

DC-Approved Child Mental Health Screening Tools

The DC Collaborative for Mental Health in Pediatric Primary Care

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BACKGROUND: As of July 1, 2013, DC Medicaid Managed Care Organizations are required to ensure annual mental health screenings by the beneficiaries' Primary Care Provider, using an approved screening tool. The DC Collaborative for Mental Health in Pediatric Primary Care, a partnership among several governmental and non-governmental organizations in DC, was tasked with the job of selecting the screening tools for children and youths (up to age 21 years).

METHOD: A comprehensive literature review was completed to identify a range of possible mental health screening tools. Information was compiled about the tools, including the age ranges covered, domains assessed, administration issues (e.g., time to complete and score), costs, psychometric properties, reading level required to complete, and the languages in which the tool is available. Tools were sent to a subset of pediatricians in the District for review. Pediatricians were also asked to identify tools that they were currently using in their practice and to identify issues of importance to them in selecting and implementing a screening tool. Tools were administered to a subset of families at a Children's National pediatric clinic to solicit further feedback from parents and from a paraprofessional with no prior experience implementing mental health screening.

Thorough review and discussion of the abovementioned information, the DC Collaborative Working Group yielded the selection of the following tools, which are described in more detail below:

- The Edinburgh Postnatal Depression Scale (for parents of children less than 1 year)
- The Survey of Wellbeing of Young Children (for children less than 5.5 years)
- The Ages and Stages Questionnaires: Social-Emotional 2 (for children 3 to 66 months)
- The Strengths and Difficulties Questionnaire (for youths ages 2 to 21 years)
- The Patient Health Questionnaire-9 (for individuals ages 18 to 21 years)
- The Patient Health Questionnaire-9 Modified for Teens (for youth 12-18 years)

NOTE: The DC Collaborative for Mental Health in Pediatric Primary Care will meet regularly to discuss screening and to consider the addition of new tools. If you have questions or would like to suggest a screening tool be added to the list, please contact Lee Beers at lbeers@childrensnational.org, or Leandra Godoy at lgodoy@childrensnational.org.

Tool Descriptions

Edinburgh Postnatal Depression Scale (EPDS)

The EPDS is a screening tool that assesses the likelihood a woman has postpartum depression or anxiety.

Administration and Scoring:

- Mothers in the first year postpartum (with children 0-12 months) complete 10-item questionnaire. Validated for use with fathers; also studied in research settings for use with grandmothers.
- Forms are available in English and Spanish as well as in over 30 other languages.
- Forms take less than 5 minutes to complete and can be scored by paraprofessionals in less than 2 minutes by hand.
- The mother is asked to mark 1 of 4 possible responses that comes the closest to how she has been feeling the previous 7 days. All 10 items must be completed. Care should be taken to avoid the possibility of the mother discussing her answers with others. The mother should complete the scale herself, unless she has limited English or has difficulty with reading.
- Cut-off score denoting a positive screen can vary; the DC Collaborative Working Group has established a score of 13 and above a positive screen that should elicit a referral.

Psychometric Properties:

The EPDS has been validated in over 30 languages with target populations around the world. The following information is based on the original study in the UK, and Test-Retest Reliability from research conducted in Australia.

- Sensitivity: 86%
- Specificity: 78%
- Positive Predictive Value: 74%
- Test-Retest Reliability (two day interval): .92

Ordering Information:

Questionnaires and scoring guidelines are free and available in multiple places on the internet. The English and Spanish versions can also be accessed through the DC Collaborative for Mental Health in Pediatric Primary Care's Perinatal Mental Health Toolkit for Pediatric Primary Care Providers available on www.dchealthcheck.net.

Ages and Stages Questionnaires: Social-Emotional (ASQ:SE-2)

The ASQ: S-2E, a caregiver-completed screening tool, assesses self-regulation, compliance, communication, adaptive behaviors, autonomy, affect, interaction with people, and parent concerns.

