

# Child Protection Evidence

## Systematic review on

# Early Years Neglect

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While the format of each review has been revised to fit the style of the College and amalgamated into a comprehensive document, the content remains unchanged until reviewed and new evidence is identified and added to the evidence-base. Updated content will be indicated on individual review pages.

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# Summary

Neglect has varying definitions across agencies and countries. However, evidence clearly shows that neglect of infants and young children has far-reaching consequences.<sup>1,2</sup>

This systematic review evaluates the scientific literature on early years neglect in children published up until **June 2021** and reflects the findings of eligible studies. The review aims to answer one clinical question:

- What are the emotional, behavioural and developmental (EBD) features in the child indicative of any type of neglect / emotional abuse?

For the purposes of this review, we have focused on neglect and emotional abuse in children aged 0 – 6 years using the World Health Organization definitions. Practitioners often lack confidence in identifying the emotionally neglected / abused infant or toddler and thus there is delay in implementing appropriate interventions.<sup>3</sup>

The 2021 update includes five new studies. This includes a cross-sectional study that examined the executive function among pre-schoolers exposed to maltreatment<sup>4</sup> and a further cross-sectional study that compared the pragmatic language skills of neglected and non-neglected 42 month olds.<sup>5</sup> Three case series were also included, these investigated the development of using units of meaning, or morphemes, to form words or mark grammatical inflections (morphosyntactic development),<sup>6</sup> attachment<sup>7</sup> and reduced autobiographical memory specificity, which is the recall of specific autobiographical events lasting a day or less.<sup>8</sup>

## Key findings:

- In infants aged 0-20 months, neglect was associated with avoidant and insecure attachment and passive or withdrawn behaviour. There are also signs that neglected children had developmental delays
- In the 20-30-month age group, children showed less positive social interaction and more internalising behaviours
- Children aged 3-4 years were delayed in language development, both receptive and expressive
- The older children, 4-6 years, included in this review had lower self-esteem and displayed reduced executive functioning, cognitive skills and language skills. In addition, they had lower levels of social interaction compared to control or abused children, disruptive behaviour, and attachment issues
- Important attachment disorders are recognised in young infants and toddlers and warrant formal evaluation by professionals trained in infant mental health. Many features

described in neglected / emotionally abused children overlap with those found in children suffering from autistic spectrum disorder or attention deficit hyperactivity disorder

- There are clearly identifiable features in the pre-school child who is being neglected and / or emotionally abused, thus it is incumbent upon all health practitioners working with these children to be aware of the indicators that they may identify

## Background

This systematic review evaluates the scientific literature on early years neglect in children published up until June 2021 and reflects the findings of eligible studies. The review aims to answer one clinical question:

1. What are the emotional, behavioural and developmental (EBD) features in the child indicative of any type of neglect / emotional abuse?

## Methodology

A literature search was performed using a number of databases for all original articles and conference abstracts published since 1960. Supplementary search techniques were used to identify further relevant references. See [Appendix 1](#) for full methodology including search strategy and inclusion criteria.

Potentially relevant studies underwent full text screening and critical appraisal. To ensure consistency, ranking was used to indicate the level of confidence that abuse had taken place and also for study types.

## Findings of clinical question 1 What are the emotional, behavioural and developmental (EBD) features in the child indicative of any type of neglect / emotional abuse?

Of the reviewed international literature, 48 articles addressed this question.<sup>2,4-50</sup> These 48 articles all met our inclusion criteria and quality ranking of confirmation of neglect / emotional abuse.

A detailed age breakdown was not given; thus, results are summarised in age bands based on the mean age of the cases. One study addressed gender and found that amongst the maltreated children, girls had the greater delay in syntactic language development.<sup>23</sup>

## **Influence of ethnicity and socio-economic group**

In the case-control studies, the groups were well-matched for ethnicity, maternal education, socio-economic grouping (insurance status for North American studies) and maternal age.

# **1.1 Identifiable, emotional, behavioural and developmental features in children**

## **Age 0-20 months**

Eight studies describe several features in children.<sup>11,12,15,29,32,43,46,47</sup> Attachment status was evaluated by Strange Situation,<sup>51</sup> comparing neglected with abused and/or control children.<sup>11,12,29</sup>

It was found that neglected children showed avoidant attachment<sup>12,29</sup> and more insecure-disorganised attachment<sup>29</sup> than non-neglected children. Neglected children did not show any difference in their play complexity from controls, although play was strongly influenced by cognitive function performance.<sup>47</sup> In interactions with their mother, these children demonstrated passive and withdrawn behaviour.<sup>15</sup>

Children with neglect and failure to thrive (FTT) had a lower developmental quotient than those with neglect or FTT alone.<sup>32</sup> Language delay was particularly prominent in toddlers whose mothers suffered from depression.<sup>43</sup>

One study did not demonstrate delayed cognitive play abilities in neglected / emotionally abused one year old infants in comparison to controls.<sup>46</sup>

## **Age 20-30 months**

Five studies described several features in this age group.<sup>10,14,17,47,50</sup>

Evaluation of neglected toddlers during play demonstrated greater negativity than seen in controls.<sup>17</sup>

Neglected children also demonstrated less positive social interaction in comparison to abused children or controls.<sup>14</sup> Neglected children were the most passive, and spent more time alone than the other two groups.

