

Draft for consultation

## Cerebral palsy in adults

**[B2] Assessing and monitoring complications and comorbidities: mental health problems**

*NICE guideline tbc*

*Evidence reviews*

*July 2018*

*Draft for Consultation*

*These evidence reviews were developed by the National Guideline Alliance hosted by the Royal College of Obstetricians and Gynaecologists*



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ISBN:

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# 1 Assessing and monitoring complications 2 and comorbidities associated with cerebral 3 palsy in adults aged 25 and over

## 4 Review question

5 B2 Which mental health assessment tools are clinically useful for adults with cerebral palsy?

## 6 Introduction

7 Adults with cerebral palsy may experience mental health issues, such as anxiety and  
8 depression more frequently than the wider population. Learning and communication  
9 difficulties can also lead to specific emotions and behaviours that require specialist  
10 understanding and input. As part of this they may also experience barriers to accessing  
11 support for their problems. This question reviews the evidence for the assessment and  
12 monitoring of these mental health problems.

## 13 PIRO table

14 Please see

15 Table 1 for a summary of the Population, Index test, Reference standard and Outcome  
16 (PIRO) characteristics of this review.

## 17 Table 1: Summary of the protocol (PIRO table)

|                           |  |
|---------------------------|--|
| <b>Population</b>         | Adults aged 25 and over with cerebral palsy and suspected mental health problems   |
| <b>Index test</b>         | <p>Test for identification or assessment of mental health problems, for example:</p> <ul style="list-style-type: none"> <li>• Whooley questions</li> <li>• GAD 2-2 from GAD-7</li> <li>• PHQ-9</li> <li>• CES-D</li> </ul>   |
| <b>Reference standard</b> | <ul style="list-style-type: none"> <li>• Diagnosis from full psychiatric or psychological assessment</li> <li>• Each other</li> <li>• Other mental health assessment tools</li> </ul>  |
| <b>Outcome</b>            | <p><b>Critical</b></p> <ul style="list-style-type: none"> <li>• Test accuracy: <ul style="list-style-type: none"> <li>◦ Sensitivity</li> <li>◦ Specificity</li> <li>◦ Positive/Negative likelihood ratio</li> </ul> </li> <li>• Validity and reliability</li> <p><b>Important</b></p> <ul style="list-style-type: none"> <li>• Patient satisfaction</li> </ul> </ul> |

18 CES-D: Center for Epidemiologic Studies Depression Scale; GAD: Generalised Anxiety Disorder Questionnaire;  
19 PHQ-9: Patient Health Questionnaire 9 question depression scale.

20 For full details see review the protocol in appendix A.

**1 Methods and process**

2 This evidence review was developed using the methods and process described in  
3 [Developing NICE guidelines: the manual 2014](#). Methods specific to this review question are  
4 described in the review protocol in appendix A and for a full description of the methods see  
5 supplementary document C.

6 Declaration of interests were recorded according to NICE's 2014 conflicts of interest policy  
7 from May 2016 until April 2018. From April 2018 onwards they were recorded according to  
8 NICE's 2018 [conflicts of interest policy](#). Those interests declared until April 2018 were  
9 reclassified according to NICE's 2018 conflicts of interest policy (see Interests Register).

**10 Clinical evidence**

**11 Included studies**

12 A systematic review of the clinical literature was conducted but no relevant studies were  
13 identified which were applicable to this review question.

14 See the literature search strategy in appendix B and study selection flow chart in appendix C.

**15 Excluded studies**

16 Studies excluded from this systematic review, with reasons for their exclusion, are provided  
17 in appendix K.

**18 Summary of clinical studies included in the evidence review**

19 No clinical studies were identified for this review.

**20 Quality assessment of clinical studies included in the evidence review**

21 No clinical studies were identified for this review.

**22 Economic evidence**

**23 Included studies**

24 A systematic review of the economic literature was conducted but no studies were identified  
25 which were applicable to this review question.

**26 Excluded studies**

27 No studies were identified which were applicable to this review question.

**28 Summary of studies included in the economic evidence review**

29 No economic evaluations were included in this review.

**30 Economic model**

31 This topic was not prioritised for economic modelling because it was assumed that early  
32 recognition would lead to targeting of interventions at the correct indications and would  
33 therefore be cost neutral or cost saving.

## 1 Resource impact

2 No unit costs were presented to the committee as these were not prioritised for decision  
3 making purposes.

## 4 Evidence statements

5 No relevant evidence was identified.

## 6 Recommendations

7 B2.1 Identify and address mental health problems alongside physical health problems.  
8 Recognise that the impact of mental health problems and emotional difficulties can be as  
9 important as physical health problems for adults with cerebral palsy.

10 B2.2 Follow NICE guidelines on identifying and managing specific mental health problems,  
11 and psychological and neurodevelopmental disorders in adults who have cerebral palsy, for  
12 example:

- 13 • [attention deficit hyperactivity disorder](#)
- 14 • [autism spectrum disorder in adults](#)
- 15 • [challenging behaviour and learning disabilities](#)
- 16 • [depression in adults](#) and [depression in adults with a chronic physical](#)  
17 [health problem](#)
- 18 • [generalised anxiety disorder and panic disorder in adults](#)
- 19 • [mental health problems in people with learning disabilities.](#)

20 B2.3 Tailor the identification and assessment of mental health problems and emotional  
21 difficulties to the needs and abilities of the person, in particular take into account  
22 communication difficulties or learning disabilities.

23 B2.4 At every review explore with the adult with cerebral palsy (and their family and carers, if  
24 agreed) if they have any concerns about, for example, their:

- 25 • mood
- 26 • irritability
- 27 • behaviour
- 28 • social interaction
- 29 • general level of function.

30 B2.5 Involve families and carers, when agreed, in identifying and assessing mental health  
31 problems and emotional difficulties in adults with cerebral palsy.

32 B2.6 Take into account the specific factors that might affect the identifying, assessing and  
33 managing mental health problems and emotional difficulties in people with cerebral palsy.  
34 These may include:

- 35 • adverse effects of medicines (including the effects of medicines used for  
36 managing mental health problems on motor function or those used for  
37 managing motor function on mental health)
- 38 • communication difficulties
- 39 • learning disabilities
- 40 • impaired neuropsychological and executive function
- 41 • comorbidities, particularly epilepsy and pain
- 42 • side effects and drug interactions of multiple medicines (polypharmacy).

- 1      B2.7 Discuss with the adult with cerebral palsy (and their family and carers, if agreed) if  
2      physical problems, such as pain, or frustration from communication difficulties or lack of  
3      stimulation are contributing to emotional distress or challenging behaviour.

