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A Review of the Clinical Utility and Psychometric Properties of the Spence Children's Anxiety Scale - Parent Version (SCAS-Parent): Gender-Specific Norms, Percentile Rankings, and Qualitative Descriptors

The Spence Children's Anxiety Scale - Parent Version (SCAS-Parent), developed by Nauta et al. (2004), is a 38-item parent report measure that assesses anxiety patterns across six anxiety domains. This technical review synthesises current research on the SCAS-Parent's psychometric properties and provides clinicians with comprehensive normative data, percentile rankings, and qualitative descriptors. We present a scoring framework incorporating age- and gender-specific norms for interpreting anxiety profiles. Furthermore, this review provides a robust reliable change indice to determine clinically relevant change for children in treatment. We outline an interpretive system categorising scores as Normal (< 85th percentile), Elevated (85th-93.31st percentile), High (93.32nd-97.72nd percentile), and Very High (> 97.72nd percentile). This document aims to enhance the clinical utility of the SCAS-Parent through evidence-based interpretative guidelines and practical implementation strategies.

[View the SCAS-Parent on NovoPsych.com.au](https://www.novopsych.com.au)

January 2025

Developer

The Spence Children's Anxiety Scale - Parent Version (SCAS-Parent) was developed by Nauta et al. (2004):

Nauta, M. H., Scholing, A., Rapee, R. M., Abbott, M., Spence, S. H., & Waters, A. (2004). A parent-report measure of children's anxiety: psychometric properties and comparison with child-report in a clinic and normal sample. *Behaviour research and therapy*, 42(7), 813–839.
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This document was developed by NovoPsych to review contemporary literature and to describe original scoring methodologies and to provide interpretation material, enhance normative data and provide qualitative descriptors.

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Description

The Spence Children's Anxiety Scale - Parent Version (SCAS-Parent) is a 38-item parent report measure designed to assess anxiety symptoms in children aged 7-13 years. Built upon contemporary diagnostic frameworks, the SCAS-Parent evaluates six distinct domains of anxiety that align with clinical diagnostic categories.

The SCAS-Parent measures six distinct anxiety dimensions:

1. Separation Anxiety - assessing distress related to separation from caregivers or home
2. Social Phobia - measuring fear and avoidance of social situations
3. Obsessive Compulsive - evaluating repetitive thoughts and behaviours
4. Panic/Agoraphobia - assessing panic symptoms and fear of public places
5. Physical Injury Fears - measuring specific phobias related to physical harm
6. Generalised Anxiety - evaluating excessive worry and physical symptoms

For clinicians, the SCAS-Parent offers several distinct advantages. Its comprehensive coverage of anxiety domains makes it particularly valuable for initial assessment and treatment planning. The measure helps clinicians quickly identify specific areas of anxiety that may require intervention, while the subscale structure allows for targeted treatment approaches. The inclusion of multiple anxiety dimensions enables clinicians to track changes in specific symptom clusters over time.

The SCAS-Parent is especially useful in educational and clinical settings where understanding the specific nature of a child's anxiety is crucial for intervention planning. Its alignment with diagnostic categories helps inform clinical decision-making and can guide referral processes. The scale's ability to differentiate between various types of anxiety makes it particularly valuable for treatment selection and monitoring intervention effectiveness.

A parallel self-report child version (SCAS-Child) is available, maintaining the same anxiety-focused items. The availability of both child and parent versions enables clinicians to gather multiple perspectives on the child's anxiety symptoms, enhancing diagnostic accuracy and treatment planning.

Psychometric Properties

For comprehensive information visit the Spence Children's Anxiety Scale website at: www.scaswebsite.com

The SCAS-Parent has been extensively validated through numerous studies across multiple countries and cultures. Research has consistently demonstrated robust psychometric properties across clinical and community samples, with particularly strong evidence for its reliability and validity.