With increasing test difficulty, neglected children showed greater memory deficits than physically abused children or controls.<sup>10</sup>

Again, there was no difference between controls and neglected children on play complexity, however play was strongly influenced by cognitive function performance.<sup>47</sup>

A longitudinal study of toddlers showed that neglected children exhibited more internalising behaviours.<sup>50</sup> Some toddlers had co-existent internalising and externalising features, which were correlated to parenting style.

## Age 3-4 years

Six studies described certain features in this age group.<sup>5,9,16,25,27,50</sup>

Pragmatic difficulties were investigated in neglected and non-neglected children, this is a difficulty in the ability to use language appropriately in social interactions.<sup>5</sup> Children exposed to neglect are significantly more likely to experience pragmatic difficulties at 42 months of age than non-neglected children. Nearly half (44.4%) of the neglected children presented pragmatic difficulties, a prevalence 10 times higher than that for the non-neglected children. The neglected children who presented pragmatic difficulties and those presenting typically developing pragmatic skills did not significantly differ in terms of levels of parental education, gross household income, or family structure.

Developmental delay, in particular language delay, was apparent in the neglected children in comparison to physically abused children or controls.<sup>9,16</sup> Receptive language (auditory comprehension quotient) and expressive language development (verbal ability quotient) were also particularly delayed.<sup>9,16</sup>

The neglected children showed the lowest auditory and verbal scores.<sup>16</sup> In observing play, both free and with parents, the neglected toddlers had a greater negative affect than physically abused children or controls.<sup>27</sup>

There was no demonstrable difference in discriminating emotions between emotionally abused, physically abused or neglected children. An allowance was made for intelligence quotient (IQ). However, all of these groups showed less ability to discriminate emotions than those with normal IQ.<sup>25</sup>

A study assessing externalising behaviours (those that harm others), and internalising behaviours (involving harm to self), found that children exhibited slightly elevated externalising behaviour over time, aged 2-3 and 5-6 years. Some children exhibited externalising and internalising behaviour.<sup>50</sup>

## Age 4-6 years

Nineteen studies described features in this age group.<sup>4,6-8,23,26,28,30,31,33-35,38-40,42,44,49,50</sup>

### Cognitive behaviours

A cross-sectional study investigated exposure to substantiated maltreatment and association with executive functioning. Maltreatment was found to be associated with reduced capacity for executive functioning (EF), and was found to vary as a function of exposure to both supportive and non-supportive ERSBs (emotion related socialisation behaviours).<sup>4</sup> Lower levels of EF were seen in children who had been exposed to emotional abuse compared to those who had not ( $p < 0.001$ ), and children exposed to neglect versus those who had not ( $p < 0.001$ ).

Autobiographical memories reflect experiences that have occurred at a specific time and location in a person's past. Individuals with overgeneral memory (OGM) lack the ability to retrieve such memories. Difficulty with retrieving specific autobiographical memories and an overreliance on the phenomenon known as OGM have been observed in individuals with histories of childhood abuse. Neglect was negatively associated with child autobiographical memory specificity (AMS), how specific the recollection of such memories is, and the quantity of maternal elaborations.<sup>8</sup> In a moderated mediation model, neglect was negatively associated with the quantity of maternal elaborations, which was positively associated with AMS when mothers reminisced in a coherent and sensitive manner (i.e., affective quality). In the context of high maternal affective quality, maternal elaborative quantity accounted for reduced AMS among neglected pre-schoolers. Neglected children provided significantly fewer specific autobiographical memories compared with non-maltreated children. However, abused and emotionally maltreated children did not significantly differ from non-maltreated children on AMS. Mothers of Neglected children were significantly lower in maternal elaborative quantity (elaborated upon memories to a lesser extent when reminiscing with their children) compared with mothers from non-maltreating families.<sup>8</sup>

### Development

Morphosyntactic skills refers to a combination of morphological and syntactical skills in language development. These skills have been investigated in English speaking neglected children but not in Francophone children where the language is more diverse. Morphological skills refer to the use of units of meaning, or morphemes, to form words or mark grammatical inflections.<sup>52</sup> Syntactic skills refer to the ability to organize words to form cohesive and coherent utterances. Neglected children showed significantly lower morphosyntactic skills than their non-neglected peers for three of the four indicators studied.<sup>6</sup> The prevalence of morphosyntactic difficulties among the neglected children, based on the mean length of utterances, was more than 5 times (25.6%) that among the non-neglected children (4.7%).