Administration and Scoring:

- Caregivers of children 1 month to 72 months complete one of 9 forms depending on the child's age (2, 6, 12, 18, 24, 30, 36, 48, and 60 months of age).
- Forms are available in English and Spanish and require a 4th-6th grade reading level to complete.
- Each questionnaire contains approximately 30 items and takes 10–15 minutes to complete.
- Scoring can be completed by paraprofessionals in less than 3 minutes.
- The total score can be compared to an age-normed cutoff score to determine if follow-up is warranted.

Psychometric Properties:

The ASQ: SE-2 was validated and normed with more than 14,000 children across the age intervals and their families. Only English-speaking families were included in this sample.

- Internal Consistency: .84 (range: .67 - .91)
- Test-Retest Reliability (1- to 3-week interval) = .89
- Concurrent Validity: .83 (range: .81 - .95)
- Sensitivity = 78% (range: 71% - 85%)
- Specificity = 95% (range: 90% - 98%)

Ordering Information:

- \$275 for a starter kit [includes color-coded, reproducible questionnaires and scoring sheets (also on a CD-ROM) and a User's Guide].
- Must purchase English and Spanish kits separately.
- Can photocopy/print from the starter kit so there are no ongoing costs.
- Brooks Publishing Co (www.brookespublishing.com; 1-800-638-3775)
<http://www.brookespublishing.com/resource-center/screening-and-assessment/asq/asq-se-2/>

For financial assistance with ordering kits, please contact Leandra Godoy at lgodoy@childrensnational.org.

Survey of Wellbeing of Young Children (SWYC)/SWYC/MA

The SWYC is a free comprehensive screening tool for children under the age of 5 ½ that assesses developmental milestones, behavioral/emotional development, and family risk factors.

Administration and Scoring:

- SWYC consists of 12 age specific forms that coincide with the standard periodicity of health supervision: 2, 4, 6, 9, 12, 15, 18, 24, 30, 36, 48, and 60 months.
- Specific domains include:
 - Developmental milestones (10 questions)
 - Child behavior (12-18 questions depending on child's age)
 - Baby Pediatric Symptoms Checklist (BPSC; 2-18 months): Assesses Irritability, inflexibility, and difficulty with routines
 - Preschool Pediatric Symptoms Checklist (PPSC; 18-66 months): Assesses Externalizing, Internalizing, Attention Problems, and Parenting Challenges
 - Autism (Parents Observation of Social Interactions, POSI; 7 questions; 16-30 months)
 - Family risk (9 questions): Assesses parent depression, DV, substance use, and hunger
 - Parent concerns about child behavior and development (2 questions)
 - SWYC-MA: Parent depression (10 questions of the EPDS; 2, 4, and 6 month forms)
- Forms are available in English and Spanish
- Forms take less than 15 minutes to complete and can be scored in five minutes
- A score outside of the expected range is a positive result and indicates that the child may be at risk for having a problem in that area of well-being

Psychometric Properties

Sections of the SWYC demonstrate acceptable psychometric properties, including reliability (test-retest, internal consistency) and validity:

- Developmental Milestones: Sensitivity = .78-.81; Specificity = .73-.76
- BPSC: Correlated with ASQ-SE and PSI Difficult Child Scale
- PPSC: Sensitivity and specificity > .80
- POSI: Two age specific studies compared POSI and M-CHAT scores to assess reliability and validity
 - Study 1: Parents of 217 children (18–48 months) evaluated at a developmental clinic completed the intake questionnaires. POSI and M-CHAT scores were compared to clinical evaluation results. POSI sensitivity (89%) was higher than M-CHAT (71%; $p < .05$); specificities were not significantly different (POSI: 54%, M-CHAT: 62%).
 - Study 2: Parents of 232 children (16–36 months) from both primary care and subspecialty settings completed the POSI, the M-CHAT, and a report of their child's diagnoses. POSI and M-CHAT scores were compared to reported diagnoses. Sensitivity (83%) compared favorably to that for the M-CHAT (50%), though specificity was lower (75 vs. 84%).
 - In both studies, POSI demonstrated adequate internal reliability (Cronbach $\alpha = 0.83$ and 0.86 , respectively)
- Family Questions: selected from previously validated tools

Ordering Information:

The SWYC is freely available for download at <https://www.floatinghospital.org/The-Survey-of-Wellbeing-of-Young-Children/Overview.aspx>.

