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# Strengths and Difficulties Questionnaire (SDQ 2-4)

25-item parent/educator report version for 2-4 year olds

The Strengths and Difficulties Questionnaire (SDQ) for 2–4 year olds is a 25-item measure designed to assess behaviours, emotions and relationships over the last six months in children aged 2–4 years. This original version of the measure is designed for parents or educators to complete and includes five subscales aimed at assessing conduct problems, emotional symptoms, hyperactivity, peer problems and prosocial behaviour.

	Internal consistency	Test-retest reliability	Validity	Responsiveness
Psychometric features	✓	✓	✓	?

	Brevity	Availability	Ease of scoring	UK Applicability
Implementation features	✓	✓	✓	✓

\*Please note that our assessment of this measure is based solely on the English version of the measure. The other versions of this measure were not assessed and it should not be assumed that they would receive the same rating.

## What is this document?

This assessment of the Strengths and Difficulties 2–4 year olds has been produced by the Early Intervention Foundation (EIF) as part of a guide that has been developed to improve understanding of how risk factors among new parents can impact on parental conflict and in turn on child outcomes, how to effectively engage these parents, what evidence-based support can be offered, and how to appropriately assess progress for these families. This assessment has followed the same process that EIF used when producing guidance on selecting measures relating to parental conflict and its impact on children. To read the full guidance report and download assessments of other measures, visit <https://www.eif.org.uk/resource/measuring-parental-conflict-and-its-impact-on-child-outcomes>



In most respects, the SDQ 2–4 is scored in the same way as the SDQ 4–17. There are, however, two important differences:

1. The wording of two items on the 'conduct' scales is different. While in the SDQ 4–17 it states 'Often lies or cheats', in the SDQ 2–4 it states 'Often argumentative with adults'. Similarly, in the SDQ 4–17 it states 'Steals from home, school or elsewhere', in the SDQ 2–4 it states 'Can be spiteful to others'. For the hyperactivity scale, there is one discrepancy: while the SDQ 4–17 states, 'Thinks things out before acting', the SDQ 2–4 states 'Can stop and think things out before acting'.
2. Compared to the SDQ 4–17, there is a lack of national data that can be used to form banding of SDQ scores. For an example of provisional banding, please see for example: <https://www2.oxfordshire.gov.uk/cms/sites/default/files/folders/documents/virtualschool/processesandforms/SDQp2-4Scoring.pdf>.

## About the measure

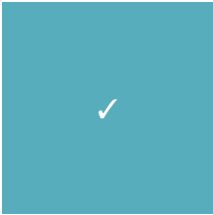
 <p><b>Author(s)/ developer(s)</b></p> <p>Goodman, R.</p>	 <p><b>Publication year for the original version of the measure</b></p> <p>1997</p>	 <p><b>Publication year for the version of the measure assessed</b></p> <p>Unclear</p>	 <p><b>Type of measure</b></p> <p>Parent report of child or teacher report of child</p>
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<p><b>Versions available</b></p>	<p>There are four other versions of this measure available, including: a version for parents or educators of 4–17-year olds, a self-rated version for 11–17 year olds, another self-rated version for youth aged 18 and over, and an informant report version for youth of that same age. For each of these versions there is also an equivalent follow-up version. For more information, please visit <a href="https://www.sdqinfo.com/">https://www.sdqinfo.com/</a>.</p>
<p><b>Outcome(s) assessed</b></p>	<p>This measure has been designed to assess behaviours, emotions and relationships in children. The measure provides both an Internalising and an Externalising score.</p>
<p><b>Subscales</b></p>	<p>There are five subscales: conduct problems; emotional symptoms; hyperactivity; peer problems; and prosocial behaviour.</p> <p>According to the developers, a Total Difficulties score can be generated by summing the scores of all scales except the prosocial behaviour scale. The developers also propose summing the scores from the conduct and hyperactivity scales to obtain an Externalising score, and adding the scores of the emotional and peer problems scales to produce an Internalising score.</p> <p>When using a version of the SDQ that includes the ‘impact supplement’, the items on overall distress and impairment can be summed to generate an Impact (or Impairment) Score.</p>
<p><b>Purpose/primary use</b></p>	<p>This measure was originally designed to represent strengths and difficulties in children and young people. This version has been adapted for younger children.</p>
<p><b>Mode of administration</b></p>	<p>This measure can be completed in person or online.</p>
<p><b>Scoring instructions</b></p>	<p>The SDQ 2–4 does not need to be scored by someone with specific training or qualifications. This measure can be scored by hand or using the scoring website: <a href="https://sdqscore.org/">https://sdqscore.org/</a>.</p>
<p><b>Example item</b></p>	<p>‘Considerate of other people’s feelings’.</p>