It was found that language delay becomes more evident as children grow older, with neglected children demonstrating more syntactic delays and producing less complex language than controls. The children also showed reduced vocabulary.<sup>23</sup>

It is also notable that the maternal verbal IQ was lower amongst the neglectful mothers, in comparison to controls.<sup>23</sup> Additionally, it was found that maltreated girls showed a greater language delay than maltreated boys.<sup>23</sup>

### Attachment

Complex abuse resulted in a greater percentage of insecure attachment than emotional maltreatment or neglect did separately. In cases of complex abuse, composed of combined emotional abuse and neglect in particular, there were more cases of insecure disorganized attachment (five children) than secure attachment (two children).<sup>7</sup>

The neglected children's perception of others showed they were less likely to expect parents to relieve their distress or to relieve distress in others, in comparison to abused children or controls.<sup>31</sup>

In assessing attachment, the neglected children demonstrated more avoidant attachment and more disorganised markers, specifically more frightening markers than controls. Overall, neglected children were more insecurely attached than controls.<sup>40,48</sup> In this assessment, it was discovered that neglected children depicted their mother as being less available to them than controls.<sup>48</sup> It was also found that neglected children perceived their relationship with their mothers to be less fulfilling, safe and reliable.<sup>40</sup>

### Emotional capabilities

Neglected children were also more likely to demonstrate under-controlled / ambivalent emotional responses to simulated inter-adult aggression.<sup>33</sup>

Neglected children had more difficulty discriminating emotional expressions (particularly between angry, sad and fearful expressions) than physically abused children or controls. They also had a predilection for selecting sad faces.<sup>34</sup> Emotional knowledge, based on labelling, recognising and matching to situations was examined in the context of harsh punitive parenting among neglected and control children. Punitive parenting did not have an impact, however the more severe the neglect, the poorer the child's emotional knowledge.<sup>42</sup> It was also noted that low IQ has an influence on emotional knowledge.<sup>42</sup>

Neglected children showed low self-esteem and the lowest scores on positive self-representation in comparison to controls, physically or sexually abused children.<sup>44</sup>

### Behavioural disorders

Neglected children showed the least number of social interactions in comparison to controls and abused children.<sup>26</sup> These children also showed cognitive deficits, disruptive behaviour<sup>26</sup> and an increase in conduct problems in comparison to abused children and controls (as rated by mothers).<sup>35</sup> In addition, teachers rated neglected children's behaviour as worse than the controls and abused children.<sup>26</sup>

Neglected children were more likely to perceive others as hurt, sad or anxious than physically abused children or controls. They perceived themselves as opposing or angry towards others and had a tendency to view themselves as anxious and ashamed.<sup>49</sup> They also showed more dissociation than controls, which was linked to the chronicity of the neglect and had poor peer relationships.<sup>30</sup>

### Moral development

Studies of moral development demonstrated that neglected children showed more cheating and less rule-compatible behaviour than controls.<sup>28</sup> In evaluating children's responses to their own and other children's 'moral transgressions' (the appropriateness of hitting, kicking, or biting another child, causing another child psychological distress, not listening to the teacher or keeping quiet during nap time, or leaving class without permission), neglected children perceived themselves and others as equally deserving of punishment for transgressions.<sup>39</sup>

### Physiological regulatory capacity

A measure of physiological regulatory capacity, respiratory sinus arrhythmia (RSA), was performed on children prior to and during a parent-child interaction.<sup>38</sup> The majority of children showed suppression of the RSA when moving from baseline to interacting with their mothers, but there was no difference between neglected children and controls.<sup>38</sup>

## **The manifestation of EBD child features through early childhood**

Several longitudinal cohort studies described manifestation of EBD child features through early childhood.<sup>2,13,18-22,24,36,41,45</sup>

The attachment pattern demonstrated by neglected children changed from ambivalent-insecure in those aged 12 months to avoidant in those aged 18 months, however some are classified as 'secure'.<sup>20,21</sup> Children who were anxiously attached at 1-18 months became angry, frustrated and non-compliant with more negative affect than controls by two years of age. The neglected children were worse at coping than both abused children and controls.<sup>21</sup>

The emotionally abused children were anxiously attached at 18 months and, by 24 months, showed more anger and frustration than controls.<sup>21</sup> By 42 months, the neglected children showed more apathy / withdrawal and hyperactivity / distractibility.<sup>21</sup>

Crittenden et al showed how neglected children aged 12 months onwards displayed aggressive and resistant behaviour towards their carers, particularly up to 2.25 years of age.<sup>13</sup> Psychological neglect at age three was significantly associated with internalising and externalising behaviour. Neglect at age three did not predict changes in the child's behaviour and development between the ages of three to five years. By five years of age cognitive development was markedly impaired<sup>18</sup> and teachers noted neglected children experiencing difficult peer relationships.

Neglected children showed persistent cognitive delay from 18 – 36 months<sup>36</sup> and children who were neglected prior to the age of four showed greater language delay once aged over four years, compared to controls.<sup>24</sup>

Toth et al reported that neglected three to four year old children perceived their parents less positively over time and had more negative self-representations.<sup>45</sup>

The Mother Child Interaction Research project (known as the Minnesota study) evaluated developmental sequelae from children aged 3-24 months, separated into an emotionally abused cohort and a neglected cohort. The emotionally abused children showed a lower developmental quotient by 24 months, compared to physically abused, neglected and control children. The neglected children showed a declining function in development and play over time. In addition, they were anxious / avoidant at 18 months, progressing to angry, frustrated and non-compliant by 24 months. These children also had a low coping score.<sup>22</sup>

Further results from the Minnesota study focused on children from birth to six years of age. Neglected children at 54 months of age showed greater dependency and by 64 months they showed more self-destructive, inattentive and overactive behaviour.<sup>22</sup> They were rated by teachers to be anxious, withdrawn, unpopular, aggressive and obsessive-compulsive in comparison to abused children and controls. Teachers rated the children as lacking humour, showing little sensitivity and empathy, as well as being poorer at following directions and expressing themselves in comparison to control groups.