Strengths and Difficulties Questionnaire (SDQ)

The SDQ is a behavioral screening tool that assesses emotional symptoms, conduct problems, hyperactivity/inattention, peer problems, and prosocial behavior. A separate scale assesses problem presence/ severity and impairment level.

Administration and Scoring:

- There are 4 age groups for which separate forms are available:
 - 2-4 years: Parent-report and teacher-report forms available.
 - 4-10 years: Parent-report and teacher-report forms available.
 - 11-17 years: Parent-report, teacher-report, and self-report forms available.
 - 17-21 years: Self-report and informant-report forms available.
- Several forms are available for use:
 - Basic form: Consists of 25 items on child behavior (for all age groups)
 - Basic form plus impact supplement: Contains ~ 7 more questions that assess impact of difficulties if problem is identified (for all age groups)
 - Follow-up form: Includes the basic items and impact questions as well as 2 additional follow-up questions for use after intervention (whether the intervention reduced problems or helped in other ways) (for youth < 17 years)
 - *For the DC MCO requirement, only one parent or self-report basic form is required, though providers are encouraged to complete the basic form plus impact supplement and any additional forms that may be relevant.*
- Forms take less than 10 minutes to complete and can be scored in less than 2 minutes by hand or online
- Results yield 5 domain scores, a Total Difficulties score, and an Impact score (if completed), each of which can be compared with age-normed cutoff scores to determine scores in the *Normal*, *Borderline*, or *Abnormal* range. *For the DC MCO requirement, only total score needs to be interpreted though interpreting subscale and impact scores can be useful.*
- Forms are available in >40 languages. *For English-speaking patients, select the USA form.*

Psychometric Properties:

The SDQ has been widely used and investigated cross-culturally with normative data obtained in various countries including the USA. These investigations have provided evidence of the reliability, consistency, and validity of the SDQ.

- Sensitivity = 63% - 94% (for total SDQ scales and any DSM-IV diagnosis, sensitivity = 47%).
- Specificity = 88% - 98% (for total SDQ scales and any DSM-IV diagnosis, specificity = 94%).
- Multi-informant SDQs (parents, teachers, older children) identified individuals with a psychiatric diagnosis with a specificity of 80 % and a sensitivity of 85%.

The SDQ: 17+ has not undergone rigorous psychometric analysis, but anecdotal data and preliminary factor analysis indicates that it is acceptable for use with young adults over 17 years of age.

Ordering Information:

Questionnaires and scoring guidelines are freely available from the website: www.sdqinfo.com. The SDQ: 17+ is freely available in English from the website: <http://sdqinfo.org/Adult/>. Scoring guidelines from the 11-17 year old version can be used for the 17+ version.

Patient Health Questionnaire (PHQ-9)

The PHQ-9 is a brief tool to assess for depression symptoms over the previous two weeks.

Administration and Scoring:

- Individuals ages 18 years and older can complete this tool.
- 9 items plus 1 item, completed only if problems are endorsed, assessing level of impairment associated with symptoms.
- Forms are available in 48 languages and require a 3rd-5th grade reading level to complete.
- Scoring can be completed by paraprofessionals in less than 2 minutes.
- Cutoff scores indicate depression severity (*minimal, mild, moderate, moderately severe, severe*) and clinical significance.

Psychometric Properties:

The PHQ-9 was initially developed and validated on a sample of 6,000 English-Speaking patients. Since then, it has been used in numerous studies that have provided evidence of the reliability, consistency, and validity of the tool.