#### 4 **Rationale and impact**

##### 5 **Why the committee made the recommendations**

- 6      No evidence was found on assessing and monitoring mental health in adults with cerebral  
7      palsy. However, from their experience, the committee acknowledged that healthcare services  
8      for adults with cerebral palsy tend to focus on physical rather than mental health. Greater  
9      awareness of mental health problems and the specific challenges of identifying and  
10     managing them in adults with cerebral palsy would help to ensure that such problems are  
11     recognised and managed. Alongside this, the committee highlighted that discussing the  
12     person's mental wellbeing at each review would help to identify any concerns and ensure  
13     that support for mental health problems is included in the person's care plan. Important  
14     insights about a person's mental health can often be gained from people close to them, so  
15     the committee agreed that (with consent from the person) family members or carers should  
16     also be asked if they have any concerns.
- 17     Physical problems and common frustrations that can affect emotional wellbeing in adults with  
18     cerebral palsy were highlighted by the committee because they are often overlooked, but can  
19     negatively affect mental health and behaviour.
- 20     The committee noted that there are many relevant NICE guidelines related to mental health  
21     conditions that would apply to adults with cerebral palsy, and other NICE guidelines relevant  
22     to those with communication difficulties or learning disabilities.

##### 23 **Impact of the recommendations on practice**

- 24     The recommendations will reinforce current best practice.

##### 25 **The committee's discussion of the evidence**

###### 26 **Interpreting the evidence**

###### 27 ***The outcomes that matter most***

- 28     The committee agreed that the most relevant outcomes related to identification of mental  
29     health problems in adults with cerebral palsy would be accuracy measures related to tests,  
30     the validity and reliability of such tests. The committee classified patient satisfaction as an  
31     important outcome rather than a critical outcomes because the aim of the review is to identify  
32     mental health conditions and it may be possible that the most accurate tool is not the most  
33     satisfying for patients. This was because accurate identification of any mental health  
34     problems is critical to their successful management.

- 35     The review did not identify any evidence and therefore none of the outcomes were reported.

###### 36 ***The quality of the evidence***

- 37     No evidence was identified for this review.

###### 38 ***Benefits and harms***

- 39     Due to the lack of available evidence the committee based their recommendations on their  
40     experience and expertise.

- 1 The committee agreed that healthcare services for adults with cerebral palsy currently focus  
2 on physical impairments and that this can risk that a mental health problem may not be  
3 detected and treated. Therefore the committee decided to raise awareness that the detection  
4 of mental health problems and emotional difficulties can be as important as physical health  
5 problems. Early recognition can inform an individualised management plan that includes  
6 mental as well as physical functions. Assessment and recognition is particularly challenging  
7 in people who have communication difficulties or learning disabilities.
- 8 The committee discussed, based on their experience, that families and carers can have  
9 insights into the mental wellbeing of the adult with cerebral palsy and that they could also  
10 have a supporting role when problems are identified (where appropriate). Involving the  
11 people that are important to the adult with cerebral palsy was therefore important and the  
12 committee agreed to make a strong recommendation to encourage this to happen. This is  
13 also consistent with other guidance which highlights that social support has a positive impact  
14 on mental wellbeing (please see below).
- 15 The committee emphasised that asking the adult with cerebral palsy whether they have any  
16 concerns is an important part of individualised assessments and should be monitored at  
17 each review (defined as a planned clinical appointment). They did not want to specify the  
18 frequency of these reviews as it would depend on individual's needs and wishes. Based on  
19 their experience, the committee decided to include examples of the most common types of  
20 concerns that may indicate an emotional or mental health problem (for example the  
21 committee discussed that concerns about mood could indicate depressive or manic  
22 symptoms, or concerns about social interactions could indicate anxiety or social isolation).
- 23 Based on their knowledge the committee agreed that there are contributing factors that are  
24 more common in people with cerebral palsy and that these impact on the recognition and  
25 assessment of mental health problems. The committee noted that it is not always recognised  
26 that mental health medication can have an impact on motor function and vice versa  
27 medication used to manage motor function can also have an effect on mental health. If this is  
28 not taken into account then the adult may be given the wrong management when a  
29 medication change or dose adjustment would have been a more effective option. Other  
30 important factors that impact on mental health are communication difficulties because they  
31 can lead to frustration and feelings of isolation; comorbidities that can lead to higher levels of  
32 depression or distress (for instance pain or epilepsy); neuropsychological and executive  
33 function impairments (for example leading to problems with organising and planning day to  
34 day activities); and polypharmacy (which is a recognised risk factor for depression and other  
35 mental health problems). Early recognition of these would improve the treatment programme  
36 by providing care that is tailored to each adult with cerebral palsy who experiences mental  
37 health difficulties.
- 38 The committee acknowledged that there are some particular challenges related to their  
39 condition that are commonly experienced by adults with cerebral palsy which impact on their  
40 mental wellbeing. It was highlighted that communication difficulties or lack of stimulation (for  
41 instance it was noted that this can occur in residential care settings) can often lead to  
42 emotional distress or challenging behaviour. These factors should be taken into  
43 consideration when assessing the mental health of the person with cerebral palsy.
- 44 The committee discussed whether a research recommendation should be made given the  
45 lack of evidence. They decided not to prioritise this topic for further research because there  
46 are already established tools available that could be applied to people with cerebral palsy  
47 and that there is a wide range of mental health problems that may need to be assessed. The  
48 committee also agreed that

1 **Cost effectiveness and resource use**

2 The committee noted that no relevant published economic evaluations had been identified for  
3 this topic.

4 The committee considered that the recommendations would lead to targeting of interventions  
5 at the correct indications through better identification of the cause of problems. If the wrong  
6 indication is targeted this will lead to an ineffective use of NHS resources; not only with  
7 regards to the intervention, but also downstream from adverse effects and reductions in  
8 quality of life.

9 Mental health problems and emotional difficulties can be as important as physical health  
10 problems and better prediction, identification and timely management could lead to the  
11 prevention of mental health problems in this population and potentially large resource  
12 savings.

13 **Other factors the committee took into account**

14 The committee highlighted that there are many relevant published NICE guidelines related to  
15 mental health problems available and that these would need to be included in the pathway of  
16 the final guideline. They agreed to directly cross reference to the following guidelines for  
17 people with cerebral palsy because based on their knowledge and experience there are  
18 physical (such as reduced mobility), neurological (leading to learning disabilities) and social  
19 (lack of an advocate) factors that make adults with cerebral palsy more likely to develop  
20 these conditions:

- 21 • [attention deficit hyperactivity disorder](#)
- 22 • [autism spectrum disorder in adults](#)
- 23 • [challenging behaviour and learning disabilities](#)
- 24 • [depression in adults](#) and [depression in adults with a chronic physical health problem](#)
- 25 • [generalised anxiety disorder and panic disorder in adults](#)
- 26 • [mental health problems in people with learning disabilities.](#)

27 Familiarity with the relevant recommendation related to the recognition and assessment of  
28 the conditions that are cross-referenced is therefore an important step in the identification of  
29 mental health problems in adults with cerebral palsy.

