

A Review of the Clinical Utility and Psychometric Properties of the Camouflaging Autistic Traits Questionnaire (CAT-Q): Gender-Specific Norms, Percentile Rankings, and Qualitative Descriptors

The Camouflaging Autistic Traits Questionnaire (CAT-Q) was developed by Hull and colleagues (2019). It is a 25-item self-report measure that assesses camouflaging strategies that people may use to adapt to or mask autistic-like traits during social interactions. This technical review provides gender-specific normative data, percentile rankings, and qualitative descriptors to enhance the interpretation and clinical utility of CAT-Q scores.

View the CAT-Q on NovoPsych.com.au

Dr Simon Baker Dr Carla Smyth Emerson Bartholomew Dr Ben Buchanan Dr David Hegarty

December 2024

Developer

The Camouflaging Autistic Traits Questionnaire (CAT-Q) was developed by Hull and colleagues (2019):

Hull, L., Mandy, W., Lai, M. C., Baron-Cohen, S., Allison, C., Smith, P., & Petrides, K. V. (2019). Development and validation of the Camouflaging Autistic Traits Questionnaire (CAT-Q). Journal of Autism and Developmental Disorders, 49(3), 819-833. <u>https://doi.org/10.1007/s10803-018-3792-6</u>

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.

Author Information

(not in authorship order)

Ben Buchanan DPsych CEO, NovoPsych Adjunct Research Fellow, Monash University, Melbourne, Australia David Hegarty PhD Head of Psychometrics, NovoPsych Adjunct Professional Fellow, Southern Cross University, Coffs Harbour, Australia Simon Baker PhD Research Fellow, NovoPsych

Carla Smyth PhD Research Fellow and Clinical Liaison, NovoPsych Emerson Bartholomew MHealthPsych Research Fellow and Psychometrician, NovoPsych

Correspondence

For inquiries about this document, contact: Dr David Hegarty Email: david@novopsych.com

Citation

Baker, S., Smyth, C., Bartholomew, E., Buchanan, B., & Hegarty, D. (2024). A Review of the Clinical Utility and Psychometric Characteristics of the Camouflaging Autistic Traits Questionnaire (CAT-Q): Gender-Specific Norms, Percentile Rankings, and Qualitative Descriptors. Retrieved from: https://novopsych.com.au/assessments/formulation/camouflaging-autistic-traits-questionnaire-cat-q/

Open Source Licence

The information in this document can be used without permission by researchers and clinicians and distributed under an <u>open source</u> licence.



Description

The Camouflaging Autistic Traits Questionnaire (CAT-Q) is a 25-item self-report measure designed to assess camouflaging strategies in individuals aged 16 years and older (Hull et al., 2019). The CAT-Q assesses the extent to which camouflaging strategies are used and is particularly relevant for identifying Autism in females and gender diverse people, who may be underdiagnosed or misdiagnosed due to their ability to mask autistic traits.

The Camouflaging Autistic Traits Questionnaire (CAT-Q) is a 25-item self-report measure designed to assess camouflaging strategies in individuals aged 16 years and older (Hull et al., 2019). Camouflaging refers to strategies that people may use to adapt to or mask their autistic traits during social interactions, often to navigate a predominantly neurotypical social environment. The CAT-Q assesses the extent to which camouflaging strategies are used and is particularly relevant for identifying Autism in females and gender diverse people, who may be underdiagnosed or misdiagnosed due to their ability to mask autistic traits.

The CAT-Q provides scores for overall camouflaging as well as three subscales:

- **Compensation:** Strategies for overcoming social challenges, such as using learned social scripts or imitating behaviours.
- Masking: Efforts to hide or suppress Autistic traits to appear more neurotypical.
- Assimilation: Attempts to fit into social situations, such as modifying behaviours to blend in.

The CAT-Q has useful clinical applications in addition to its utility in screening and assessment. Results can be integrated into formulation and treatment, help validate the experiences of Autistic people, and facilitate self-awareness. The nuanced understanding of camouflaging provided by the scale can assist with the identification of treatment targets and guide the development of coping strategies to help reduce negative impacts of camouflaging on well-being, while also recognising its adaptive aspects.

While the CAT-Q provides valuable insights into camouflaging strategies and can be a useful part of a comprehensive assessment for Autism, scores may also reflect phenomena other than, or co-occurring with, Autism (e.g., people with social anxiety may show greater use of camouflaging strategies). It is important to interpret the results within the context of the individual's developmental history, personal characteristics, and social environment.



Psychometric Properties

The Camouflaging Autistic Traits Questionnaire (CAT-Q) demonstrates robust psychometric properties (Hull et al., 2019). It shows high internal consistency for the total scale (Cronbach's alpha = 0.94) and subscales: Compensation (0.91), Masking (0.85), and Assimilation (0.92). It also shows good test-retest reliability for the total scale and subscales over a three-month interval (rs = 0.77, 0.78, 0.70, and 0.73, respectively).

The CAT-Q was validated on an age- and gender-diverse sample of 306 Autistic and 472 Non-Autistic adults (mean age = 34.56 years, SD = 14.89 years), allowing for meaningful interpretation of a respondent's total score and subscale scores relative to both Autistic and Non-Autistic adults of the same gender (Hull et al., 2020). The means and standard deviations for the total score and subscale scores among key groups are as follows:

Autistic:

- Total: Male 109.64 (26.50); Female 124.35 (23.27); Non-binary 122.00 (17.12)
- **Compensation:** Male 36.81 (12.14); Female 41.85 (11.11); Non-binary 43.50 (9.89)
- Masking: Male 32.90 (10.57); Female 37.87 (10.54); Non-binary 36.06 (8.78)
- Assimilation: Male 39.93 (11.26); Female 44.63 (7.82); Non-binary 39.88 (6.43)

Non-Autistic:

- Total: Male 96.89 (24.22); Female 90.87 (27.67); Non-binary 109.44 (27.20)
- **Compensation:** Male 30.06 (10.92); Female 27.18 (11.5); Non-binary 35.48 (11.32)
- Masking: Male 36.34 (8.13); Female 34.69 (9.05); Non-binary 38.70 (7.61)
- Assimilation: Male 30.48 (10.33); Female 29.00 (11.73); Non-binary 35.26 (12.11)

The above means and standard deviations are used to convert the respondent's score to percentiles, providing useful information about their use of camouflaging strategies relative to Autistic and Non-Autistic adults of the same gender. For respondents whose gender is unspecified, percentiles are based on the pooled means and standard deviations for males, females, and non-binary individuals.

While the CAT-Q demonstrates robust psychometric properties, concerns about construct validity remain, particularly regarding its overlap with similar constructs and strategies related to adapting to social norms, social anxiety and other mental health challenges, or neurodivergence more broadly (e.g., ADHD) (Fombonne, 2020; Lai et al., 2020).



Scoring & Interpretation

The Camouflaging Autistic Traits Questionnaire (CAT-Q) provides scores for overall camouflaging as well as three subscales, with higher scores indicating greater use of camouflaging strategies.

- Compensation (Items 1, 4, 5, 8, 11, 14, 17, 20, and 23). Strategies for overcoming social challenges, such as using learned social scripts or imitating behaviours.
- Masking (Items 2, 6, 9, 12, 15, 18, 21, and 24). Efforts to hide or suppress Autistic traits to appear more neurotypical.
- Assimilation (Items 3, 7, 10, 13, 16, 19, 22, and 25). Attempts to fit into social situations, such as modifying behaviours to blend in.

The respondent's total and subscale scores are expressed as percentiles based on normative data for Non-Autistic adults of the same gender (e.g., male, female, or non-binary) (Hull et al., 2020). The percentiles contextualise the respondent's scores relative to the typical scores of Non-Autistic adults. For example, the 50th percentile represents typical levels of camouflaging among Non-Autistic adults, while scores on the 90th percentile fall within the top 10% when compared to Non-Autistic adults.