Confirmatory factor analyses support a six-factor structure for the SCAS-Parent that corresponds with DSM anxiety disorders: separation anxiety, social phobia, generalised anxiety, panic/agoraphobia, obsessive-compulsive disorder, and physical injury fears (Nauta et al., 2004). The SCAS-P demonstrates excellent internal consistency for the total scale ($\alpha = .87-.90$) across clinical and community samples (Brown-Jacobsen et al., 2011; Whiteside et al., 2012). Subscale reliability coefficients range from $\alpha = .60-.87$, with the Physical Injury subscale showing consistently lower reliability across studies.

The SCAS-Parent shows good convergent validity with other measures of child anxiety, including moderate to strong correlations with the Child Behavior Checklist-Internalising scale ($r = .55-.59$) and discriminant validity is supported by lower correlations with externalising problems ($r = .33-.34$; Nauta et al., 2004). The OCD subscale correlates significantly with the Children's Yale-Brown Obsessive Compulsive Scale ($r = .36-.44$) and OCD symptom ratings from structured diagnostic interviews ($r = .58-.67$; Whiteside et al., 2012). The parent-report version demonstrates particularly strong validity for identifying OCD symptoms, with 95% sensitivity and 54% specificity in clinical samples.

Parent-child agreement on the SCAS (using both the Parent and Child versions) is moderate to high for most anxiety disorder symptoms. Correlations between parent and child reports range from $r = .60-.74$ for corresponding subscales, with particularly strong agreement on the OCD ($r = .60$) and separation anxiety ($r = .74$) subscales (Brown-Jacobsen et al., 2011). Agreement tends to be higher for observable symptoms (e.g., separation anxiety) compared to internal experiences (e.g., generalised anxiety; Magiati et al., 2017).

The SCAS-Parent effectively discriminates between children with anxiety disorders and non-anxious controls, with correct classification rates of 80-86% (Nauta et al., 2004). The measure also shows reasonable ability to differentiate between specific anxiety disorders, particularly for separation anxiety (70%), social phobia (60%), panic/agoraphobia (68%), and OCD (72%), though it has more difficulty discriminating generalised anxiety disorder (31%; Nauta et al., 2004). In clinical settings, the SCAS-Parent demonstrates good positive predictive value (PPV = .43) and excellent negative predictive value (NPV = .85) across subscales. The OCD subscale shows particularly strong diagnostic utility, with parent reports correctly classifying 72% of cases and demonstrating significant sensitivity to treatment effects (Whiteside et al., 2012).

The SCAS-Parent has been validated in a large sample of children ($N = 1,857$) in the USA, Australia, and the UK (Brown-Jacobson et al., 2011; Cresswell et al. (n.d.); Nauta et al., 2004; Whiteside et al., 2012). This data is used to determine percentiles that are based upon age (7 - 9, 10 - 13 years of age, or combined (i.e., 7- 13) if the client's age is outside of these ranges) and gender (male, female, or combined if gender is not specified).

A descriptor is determined that is based upon the percentiles:

- Normal: Percentile of 84 or less (equivalent to T scores of 60 and below)
- Elevated: Percentile of 85 or above and less than or equal to 93 (equivalent to T scores of between 61 and 64)
- High: Percentile of 94 or above and less than or equal to 97.72 (equivalent to T scores of between 65 and 69)
- Very High: percentile of 97.73 or greater (equivalent to T scores of 70 and above)

A reliable change score has been determined by NovoPsych for the SCAS-Parent total score from data collected between July 2014 and January 2025 where clients had completed multiple assessments. All data was included in the analysis, so no data was removed based upon initial symptom severity. The resultant sample size was 6,099. The reliable change score was calculated using the Jacobson-Truax method of clinical significance classification (Jacobson & Truax, 1991) using a calculated Cronbach alpha from the NovoPsych data. The internal reliability calculated for the Total Score was 0.92 and the reliable change score calculated was 13.