30 **References**

31 No studies were included in this review.

32

33

# 1 Appendices

## 2 Appendix A – Review protocols

3 Review protocol for review question B2: Which mental health assessment tools are clinically useful for adults with cerebral palsy?

4 **Table 2: Review protocol for monitoring and assessing mental health**

| <b>Field (based on PRISMA-P)</b>   | <b>Content</b>  |
|--|---|
| Review question  | B.2 Which mental health assessment tools are clinically useful for adults with cerebral palsy?  |
| Type of review question  | Diagnostic test accuracy  |
| Objective of the review  | The aim of this review is to compare the clinical utility of assessment tools in adults with cerebral palsy.  |
| Eligibility criteria – <b>population/disease/condition/issue/domain</b>          | Adults aged 25 and over with cerebral palsy and suspected mental health problems.   |
| Eligibility criteria – <b>intervention(s)/exposure(s)/prognostic factor(s)</b>   | Test for identification or assessment of mental health problems, for example: <ul style="list-style-type: none"> <li>• Whooley questions</li> <li>• GAD 2-2 from GAD-7</li> <li>• PHQ-9</li> <li>• CES-D (Center for Epidemiological studies depression scale)</li> </ul> |
| Eligibility criteria – <b>comparator(s)/control or reference (gold) standard</b> | <ul style="list-style-type: none"> <li>• Diagnosis from full psychiatric or psychological</li> <li>• assessment</li> <li>• Each other</li> <li>• Other mental health assessment tools</li> </ul>  |
| <b>Outcomes and prioritisation</b>   | <b>Critical outcomes</b> <ul style="list-style-type: none"> <li>• Test accuracy:               <ul style="list-style-type: none"> <li>◦ Sensitivity</li> <li>◦ Specificity</li> <li>◦ Positive/Negative likelihood ratio</li> </ul> </li> </ul>                           |

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| Field (based on PRISMA-P)  | Content  |
|--|--|
|  | <ul style="list-style-type: none"> <li>• Validity and reliability</li> </ul> <p><b>Important outcomes</b></p> <ul style="list-style-type: none"> <li>• Patient satisfaction</li> </ul> <p>The thresholds for clinical usefulness of tests:</p> <ul style="list-style-type: none"> <li>• Sensitivity and specificity (sensitivity will be prioritised as the tests in question will be used for screening rather than definitive diagnosis): <ul style="list-style-type: none"> <li>◦ High &gt;90%</li> <li>◦ Moderate 75-90%</li> <li>◦ Low &lt;75%</li> </ul> </li> <li>• Positive likelihood ratio: <ul style="list-style-type: none"> <li>◦ Very useful test &gt;10</li> <li>◦ Moderately useful test 5-10</li> <li>◦ Not a useful test &lt;5</li> </ul> </li> <li>• Negative likelihood ratio: <ul style="list-style-type: none"> <li>◦ Very useful test &lt;0.1</li> <li>◦ Moderately useful test 0.1 to 0.2</li> <li>◦ Not a useful test&gt;0.2</li> </ul> </li> </ul> |
| Eligibility criteria – <b>study design</b>                           | Only published full text papers -<br>Systematic reviews of cross sectional diagnostic accuracy studies<br>cross sectional diagnostic accuracy studies<br>Case control studies (only in the absence of cross sectional diagnostic accuracy studies)   |
| Other inclusion <b>exclusion criteria</b>                            | None   |
| Proposed sensitivity/ <b>sub-group analysis</b> , or meta-regression | In the presence of heterogeneity, the following subgroups will be considered for sensitivity analysis: <ul style="list-style-type: none"> <li>• Population subgroups: <ul style="list-style-type: none"> <li>◦ Presence of chronic pain</li> <li>◦ Learning difficulties</li> <li>◦ Communication difficulties</li> <li>◦ Ambulant vs. non-ambulant</li> </ul> </li> </ul>   |

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| Field (based on PRISMA-P)                                  | Content  |
|--|--|
|  | <ul style="list-style-type: none"> <li>○ People with limbic system damage</li> <li>● Assessment subgroups per assessment tool where possible</li> <li>● Important confounders:           <ul style="list-style-type: none"> <li>○ learning difficulties</li> <li>○ communication difficulties</li> </ul> </li> </ul>   |
| Selection process – duplicate screening/selection/analysis | A random sample of the references identified in the search was sifted by a second reviewer. This sample size was 10% of the total, or 100 studies if the search identifies fewer than 1000 studies. All disagreements in study inclusion were discussed and resolved between the two reviewers. The senior systematic reviewer or guideline lead was involved if discrepancies could not be resolved between the two reviewers.  |
| Data management (software)                                 | STAR was used to sift through the references identified by the search.   |
| Information sources – databases and dates                  | Embase 1974 to present, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to Present, PsycINFO 1806 to present   |
| Identify if an update                                      | Not an update  |
| Author contacts  | For details please see the guideline in development web site.  |
| Highlight if amendment to previous protocol                | For details please see section 4.5 of <a href="#">Developing NICE guidelines: the manual 2014</a>  |
| Search strategy – for one database                         | For details please see appendix B.   |
| Data collection process – forms/duplicate                  | A standardised evidence table format will be used, and published as appendix D (clinical evidence tables) or H (economic evidence tables) of the full guideline.   |
| Data items – define all variables to be collected          | For details please see evidence tables in appendix D (clinical evidence tables) or H (economic evidence tables).   |
| Methods for assessing bias at outcome/study level          | <p>Standard study checklists were used to critically appraise individual studies. For details please see section 6.2 of <a href="#">Developing NICE guidelines: the manual 2014</a></p> <p>The risk of bias across all available evidence was evaluated for each outcome using an adaptation of the 'Grading of Recommendations Assessment, Development and Evaluation (GRADE) toolbox' developed by the international GRADE working group <a href="http://www.gradeworkinggroup.org/">http://www.gradeworkinggroup.org/</a></p> |

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| <b>Field (based on PRISMA-P)</b>  | <b>Content</b>   |
|---|--|
| Criteria for quantitative synthesis   | For details please see section 6.4 of <a href="#">Developing NICE guidelines: the manual 2014</a>  |
| Methods for quantitative analysis – combining studies and exploring (in)consistency | For details please see the methods see supplementary document C.   |
| Meta-bias assessment – publication bias, selective reporting bias                   | For details please see section 6.2 of <a href="#">Developing NICE guidelines: the manual 2014</a>  |
| Confidence in cumulative evidence   | For details please see sections 6.4 and 9.1 of <a href="#">Developing NICE guidelines: the manual 2014</a>   |
| Rationale/context – what is known   | For details please see the introduction to the evidence review.  |
| Describe contributions of authors and guarantor                                     | A multidisciplinary committee developed the evidence review. The committee was convened by the National Guideline Alliance (NGA) and chaired by Dr Paul Eunson in line with section 3 of <a href="#">Developing NICE guidelines: the manual 2014</a> .<br>Staff from the NGA undertook systematic literature searches, appraised the evidence, conducted meta-analysis and cost effectiveness analysis where appropriate, and drafted the guideline in collaboration with the committee. For details please see the methods in supplementary document C. |
| Sources of funding/support  | The NGA is funded by NICE and hosted by the Royal College of Obstetricians and Gynaecologists.   |
| Name of sponsor   | The NGA is funded by NICE and hosted by the Royal College of Obstetricians and Gynaecologists.   |
| Roles of sponsor  | NICE funds NGA to develop guidelines for those working in the NHS, public health and social care in England  |
| PROSPERO registration number  | Not applicable   |