CAT-Q F	Results			
		Score	Percentile	Descriptor
	Total (25-175)	123	88	High
	Compensation (9-63)	42	90	High
	Masking (8-56)	40	72	Moderate
	Assimilation (8-56)	41	85	High

The scoring approach uses qualitative descriptors to categorise CAT-Q scores. Each qualitative descriptor corresponds to a specific range of scores. The ranges for these descriptors were determined using percentiles derived from a Non-Autistic sample of 472 male, female, and non-binary adults obtained from a study by Hull and colleagues (2020). The ranges for the total CAT-Q score are as follows.

- Extremely Low (total score of 25 to 51) (less than or equal to the 5th percentile)
- Low (total score of 52 to 75) (percentile between 6 and 24)
- Moderate (total score of 76 to 112) (percentile between 25 and 75)
- High (total score of 113 to 136) (percentile between 76 and 94)
- Extremely High (total score of 137 to 175) (greater than or equal to the 95th percentile)





CAT-Q Normative Percentiles (Females)

Graphs comparing the respondent's total and subscale scores to the normative distribution of scores among Non-Autistic and Autistic individuals are presented, with shaded areas corresponding to scores between the 25th and 75th percentile. This graph contextualises the respondent's scores relative to typical levels of camouflaging among Non-Autistic and Autistic adults.



CAT-Q Scores Compared to Non-Autistic and Autistic Distributions (Females)



If administered more than once, a meaningful change in camouflaging is defined as a change of 13 or more points in the total score based on a Minimally Important Difference (MID) calculation.

It is recommended to interpret CAT-Q scores in light of the following considerations.

- Firstly, sex and gender differences exist in camouflaging, with Autistic females and non-binary and gender-diverse Autistic people typically scoring higher than Autistic males (Cook et al., 2021; Hull et al., 2020). Considering camouflaging is particularly important when assessing Autism in these groups, as greater use of camouflaging strategies may result in lower scores on measures of autistic traits (Cook et al., 2021, 2024).
- Secondly, while camouflaging strategies are often associated with Autism particularly among females and non-binary and gender-diverse individuals they are not an inherent feature of, or specific to, Autism (Lai et al., 2020). Camouflaging represents strategies used by both Autistic and Non-Autistic people to adapt to and navigate social environments. The CAT-Q does not fully differentiate camouflaging strategies used by Autistic people from similar strategies used by Non-Autistic people.
- Thirdly, some items on the CAT-Q may conflate autistic camouflaging with similar strategies arising from social anxiety or other mental health challenges (Fombonne, 2020). High scores may therefore reflect efforts to manage social anxiety or neurodivergence more broadly (e.g., ADHD).
- Lastly, greater use of camouflaging is associated with increased mental health challenges among Autistic adults (Cook et al., 2021). Although the direction of this relationship is not yet understood, it underscores the importance of considering mental health challenges when interpreting CAT-Q scores.



Supporting Information

This section outlines NovoPsych's development of gender-specific norms for the CAT-Q based on data obtained from a study by Hull and colleagues (2020). By accounting for gender differences, these norms enhance the interpretability of CAT-Q scores, enabling clinicians to assess camouflaging with greater nuance.

This section also outlines NovoPsych's development of classification thresholds and qualitative descriptors for CAT-Q scores. These descriptors provide clinicians with clear and consistent classifications of levels of camouflaging, supporting better understanding and communication of CAT-Q scores.

Lastly, this section describes the structure and logic of the automated interpretive text that NovoPsych provides in CAT-Q reports. This interpretive text adapts to the client's scores, gender, and assessment history, providing clinicians with comprehensive, tailored interpretations of CAT-Q results.

Percentile Calculations

Means and standard deviations for the total CAT-Q score and CAT-Q subscale scores are shown in Table 1. The means and standard deviations for male, female, and non-binary adults were obtained from a study by Hull and colleagues (2020), which had an age- and gender-diverse sample of 306 Autistic and 472 Non-Autistic adults (mean age = 34.56 years, SD = 14.89 years). The pooled means and standard deviations were calculated as weighted averages of the gender-specific means and standard deviations.

		Non-	Autistic			Autistic				
	Pooled	Male	Female	Non-binary	Pooled	Male	Female	Non-binary		
Total CAT-Q	94.39	96.89	90.87	109.44	119.04	109.64	124.35	122.00		
	(26.65)	(24.22)	(27.67)	(27.20)	(25.11)	(26.50)	(23.27)	(17.12)		
Compensation	28.83	30.06	27.18	35.48	40.16	36.81	41.85	43.50		
	(11.44)	(10.92)	(11.50)	(11.32)	(11.66)	(12.14)	(11.11)	(9.89)		
Masking	35.59	36.34	34.69	38.70	36.02	32.90	37.87	36.06		
	(8.66)	(8.13)	(9.05)	(7.61)	(10.70)	(10.57)	(10.54)	(8.78)		
Assimilation	29.96	30.48	29.00	35.26	42.72	39.93	44.63	39.88		
	(11.28)	(10.33)	(11.73)	(12.11)	(9.39)	(11.26)	(7.82)	(6.43)		

Table 1. Mean (SD) total and subscale scores.

Source: Hull et al. (2020).



NovoPsych has used the above (pooled) means and standard deviations to convert CAT-Q scores to gender-specific percentiles, as shown in Tables 2 and 3.1 to 3.3, according to the following equation.

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.

The percentiles contextualise each score relative to typical scores among Non-Autistic and Autistic adults, offering a clearer perspective on how the respondent's level of camouflaging compares to those of their peers.



Percentile Tables

Table 2. Percentiles for total CAT-Q scores relative to pooled Non-Autistic and Autistic samples, stratified by gender.