Emotionally abused children followed from age 18 – 42 months showed a mixed pattern of early behaviours, becoming less persistent and showing less enthusiasm for tasks than controls at 42 months.<sup>2</sup>

Evaluating neglected children aged four to five years showed poorer emotional knowledge over time, compared to controls, after controlling for IQ.<sup>41</sup>

## 1.2 Key evidence statements

- Given the delay in language, both receptive and expressive, in neglected / emotionally abused children, it is essential that all practitioners working with pre-school children are trained in normal child development
- Important attachment disorders are recognised in young infants and toddlers and warrant formal evaluation by professionals trained in infant mental health. Many features described in neglected / emotionally abused children overlap with those found in children suffering from autistic spectrum disorder or attention deficit hyperactivity disorder
- Careful observation and recording of the infant-carer interaction will help to identify neglected / emotionally abused toddlers at an early stage, enabling appropriate assessment and intervention
- There are clearly identifiable features in the pre-school child who is being neglected and / or emotionally abused, thus it is incumbent upon all health practitioners working with these children to be aware of the indicators that they may identify

## 1.3 Research implications

- Although it is recognised that many children suffer from multiple forms of abuse or neglect, future studies would benefit from clearly delineating the subcategories of children and, in particular, the definitions that have been used for neglect or emotional abuse
- There is a dearth of literature relating to neglect / emotional abuse from outside North America, and given the cultural context of neglect, further international studies are warranted

## 1.4 Limitations of review findings

- Although authors attempted to separate children experiencing “pure neglect” or “emotional abuse”, it is likely that many children were subjected to more than one form of abuse or neglect. Thus, the features described may overlap with those found in both emotional abuse and other forms of abuse or neglect
- Unfortunately, the age bands selected for studying the EBD features in children did not precisely match the age bands in those studies focusing on parent-child interactions
- The studies included predominantly addressed neglect, with relatively less research into emotional abuse of infants and toddlers

## Other useful resources

The review identified a number of interesting findings that were outside of the inclusion criteria. These are as follows:

### Clinical question 1

#### Faltering growth

- One study assessed the catch-up growth of long term physically neglected and emotionally abused pre-school children and determined that the growth failure was reversible after one year in foster care<sup>53</sup>

#### Incidence of child neglect

- A Canadian incidence study during 1998 noted that 40% of investigations were due to neglect and 19% emotional maltreatment<sup>54</sup>
- Another Canadian incidence study from 2003 recorded the prevalence of neglect and emotional abuse with relevant associated risk factors<sup>55,56</sup>
- The UK Framework for the Assessment of Children in Need and Their Families identifies the statutory basis for assessment in the UK (+ working together to safeguard children)<sup>57</sup>
- An American statement on screening for family and intimate partner violence <sup>58</sup>
- For the period 2008-9 the incidence of neglect was 48% and emotional abuse 24% in Wales, UK <sup>59</sup>

#### Prevalence of Emotional Abuse

- A meta-analysis of 29 studies determined the prevalence of emotional abuse of 3/1000 children for studies using an informant versus 363/1000 using self-report measures<sup>60</sup>

#### Consequences of extreme early neglect

- MRI studies of children experiencing severe institutional neglect demonstrated reduced cerebellar volume<sup>61</sup>

#### Long term consequences

- Early adverse childhood experiences (including emotional abuse) are associated with an increased risk of premature death<sup>62</sup>

- Overarching study summarising the conclusions of the Minnesota Study (The Mother Child Interaction Research project) identifying the developmental sequelae of infant maltreatment<sup>22</sup>
- Early childhood neglect (aged 0-2 years) is associated with aggression at age 4-8 years<sup>63</sup>
- There has been an increase in animal data to suggest that early maltreatment including neglect can affect methylation of brain-derived neurotrophic factor (BDNF) which may lead to altered BDNF gene expression in future offspring. This has been association with perpetuation of abnormal care taking behaviour<sup>64</sup>

## Tools

- The Cleveland Child Abuse Potential Scale (C-CAPS) was piloted to determine if it could effectively distinguish between children who were maltreated, at risk, and controls. The instrument was able to correctly classify 85% of control cases and 76% of Maltreatment cases<sup>65</sup>

## Related publications

Publication arising from early years neglect review

Naughton AM, Maguire SA, Mann MK, Lumb RC, Tempest V, Gracias S, Kemp AM. Emotional, behavioural, and developmental features indicative of neglect or emotional abuse in preschool children: a systematic review. *JAMA Pediatrics*. 2013;167(8):769-775

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## Appendix 1 – Methodology

In the original Early Years Neglect injuries systematic review an all-language literature search of original articles, their references and conference abstracts published since 1960 was performed. The initial search strategy was developed across OVID Medline databases using keywords and Medical Subject Headings (MeSH headings) and was modified appropriately to search the remaining bibliographic databases. The search sensitivity was augmented by use of a range of supplementary ‘snowballing’ techniques including consultation with subject experts and relevant organisations, and hand searching selected websites, non-indexed journals and the references of all full-text articles.

We limited our search strategy to Organisation for Economic Co-operation and Development populations due to similarities in culture and patterns of health status.