1 CDSR: Cochrane Database of Systematic Reviews; CENTRAL: Cochrane Central Register of Controlled Trials; CES-D: Center for Epidemiologic Studies Depression Scale;  
 2 DARE: Database of Abstracts of Effects; GAD: Generalised Anxiety Disorder Questionnaire; GMFCS, gross motor function classification system; GRADE: Grading  
 3 of Recommendations Assessment, Development and Evaluation; HTA: Health Technology Assessment; MID: minimally important difference; NGA: National Guideline Alliance;  
 4 NICE: National Institute for Health and Care Excellence; PHQ-9, Patient Health Questionnaire 9 question depression scale; RoB: risk of bias; SD: standard deviation  
 5  
 6

7



## Appendix B – Literature search strategies

Literature search strategy for evidence review question B2: Which mental health assessment tools are clinically useful for adults with cerebral palsy?

### Database: Medline & Embase (Multifile)

Database(s): Embase 1974 to 2018 March 22, Ovid MEDLINE(R) In-Process & Other Non-Indexed Citations and Ovid MEDLINE(R) 1946 to Present, PsycINFO 1806 to March Week 3 2018

**Table 3: Last searched on 22 March 2018**

| #  | Searches  |
|----|---|
| 1  | exp Cerebral Palsy/ use prmz  |
| 2  | exp cerebral palsy/ use oemezd  |
| 3  | exp Cerebral Palsy/ use psyh  |
| 4  | ((cerebral or brain or central) adj2 (pal* or paralys#s or pares#s)).tw.  |
| 5  | cerebral palsy.ti,ab.   |
| 6  | little? disease.tw.   |
| 7  | ((hemipleg* or dipleg* or tripleg* or quadripleg* or unilateral*) adj5 spastic*).tw.  |
| 8  | ((hemipleg* or dipleg* or tripleg* or quadripleg* or unilateral*) adj3 ataxi*).tw.  |
| 9  | or/1-8  |
| 10 | limit 9 to english language   |
| 11 | limit 10 to (adult <18 to 64 years> or aged <65+ years>) use oemezd [Limit not valid in Ovid MEDLINE(R),Ovid MEDLINE(R) In-Process,PsycINFO; records were retained]   |
| 12 | limit 10 to "all adult (19 plus years)" [Limit not valid in Embase,PsycINFO; records were retained]   |
| 13 | 12 use prmz   |
| 14 | limit 10 to adulthood <18+ years> [Limit not valid in Embase,Ovid MEDLINE(R),Ovid MEDLINE(R) In-Process; records were retained]   |
| 15 | 14 use psyh   |
| 16 | or/11,13,15   |
| 17 | exp mental health/ or exp mental disease/ or exp developmental disorder/ or intellectual impairment/ or exp mental deficiency/ or exp learning disorder/ or exp depression/ or exp Hamilton Depression Rating Scale/ or exp Depression Anxiety Stress Scale/ or exp Center for Epidemiological Studies Depression Scale/ or exp depression assessment/ or exp Edinburgh Postnatal Depression Scale/ or exp Calgary Depression Scale/ or exp "Hospital Anxiety and Depression Scale"/ or exp Montgomery Asberg Depression Rating Scale/ or exp Self-rating Depression Scale/ or exp depression inventory/ or exp "mixed anxiety and depression"/ or exp Beck Depression Inventory/ or exp experimental depression test/ or exp Zung Self Rating Depression Scale/ or exp generalized anxiety disorder/ or exp Social Interaction Anxiety Scale/ or exp State Trait Anxiety Inventory/ or exp Liebowitz Social Anxiety Scale/ or exp Anxiety Sensitivity Index/ or exp Hamilton Anxiety Scale/ or exp anxiety disorder/ or exp anxiety assessment/ or exp Beck Anxiety Inventory/ or exp anxiety/ or exp Depression Anxiety Stress Scale/ or exp mental stress/ or exp Depression Anxiety Stress Scale/ or exp Perceived Stress Scale/ or stress/ or exp stress assessment/ or exp Brief Pain Inventory/ or exp pain measurement/ or exp experimental pain test/ or exp experimental chronic pain test/ or exp Memorial Pain Assessment Card/ or exp chronic pain/ or exp pain parameters/ or exp pain assessment/ or exp pain/ or exp McGill Pain Questionnaire/ or exp experimental acute pain test/ or exp panic/ or exp mood disorder/ or exp personality disorder/ or exp health survey/ or exp health care survey/ or exp questionnaire/ or exp psychological rating scale/ or exp "sensitivity and specificity"/ or exp psychometry/ or exp diagnostic procedure/ or exp "Diagnostic and Statistical Manual of Mental Disorders"/ or exp "quality of |