					То	tal			
			Nor	n-Autistic			A	utistic	
Descriptor	Score	Pooled	Male	Female	Non-binary	Pooled	Male	Female	Non-binary
	25	0.46	0.15	0.86	0.1	0.01	0.07	0.01	0.01
	26	0.51	0.17	0.95	0.11	0.01	0.08	0.01	0.01
	27	0.57	0.2	1	0.12	0.01	0.09	0.01	0.01
	28	0.64	0.22	1.2	0.14	0.01	0.1	0.01	0.01
	29	0.71	0.25	1.3	0.16	0.02	0.12	0.01	0.01
	30	0.78	0.29	1.4	0.17	0.02	0.13	0.01	0.01
	31	0.87	0.33	1.5	0.2	0.02	0.15	0.01	0.01
	32	0.96	0.37	1.7	0.22	0.03	0.17	0.01	0.01
	33	1.1	0.42	1.8	0.25	0.03	0.19	0.01	0.01
	34	1.2	0.47	2	0.28	0.04	0.22	0.01	0.01
	35	1.3	0.53	2.2	0.31	0.04	0.24	0.01	0.01
Ň	36	1.4	0.6	2.4	0.35	0.05	0.27	0.01	0.01
	37	1.6	0.67	2.6	0.39	0.05	0.31	0.01	0.01
fel	38	17	0.75	2.8	0.43	0.06	0.34	0.01	0.01
ω	39	19	0.84	3	0.48	0.07	0.38	0.01	0.01
xt	40	21	0.94	33	0.53	0.08	0.43	0.01	0.01
ш	40 41	2.1	11	3.6	0.59	0.00	0.48	0.01	0.01
	42	2.5	1.1	3.0	0.66	0.00	0.53	0.02	0.01
	43	2.0	1.2	0.0 A	0.00	0.11	0.00	0.02	0.01
	40	2.7	1.0	5	0.81	0.12	0.66	0.02	0.01
	44	2.9	1.4	5	0.80	0.14	0.00	0.03	0.01
	45	3.2	1.0	5	0.09	0.10	0.74	0.03	0.01
	40	3.5	1.0	5	0.90	0.10	0.02	0.04	0.01
	47	3.0	2	0	1.1	0.21	0.9	0.04	0.01
	40	4	2.2	0	1.2	0.23	1 1	0.05	0.01
	49	4	2.4	7	1.3	0.26	1.1	0.06	0.01
	50	5	2.0	7	1.4	0.3	1.2	0.07	0.01
	51	5	2.9	7	1.0	0.34	1.3	0.08	0.01
	52	6	3.2	8	1.7	0.38	1.5	0.09	0.01
	53	6	3.5	9	1.9	0.43	1.6	0.11	0.01
	54	6	3.8	9	2.1	0.48	1.8	0.13	0.01
	55		4	10	2.3	0.54	2	0.14	0.01
	56		5	10	2.5	0.6	2.1	0.17	0.01
	57	8	5	11	2.7	0.67	2.3	0.19	0.01
	58	9	5	12	2.9	0.75	2.6	0.22	0.01
	59	9	6	12	3.2	0.84	2.8	0.25	0.01
	60	10	6	13	3.5	0.94	3.1	0.28	0.01
	61	11	7	14	3.7	1	3.3	0.32	0.02
	62	11	7	15	4	1.2	3.6	0.37	0.02
Ň	63	12	8	16	4	1.3	3.9	0.42	0.03
	64	13	9	17	5	1.4	4	0.48	0.04
	65	14	9	17	5	1.6	5	0.54	0.04
	66	14	10	18	6	1.7	5	0.61	0.05
	67	15	11	19	6	1.9	5	0.69	0.07
	68	16	12	20	6	2.1	6	0.77	0.08
	69	17	12	21	7	2.3	6	0.87	0.1
	70	18	13	23	7	2.5	7	0.98	0.12
	71	19	14	24	8	2.8	7	1.1	0.14
	72	20	15	25	8	3.1	8	1.2	0.17
	73	21	16	26	9	3.3	8	1.4	0.21
	74	22	17	27	10	3.6	9	1.5	0.25
	75	23	18	28	10	4	10	1.7	0.3
	76	25	19	30	11	4	10	1.9	0.36
	77	26	21	31	12	5	11	2.1	0.43
	78	27	22	32	12	5	12	2.3	0.51
									-



	79	28	23	33	13	6	12	2.6	0.6
	80	20	24	35	1/	6	13	28	0 71
	00	2.5	27	00	45	0	10	2.0	0.71
	81	31	26	30	15	6	14	3.1	0.83
	82	32	27	37	16	7	15	3.4	0.97
	83	33	28	39	17	8	16	3.8	11
	04	25	20	40	47	ő	47	0.0	1.1
	84	35	30	40	17	8	17	4	1.3
	85	36	31	42	18	9	18	5	1.5
	86	38	33	43	19	a	19	5	18
	07	00	00	40	10	10	10	5	1.0
	87	39	34	44	20	10	20	5	2
	88	41	36	46	22	11	21	6	2.4
	80	12	37	17	22	12	22	6	27
	09	42	57	47	23	12	22	0	2.1
	90	43	39	49	24	12	23	7	3.1
	91	45	40	50	25	13	24	8	3.5
	02	16	12	52	26	1/	25	Q	Λ
te	92	40	42	52	20	14	23	0	-
La	93	48	44	53	27	15	27	9	5
8	94	49	45	55	29	16	28	10	5
ē	05	51	17	56	30	17	20	10	6
2	90	51	47	50	50		29	10	0
	96	52	49	57	31	18	30	11	6
	97	54	50	59	32	19	32	12	7
	98	55	52	60	34	20	33	13	8
	50	55	52	00	07	20	00	10	0
	99	57	53	62	35	21	34	14	9
	100	58	55	63	36	22	36	15	10
	101	60	57	64	38	24	37	16	11
	101	00	50	04	00	27	07	10	10
	102	61	58	66	39	25	39	17	12
	103	63	60	67	41	26	40	18	13
	104	64	62	68	42	27	42	10	15
	10-	07	02	70	72	27	72	10	10
	105	65	63	70	44	29	43	20	16
	106	67	65	71	45	30	45	22	18
	107	68	66	72	46	32	46	23	19
	107	70	00	72	+0	02	+0	20	13
	108	70	68	73	48	33	48	24	21
	109	71	69	74	49	34	49	25	22
	110	72	71	76	51	36	51	27	24
	444	72	70	70	50	07	50	27	21
	111	73	72	11	52	37	52	28	26
	112	75	73	78	54	39	54	30	28
	113	76	75	79	55	40	55	31	30
	11.0	77	76	20	53	40	57	22	20
	114		70	00	57	42	57	33	52
	115	78	77	81	58	44	58	34	34
	116	79	78	82	60	45	59	36	36
	117	00	00	02	61	17	61	20	20
	117	80	80	03	01	47	01	30	39
	118	81	81	84	62	48	62	39	41
	119	82	82	85	64	50	64	41	43
	120	83	83	85	65	52	65	43	45
	120	00	00	00	00	52	00	+0	+5
	121	84	84	86	66	53	67	44	48
	122	85	85	87	68	55	68	46	50
	123	86	86	88	69	56	69	48	52
~	120	00	00	00	70	50	74	40	52
<u>a</u>	124	87	87	88	70	58	71	49	55
I	125	87	88	89	72	59	72	51	57
	126	88	89	90	73	61	73	53	59
	407	00	00	00	74		74	55	60
	127	89	89	90	74	62	74	55	01
	128	90	90	91	75	64	76	56	64
	129	90	91	92	76	65	77	58	66
	120	01	01	02	70	67	70	60	60
	130	91	91	92	10	07	10	60	00
	131	92	92	93	79	68	79	61	70
	132	92	93	93	80	70	80	63	72
	122	02	02	04	01	71	01	64	74
	155	95	95	94	01	/1	01	04	74
	134	93	94	94	82	72	82	66	76
	135	94	94	94	83	74	83	68	78
	136	04	05	05	Q /	75	84	60	70
	130	94	95	95	04	75	04	09	79
	137	95	95	95	84	76	85	71	81
	138	95	96	96	85	77	86	72	82
	120	05	06	06	86	70	97	74	Q.4
	129	95	90	90	00	19	07	74	04