Prior to the 2021 update, identified articles, once scanned for duplicates and relevancy, were transferred to a purpose-built Microsoft Access database to coordinate the review, and collate critical appraisal data. Where applicable, authors were contacted for primary data and additional information. Translations were obtained when necessary. Relevant studies were scanned for eligibility by the lead researcher and those that met our inclusion criteria were reviewed. For the 2021 update studies were managed using Endnote and only data included in English language papers or with an English language abstract were accessed for relevancy. No contact was made with authors in this update.

Standardised data extraction and critical appraisal forms were based on criteria defined by the National Health Service’s Centre for Reviews and Dissemination.<sup>66</sup> We also used a selection of systematic review advisory articles to develop our critical appraisal forms.<sup>41,67-70</sup> Articles were independently reviewed by two reviewers. A third review was undertaken to resolve disagreement between the initial reviewers when determining either the evidence type of the article or whether the study met the inclusion criteria.

Our panel of reviewers included paediatricians, psychologists, psychiatrists, social science researchers, information specialists and social workers. All reviewers underwent standardised critical appraisal training, based on the CRD critical appraisal standards.<sup>41</sup>

We included all studies addressing neglect, emotional abuse or emotional neglect in children less than six years of age. We combined these latter two conditions since, in practice, these descriptions appear concurrently, and this acknowledges the broader term of ‘psychological maltreatment’ as defined by the American Professional Society on the Abuse of Children (1995).<sup>71</sup> Among international definitions of neglect and emotional abuse, we opted for those of the World Health Organization, as follows:

- Neglect (including emotional neglect) is defined as:

“The failure of a parent to provide for the development of the child – where the parent is in a position to do so – in one or more of the following areas: health, education, emotional development, nutrition, shelter and safe living conditions. Neglect is distinguished from circumstances of poverty in that neglect can occur only in cases where reasonable resources are available to the family or caregiver.”<sup>72</sup>

- Emotional abuse is defined as:

“Emotional abuse includes the failure of a caregiver to provide an appropriate and supportive environment, and includes acts that have an adverse effect on the emotional health and development of a child. Such acts include restricting a child’s movements, denigration, ridicule, threats and intimidation, discrimination, rejection and other non-physical forms of hostile treatment<sup>72</sup>”.

## Inclusion criteria

Inclusion	Exclusion
Children aged 0-5 completed years	Studies of sexual abuse
Documented features of the impact of neglect on the child during the period of exposure to neglect	Studies of physical abuse alone, or studies combining physical abuse and neglect, where the data from the neglect cases could not be extracted
Studies conducted in Organisation for Economic Co-operation and Development countries	Studies of management or complications of neglect
Child / carer interaction documented using standardized recording	Studies addressing risk factors for neglect
Studies of the interaction between the child and their primary carer	
Confirmation of neglect ranks A- C2	

## Confirmation of neglect

Ranking	Criteria used to define neglect
A1	Neglect/emotional abuse confirmed at child protection case conference, multi-disciplinary assessment, including social services or Court proceedings
A2	Diagnosis of emotional neglect/emotional abuse by clinical psychologist, psychiatrist or other mental health specialist
B	Neglect/emotional abuse confirmed by referenced criteria/tool
C1	Neglect/emotional abuse confirmed by unreferenced criteria/tool
C2	Observations of emotionally harmful carer-child interaction (not categorized as neglect/emotional abuse)
D	Neglect/emotional abuse/harmful carer-child interaction suspected or stated, with no supporting detail

## Search strategy

The below table presents the search terms used in the 2021 Medline database search for early years neglect, truncation and wildcard characters were adapted to the different databases where necessary.

1. exp Child/	140. emotional* depriv*.ti,ab.
2. exp Child Preschool/	141. or/34-140
3. exp Infant, Newborn/	142. 15 and 33 and 141
4. exp Infant/	143. Family/
5. infancy.ti,ab.	144. Mother-Child Relations/
6. child*.ti,ab.	145. Maternal Behavior/
7. infant*.ti,ab.	146. Parent-Child Relations/
8. (baby or babies).ti,ab.	147. ((parent* or mother or father or maternal or paternal or carer*) adj3 (depression or depressed or depressive or dysthymi? or dysphori?)).ti,ab.
9. toddler*.ti,ab.	148. ((parent* or mother or father or maternal or paternal or carer*) adj3 mood disorder*).ti,ab.
10. neonat*.ti,ab.	149. ((parent* or mother or father or maternal or paternal or carer*) adj3 negative mood).ti,ab.
11. (pediatric* or paediatric*).ti,ab.	
12. or/1-11	