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| #  | Searches  |
|----|---|
|    | life"/ or exp adaptive behavior/ or clinical assessment tool/ or exp diagnostic test/ or exp psychologic test/ or psychometry/ or rating scale/ or screening test/ or summated rating scale/ or exp cognitive therapy/ or exp behavior therapy/   |
| 18 | 17 use oemezd   |
| 19 | exp Mental Disorders/ or exp Psychopathology/ or exp Mental Health/ or exp developmental disabilities/ or exp intellectual development disorder/ or "intellectual development disorder (attitudes toward)"/ or exp learning disabilities/ or exp recurrent depression/ or exp beck depression inventory/ or exp "depression (emotion)"/ or exp zungs self rating depression scale/ or exp emotional states/ or exp coping behavior/ or exp generalized anxiety disorder/ or exp anxiety disorders/ or exp anxiety/ or exp social anxiety/ or exp anxiety management/ or exp state trait anxiety inventory/ or exp anxiety sensitivity/ or exp acute stress disorder/ or exp psychological stress/ or exp "stress and coping measures"/ or exp chronic stress/ or exp stress/ or exp stress management/ or exp stress reactions/ or exp pain management/ or exp chronic pain/ or exp pain measurement/ or exp pain/ or exp panic/ or exp panic disorder/ or exp Emotional States/ or exp Personality Disorders/ or exp Affective Disorders/ or exp Psychometrics/ or exp Surveys/ or exp questionnaires/ or exp Psychological Assessment/ or exp Psychopathology/ or exp Rating Scales/ or exp Psychodiagnostics/ or exp Symptoms/ or exp Test Reliability/ or exp Screening/ or exp Medical Diagnosis/ or exp "Diagnostic and Statistical Manual"/ or exp "Quality of Life"/ or exp Adaptation/ or exp measurement/ or exp inventories/ or performance tests/ or exp personality measures/ or exp preference measures/ or exp reading measures/ or exp retention measures/ or exp screening tests/ or sociometric tests/ or "speech and hearing measures"/ or standardized tests/ or subtests/ or symptom checklists/ or exp testing/ or testing methods/ or exp test scores/ or verbal tests/ or exp cognitive therapy/ or exp behavior therapy/ |
| 20 | 19 use psyh   |
| 21 | exp Mental Health/ or developmental disabilities/ or exp intellectual disability/ or exp learning disorders/ or mentally disabled persons/ or exp Depression/ or exp Depressive Disorder/ or exp Anxiety Disorders/ or exp Anxiety/ or exp Stress, Psychological/ or exp Pain/ or exp Chronic Pain/ or exp Panic Disorder/ or exp Panic/ or exp Mood Disorders/ or exp Personality Disorders/ or exp Psychiatric Status Rating Scales/ or exp "Surveys and Questionnaires"/ or exp "Sensitivity and Specificity"/ or exp Psychometrics/ or exp "Diagnostic Techniques and Procedures"/ or exp "Diagnostic and Statistical Manual of Mental Disorders"/ or exp Health Surveys/ or exp Test Anxiety Scale/ or exp "Quality of Life"/ or exp Adaptation, Psychological/ or exp Psychopathology/ or diagnostic tests, routine/ or "predictive value of tests"/ or exp psychiatric status rating scales/ or exp psychological tests/ or exp cognitive therapy/ or exp behavior therapy/  |
| 22 | 21 use prmz   |
| 23 | ((mental* or psychologic*) adj2 (health or disorder* or disease* or deficien* or illness or problem*).ti,ab,sh.   |
| 24 | ((intellect* adj (deficien* or difficult* or disab* or disorder* or impair* or handicap* or incapacit* or handicap* or subnorm* or sub*1 average or sub*1 average or sub*1 norm*)) or (low*2 adj2 intellect*) or (learning adj (deficien* or difficult* or disab* or disorder* or handicap* or impair* or incapacit* or handicap* or subnorm* or sub*1 average or sub*1 average or sub*1 norm*)) or (mental* adj (disab* or handicap* or impair* or handicap* or incapacit* or retard* or subnorm* or sub*1 average or sub*1 average or sub*1 norm*)).ti,ab.  |
| 25 | ((development* or neurodevelopment*) adj (disab* or delay)).tw.   |
| 26 | (education* adj5 subnorm*).tw.  |
| 27 | (depres* or seasonal affective disorder* or dysthym* or melancholi*).ti,ab.   |
| 28 | (depress* or nervous or anxious or edg* or afraid or grief* or griev* or pleasure* or joy or enjoy or worry* or worrie* or blue* or weary* or relax* or restless* or sit* still or fidget* or focus* or slow* or speak* or speech* or annoy* or irritable or panic* or dread* or anguish or anxiet* or post-traumatic stress* or stress* or appetite or sad* or happy* or unhappy* or bad* or dead* or hurt* or like myself or get* going or interest* or concentrat* or despond* or gloom* or despair* or low spirit* or hope* or miser* or tension* or turmoil* or asleep or sleep* or tired or overeat* or weight loss* or weight gain* or appetite* or feeling down or energy or  |

## DRAFT FOR CONSULTATION

Assessing and monitoring complications and comorbidities associated with cerebral palsy in adults aged 25 and over

| #  | Searches  |
|----|---|
|    | mood* or chronic pain* or suicid* or pessimis* or failure* or self-reproach* or self-deprecate* or self-accusa* or guilt* or sin* or remorse* or self-report*).ti,ab.   |
| 29 | (Beck Depression Inventory or BDI-21 or anxiety disorder scale* or Generalized Anxiety Disorder* or GAD or depression scale* or CES-D or Whooley questions).tw.   |
| 30 | (health adj2 (survey* or questionnaire*)).tw.   |
| 31 | ((mental* or psychologic*) adj2 (rating scale* or assess* or monitor* or screen* or diagnos* or test* or symptom* or measure* or status)).tw.   |
| 32 | (psychopatholog* or psychometric* or psychodiagnos* or adapt*).tw.  |
| 33 | exp psychosis/ use oemezd or exp "schizophrenia and disorders with psychotic features"/ use prmz or exp psychosis/ use psyh or (borderline states or paranoid schizophrenia).sh.  |
| 34 | (paranoi* or psychotic* or psychosis or psychoses or schizo*).ti,ab.  |
| 35 | ((assessment adj2 dual diagnosis) or behaviour checklist* or (clinical outcomes adj2 routine evaluation adj3 learning disabilities) or (diagnostic assessment adj3 severely handicapped) or (psychopathology checklist* adj2 adults with intellectual disability) or psychiatric assessment schedule for adults with developmental disabilities checklist* or (reiss screen for maladaptive adj behav*) or (strength adj2 difficulties questionnaire*) or (psychiatric assessment schedule adj2 adults adj3 developmental disability) or psychopathology instrument for mentally retarded adults or health of the nation outcome scales for people with learning disabilities).ti,ab. |
| 36 | ((add*1 or cbcl or core-ld or coreld or dash or dash-ii or pac or p-aid or paid or pas-add*1 or pasadd or rsmb or sdq or pas-add*1 or pimra or honos-ld or honosld) adj3 (assessment* or checklist* or interview* or inventor* or questionnaire* or scale* or screen*).ti,ab.   |
| 37 | or/23-36  |
| 38 | 18 or 20 or 22 or 37  |
| 39 | 16 and 38   |
| 40 | conference abstract.pt. use oemezd  |
| 41 | letter.pt. or LETTER/ use oemezd  |
| 42 | Letter/ use prmz  |
| 43 | EDITORIAL/ use prmz   |
| 44 | editorial.pt. use oemezd  |
| 45 | NEWS/ use prmz  |
| 46 | exp HISTORICAL ARTICLE/ use prmz  |
| 47 | note.pt. use oemezd   |
| 48 | ANECDOTES AS TOPIC/ use prmz  |
| 49 | COMMENT/ use prmz   |
| 50 | CASE REPORT/ use prmz   |
| 51 | CASE REPORT/ use oemezd   |
| 52 | CASE STUDY/ use oemezd  |
| 53 | (letter or comment* or abstracts).ti.   |
| 54 | or/40-53  |
| 55 | RANDOMIZED CONTROLLED TRIAL/ use prmz   |
| 56 | RANDOMIZED CONTROLLED TRIAL/ use oemezd   |
| 57 | random*.ti,ab.  |
| 58 | or/55-57  |
| 59 | 54 not 58   |
| 60 | ANIMALS/ not HUMANS/ use prmz   |
| 61 | ANIMAL/ not HUMAN/ use oemezd   |
| 62 | exp ANIMALS, LABORATORY/ use prmz   |