<b>Target population</b>	The preschool version of the SDQ is targeted towards children aged 2–4 years.
<b>Response format</b>	Three-point Likert scale: 0 = “Not True”; 1 = “Somewhat True”; 2 = “Certainly True”.
<b>Language(s)</b>	The SDQ is available in English. The measure has also been officially translated by the developers into 50 languages, with the complete list available here: <a href="https://www.sdqinfo.org/py/sdqinfo/b0.py">https://www.sdqinfo.org/py/sdqinfo/b0.py</a> .
<b>Strengths &amp; limitations</b>	<p>Strengths:</p> <ul style="list-style-type: none"> <li>• The SDQ 2–4 is a valid and reliable measure which is sensitive to change in short interventions.</li> <li>• The SDQ 2–4 assesses both externalising and internalising problems.</li> </ul> <p>The SDQ 2–4 is a short (25-item) measure, which is free to access and easy to score. The SDQ 2–4 is available at: <a href="https://www.sdqinfo.com/">https://www.sdqinfo.com/</a>, with a bespoke scoring website at: <a href="https://sdqscore.org/">https://sdqscore.org/</a>.</p>
<b>Link</b>	<a href="https://www.sdqinfo.com/">https://www.sdqinfo.com/</a>
<b>Contact details</b>	<a href="mailto:youthinmind@gmail.com">youthinmind@gmail.com</a>
<b>Copyright</b>	<p>Please note that the SDQ 2–4, whether in English or in another language, is a copyrighted document that is not in the public domain. To ensure that the SDQ 2–4 is fully comparable across studies and settings, it may not be modified in any way, by for example changing the wording of questions, adding questions, or administering only subsets of questions.. Similarly, to ensure high quality and consistency, unauthorised translations are not permitted. Paper versions may be downloaded from the website and subsequently photocopied without charge by individuals or non-profit organisations, provided they are not charging families.</p> <p>Users are not permitted to create or distribute electronic versions for any purpose without prior authorisation from Youth In Mind. If you are interested in making translations or creating electronic versions, you must first contact <a href="mailto:youthinmind@gmail.com">youthinmind@gmail.com</a>.</p>
<b>Key reference(s)</b>	Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A research note. <i>Journal of Child Psychology and Psychiatry</i> , 38(5), 581-586. <a href="https://doi.org/10.1111/j.1469-7610.1997.tb01545.x">https://doi.org/10.1111/j.1469-7610.1997.tb01545.x</a>

# Psychometric features in detail

## Internal consistency



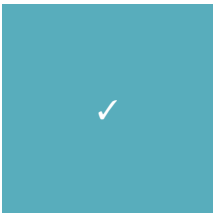
Compared to the SDQ 4–17, the preschool 2–4 years version of the SDQ has more limited evidence.

De Souza et al. (2017) evaluated the psychometric properties of the SDQ 2–4 in mothers of 5,481 2 year olds from the Growing Up in New Zealand cohort study (see Morton et al., 2014). The Cronbach Alpha coefficient was low for peer problems ( $\alpha = 0.54$ ) but considered satisfactory for all other subscales ( $\alpha = > 0.70$ ). For the Total difficulties Scale, the Cronbach Alpha score was also acceptable ( $\alpha = 0.84$ ).

Based on a Scottish sample ( $n = 2500$ , aged 4), McAloney-Kocaman and McPherson (2017) found an acceptable reliability for the overall scale ( $\alpha = > 0.79$ ), the hyperactivity scale ( $\alpha = > 0.68$ ) and the pro-social scale ( $\alpha = > 0.60$ ). The remaining three sub-scales had weaker internal consistency with alpha values being as follows:  $\alpha = 0.34$  for the peer problems sub-scale;  $\alpha = 0.49$  for conduct problems; and  $\alpha = 0.58$  for emotional stability.

In another UK-based study, Croft et al. (2015) used SDQ data from 16,659 families collected as part of the Millennium Cohort Study. The authors found an acceptable internal reliability score for all scales (ranging from  $\alpha = 0.74$  to  $\alpha = 0.80$ ) apart from peer problems ( $\alpha = 0.62$ ).