<p>13. limit 12 to (“all infant (birth to 23 months)” or “newborn infant (birth to 1 month)” or “infant (1 to 23 months)” or “preschool child (2 to 5 years)”)</p> <p>14. (pre-school* or preschool* or preschool-age Child*).ti,ab.</p> <p>15. 13 or 14</p> <p>16. (abus* adj neglect*).ti,ab.</p> <p>17. (maltreat* or mistreat* or deprive* or ignor*).mp.</p> <p>18. neglected.ti,ab.</p> <p>19. neglectful.ti,ab.</p> <p>20. psychological neglect.ti,ab.</p> <p>21. ((lack* or absen* or fail*) adj3 (care* or childcare)).ti,ab.</p> <p>22. ((social* or emotional* or psychosocial* or contact or psychological*) adj3 (deprived or deprivation)).ti,ab.</p> <p>23. overlook*.ti,ab.</p> <p>24. neglect* psychological*.ti,ab.</p> <p>25. emotion* neglect*.ti,ab.</p> <p>26. emotion* abus*.ti,ab.</p> <p>27. emotion* harm*.ti,ab.</p> <p>28. child neglect.ti,ab.</p> <p>29. neglect* child*.ti,ab.</p> <p>30. emotion* depriv*.ti,ab.</p> <p>31. emotional trauma.ti,ab.</p> <p>32. ((neglect* or ignore or deprive*) adj1 (psychologic* or emotion*)).ti,ab.</p> <p>33. or/16-32</p> <p>34. Failure to Thrive/</p> <p>35. (failure to thrive adj5 (emotion* or nonorganic or non-organic)).ti,ab.</p> <p>36. (failure to thrive adj5 (abus* or neglect* or maltreat* or mistreat* or depriv* or psych)).ti,ab.</p>	<p>150. ((parent* or mother or father or maternal or paternal or carer*) adj3 partner violence).ti,ab.</p> <p>151. ((parent* or mother or father or maternal or paternal or carer*) adj3 (anger or angry or angst or rage)).ti,ab.</p> <p>152. ((parent* or mother or father or maternal or paternal or carer*) adj3 depress*).ti,ab.</p> <p>153. ((parent* or mother or father or maternal or paternal or carer*) adj3 emotion*).ti,ab.</p> <p>154. ((parent* or mother or father or maternal or paternal or carer*) adj3 substance abuse).ti,ab.</p> <p>155. ((parent* or mother or father or maternal or paternal or carer*) adj3 domestic violence).ti,ab.</p> <p>156. ((parent* or mother or father or maternal or paternal or carer*) adj3 punitive).ti,ab.</p> <p>157. ((parent* or mother or father or maternal or paternal or carer*) adj3 unavailab*).ti,ab.</p> <p>158. ((parent* or mother or father or maternal or paternal or carer*) adj3 (instab* or unstab*)).ti,ab.</p> <p>159. Learning disability/ or Learning disability.mp.</p> <p>160. (spouse or partner).mp.</p> <p>161. (Interpersonal violence or IPV).mp.</p> <p>162. Psychologica* unavailab*.mp.</p> <p>163. Emotion* inatten*.mp.</p> <p>164. Emotion* unattach*.mp.</p> <p>165. Authoritative.mp.</p> <p>166. Disengaged.mp.</p> <p>167. Emotion* unavailab*.mp.</p> <p>168. ((Parent* or mother or father or maternal or paternal) adj1 anger).ti,ab.</p> <p>169. Rough handl*.mp.</p> <p>170. Unresponsiv*.mp.</p> <p>171. Non-physical punishment.mp.</p> <p>172. “Family Relations”/</p> <p>173. Interpersonal Relations/</p>
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37. ((fail* or inadequa*) adj2 emotional support).ti,ab.	174. (child* adj3 (mock* or taunt* or denigrat* or threat* or hostile)).mp.
38. (unkempt or ungroomed).ti,ab.	175. Inappropriate expectation*.mp.
39. Psychosocial Deprivation/	176. inappropriate development.mp.
40. unhealthy appearance?.ti,ab.	177. (over-protective or over protective*).ti,ab.
41. exp Internal-External Control/	178. **Parenting”/
42. (internal* adj3 extem*).ti,ab.	179. (dysfunctional family or family dysfunction).ti,ab.
43. (anxiety or anxious* or anguish*).ti,ab.	180. “Rejection (Psychology)”/
44. (withdrawn or apath*).ti,ab.	181. Negative attribution*.mp.
45. (indifferen* or disinterest*).ti,ab.	182. High criticism.mp.
46. ((lack* or low or flat*) adj3 (affect or emotion*)).ti,ab.	183. parent* unresponsiv*.mp.
47. (clingy or clinginess).ti,ab.	184. Child Rearing/
48. ((attention or affection* or love) adj3 (inappropriate* or improper* or unsuitabl*)).ti,ab.	185. family interact*.ti,ab.
49. ((mental or psychological* or emotional*) adj3 (stress* or distress*)).ti,ab.	186. home environment*.ti,ab.
50. internalisation.ti,ab.	187. Neglect* mother*.ti,ab.
51. Irritable Mood/	188. over* critical.ti,ab.
52. ((emotion* or affect*) adj3 (labil* or regulat*)).ti,ab.	189. (families or family or dyad).ti,ab.
53. (aloof or avoid*).ti,ab.	190. or/143-189
54. Shyness/	191. 15 and 33 and 190
55. ((avoid* or withdraw*) adj3 (contact or touch* or physical*)).ti,ab.	192. assessment.mp.
56. ((avoid* or withdraw*) adj3 social*).ti,ab.	193. Diagnosis/
57. unsociable.ti,ab.	194. diagnostic tool.mp.
58. ((lack or poor* or avoid*) adj3 communicat*).ti,ab.	195. assessment tool.mp. or “Severity of Illness Index”/
59. (watchful or wary or vigilan*).ti,ab.	196. Needs Assessment/
60. (unhappiness or unhappy).ti,ab.	197. graded care profile.mp.
61. (overly responsible or perfectionis*).ti,ab.	198. (identification or identify).ti,ab.
62. “ATTENTION DEFICIT and DISRUPTIVE BEHAVIOR DISORDERS”/	199. Pattern Recognition, Visual/
	200. detect*.ti,ab.
	201. Classification/
	202. Decision Making/