## DRAFT FOR CONSULTATION

Assessing and monitoring complications and comorbidities associated with cerebral palsy in adults aged 25 and over

| #  | Searches  |
|----|---|
| 63 | exp ANIMAL EXPERIMENTATION/ use prmz            |
| 64 | exp MODELS, ANIMAL/ use prmz                    |
| 65 | exp RODENTIA/ use prmz                          |
| 66 | NONHUMAN/ use oemezd                            |
| 67 | exp ANIMAL EXPERIMENT/ use oemezd               |
| 68 | exp EXPERIMENTAL ANIMAL/ use oemezd             |
| 69 | ANIMAL MODEL/ use oemezd                        |
| 70 | exp RODENT/ use oemezd                          |
| 71 | exp ANIMALS/ use psyh                           |
| 72 | exp Animal Models/ use psyh                     |
| 73 | exp Rodents/ or exp Mice/ or exp RATS/ use psyh |
| 74 | (rat or rats or mouse or mice).ti.              |
| 75 | or/59-74  |
| 76 | 39 not 75                                       |

### Database: Cochrane Library

**Table 4: Last searched on 22 March 2018**

| ID  | Search   |
|-----|--|
| #1  | MeSH descriptor: [Cerebral Palsy] explode all trees                            |
| #2  | ((cerebral or brain or central) N2 (pal* or paralys?s or pare?s))              |
| #3  | ((hemipleg* or dipleg* or triplex* or quadripleg* or unilateral*) N5 spastic*) |
| #4  | ((hemipleg* or dipleg* or triplex* or quadripleg* or unilateral*) N3 ataxi*)   |
| #5  | #1 or #2 or #3 or #4   |
| #6  | MeSH descriptor: [Mental Health] explode all trees                             |
| #7  | MeSH descriptor: [Developmental Disabilities] explode all trees                |
| #8  | MeSH descriptor: [Intellectual Disability] explode all trees                   |
| #9  | MeSH descriptor: [Learning Disorders] explode all trees                        |
| #10 | MeSH descriptor: [Mentally Disabled Persons] explode all trees                 |
| #11 | MeSH descriptor: [Mental Disorders] explode all trees                          |
| #12 | MeSH descriptor: [Mentally Ill Persons] explode all trees                      |
| #13 | MeSH descriptor: [Anxiety] explode all trees                                   |
| #14 | MeSH descriptor: [Anxiety Disorders] explode all trees                         |
| #15 | MeSH descriptor: [Panic] explode all trees                                     |
| #16 | MeSH descriptor: [Panic Disorder] explode all trees                            |
| #17 | MeSH descriptor: [Stress, Psychological] explode all trees                     |
| #18 | MeSH descriptor: [Depression] explode all trees                                |
| #19 | MeSH descriptor: [Depressive Disorder] explode all trees                       |
| #20 | MeSH descriptor: [Mood Disorders] explode all trees                            |
| #21 | MeSH descriptor: [Personality Disorders] explode all trees                     |
| #22 | MeSH descriptor: [Pain] explode all trees                                      |
| #23 | MeSH descriptor: [Chronic Pain] explode all trees                              |
| #24 | MeSH descriptor: [Psychiatric Status Rating Scales] explode all trees          |
| #25 | MeSH descriptor: [Surveys and Questionnaires] explode all trees                |
| #26 | MeSH descriptor: [Sensitivity and Specificity] explode all trees               |
| #27 | MeSH descriptor: [Psychometrics] explode all trees                             |

## DRAFT FOR CONSULTATION

Assessing and monitoring complications and comorbidities associated with cerebral palsy in adults aged 25 and over

| ID  | Search   |
|-----|--|
| #28 | MeSH descriptor: [Diagnostic Techniques and Procedures] explode all trees  |
| #29 | MeSH descriptor: [Diagnostic and Statistical Manual of Mental Disorders] explode all trees   |
| #30 | MeSH descriptor: [Health Surveys] explode all trees  |
| #31 | MeSH descriptor: [Test Anxiety Scale] explode all trees  |
| #32 | MeSH descriptor: [Quality of Life] explode all trees   |
| #33 | MeSH descriptor: [Adaptation, Psychological] explode all trees   |
| #34 | MeSH descriptor: [Psychopathology] explode all trees   |
| #35 | MeSH descriptor: [Diagnostic Tests, Routine] explode all trees   |
| #36 | MeSH descriptor: [Predictive Value of Tests] explode all trees   |
| #37 | MeSH descriptor: [Psychiatric Status Rating Scales] explode all trees  |
| #38 | MeSH descriptor: [Psychological Tests] explode all trees   |
| #39 | ((mental* or psychologic*) near/2 (deficien* or disease* or disorder* or disturbance* or dysfunction* or health or illness* or problem*)):ti,ab,kw   |
| #40 | (intellect* near/1 (deficien* or difficult* or disab* or disorder* or impair* or handicap* or incapacit* or subnorm* or "sub* norm**" or subaverage or "sub* average")) or (low* near/2 intellect*) or (learning near/1 (deficien* or difficult* or disab* or disorder* or handicap* or impair* or incapacit* or handicap* or subnorm* or "sub* norm**" or subaverage or "sub* average")) or (mental* near/1 (deficien* or disab* or impair* or handicap* or incapacit* or delay* or retard* or subnorm* or subaverage or "sub* average" or "sub* norm**")) or ((subaverage or "sub* average" or subnormal or "sub* normal**) near/3 (adult* or cognit* or intel*)) or ((development* or neurodevelopment*) near/1 (disab* or delay*)) or (education* near/5 subnorm*)   |
| #41 | (special* near/2 (educat* or need*)):ti,ab,kw,ab,kw  |
| #42 | (anxiet* or anxious* or ((chronic* or excessiv* or intens* or (long* near/2 last*)) or neuros* or neurotic* or ongoing or persist* or serious* or sever* or uncontrol* or "un control**" or unrelent* or "un relent*") near/2 worry or chronic near/1 pain)):ti,ab,kw  |
| #43 | depres* or seasonal affective disorder* or dysthym* or melancholi*   |
| #44 | (depress* or nervous or anxious or edg* or afraid or grief* or griev* or pleasure* or joy or enjoy or worry* or worrie* or blue* or weary* or relax* or restless* or sit* still or fidget* or focus* or slow* or speak* or speech* or annoy* or irritable or panic* or dread* or anguish or anxiet* or post-traumatic stress* or stress* or appetite or sad* or happy* or unhappy* or bad* or dead* or hurt* or like myself or get* going or interest* or concentrat* or despond* or gloom* or despair* or low spirit* or hope* or miser* or panic* or mood* or tension* or turmoil* or asleep or sleep* or tired or overeat* or weight loss* or weight gain* or appetite* or feeling down or energy or mood* or chronic pain* or suicid* or pessimis* or failure* or self-reproach* or self-deprecate* or self-accusa* or guilt* or sin* or remorse* or self-report*) |
| #45 | Beck Depression Inventory or BDI-21 or anxiety disorder scale* or Generalized Anxiety Disorder* or GAD or depression scale* or CES-D or Whooley questions  |
| #46 | health near/2 (survey* or questionnaire*)  |
| #47 | ((mental* or psychologic*) near/2 (rating scale* or assess* or monitor* or screen* or diagnos* or test* or symptom* or measure* or status))  |
| #48 | psychopatholog* or psychometric*or psychodiagnos* or adapt*  |
| #49 | ((assessment near/22 dual diagnosis) or behaviour checklist* or (clinical outcomes near/2 routine evaluation near/3 learning disabilities) or (diagnostic assessment near/3 severely handicapped) or (psychopathology checklist* near/2 adults with intellectual disability) or psychiatric assessment schedule for adults with developmental disabilities checklist* or (reiss screen for maladaptive near behav*) or (strength near/2 difficulties questionnaire*) or (psychiatric assessment schedule near/2 adults near/3 developmental disability) or psychopathology instrument for mentally retarded adults or health of the nation outcome scales for people with learning disabilities)   |
| #50 | paranoi* or psychotic* or psychosis or psychoses or schizo*  |
| #51 | assessment* or checklist* or interview* or inventor* or questionnaire* or scale* or screen*  |

