyses indicated greater depression and parenting stress in parents of CYP with these difficulties compared to controls, and within parents of CYP with a mental health difficulty, mothers appear to have greater depression and anxiety. Further studies are needed to better understand the role of CYP mental health on parents’ wellbeing, particularly with a need for longitudinal, case-control studies, that also examine variation in relation to the CYP diagnosis. It remains important to consider parents’ wellbeing within CAMHS provision, owing to evidence that distress can be high, assessing and offering interventions where needed.
Author contributorship

FM conceived of the study and was involved in all aspects, leading data analysis. All other authors were involved in conception and/or data acquisition, and drafting and approving the manuscript. DD led the process of searching, screening and extraction. Searches were completed by FM and DD. Screening was completed by FM, DD, SG, CD, AA, and LD. Discrepancy check was conducted by FM, SG and SH. Data extraction was completed by FM, DD, SW, and LD. SG and SH provided specific expert into to the design and revisions of intellectual content.

Competing interests

The authors declare no competing interests.

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