Scoring & Interpretation

SCAS-Parent scores consist of a total raw score (range from 0 to 114) and six sub-scale scores, with higher scores indicating greater severity of anxiety symptoms. These scores are also converted into percentiles based on age and gender from a large normative sample ($N = 1,857$) reported by Spence (n.d.) and accessible on www.scaswebsite.com. A percentile score of 85 and above for any subscale score or the total SCAS score indicates elevated and clinically relevant anxiety symptoms.

Sub-scales are presented for the SCAS-Parent:

- Separation anxiety (items 5, 8, 11, 14, 15, 38; range 0-18): Assesses a child's distress when separated from their primary caregivers or home environment. Includes fears about being alone, worry about harm befalling family members, and reluctance to go to school or sleep away from home.
- Social phobia (items 6, 7, 9, 10, 26, 31; range 0-18): Measures fear and avoidance of social situations, including performance anxiety and social evaluation concerns. This includes worries about speaking in class, meeting new people, and fear of embarrassment.
- Obsessive compulsive (items 13, 17, 24, 35, 36, 37; range 0-18): Evaluates repetitive thoughts, compulsive behaviours, and ritualistic actions. This includes checking behaviours, unwanted intrusive thoughts, and the need to do certain things in a particular way.

- Panic/agoraphobia (items 12, 19, 25, 27, 28, 30, 32, 33, 34; range 0-27): Assesses physical symptoms of anxiety and fear of public places or situations where escape might be difficult. This includes symptoms like heart racing, difficulty breathing, and fear of crowded places.
- Physical Injury (items 2, 16, 21, 23, 29; range 0-15): Measures specific fears related to physical harm or injury. This includes fears of doctors/dentists, fear of heights, darkness, and specific situations that might result in physical harm.
- Generalised anxiety (items 1, 3, 4, 18, 20, 22; range 0-18): Evaluates excessive worry about everyday matters, perfectionism, and general anxiety symptoms. This includes worrying about things in general, feeling nervous, and having trouble relaxing.

A descriptor is determined that is based upon the percentiles:

- Normal: Percentile of 84 or less
- Elevated: Percentile of 85 or above and less than or equal to 93
- High: Percentile of 94 or above and less than or equal to 97.72
- Very High: percentile of 97.73 or greater

On first administration a stacked bar graph is presented showing the percentiles for the total score and subscales with the descriptors in the background of the plot. If the scale is administered on multiple occasions a graph is produced to track symptoms over time for both the total and the subscale percentiles.

A reliable change score for the total score was determined by NovoPsych based upon 6,099 administrations of the SCAS-Parent. The reliable change score was calculated as 13, meaning that if a client demonstrates a reduction of 13 points or more on the SCAS-Parent total score then they have demonstrated significant improvement in their anxiety symptoms. Similarly, if they have demonstrated an increase of 13 points or more then this indicates a significant deterioration in their anxiety symptoms.

Supporting Information

Percentile Calculations

Percentiles are based upon those provided by Spence (n.d.) in the T-Score templates. NovoPsych does not use the T-Scores but instead converts directly from a raw score to a percentile as outlined in the tables. See here for more details: <https://www.scaswebsite.com/portfolio/scas-parent-t-scores/>

When a client is not within the specified age brackets for norms (i.e., 7-9 or 10-13) or when gender is not specified then a combined (7-13 or male and female) percentile is provided based upon the means and standard deviations as outlined here (note these values were updated in January 2025):

<https://www.scaswebsite.com/wp-content/uploads/2021/07/Table-Means-SDs-SCAS-P-T-score-sample-7to13yrs.pdf>

NovoPsych uses these means and standard deviations to convert SCAS-Parent scores to percentiles according to the following equation:

$$\text{Percentile} = 100 \times \Phi((x - M)/SD)$$

Where:

- x is the score
- M is the mean
- SD is the standard deviation
- Φ is the standard normal cumulative distribution function

This equation first standardises the score to a z-score by subtracting the mean and dividing by the standard deviation, then converts the z-score to a percentile by applying the standard normal cumulative distribution function and multiplying by 100.