63. Conduct Disorder/	203. Early Diagnosis/
64. Aggression/	204. screening.mp. or Mass Screening/
65. ((aggression or aggressive*) adj3 (behavio* or escalat*)).ti,ab.	205. "Risk Factors"/
66. acting out.ti,ab.	206. HOME inventory.mp.
67. out of control.ti,ab.	207. Risk Assessment/
68. ((chaotic* or challenging) adj3 behavio*).ti,ab.	208. Risk/
69. (bully* or bullie?).ti,ab.	209. or/192-208
70. Anger/	210. 15 and 33 and 209
71. ((destructive* or disruptive*) adj3 behav*).ti,ab.	211. Environment/
72. Impulsive Behavior/	212. Hostile atmosphere.mp.
73. impulse control.ti,ab.	213. Environment Design/
74. (impulsive* or impulsivity or impulse control).ti,ab.	214. depriv*.ti,ab.
75. Developmental Disabilities/	215. chao*.ti,ab.
76. Child Development/	216. "Play and Playthings"/
77. Child Behavior/	217. Absence of toys.mp.
78. Infant Behavior/	218. Absence of play.mp.
79. Personality Development/	219. Absence of stimulation.mp.
80. ((chang* or alter* or deviat* or transition?) adj3 personality).ti,ab.	220. home.ti,ab.
81. Helplessness, Learned/	221. buggy.mp.
82. sad.ti,ab.	222. "Walkers"/
83. Social Behavior/	223. Infant Equipment/
84. Attention Deficit Disorder with Hyperactivity/	224. (pram or pushchair).mp.
85. avoidant attention.ti,ab.	225. stroller.mp.
86. (normative adj3 avoidance).ti,ab.	226. ((view* or watch*) adj3 television).ti,ab.
87. (abandoned or abandonment?).ti,ab.	227. Social Environment/
88. psychological neglect.ti,ab.	228. or/211-227
89. ((lack* or absen* or fail*) adj3 (care* or childcare)).ti,ab.	229. 15 and 33 and 228
	230. 142 or 191 or 210 or 229
	231. Stress Disorders, Post-Traumatic/
	232. sexual abuse.mp. or Sex Offenses/