140 96 96.2 96.2 87 80 87 75 85 141 96 96.6 96.5 88 81 88 76 87 142 96.3 96.9 96.8 88 82 89 78 88 143 96.6 97.2 97 89 83 90 79 89 144 96.9 97.4 97.3 90 84 90 80 90 145 97.1 97.7 97.5 90 85 91 81 91 146 97.4 97.9 92.7 87 92 83 93 147 97.6 98.1 97.9 92 87 92 83 93 148 97.8 98.3 98.1 92 88 93 86 94 150 98.2 98.6 94 93 89 94 86 95									
141 96 96.6 96.5 88 81 88 76 87 142 96.3 96.9 96.8 88 82 89 78 88 143 96.6 97.2 97 89 83 90 79 89 144 96.9 97.4 97.3 90 84 90 80 90 145 97.1 97.7 97.5 90 85 91 81 91 146 97.4 97.9 97.7 91 86 91 82 92 147 97.6 98.1 97.9 92 87 92 83 93 148 97.8 98.3 98.1 92 88 93 86 94 150 98.2 98.6 98.4 93 89 94 86 95 151 98.3 98.7 98.5 94 90 94 86 95 <td>140</td> <td>96</td> <td>96.2</td> <td>96.2</td> <td>87</td> <td>80</td> <td>87</td> <td>75</td> <td>85</td>	140	96	96.2	96.2	87	80	87	75	85
142 96.3 96.9 96.8 88 82 89 78 88 143 96.6 97.2 97 89 83 90 79 89 144 96.9 97.4 97.3 90 84 90 80 90 145 97.1 97.7 97.5 90 85 91 81 91 146 97.4 97.9 97.7 91 86 91 82 92 147 97.6 98.1 97.9 92 87 92 83 93 148 97.8 98.3 98.1 92 88 93 85 94 149 98 98.4 98.2 93 88 93 86 94 150 98.2 98.6 98.4 93 89 94 86 95 151 98.3 98.7 98.5 94 91 95 88 96 <td>141</td> <td>96</td> <td>96.6</td> <td>96.5</td> <td>88</td> <td>81</td> <td>88</td> <td>76</td> <td>87</td>	141	96	96.6	96.5	88	81	88	76	87
143 96.6 97.2 97 89 83 90 79 89 144 96.9 97.4 97.3 90 84 90 80 90 145 97.1 97.7 97.5 90 85 91 81 91 146 97.4 97.9 97.7 91 86 91 82 92 147 97.6 98.1 97.9 92 87 92 83 93 148 97.8 98.3 98.1 92 88 93 85 94 149 98 98.4 98.2 93 88 93 86 94 150 98.2 98.6 98.4 93 89 94 86 95 151 98.3 98.7 98.5 94 90 94 86 95 152 98.5 98.9 95.5 91 95 89 96.5 <t< td=""><td>142</td><td>96.3</td><td>96.9</td><td>96.8</td><td>88</td><td>82</td><td>89</td><td>78</td><td>88</td></t<>	142	96.3	96.9	96.8	88	82	89	78	88
144 96.9 97.4 97.3 90 84 90 80 90 145 97.1 97.7 97.5 90 85 91 81 91 146 97.4 97.9 97.7 91 86 91 82 92 147 97.6 98.1 97.9 92 87 92 83 93 148 97.8 98.3 98.1 92 88 93 85 94 149 98 98.4 98.2 93 88 93 86 94 150 98.2 98.6 98.4 93 89 94 86 95 151 98.3 98.7 98.5 94 90 94 87 95 152 98.5 98.9 98.6 94 91 95 89 96.5 152 98.7 99.08 98.9 95 92 95 90 9	143	96.6	97.2	97	89	83	90	79	89
145 97.1 97.7 97.5 90 85 91 81 91 146 97.4 97.9 97.7 91 86 91 82 92 147 97.6 98.1 97.9 92 87 92 83 93 148 97.8 98.3 98.1 92 88 93 85 94 149 98 98.4 98.2 93 88 93 86 94 150 98.2 98.6 98.4 93 89 94 86 95 151 98.3 98.7 98.5 94 90 94 87 95 152 98.5 98.9 98.6 94 91 95 88 96 153 98.6 99 98.8 95 91 95 89 96.5 154 98.7 99.08 98.9 95 92 96 91 97.	144	96.9	97.4	97.3	90	84	90	80	90
146 97.4 97.9 97.7 91 86 91 82 92 147 97.6 98.1 97.9 92 87 92 83 93 148 97.8 98.3 98.1 92 88 93 85 94 149 98 98.4 98.2 93 88 93 86 94 150 98.2 98.6 98.4 93 89 94 86 95 151 98.3 98.7 98.5 94 90 94 87 95 152 98.5 98.9 98.6 94 91 95 88 96 153 98.6 99 98.8 95 91 95 89 96.5 154 98.7 99.08 98.9 95 92 96 91 97.3 155 98.9 99.18 99 95 92 96 91 97	145	97.1	97.7	97.5	90	85	91	81	91
147 97.6 98.1 97.9 92 87 92 83 93 148 97.8 98.3 98.1 92 88 93 85 94 149 98 98.4 98.2 93 88 93 86 94 150 98.2 98.6 98.4 93 89 94 86 95 151 98.3 98.7 98.5 94 90 94 87 95 152 98.5 98.9 98.6 94 91 95 88 96 153 98.6 99 98.8 95 91 95 89 96.5 153 98.6 99 95 92 95 90 96.9 154 98.7 99.08 98.9 95 92 96 91 97.3 155 98.9 99.18 99 95 92 96 91 97.6	146	97.4	97.9	97.7	91	86	91	82	92
148 97.8 98.3 98.1 92 88 93 85 94 149 98 98.4 98.2 93 88 93 86 94 150 98.2 98.6 98.4 93 89 94 86 95 151 98.3 98.7 98.5 94 90 94 87 95 152 98.5 98.9 98.6 94 91 95 88 96 153 98.6 99 98.8 95 91 95 89 96.5 154 98.7 99.08 98.9 95 92 95 90 96.9 155 98.9 99.18 99 95 92 96 91 97.3 156 99 99.27 99.07 96 93 96 91 97.6 157 99.06 99.35 99.16 96 93 96.3 92	147	97.6	98.1	97.9	92	87	92	83	93
149 98 98.4 98.2 93 88 93 86 94 150 98.2 98.6 98.4 93 89 94 86 95 151 98.3 98.7 98.5 94 90 94 87 95 152 98.5 98.9 98.6 94 91 95 88 96 153 98.6 99 98.8 95 91 95 89 96.5 154 98.7 99.08 98.9 95 92 95 90 96.9 155 98.9 99.18 99 95 92 96 91 97.3 156 99 99.27 99.07 96 93 96 91 97.6 157 99.06 99.35 99.16 96 93 96.3 92 98 158 99.15 99.24 96.3 94 96.6 93 98.2	148	97.8	98.3	98.1	92	88	93	85	94
150 98.2 98.6 98.4 93 89 94 86 95 151 98.3 98.7 98.5 94 90 94 87 95 152 98.5 98.9 98.6 94 91 95 88 96 153 98.6 99 98.8 95 91 95 89 96.5 154 98.7 99.08 98.9 95 92 95 90 96.9 155 98.9 99.18 99 95 92 96 91 97.3 156 99 99.27 99.07 96 93 96 91 97.6 157 99.06 99.35 99.16 96 93 96.3 92 98 158 99.15 99.24 96.3 94 96.6 93 98.2	149	98	98.4	98.2	93	88	93	86	94
151 98.3 98.7 98.5 94 90 94 87 95 152 98.5 98.9 98.6 94 91 95 88 96 153 98.6 99 98.8 95 91 95 89 96.5 154 98.7 99.08 98.9 95 92 95 90 96.9 154 98.7 99.08 98.9 95 92 95 90 96.9 155 98.9 99.18 99 95 92 96 91 97.3 156 99 99.27 99.07 96 93 96 91 97.6 157 99.06 99.35 99.16 96 93 96.3 92 98 158 99.15 99.24 96.3 94 96.6 93 98.2	150	98.2	98.6	98.4	93	89	94	86	95
152 98.5 98.9 98.6 94 91 95 88 96 153 98.6 99 98.8 95 91 95 89 96.5 154 98.7 99.08 98.9 95 92 95 90 96.9 155 98.9 99.18 99 95 92 96 91 97.3 156 99 99.27 99.07 96 93 96 91 97.6 157 99.06 99.35 99.16 96 93 96.3 92 98 158 99.15 99.24 96.3 94 96.6 93 98.2	151	98.3	98.7	98.5	94	90	94	87	95
153 98.6 99 98.8 95 91 95 89 96.5 154 98.7 99.08 98.9 95 92 95 90 96.9 155 98.9 99.18 99 95 92 96 91 97.3 156 99 99.27 99.07 96 93 96 91 97.6 157 99.06 99.35 99.16 96 93 96.3 92 98 158 99.15 99.24 96.3 94 96.6 93 98.2	152	98.5	98.9	98.6	94	91	95	88	96
154 98.7 99.08 98.9 95 92 95 90 96.9 155 98.9 99.18 99 95 92 96 91 97.3 156 99 99.27 99.07 96 93 96 91 97.6 157 99.06 99.35 99.16 96 93 96.3 92 98 158 99.15 99.24 96.3 94 96.6 93 98.2	ē 153	98.6	99	98.8	95	91	95	89	96.5
155 98.9 99.18 99 95 92 96 91 97.3 156 99 99.27 99.07 96 93 96 91 97.6 157 99.06 99.35 99.16 96 93 96.3 92 98 158 99.15 99.42 99.24 96.3 94 96.6 93 98.2	±154	98.7	99.08	98.9	95	92	95	90	96.9
156 99 99.27 99.07 96 93 96 91 97.6 157 99.06 99.35 99.16 96 93 96.3 92 98 158 99.15 99.42 99.24 96.3 94 96.6 93 98.2	ē 155	98.9	99.18	99	95	92	96	91	97.3
157 99.06 99.35 99.16 96 93 96.3 92 98 158 99.15 99.42 99.24 96.3 94 96.6 93 98.2	5 156	99	99.27	99.07	96	93	96	91	97.6
158 99.15 99.42 99.24 96.3 94 96.6 93 98.2	157	99.06	99.35	99.16	96	93	96.3	92	98
	ш 158	99.15	99.42	99.24	96.3	94	96.6	93	98.2
159 99.23 99.48 99.31 96.6 94 96.9 93 98.5	159	99.23	99.48	99.31	96.6	94	96.9	93	98.5
160 99.31 99.54 99.38 96.8 95 97.1 94 98.7	160	99.31	99.54	99.38	96.8	95	97.1	94	98.7
161 99.38 99.59 99.44 97.1 95 97.4 94 98.9	161	99.38	99.59	99.44	97.1	95	97.4	94	98.9
162 99.44 99.64 99.49 97.3 96 97.6 95 99.03	162	99.44	99.64	99.49	97.3	96	97.6	95	99.03
163 99.5 99.68 99.54 97.6 96 97.8 95 99.17	163	99.5	99.68	99.54	97.6	96	97.8	95	99.17
164 99.55 99.72 99.59 97.8 96.3 98 96 99.29	164	99.55	99.72	99.59	97.8	96.3	98	96	99.29
165 99.6 99.75 99.63 97.9 96.6 98.2 96 99.4	165	99.6	99.75	99.63	97.9	96.6	98.2	96	99.4
166 99.64 99.78 99.67 98.1 96.9 98.3 96.3 99.49	166	99.64	99.78	99.67	98.1	96.9	98.3	96.3	99.49
167 99.68 99.81 99.7 98.3 97.2 98.5 96.7 99.57	167	99.68	99.81	99.7	98.3	97.2	98.5	96.7	99.57
168 99.71 99.83 99.73 98.4 97.4 98.6 97 99.64	168	99.71	99.83	99.73	98.4	97.4	98.6	97	99.64
169 99.74 99.85 99.76 98.6 97.7 98.7 97.2 99.7	169	99.74	99.85	99.76	98.6	97.7	98.7	97.2	99.7
170 99.77 99.87 99.79 98.7 97.9 98.9 97.5 99.75	170	99.77	99.87	99.79	98.7	97.9	98.9	97.5	99.75
171 99.8 99.89 99.81 98.8 98.1 99 97.8 99.79	171	99.8	99.89	99.81	98.8	98.1	99	97.8	99.79
172 99.82 99.9 99.83 98.9 98.3 99.07 98 99.83	172	99.82	99.9	99.83	98.9	98.3	99.07	98	99.83
173 99.84 99.92 99.85 99.03 98.4 99.16 98.2 99.86	173	99.84	99.92	99.85	99.03	98.4	99.16	98.2	99.86
174 99.86 99.93 99.87 99.12 98.6 99.24 98.4 99.88	174	99.86	99.93	99.87	99.12	98.6	99.24	98.4	99.88
175 99.88 99.94 99.88 99.2 98.7 99.32 98.5 99.9	175	99.88	99 94	99.88	99.2	98.7	99.32	98.5	99.90