## DRAFT FOR CONSULTATION

Assessing and monitoring complications and comorbidities associated with cerebral palsy in adults aged 25 and over

| ID  | Search   |
|-----|--|
| #52 | #6 or #7 or #8 or #9 or #10 or #11 or #12 or #13 or #14 or #15 or #16 or #17 or #18 or #19 or #20 or #21 or #22 or #23 or #24 or #25 or #26 or #27 or #28 or #29 or #30 or #31 or #32 or #33 or #34 or #35 or #36 or #37 or #38 or #39 or #40 or #41 or #42 or #43 or #44 or #45 or #46 or #47 or #48 or #49 or #50 or #51 |
| #53 | #5 and #52   |

### Database: Web of Science

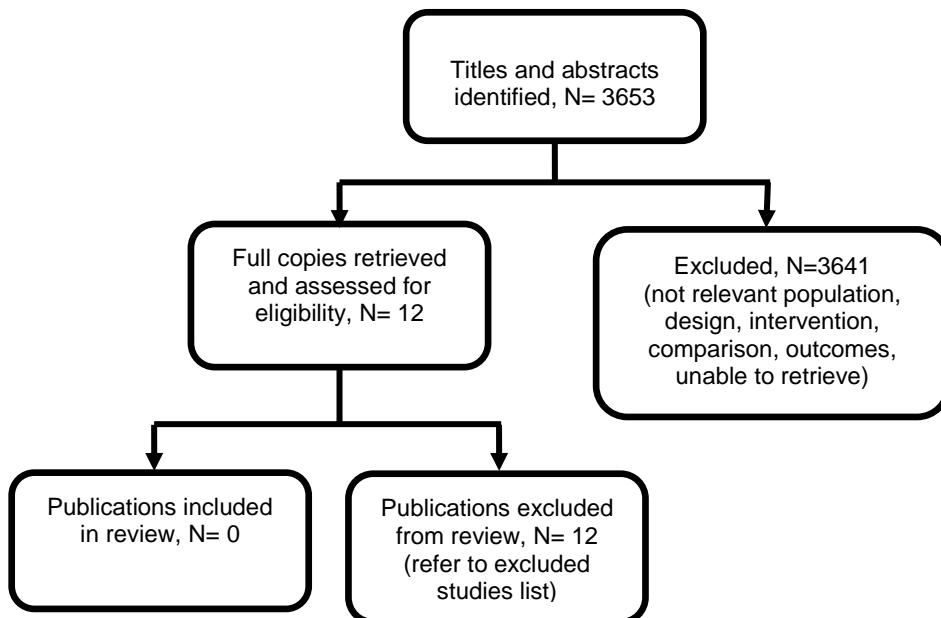
**Table 5: Last searched on 22/03/2018**

| Set | Search  |
|-----|---|
| #8  | (#7) AND LANGUAGE: (English)  |
| #7  | #5 not #6   |
| #6  | ts=child* or ts=infant* or ts=p?ediat* or ts=preterm or ts=stroke* or ts=dementia   |
| #5  | #4 AND #1   |
| #4  | #3 OR #2  |
| #3  | ts=Developmental Disabilit* or ts=Intellectual Disabilit* or ts=Learning Disorder* or ts=Mentally Disabled Person* or ts=Mental Disorder* or ts=Mentally Ill Person* or ts=Anxiet* or ts=Depressive Disorder* or ts=Personality Disorder* or ts=depress* or ts=nervous or ts=anxious or ts=edg* or ts=afraid or ts=grief* or ts=griev* or ts=pleasure* or ts=joy or ts=enjoy or ts=worry* or ts=worrie* or ts=blue* or ts=weary* or ts=relax* or ts=restless* or ts=sit* still or ts=fidget* or ts=focus* or ts=slow* or ts=speak* or ts=speech* or ts=annoy* or ts=irritable or ts=panic* or ts=dread* or ts=anguish or ts=anxiet* or ts=post-traumatic stress* or ts=stress* or ts=appetite or ts=sad* or ts=happy* or ts=unhappy* or ts=bad* or ts=dead* or ts=hurt* or ts=like myself or ts=get* going or ts=interest* or ts=concentrat* or ts=despond* or ts=gloom* or ts=despair* or ts=low spirit* or ts=hope* or ts=miser* or ts=tension* or ts=turmoil* or ts=asleep or ts=sleep* or ts=tired or ts=overeat* or ts=weight loss* or ts=weight gain* or ts=appetite* or ts=feeling down or ts=energy or ts=mood* or ts=chronic pain* or ts=suicid* or ts=pessimis* or ts=failure* or ts=self-reproach* or ts=self-deprecat* or ts=self-accusa* or ts=guilt* or ts=sin* or ts=remorse* or ts=self-report* |
| #2  | ts=Psychiatric Status Rating Scale* or ts=Survey* or ts=Questionnaire* or ts=Psychometric* or ts=Routine Diagnostic test* or ts=Health Survey* or ts=Test Anxiety Scale* or ts=Psychopathology or ts=Psychiatric Status Rating Scale* or ts=Psychological Test* or ts=Beck Depression Inventory or ts=BDI-21 or ts=anxiety disorder scale* or ts=Generalized Anxiety Disorder* or ts=GAD or ts=depression scale* or ts=CES-D or ts=Whooley questions or ts=(mental* (health or disorder* or disease* or deficien* or illness or problem* or rating scale* or assess* or monitor* or screen* or diagnos* or test* or symptom* or measure* or status)) or ts=(psychologic* (health or disorder* or disease* or deficien* or illness or problem* or rating scale* or assess* or monitor* or screen* or diagnos* or test* or symptom* or measure* or status)) or ts=behaviour checklist* or ts=routine evaluation* or ts=psychopathology checklist* or ts=psychiatric assessment  |
| #1  | ts=Cerebral Palsy   |

## Appendix C – Clinical evidence study selection

Clinical evidence study selection for evidence review question B2: Which mental health assessment tools are clinically useful for adults with cerebral palsy?