Percentile Table

See data on the SCAS website: <https://www.scaswebsite.com/portfolio/scas-parent-t-scores/>

Developer

Nauta, M. H., Scholing, A., Rapee, R. M., Abbott, M., Spence, S. H., & Waters, A. (2004). A parent-report measure of children's anxiety: psychometric properties and comparison with child-report in a clinic and normal sample. *Behaviour research and therapy*, 42(7), 813–839. [https://doi.org/10.1016/S0005-7967\(03\)00200-6](https://doi.org/10.1016/S0005-7967(03)00200-6)

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Assessment Questions



NovoPsych

Spence Children's Anxiety Scale - Parent (SCAS-Parent)**Instructions:**

Below is a list of items that describe children. For each item please tap the response that best describes your child. Please answer all the items.

		Never	Sometime	Often	Always
1	My child worries about things	0	1	2	3
2	My child is scared of the dark	0	1	2	3
3	When my child has a problem, s(he) complains of having a funny feeling in his / her stomach	0	1	2	3
4	My child complains of feeling afraid	0	1	2	3
5	My child would feel afraid of being on his/her own at home	0	1	2	3
6	My child is scared when s(he) has to take a test	0	1	2	3
7	My child is afraid when (s)he has to use public toilets or bathrooms	0	1	2	3
8	My child worries about being away from us / me	0	1	2	3
9	My child feels afraid that (s)he will make a fool of him/herself in front of people	0	1	2	3
10	My child worries that (s)he will do badly at school	0	1	2	3
11	My child worries that something awful will happen to someone in our family	0	1	2	3
12	My child complains of suddenly feeling as if (s)he can't breathe when there is no reason for this	0	1	2	3
13	My child has to keep checking that (s)he has done things right (like the switch is off, or the door is locked)	0	1	2	3
14	My child is scared if (s)he has to sleep on his/her own	0	1	2	3
15	My child has trouble going to school in the mornings because (s)he feels nervous or afraid	0	1	2	3
16	My child is scared of dogs	0	1	2	3



		Never	Sometime	Often	Always
17	My child can't seem to get bad or silly thoughts out of his / her head	0	1	2	3
18	When my child has a problem, s(he) complains of his/her heart beating really fast	0	1	2	3
19	My child suddenly starts to tremble or shake when there is no reason for this	0	1	2	3
20	My child worries that something bad will happen to him/her	0	1	2	3
21	My child is scared of going to the doctor or dentist	0	1	2	3
22	When my child has a problem, (s)he feels shaky	0	1	2	3
23	My child is scared of heights (eg. being at the top of a cliff)	0	1	2	3
24	My child has to think special thoughts (like numbers or words) to stop bad things from happening	0	1	2	3
25	My child feels scared if (s)he has to travel in the car, or on a bus or train	0	1	2	3
26	My child worries what other people think of him/her	0	1	2	3
27	My child is afraid of being in crowded places (like shopping centres, the movies, buses, busy playgrounds)	0	1	2	3
28	All of a sudden my child feels really scared for no reason at all	0	1	2	3
29	My child is scared of insects or spiders	0	1	2	3
30	My child complains of suddenly becoming dizzy or faint when there is no reason for this	0	1	2	3
31	My child feels afraid when (s)he has to talk in front of the class	0	1	2	3
32	My child's complains of his / her heart suddenly starting to beat too quickly for no reason	0	1	2	3
33	My child worries that (s)he will suddenly get a scared feeling when there is nothing to be afraid of	0	1	2	3
34	My child is afraid of being in small closed places, like tunnels or small rooms	0	1	2	3
35	My child has to do some things over and over again (like washing his / her hands, cleaning or putting things in a certain order)	0	1	2	3
36	My child gets bothered by bad or silly thoughts or pictures in his/her head	0	1	2	3



	Never	Sometime	Often	Always
37	0	1	2	3
38	0	1	2	3
39	Is there anything else that your child is really afraid of?			