Table 3.1. Percentiles for Compensation subscale scores relative to Non-Autistic and Autistic samples, stratified by gender.

					Compe	Isation			
			Nor	n-Autistic			A	utistic	
Descriptor	Score	Pooled	Male	Female	Non-binary	Pooled	Male	Female	Non-binary
Extremely	9	4	2.7	6	0.97	0.38	1.1	0.16	0.02
Low	10	5	3.3	7	1.2	0.48	1.4	0.21	0.04
2011	11	6	A	8	1.5	0.62	17	0.27	0.05
	12	7	5	0	1.0	0.02	2	0.27	0.03
	12	/ 0	5	9	1.9	0.79	2	0.30	0.07
	13	0	0	11	2.4	0.99	2.5	0.47	0.1
-	14	10	1	13	2.9	1.2	3	0.61	0.14
8	15	11	8	14	3.5	1.5	3.6	0.78	0.2
_	16	13	10	17	4	1.9	4	1	0.27
	17	15	12	19	5	2.4	5	1.3	0.37
	18	17	13	21	6	2.9	6	1.6	0.5
	19	20	16	24	7	3.5	7	2	0.66
	20	22	18	27	9	4	8	2.5	0.87
	21	25	20	30	10	5	10	3	1.1
	22	28	23	33	12	6	11	3.7	1.5
	23	31	26	36	14	7	13	4.5	1.9
	24	34	29	39	16	8	15	5	2.4
	25	37	32	42	18	10	17	6	3.1
	26	40	36	46	20	11	19	8	3.8
Θ	27	44	39	49	23	13	21	q	5
rat	28	47	43	53	25	15	23	11	6
ep	20	51	46	56	20	17	26	12	7
Ŷ	29	51	4 0	60	20	10	20	14	0
~	30	54	50	62	25	19	29	14	9
	31	50	55	03	35		32	10	10
	32	61	57	66	38	24	35	19	12
	33	64	61	69	41	27	38	21	14
	34	67	64	72	45	30	41	24	17
	35	71	67	75	48	33	44	27	20
	36	73	71	78	52	36	47	30	22
	37	76	74	80	55	39	51	33	26
	38	79	77	83	59	43	54	36	29
	39	81	79	85	62	46	57	40	32
	40	84	82	87	66	49	60	43	36
-	41	86	84	89	69	53	64	47	40
ligi	42	88	86	90	72	56	67	51	44
-	43	89	88	92	75	60	69	54	48
	44	91	90	93	77	63	72	58	52
	45	92	91	94	80	66	75	61	56
	46	93	93	95	82	69	78	65	60
	47	94	94	96	85	72	80	68	64
	48	95	95	96.5	87	75	82	71	68
	49	96.1	96	97.1	88	78	84	74	71
	50	96.8	96.6	97.6	90	80	86	77	74
	51	97.4	97.2	98.1	91	82	88	79	78
	52	97.9	97.8	98.5	93	85	89	82	80
	53	98.3	98.2	98.8	94	86	91	84	83
db	54	98.6	98.6	99.02	95	88	92	86	86
Ī	55	98.0	08.0	99.02	96	90	02	88	88
ely	55	00.12	00.10	00.20	06 5	01	04	00	00
Ĕ	50	00.31	99.1Z	99.39	90.5		94	90	90
ttre	57	99.31	99.3Z	99.52	97.1	93	90	91	91
ú	50	99.40	99.47	99.03	97.7	94	90	93	93
	59	99.58	99.6	99.72	98.1	95	96.6	94	94
	60	99.68	99.69	99.78	98.5	96	97.2	95	95
	61	99.75	99.77	99.84	98.8	96.3	97.7	96	96.2
	62	99.81	99.83	99.88	99.04	96.9	98.1	96.5	96.9
	63	99.86	99.87	99.91	99.25	97.5	98.5	97.2	97.6



Table 3.2. Percentiles for **Masking** subscale scores relative to Non-Autistic and Autistic samples, stratified by gender.