<p>90. ((social* or emotional* or psychosocial* or contact or psychological*) adj3 (deprived or deprivation)).ti,ab.</p> <p>91. "lack of supervision".ti,ab.</p> <p>92. unsupervised.ti,ab.</p> <p>93. (temper or hostile* pr hypervigilant*).ti,ab.</p> <p>94. Child Behavior Disorders/</p> <p>95. (rage of raging or rageful).ti,ab.</p> <p>96. attun*.ti,ab.</p> <p>97. Nonverbal Communication/</p> <p>98. Sensory integration.mp.</p> <p>99. Dissociat*.ti,ab.</p> <p>100. **Dissociative Disorders"/</p> <p>101. Dysregulation.mp.</p> <p>102. Affect mirroring.mp.</p> <p>103. **Facial Expression"/</p> <p>104. Mind-mindedness.mp.</p> <p>105. Object Attachment/</p> <p>106. attachment.ti,ab.</p> <p>107. persecut*.ti,ab.</p> <p>108. Speech delay.mp.</p> <p>109. Language delay.mp.</p> <p>110. Language Disorders/</p> <p>111. Perspective taking.mp.</p> <p>112. Demanding.mp.</p> <p>113. Poor concentration.ti,ab.</p> <p>114. listless*.mp.</p> <p>115. Isolated.mp.</p> <p>116. **Social Isolation"/</p> <p>117. Inhibited.mp.</p> <p>118. Reactive Attachment Disorder/</p>	<p>233. "Child Abuse, Sexual"/</p> <p>234. (Algeria\$ or Egypt\$ or Libya\$ or Morocco\$ or Tunisia\$ or Western Sahara\$ or Angola\$ or Benin or Botswana\$ or Burkina Faso or Burundi or Cameroon or Cape Verde or Central African Republic or Chad or Comoros or Congo or Djibouti or Eritrea or Ethiopia\$ or Gabon or Gambia\$ or Ghana or Guinea or Kenya\$ or Lesotho or Liberia or Madagascas\$ or Malawi or Mali or Mauritania or Mauritius or Mayotte or Mozambique\$ or Namibia\$ or Niger or Nigeria\$ or Reunion or Rwanda\$ or Saint Helena or Senegal or Seychelles or Sierra Leone or Somalia or South Africa\$ or Sudan or Swaziland or Tanzania or Togo or Uganda\$ or Zambia\$ or Zimbabwe\$ or China or Chinese or Hong Kong or Macao or Mongolia\$ or Taiwan\$ or Belarus or Moldova\$ or Russia\$ or Ukraine or Afghanistan or Armenia\$ or Azerbaijan or Bahrain or Cyprus or Cypriot or Georgia\$ or Iran\$ or Iraq\$ or Israel\$ or Jordan\$ or Kazakhstan or Kuwait or Kyrgyzstan or Lebanon\$ or Oman or Pakistan\$ or Palestine\$ or Qatar or Saudi Arabia or Syria\$ or Tajikistan or Turkmenistan or United Arab Emirates or Uzbekistan or Yemen or Bangladesh\$ or Bhutan or British Indian Ocean Territory or Brunei Darussalam or Cambodia\$ or India\$ or Indonesia\$ or Lao or People's Democratic Republic or Malaysia\$ or Maldives or Myanmar or Nepal or Philippines\$ or Singapore or Sri Lanka or Thailand\$ or Timor Leste or Vietnam or Albania\$ or Andorra or Bosnia\$ or Herzegovina\$ or Bulgaria\$ or Croatia\$ or Estonia or Faroe Islands or Greenland or Liechtenstein or Lithuania\$ or Macedonia or Malta or Maltese or Romania or Serbia\$ or Montenegro or Slovenia or Svalbard or Argentina\$ or Belize or Bolivia\$ or Brazil\$ or Chile or Chilean or Colombia\$ or Costa Rica\$ or Cuba or Ecuador or El Salvador or French Guiana or Guatemala\$ or Guyana or Haiti or Honduras or Jamaica\$ or Nicaragua\$ or Panama or Paraguay or Peru or Puerto Rico or Suriname or Uruguay or Venezuela or developing countries\$ or South America\$).ti,sh.</p> <p>235. "Africa South of the Sahara"/</p> <p>236. or/231-235</p> <p>237. 230 not 236</p> <p>238. limit 237 to yr="2014 - 2021"</p>
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119. Disinhibited.mp.	
120. Social skills.mp.	
121. Emotional skills.mp.	
122. False positive affect.mp.	
123. touch sensitive.mp.	
124. Apparent compliance.mp.	
125. Language comprehension deficit.mp.	
126. Grasp of reality.mp.	
127. Immatur*.ti,ab.	
128. impatien*.ti,ab.	
129. Socialization/	
130. cognitive delay.mp.	
131. cognitive* stimulat*.ti,ab.	
132. attachment disorder.mp.	
133. eye contact.ti,ab.	
134. *Stress, Psychological/	
135. stunting of growth.mp.	
136. stunt* growth.mp.	
137. Hospitalism.ti,ab.	
138. environmental retardation.ti,ab.	
139. affect deprivation.ti,ab.	

Thirteen databases were searched together with hand searching of particular journals and websites. A complete list of the resources searched can be found below.

Databases	Time period searched
ASSIA (Applied Social Sciences Index and Abstracts)	1987 – 2021
CINAHL (Cumulative Index to Nursing and Allied Health Literature)	1982 – 2014
Cochrane Central Register of Controlled Trials	1960 – 2014
EMBASE	1980 – 2021
ERIC (Education Resources Information Center)	1962 – 2021

HMIC (Health Management Information Consortium)	1979 – 2014
IBSS (International Bibliography of the Social Sciences)	1960 – 2014
MEDLINE	1960 – 2021
MEDLINE In-Process and Other Non-Indexed Citations	2006 – 2021
Open SIGLE (System for Information on Grey Literature in Europe)	1980 – 2005*
PsycINFO	1960 – 2014
Pubmed e publications	2014
SCOPUS	1966 – 2021
Social Care Online	2006 – 2014
Social Services Abstracts	2008 – 2013
Sociological abstracts	2008 – 2013
Web of Knowledge – ISI Proceedings	1990 – 2014
Web of Knowledge – ISI Science Citation Index	1970 – 2014
Web of Knowledge – ISI Social Science Citation Index	1970 – 2014
* ceased indexing † institutional access terminated ‡ no yield so ceased searching	
<b>Journals 'hand searched'</b>	<b>Time period searched</b>
Child Abuse and Neglect	1979 – 2014
Child Abuse Review	1992 – 2014
<b>Websites searched</b>	<b>Date accessed</b>
Centre for Excellence and Outcomes in Children and Young People's Services(C4EO)	14 October 2014
Child Welfare Information Gateway(CWIG)	14 October 2014
Research in Practice(RIP)	From inception – 2009†
Social Care Institute for Excellence website	14 October 2014
Translational Research on Child Neglect Consortium (TRCNC)	14 October 2014
Trauma Central	14 October 2014

## **Pre-review screening and critical appraisal**

Papers found in the database and hand searches underwent three rounds of screening before they were included in this update. The first round was a title screen where papers that obviously did not meet the inclusion criteria were excluded. The second was an abstract screen where papers that did not meet the inclusion criteria based on the information provided in the abstract were excluded. These first two stages were carried out by a systematic reviewer at the RCPCH and a clinical expert. Finally, a full text screen with a critical appraisal was carried out by expert reviewer members of the clinical expert sub-committee. Critical appraisal forms were completed for each of the papers reviewed at this stage. Examples of the pre-review screening and critical appraisal forms used in previous reviews are available on request ([evidence@rcpch.ac.uk](mailto:evidence@rcpch.ac.uk)).