Developer Reference:

Nauta, Scholing, Rapee, Abbott, Spence and Waters. (2004). A parent report measure of children's anxiety. Behaviour Research and Therapy. 42 (7), 813-839.

Administer Now



Sample Result



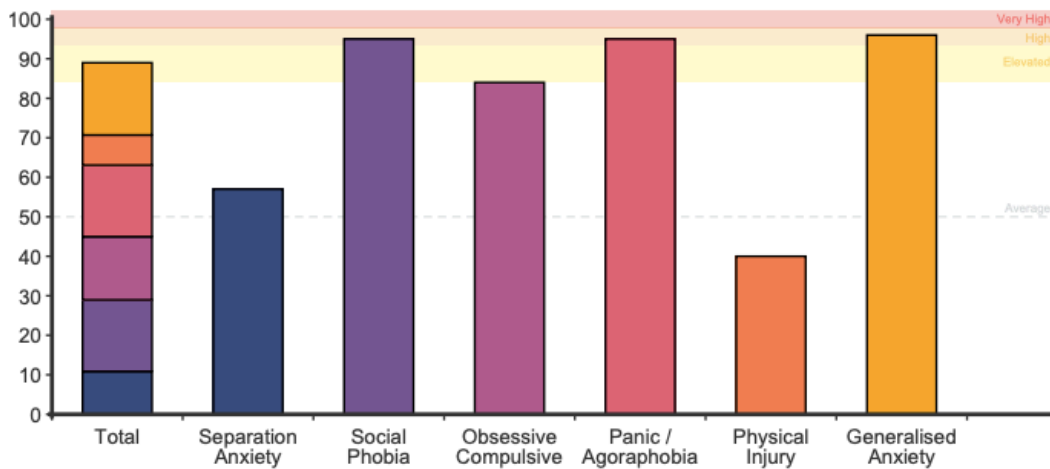
Spence Children's Anxiety Scale - Parent (SCAS-Parent)

Client Name	Generic Child	Date administered	10 Jan 2025
Date of birth (age)	18 Sep 2013 (11)	Time taken	57s
Assessor	Dr David Hegarty		

Results

	Raw Score	Percentile	Descriptor
Total	31	89	Elevated
Separation Anxiety	2	57	Normal
Social Phobia	10	95	High
Obsessive Compulsive	2	84	Normal
Panic/Agoraphobia	7	95	High
Physical Injury	1	40	Normal
Generalised Anxiety	9	96	High

Percentiles for Subscales



Interpretation

The norms used to calculate percentiles and descriptors were for male adolescents between 10 and 13 years of age.

Based upon these SCAS-Parent scores, this client is in the high range for Social Phobia, Panic/Agoraphobia and Generalised Anxiety. Therefore, the client is experiencing some symptoms in this area and may require further assessment or treatment. The following items contributed to the client's high scores:

- 26. My child worries what other people think of him/her (Always)
- 31. My child feels afraid when (s)he has to talk in front of the class (Always)



Client Name	Generic Child
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Interpretation (cont.)

- 1. My child worries about things (Often)
- 3. When my child has a problem, s(he) complains of having a funny feeling in his / her stomach (Often)
- 6. My child is scared when s(he) has to take a test (Often)

The client is in the normal range and is not experiencing significant symptoms for Separation Anxiety, Obsessive Compulsive and Physical Injury.

Scoring and Interpretation Information

For comprehensive information on the SCAS-Parent, [see here](#).

Scores consist of a total raw score (between 0 and 114) and six subscale scores.

- Panic attack and agoraphobia (items 12,19,25,27,28,30,32,33,34)
- Separation anxiety (items 5,8,11,14,15,38)
- Physical injury fears (items 2,16,21,23,29)
- Social phobia (items 6,7,9,10,26,31)
- Obsessive compulsive (items 13,17,24,35,36,37)
- Generalized anxiety disorder (items 1,3,4,18,20,22)

Results are also converted to percentile ranks based on a community sample, using the child's gender and age (Brow-Jacobsen et al, 2011; Cresswell et al., n.d.; Nauta et al., 2004; Whiteside et al, 2012). Percentiles are helpful for interpretation as they contextualise the respondent's scores in comparison to typical responses from a normative group. A percentile of 50 compared to the community sample represents a typical (and healthy) pattern of responding among children.