					Mas	king					
			Non	-Autistic	Autistic Autistic						
Descriptor	Score	Pooled	Male	Female	Non-binary	Pooled	Male	Female	Non-binary		
	8	0.07	0.02	0.16	0.01	0.44	0.92	0.23	0.07		
	9	0.11	0.04	0.23	0.01	0.58	1.2	0.31	0.1		
	10	0.16	0.06	0.32	0.01	0.75	1.5	0.41	0.15		
	11	0.23	0.09	0.44	0.01	0.97	1.9	0.54	0.22		
N.	12	0.32	0.14	0.61	0.02	1.2	2.4	0.71	0.31		
2	13	0.45	0.2	0.83	0.04	1.6	3	0.91	0.43		
el	14	0.63	0.3	1.1	0.06	2	3.7	1.2	0.6		
E	15	0.87	0.43	1.5	0.09	2.5	5	1.5	0.82		
xt	16	1.2	0.62	1.9	0.1	3.1	5	1.9	1.1		
ш	17	1.6	0.87	2.5	0.2	3.8	7	2.4	1.5		
	18	2.1	1.2	3.3	0.3	5	8	3	2		
	19	2.8	1.6	4	0.5	6	9	3.7	2.6		
	20	3.6	2.2	5	0.7	7	11	4	3.4		
	21	5	3	7	1	8	13	5	4		
	22	6	3.9	8	1.4	10	15	7	5		
	23	7	5	10	2	11	17	8	7		
-	24	9	6	12	2.7	13	20	9	8		
ð.	25	11	8	14	3.6	15	23	11	10		
	20	13	10	17	5	17	20	13	13		
	21	10	13	20	0	20	29	15	10		
	20	19	10	23	0	23	32	17	10		
	29	26	22	20	13	20	30	20	21		
	31	30	26	34	16	32	43	20	23		
	32	34	30	38	10	35	47	20	32		
	33	38	34	43	23	39	50	32	36		
Θ	34	43	39	47	27	43	54	36	41		
rat	35	47	43	51	31	46	58	39	45		
pqe	36	52	48	56	36	50	62	43	50		
M	37	56	53	60	41	54	65	47	54		
	38	61	58	64	46	57	69	50	59		
	39	65	63	68	52	61	72	54	63		
	40	69	67	72	57	65	75	58	67		
	41	73	72	76	62	68	78	62	71		
	42	77	76	79	67	71	81	65	75		
	43	80	79	82	71	74	83	69	79		
	44	83	83	85	76	77	85	72	82		
fb	45	86	86	87	80	80	87	75	85		
Ξ	46	89	88	89	83	82	89	78	87		
	47	91	91	91	86	85	91	81	89		
	48	92	92	93	89	87	92	83	91		
	49	94	94	94	91	89	94	85	93		
E	50	95	95	95	93	90	95	88	94		
ligh	51	96.2	96.4	96.4	95	92	96	89	96		
N F	52	97.1	97.3	97.2	96	93	96.5	91	96.5		
mel	53	97.8	98	97.8	97	94	97.1	92	97.3		
tret	54	90.3	90.5	90.4	97.8	95	91.1	94	97.9		
EX	55	90.7	90.9	90.0	90.4	90.2	90.2	95	90.0		
	56	99.08	99.22	99.07	98.8	96.9	98.6	96	98.8		



Table 3.3. Percentiles for Assimilation subscale scores relative to Non-Autistic and Autistic samples, stratified by gender.

					Assim	ilation			
			Non	-Autistic			A	utistic	
Descriptor	Score	Pooled	Male	Female	Non-binary	Pooled	Male	Female	Non-binary
	8	2.6	1.5	3.7	1.2	0.01	0.23	0.01	0.01
Extremely	9	3.2	1.9	4	1.5	0.02	0.3	0.01	0.01
Low	10	3.8	2.4	5	1.8	0.02	0.39	0.01	0.01
	11	5	3	6	2.3	0.04	0.51	0.01	0.01
	12	6	3.7	7	2.7	0.05	0.66	0.01	0.01
	13	7	5	9	3.3	0.08	0.84	0.01	0.01
	14	8	6	10	4	0.11	1.1	0.01	0.01
	15	9	7	12	5	0.16	1.3	0.01	0.01
-	16	11	8	13	6	0.22	1.7	0.01	0.01
ð.	17	13	10	15	7	0.31	2.1	0.02	0.02
	18	14	11	17	8	0.42	2.6	0.03	0.03
	19	17	13	20	9	0.58	3.2	0.05	0.06
	20	19	16	22	10	0.78	3.8	0.08	0.1
	21	21	18	25	12	1	5	0.13	0.17
	22	24	21	28	14	1.4	6	0.19	0.27
	23	27	23	30	16	1.8	7	0.28	0.43
	24	30	27	33	18	2.3	8	0.42	0.68
	25	33	30	37	20	3	9	0.6	1
	26	36	33	40	22	3.7	11	0.86	1.5
	27	40	37	43	25	5	13	1.2	2.3
	28	43	41	47	27	6	14	1.7	3.2
ate	29	47	44	50	30	7	17	2.3	5
Jer	30	50	48	53	33	9	19	3.1	6
٥ ٩	31	54	52	57	36	11	21	4	8
2	32	57	56	60	39	13	24	5	11
	33	61	60	63	43	15	27	7	14
	34	64	63	67	46	18	30	9	18
	35	67	67	70	49	21	33	11	22
	36	70	70	72	52	24	36	13	27
	37	73	74	75	56	27	40	16	33
	38	76	77	78	59	31	43	20	38
	39	79	80	80	62	35	47	24	45
	40	81	82	83	65	39	50	28	51
	41	84	85	85	68	43	54	32	57
db	42	86	87	87	71	47	57	37	63
Ξ	43	88	89	88	74	51	61	42	69
	44	89	90	90	76	55	64	47	74
	45	91	92	91	79	60	67	52	79
	46	92	93	93	81	64	71	57	83
	47	93	95	94	83	68	73	62	87
	48	95	96	95	85	71	76	67	90
£	49	95	96.4	96	87	75	79	71	92
Ę	50	96.2	97.1	96.3	89	78	81	75	94
Ą	51	96.9	97.7	97	90	81	84	79	96
me	52	97.5	98.1	97.5	92	84	86	83	97
tre.	53	97.9	98.5	98	93	86	88	86	97.9
Ě	54	98.3	98.9	98.3	94	89	89	88	98.6
	55	98.7	99.12	98.7	95	90	91	91	99.07
	56	99	99.33	98.9	96	92	92	93	99.39



Using the gender-specific norms established above, Figures 1, 2, 3, and 4 show the distributions of the total CAT-Q score and CAT-Q subscale scores among Non-Autistic and Autistic adults, separately for the pooled samples, males, females, and non-binary adults. The shaded areas indicate scores between the 25th and 75th percentiles within each sample.

























Descriptors

In addition to gender-specific norms, NovoPsych has established qualitative descriptors for specific ranges of the total CAT-Q score and CAT-Q subscale scores (see Table 4).

Descriptor	Total CAT-Q	Compensation	Masking	Assimilation
Extremely Low	25 - 51	9 - 10	8 - 21	8 - 11
Low	52 - 75	11 - 20	22 - 29	12 - 22
Moderate	76 - 112	21 - 36	30 - 41	23 - 37
High	113 - 136	37 - 47	42 - 49	38 - 47
Extremely High	137 - 175	48 - 63	50 - 56	48 - 56

Table 4. Qualitative descriptors and score ranges.

Each score range corresponds to a percentile range within the pooled Non-Autistic sample, as follows:

- Extremely Low: Less than or equal to the 5th percentile
- Low: Percentile between 6 and 24
- Moderate: Percentile between 25 and 75
- **High:** Percentile between 76 and 94
- Extremely High: Greater than or equal to the 95th percentile

The score ranges, and corresponding percentiles, are highlighted in different shades of blue in Tables 2, 3.1 to 3.3, and 4.