- Sensitivity = 88% for Major Depressive Disorder
- Specificity = 88% for Major Depressive Disorder
- Internal Consistency = .86 - .89

Ordering Information:

Questionnaires and scoring guidelines are freely available at: <http://www.phqscreeners.com/>.

Patient Health Questionnaire Modified for Teens (PHQ-9 Modified)

A modified version of the PHQ-9 is tool used for adolescents that assesses depression symptom over the previous two weeks. Questions about suicidality for the past year are also included.

Administration and Scoring:

- Individuals ages 12-18 can complete this questionnaire.
- 13 items assess current symptoms, history of depression, level of impairment, and number of lifetime suicide attempts
- Forms are available in English and Spanish and require a 3rd-5th grade reading level to complete
- Scoring can be completed by paraprofessionals in less than two minutes. Scoring is similar to PHQ-9 but higher thresholds are recommended
- Cutoff scores indicate depression severity (*minimal, mild, moderate, moderately severe, severe*) and clinical significance

Psychometric Properties:

- PHQ-9 for adults has been widely used and found to have good internal consistency (.86-.89), sensitivity (88% for MDD) and specificity (88% for MDD).
- Modified version with slightly higher cutoff (11) found to have good sensitivity (89.5%) and specificity (77.5%) for detecting youth meeting criteria for MDD

Ordering Information:

Questionnaires and scoring guidelines are freely available: <http://www.gladpc.org/> (in the toolkit section) and in the AAP mental health toolkit.

Recommendations Regarding Screening for Adolescent Substance Abuse and Suicidality:

The SDQ does not assess for suicidality or substance use, both of which are common and important issues in this age group. The DC Collaborative, along with several other professional organizations, such as the American Academy of Pediatrics, considers it best practice to screen for adolescent suicidality and substance use. Thus, **the DC Collaborative strongly encourages all adolescent providers to include the following suicidality and substance use questions in the screening questionnaires they provide to patients:**

2-Item Suicide Screener: The PHQ-9 Modified for Teens includes a 2-item suicide screener, both of which are answered on a *yes-no* scale. One question asks about suicidal ideation within the past month (“Has there been a time in the past month when you have had serious thoughts about ending your life?”) and one question asks about lifetime suicide attempts (“Have you **ever**, in your **whole life**, tried to kill yourself or made a suicide attempt?”). Clinicians *must* follow up positive responses to either item with a clinical interview and appropriate action steps, such as safety contracting or referral to the emergency department. For more information about these 2 questions, how to respond to positive screens and how to address adolescent depression more broadly, please see the GLAD-PC toolkit: <http://www.thereachinstitute.org/guidelines-for-adolescent-depression-primary-care>.

6-Item Substance Use Screener: The CRAFFT (Car, Relax, Alone, Forget, Friends, Trouble) is a brief screen for youth under 21 years of age related to alcohol and drug use. There are three opening questions followed by 3 additional questions to be completed only if the adolescent endorses any of the first three questions. The CRAFFT, which can either be self-administered or administered in an interview format, can be completed and scored in a few minutes. The psychometric properties of the CRAFFT indicate that a CRAFFT score of 2 or higher is optimal for identifying any substance use problems (sensitivity, 0.76; specificity, 0.94; positive predictive value, 0.83; negative predictive value, 0.91), any substance use diagnosis (abuse or dependence; sensitivity, 0.80; specificity, 0.86; positive predictive value, 0.53; negative predictive value, 0.96) and substance abuse dependence (sensitivity, 0.92; specificity, 0.80; positive predictive value, 0.25; negative predictive value 0.99). Validity was not significantly affected by age, sex, or race. The tool is freely available in 13 languages on the Center for Adolescent Substance Abuse Research website: <http://www.ceasar-boston.org/CRAFFT/index.php>. Additional resources related to the CRAFFT are also available on the website.

For questions or concerns, please contact Lee Beers at lbeers@childrensnational.org, or Leandra Godoy at lgodoy@childrensnational.org.