## Test-retest reliability



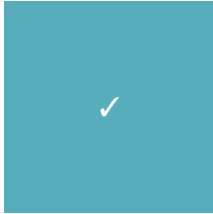
Using data from the Growing Up in Scotland survey, SDQ 2–4 scores were measured at entry to preschool (age 4) and entry to primary school (age 5). Correlations demonstrated that scores were fairly stable (moderate correlation) across all subscales of the SDQ over time with correlations being as follows:

Conduct problems:  $r = 0.56$ ; Emotional symptoms:  $r = 0.46$ ; Hyperactivity:  $r = 0.62$ ; Peer problems:  $r = 0.42$ ; Total difficulties:  $r = 0.64$ ; Pro-social:  $r = 0.48$ . (Bradshaw & Tipping, 2010).

Similarly, in the Millennium Cohort Study based paper, SDQ scores at age 3 were strongly positively correlated with SDQ scores at age 5 and 7 (Croft et al. (2015)).

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### Validity



In a study of 93 children aged 12–24 months, Patel et al. (2021) evaluated the measure against the Child Behaviour Checklist (CBCL). Results of the analysis indicated good concurrent validity with subscales of the SDQ and CBCL being significantly correlated ( $r$  range = 0.19 to 0.57).

D'Souza et al. (2017, 2019) conducted a Confirmatory Factor Analysis, finding that compared to the original five factor model, the indices did not meet the recommended model fit thresholds ( $\chi^2(265) = 7240.09$ ; CFI = 0.787; TLI = 0.759; RMSEA = 0.069). When allowing the reverse-scored items to cross-load onto the prosocial factor, model fit was improved, such that model fit statistics were acceptable ( $\chi^2(260) = 3361.02$ ; CFI = 0.905; TLI = 0.891; RMSEA = 0.047)

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### Sensitivity to change



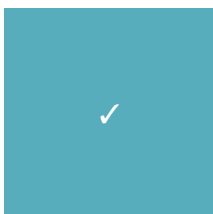
Baltrotsky et al. (2022) reported that the SDQ detected a small decrease on the Total Difficulties scale over an eight-week period. The study was RCT in design, collecting data from 33 Australian-based parents randomised into either the program group ( $n = 17$ ) or control group ( $n = 16$ ).

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## Implementation features in detail

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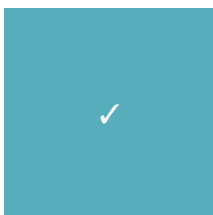
### Brevity



This measure has 25 items and takes between five and 10 minutes to complete.

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### Availability



This measure is free to use. It does not require a clinical license to be used.

Further details can be found at <https://www.sdqinfo.org/py/sdqinfo/b0.py>

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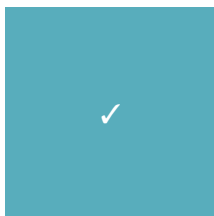
**Ease of scoring**

The SDQ has simple scoring instructions involving basic calculations. It does not need to be scored by someone with specific training or qualifications. Scoring can be done by hand or using the scoring website: <https://sdqscore.org>.

It is usually easiest to score all five scales first before working out the Total Difficulties score. The overall (five-subscale) SDQ score ranges from 0 to 50, with a higher score indicating abnormal behaviours. The Total Difficulties score ranges from 0 to 40. The externalising score ranges from 0 to 20 and is the sum of the conduct and hyperactivity scales. The internalising score ranges from 0 to 20 and is the sum of the emotional and peer problems scales.

UK cut-offs are available at <https://sdqinfo.org/UK3yearNorm.html> and <https://www.sdqinfo.org/py/sdqinfo/c0.py>.

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**Used in the UK**

Given the similarity with the original SDQ, the SDQ 2–4 has strong applicability in the UK. However, to date, our review of the evidence suggests that the use of the SDQ 2–4 specifically is lacking. There were a number of instances where studies utilised the original SDQ when working with preschool children (see Kersten et al., 2016).

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**Language(s)**

The SDQ 2–4 is available in English. The measure has also been officially translated by the developers into more than 50 languages, with the complete list available here: <https://www.sdqinfo.org/py/sdqinfo/b0.py>.

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## Of potential interest...

A 2016 systematic review (Kersten et al., 2016) synthesised evidence for the validity and reliability of the Strengths and Difficulties Questionnaire in children aged 3–5 years. However, it is not specified whether studies used the SDQ 2–4 specifically and the range of ages included across all studies ranged from 3 to 17. There also appears to more psychometric data conducted on non-English based questionnaires of the SDQ 2–4 (see e.g., Croft, 2015, p. 2).

# References

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