Interpretive Text

The interpretive text for the CAT-Q follows a structured format that adapts based on the client's scores and gender. The text begins with a general statement about the client's overall level of camouflaging strategies, categorising their total score into one of five ranges: Extremely Low, Low, Moderate, High, or Extremely High. This statement includes specific percentile comparisons to both non-autistic and autistic reference groups, with these comparisons being tailored to the client's gender (male, female, or non-binary/gender-diverse).

"The client's responses on the Camouflaging Autistic Traits Questionnaire (CAT-Q) indicate that they engage in camouflaging strategies at a level that falls within the <"Extremely Low" | "Low" | "Moderate" | "High" | "Extremely High"> range when compared to Non-Autistic adults. The respondent's score is on the XXst/nd/rd/th percentile when compared to <"Non-Autistic adults" | "Non-Autistic males" | "Non-Autistic females" | "non-binary Non-Autistic adults" | "Autistic females" | "Autistic females" | "non-binary Autistic females" | "Autistic females" | "Non-Binary Autistic adults" | "Non-Binary

Additional context is then provided based on the classification of the total score.

- For Low or Extremely Low scores, the text acknowledges minimal use of camouflaging strategies and notes that some autistic individuals may not need to or be aware of camouflaging.

"This suggests that, overall, the respondent engages minimally in camouflaging strategies. It is important to consider that some Autistic individuals may not find it necessary to camouflage or may not be consciously aware of doing so."

- For Moderate scores, it emphasises that scores in this range, particularly at the upper end, may overlap with those of autistic adults.

"Importantly, scores within the "Moderate" range may overlap with those of Autistic adults, particularly near the upper end of this range. Therefore, it is important to interpret the respondent's score together with other sources of information."

- For High scores in gender-diverse/non-binary individuals, it includes a specific note about typically higher CAT-Q scores in this population.

"Importantly, research indicates that non-binary and gender-diverse Non-Autistic adults tend to score higher on the CAT-Q compared to both males and females. As such, scores within the "High" range may overlap with typical levels of camouflaging among non-binary and gender-diverse Non-Autistic adults, particularly for scores in the lower half of this range."

- For High or Extremely High scores, it discusses the implications of substantial camouflaging efforts, while noting that high scores may reflect various factors beyond autism, such as social anxiety or other forms of neurodivergence.

"<A | An > <"High" | "Extremely High"> score indicates that the respondent is likely engaging in substantial efforts to adapt to or mask autistic-like traits during social interactions. However, it is important to note that high scores may not only reflect camouflaging strategies used by Autistic people but could also reflect strategies related



to adapting to social norms, social anxiety and other mental health challenges, or neurodivergence more broadly (e.g., ADHD)."

The text then describes any subscales (Compensation, Masking, and Assimilation) that score in the High or Extremely High ranges. These subscales are presented in order of severity, first by classification (Extremely High before High) and then by percentile value. For each notable subscale, the text includes:

- The specific classification and percentile comparisons
- An explanation of what the subscale measures
- The implications of high scores in this area
- The specific questionnaire items that received the highest ratings

For High or Extremely High scores on the Compensation subscale:

"The client's responses on the **Compensation** subscale indicate that they engage in compensation strategies at a level that falls within the < "Extremely Low" | "Low" | "Moderate" | "High" | "Extremely High"> range when compared to Non-Autistic adults. Their score is on the XXst/nd/rd/th percentile when compared to < "Non-Autistic adults" | "Non-Autistic females" | "non-binary Non-Autistic adults"> and the XXst/nd/rd/th percentile when compared to < "Non-Autistic adults" | "Non-Autistic adults" | "Non-Autistic females" | "non-binary Non-Autistic females" | "non-binary Non-Autistic females" | "non-binary Autistic adults"> and the XXst/nd/rd/th percentile when compared to < "Autistic adults" | "Autistic females" | "non-binary Non-Autistic females" | "non-binary Non-Autistic females" | "non-binary Autistic adults"> and the XXst/nd/rd/th percentile when compared to < "Autistic adults" | "Autistic females" | "non-binary Non-Autistic females" | "non-binary Autistic adults" | "Autistic females" | "non-binary Autistic adults"> and the XXst/nd/rd/th percentile when compared to < "Autistic adults" | "Autistic females" | "non-binary Non-Autistic females" | "non-binary Autistic adults"> and the XXst/nd/rd/th percentile when compared to < "Autistic adults" | "Autistic females" | "non-binary Autistic adults"> and the XXst/nd/rd/th percentile when compared to < "Autistic adults" | "Autistic females" | "non-binary Autistic adults"> and the XXst/nd/rd/th percentile when compared to < "Autistic adults" | "Autistic females" | "non-binary Autistic adults"> and the XXst/nd/rd/th percentile when compared to < "Autistic adults" | "Autistic females" | "non-binary Autistic adults"> autistic females | adults" | adults | adult

For High or Extremely High scores on the Masking subscale:

"The client's responses on the **Masking** subscale indicate that they engage in masking strategies at a level that falls within the <"Extremely Low" | "Low" | "Moderate" | "High" | "Extremely High"> range when compared to Non-Autistic adults. Their score is on the XXst/nd/rd/th percentile when compared to <"Non-Autistic adults" | "Non-Autistic males" | "Non-Autistic females" | "non-binary Non-Autistic adults"> and the XXst/nd/rd/th percentile when compared to <"Autistic adults" | "Autistic males" | "Autistic females" | "non-binary Autistic adults"> This suggests a tendency to suppress or hide autistic traits to appear more neurotypical, such as forcing eye contact or adjusting facial expressions. While masking can facilitate smoother social interactions and help avoid misunderstandings or negative reactions, it may also lead to stress and reduced well-being. The items with the highest ratings were:"

For High or Extremely High scores on the Assimilation subscale:

"The client's responses on the Assimilation subscale indicate that they engage in assimilation strategies at a level that falls within the <"Extremely Low" | "Low" | "Moderate" | "High" | "Extremely High"> range when compared to Non-Autistic adults. Their score is on the XXst/nd/rd/th percentile when compared to <"Non-Autistic adults" | "Non-Autistic females" | "non-binary Non-Autistic adults"> and the XXst/nd/rd/th percentile when compared to <"Non-Autistic adults" | "Non-Autistic adults" | "Non-Autistic females" | "non-binary Non-Autistic females" | "non-binary Non-Autistic females" | "non-binary Autistic adults"> and the XXst/nd/rd/th percentile when compared to <"Autistic adults" | "Autistic females" | "Autistic females" | "non-binary Non-Autistic females" | "non-binary Non-Autistic females" | "non-binary Autistic adults"> and the XXst/nd/rd/th percentile when compared to <"Autistic adults" | "Autistic females" | "Autistic females" | "non-binary Non-Autistic females" | "non-binary Autistic adults" | "Autistic females" | "non-binary Autistic adults"> and the XXst/nd/rd/th percentile when compared to <"Autistic adults" | "Autistic females" | "Autistic females" | "non-binary Autistic adults" | "Autistic females" | "non-binary Autistic adults"> and the XXst/nd/rd/th percentile when compared to <"Autistic adults" | "Autistic females" | "non-binary Autistic adults" | those of others or suppressing aspects of individuality. While these strategies may foster social acceptance, they can also contribute to a reduced sense of personal authenticity and increased social fatigue. The items with the highest ratings were:"



For repeated/follow-up assessments, the text maintains this structure but adds information about changes since the initial assessment. This includes the magnitude and direction of change in scores, interpreted against a calculated Minimally Important Difference (MID) threshold that defines clinically meaningful change.

"Since the respondent was first assessed on [Date], their level of camouflaging has <"not changed significantly" | "significantly decreased" | "significantly increased">, with a X point < "change" | "decrease" | "increase"> in the score. A meaningful change in camouflaging is defined as a change in the score of X or more points based on a Minimally Important Difference (MID) calculation."