**Figure 1: Flow diagram of clinical article selection for mental health assessment tools review**



## Appendix D – Clinical evidence tables

Clinical evidence study selection for evidence review question B2: Which mental health assessment tools are clinically useful for adults with cerebral palsy?

No clinical studies were identified for this review.

## **Appendix E – Forest plots**

Forest plots for evidence review question B2: Which mental health assessment tools are clinically useful for adults with cerebral palsy?

No forest plots were included in this review.

## **Appendix F – GRADE tables**

GRADE tables for evidence review question B2: Which mental health assessment tools are clinically useful for adults with cerebral palsy?

No clinical studies were identified for this review.

## **Appendix G – Economic evidence study selection**

Economic evidence study selection for evidence review question B2: Which mental health assessment tools are clinically useful for adults with cerebral palsy?

No economic evidence was identified for this review.

## **Appendix H – Economic evidence tables**

Economic evidence tables for evidence review question B2: Which mental health assessment tools are clinically useful for adults with cerebral palsy?

No economic evidence was identified for this review.

## **Appendix I – Health economic evidence profiles**

Health economic evidence profiles for evidence review B2: Which mental health assessment tools are clinically useful for adults with cerebral palsy?

No economic evidence was identified for this review.

## **Appendix J – Health economic analysis**

Health economic analysis for evidence review B2: Which mental health assessment tools are clinically useful for adults with cerebral palsy?

No economic analysis was included in this review.

## Appendix K – Excluded studies

List of clinical and economic excluded studies tables for evidence review B2: Which mental health assessment tools are clinically useful for adults with cerebral palsy?

### Clinical studies

**Table 6: Excluded clinical studies for monitoring and assessing mental health**

| Excluded studies - B.2 Which mental health assessment tools are clinically useful for adults with cerebral palsy?   |   |
|---|---|
| Study   | Reason for Exclusion  |
| Aman, M. G., Richmond, G., Stewart, A. W., The Aberrant Behavior Checklist: Factor structure and the effect of subject variables in American and New Zealand facilities, American Journal of Mental Deficiency, 91, 570-578, 1987                                 | Aberrant behaviour rather than mental health assessment.  |
| Balandin,S., Berg,N., Waller,A., Assessing the loneliness of older people with cerebral palsy, Disability and Rehabilitation, 28, 469-479, 2006   | Not mental health problems - measured loneliness.   |
| Borkowska, Aneta Rita, Anxiety level and self-esteem in youth with cerebral palsy, Current Issues in Personality Psychology, 3, 159-165, 2015   | Compares anxiety and self-esteem between a group with CP (mean age 20 years) and a control group without CP.  |
| Cox, Barbara Joanne, Predictors of depression in adults with cerebral palsy: A biopsychosocial model, Dissertation Abstracts International: Section B: The Sciences and Engineering, 60, 1847, 1999   | Abstract only - study looked at factors associated with depression.   |
| Davis, Renee, A study examining the relationship between congenital disability and depression in adults with cerebral palsy, Dissertation Abstracts International: Section B: The Sciences and Engineering, 69, 1320, 2008  | Abstract only - study looked at factors associated with depression.   |
| Hove,O., Havik,O.E., Developmental level and other factors associated with symptoms of mental disorders and problem behaviour in adults with intellectual disabilities living in the community, Social Psychiatry and Psychiatric Epidemiology, 45, 105-113, 2010 | Results for those with epilepsy (N=134) and CP (N=54) were combined.  |
| Ignjatovic, P., Jovic, N., Cognitive and psychological problems in patients with cerebral palsy and epilepsy, European Neuropsychopharmacology, 21, S171-S171, 2011   | Abstract only, not assessment of mental health problems, mean or median age not reported.   |
| Margetis, K., Papageorgiou, G., Gatzonis, S., Politis, K., Siatouni, A., Sakas, D., Intrathecal baclofen improves psychiatric symptoms in spasticity patients, Journal of Clinical Psychopharmacology, 34, 374-379, 2014  | Summarises the effect of baclofen on psychological distress symptoms - patients with learning disability or symptoms of psychosis were excluded, 8/15 had CP. |
| Mathiasen, Rene, Hansen, Bo Molholm, Forman, Julie Lyng, Kessing, Lars Vedel, Greisen, Gorm, The risk of psychiatric  | Looks at cerebral palsy as a risk factor for psychiatric disorders.   |

| <b>Excluded studies - B.2 Which mental health assessment tools are clinically useful for adults with cerebral palsy?</b>   |   |
|--|---|
| <b>Study</b>   | <b>Reason for Exclusion</b>   |
| disorders in individuals born prematurely in Denmark from 1974 to 1996, Acta Paediatrica, 100, 691-699, 2011   |   |
| Rasmussen, K. G., Zorumski, C. F., Jarvis, M. R., Electroconvulsive-Therapy in Patients with Cerebral-Palsy, Convulsive Therapy, 9, 205-208, 1993  | 4 case reports of treatment - not assessment of mental health problems in CP. |
| Ravesloot, C., Ward, B., Hargrove, T., Wong, J., Livingston, N., Torma, L., Ipsen, C., Why stay home? Temporal association of pain, fatigue and depression with being at home, Disability and Health Journal, 9, 218-225, 2016 | Cerebral palsy not reported.  |
| Van Lieshout, R. J., Boyle, M. H., Saigal, S., Morrison, K., Schmidt, L. A., Mental health of extremely low birth weight survivors in their 30s, Pediatrics, 135, 452-459, 2015  | No analysis of those with cerebral palsy.                                     |

*CP: cerebral palsy; N: number of participants.*

## Economic studies

No economic evidence was identified for this review.

## **Appendix L – Research recommendations**

Research recommendation for evidence review question B2: Which mental health assessment tools are clinically useful for adults with cerebral palsy?

No research recommendation was made for this review.