Any scores more than the 84th percentile (1 standard deviation from the normal population mean) are considered to be clinically significant.

If the scale is administered on multiple occasions a graph is produced to track symptoms over time, representing the respondents scores as a normative percentile.

Client Responses

		Never	Sometime	Often	Always
1	My child worries about things	0	1	2	3
2	My child is scared of the dark	0	1	2	3
3	When my child has a problem, s(he) complains of having a funny feeling in his / her stomach	0	1	2	3
4	My child complains of feeling afraid	0	1	2	3



Client Name	Generic Child
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Client Responses (cont.)

		Never	Sometime	Often	Always
5	My child would feel afraid of being on his/her own at home	0	1	2	3
6	My child is scared when s(he) has to take a test	0	1	2	3
7	My child is afraid when (s)he has to use public toilets or bathrooms	0	1	2	3
8	My child worries about being away from us / me	0	1	2	3
9	My child feels afraid that (s)he will make a fool of him/herself in front of people	0	1	2	3
10	My child worries that (s)he will do badly at school	0	1	2	3
11	My child worries that something awful will happen to someone in our family	0	1	2	3
12	My child complains of suddenly feeling as if (s)he can't breathe when there is no reason for this	0	1	2	3
13	My child has to keep checking that (s)he has done things right (like the switch is off, or the door is locked)	0	1	2	3
14	My child is scared if (s)he has to sleep on his/her own	0	1	2	3
15	My child has trouble going to school in the mornings because (s)he feels nervous or afraid	0	1	2	3
16	My child is scared of dogs	0	1	2	3
17	My child can't seem to get bad or silly thoughts out of his / her head	0	1	2	3
18	When my child has a problem, s(he) complains of his/her heart beating really fast	0	1	2	3
19	My child suddenly starts to tremble or shake when there is no reason for this	0	1	2	3
20	My child worries that something bad will happen to him/her	0	1	2	3
21	My child is scared of going to the doctor or dentist	0	1	2	3
22	When my child has a problem, (s)he feels shaky	0	1	2	3
23	My child is scared of heights (eg. being at the top of a cliff)	0	1	2	3



Client Name	Generic Child
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Client Responses (cont.)

		Never	Sometime	Often	Always
24	My child has to think special thoughts (like numbers or words) to stop bad things from happening	0	1	2	3
25	My child feels scared if (s)he has to travel in the car, or on a bus or train	0	1	2	3
26	My child worries what other people think of him/her	0	1	2	3
27	My child is afraid of being in crowded places (like shopping centres, the movies, buses, busy playgrounds)	0	1	2	3
28	All of a sudden my child feels really scared for no reason at all	0	1	2	3
29	My child is scared of insects or spiders	0	1	2	3
30	My child complains of suddenly becoming dizzy or faint when there is no reason for this	0	1	2	3
31	My child feels afraid when (s)he has to talk in front of the class	0	1	2	3
32	My child's complains of his / her heart suddenly starting to beat too quickly for no reason	0	1	2	3
33	My child worries that (s)he will suddenly get a scared feeling when there is nothing to be afraid of	0	1	2	3
34	My child is afraid of being in small closed places, like tunnels or small rooms	0	1	2	3
35	My child has to do some things over and over again (like washing his / her hands, cleaning or putting things in a certain order)	0	1	2	3
36	My child gets bothered by bad or silly thoughts or pictures in his/her head	0	1	2	3
37	My child has to do certain things in just the right way to stop bad things from happening	0	1	2	3
38	My child would feel scared if (s)he had to stay away from home overnight	0	1	2	3
39	Is there anything else that your child is really afraid of?				
	None.				