The interpretive text is adjusted based on appropriate normative data for the client's gender, ensuring that comparisons are made against relevant reference groups. This adaptability in score interpretation reflects the understanding that camouflaging behaviours may manifest differently across gender identities.



Developer

Hull, L., Mandy, W., Lai, M. C., Baron-Cohen, S., Allison, C., Smith, P., & Petrides, K. V. (2019). Development and validation of the Camouflaging Autistic Traits Questionnaire (CAT-Q). Journal of Autism and Developmental Disorders, 49(3), 819-833. <u>https://doi.org/10.1007/s10803-018-3792-6</u>

References

Cook, J., Hull, L., Crane, L., & Mandy, W. (2021). Camouflaging in autism: A systematic review. Clinical Psychology Review, 89, 102080. <u>https://doi.org/10.1016/j.cpr.2021.102080</u>

Cook, J., Hull, L., & Mandy, W. (2024). Improving diagnostic procedures in autism for girls and women: A narrative review. Neuropsychiatric Disease and Treatment, 20, 505-514. <u>https://doi.org/10.2147/NDT.S372723</u>

Fombonne E. (2020). Camouflage and autism. Journal of Child Psychology and Psychiatry, and Allied Disciplines, 61(7), 735-738. <u>https://doi.org/10.1111/jcpp.13296</u>

Hull, L., Mandy, W., Lai, M. C., Baron-Cohen, S., Allison, C., Smith, P., & Petrides, K. V. (2019). Development and validation of the Camouflaging Autistic Traits Questionnaire (CAT-Q). Journal of Autism and Developmental Disorders, 49(3), 819-833. <u>https://doi.org/10.1007/s10803-018-3792-6</u>

Hull, L., Lai, M. C., Baron-Cohen, S., Allison, C., Smith, P., Petrides, K. V., & Mandy, W. (2020). Gender differences in self-reported camouflaging in autistic and non-autistic adults. Autism, 24(2), 352-363. <u>https://doi.org/10.1177/1362361319864804</u>

Lai, M. C., Hull, L., Mandy, W., Chakrabarti, B., Nordahl, C. W., Lombardo, M. V., Ameis, S. H., Szatmari, P., Baron-Cohen, S., Happé, F., & Livingston, L. A. (2021). Commentary: 'Camouflaging' in autistic people – reflection on Fombonne (2020). Journal of Child Psychology and Psychiatry, and Allied Disciplines, 62(8). https://doi.org/10.1111/jcpp.13344



Assessment Questions



Camouflaging Autistic Traits Questionnaire (CAT-Q)

Instructions:

Please read each statement below and choose the answer that best fits your experiences during social interactions.

		Strongly Disagree	Disagree	Somewha t Disagree	Neither Agree nor Disagree	Somewha t Agree	Agree	Strongly Agree
1	When I am interacting with someone, I deliberately copy their body language or facial expressions.	1	2	3	4	5	6	7
2	I monitor my body language or facial expressions so that I appear relaxed.	1	2	3	4	5	6	7
3	I rarely feel the need to put on an act in order to get through a social situation.	7	6	5	4	3	2	1
4	I have developed a script to follow in social situations.	1	2	3	4	5	6	7
5	I will repeat phrases that I have heard others say in the exact same way that I first heard them.	1	2	3	4	5	6	7
6	I adjust my body language or facial expressions so that I appear interested by the person I am interacting with.	1	2	3	4	5	6	7
7	In social situations, I feel like I'm 'performing' rather than being myself.	1	2	3	4	5	6	7
8	In my own social interactions, I use behaviours that I have learned from watching other people interacting.	1	2	3	4	5	6	7
9	I always think about the impression I make on other people.	1	2	3	4	5	6	7
10	I need the support of other people in order to socialise.	1	2	3	4	5	6	7
11	I practice my facial expressions and body language to make sure they look natural.	1	2	3	4	5	6	7
12	I don't feel the need to make eye contact with other people if I don't want to.	7	6	5	4	3	2	1
13	I have to force myself to interact with people when I am in social situations.	1	2	3	4	5	6	7
14	I have tried to improve my understanding of social skills by watching other people.	1	2	3	4	5	6	7
15	I monitor my body language or facial expressions so that I appear interested by the person I am interacting with.	1	2	3	4	5	6	7
16	When in social situations, I try to find ways to avoid interacting with others.	1	2	3	4	5	6	7

Page 1 of 2





NovoPsych

		Strongly Disagree	Disagree	Somewha t Disagree	Neither Agree nor Disagree	Somewha t Agree	Agree	Strongly Agree
17	I have researched the rules of social interactions to improve my own social skills.	1	2	3	4	5	6	7
18	I am always aware of the impression I make on other people.	1	2	3	4	5	6	7
19	I feel free to be myself when I am with other people.	7	6	5	4	3	2	1
20	I learn how people use their bodies and faces to interact by watching television or films, or by reading fiction.	1	2	3	4	5	6	7
21	I adjust my body language or facial expressions so that I appear relaxed.	1	2	3	4	5	6	7
22	When talking to other people, I feel like the conversation flows naturally.	7	6	5	4	3	2	1
23	I have spent time learning social skills from television shows and films, and try to use these in my interactions.	1	2	3	4	5	6	7
24	In social interactions, I do not pay attention to what my face or body are doing.	7	6	5	4	3	2	1
25	In social situations, I feel like I am pretending to be 'normal'.	1	2	3	4	5	6	7

Developer Reference:

Hull, L., Mandy, W., Lai, M. C., Baron-Cohen, S., Allison, C., Smith, P., & Petrides, K. V. (2019). Development and validation of the Camouflaging Autistic Traits Questionnaire (CAT-Q). Journal of Autism and Developmental Disorders, 49(3), 819-833. https://doi.org/10.1007/s10803-018-3792-6

Administer Now

Page 2 of 2



Sample Results

Assessment powered by NovoPsych	
------------------------------------	--

Camouflaging Autistic Traits Questionnaire (CAT-Q)										
Client Nan	e Generic Client		Date administere	d 29 Nov 2024						
Date of birth (ag	e) 1 Jan 1990 (34)		Time take	n 3 min 52s						
Assess	or Dr Simon Baker									
CAT-Q Results										
		Score	Percentile	Descriptor						
	Total (25-175)	123	88	High						
	Compensation (9-63)	42	90	High						
	Masking (8-56)	40	72	Moderate						
	Assimilation (8-56)	41	85	High						











	Client Name Generic Client
nter	pretation (cont.)
	coping strategies to mitigate the challenges associated with camouflaging.
	 The client's responses on the Compensation subscale indicate that they engage in compensation strategies at a level that falls within the High range when compared to Non-Autistic adults. Their score is on the 90th percentile when compared to Non-Autistic females and the 51st percentile when compared to Autistic females. This suggests that the respondent uses strategies to actively overcome social challenges, such as imitating neurotypical social behaviours or learning scripts for social interactions. These strategies may help them navigate social environments but could also be cognitively demanding and contribute to emotional exhaustion over time. The items with the highest ratings were: 1. When I am interacting with someone, I deliberately copy their body language or facial expressions. (Somewhat Agree) 5. I will repeat phrases that I have heard others say in the exact same way that I first heard them. (Somewhat Agree) 8. In my own social interactions, I use behaviours that I have learned from watching other people interacting. (Somewhat Agree) 11. I practice my facial expressions and body language to make sure they look natural. (Somewhat Agree)
	 The client's responses on the Assimilation subscale indicate that they engage in assimilation strategies at a level that falls within the High range when compared to Non-Autistic adults. Their score is on the 85th percentile when compared to Non-Autistic females and the 32nd percentile when compared to Autistic females. This likely reflects substantial efforts to fit into social situations, potentially by altering behaviours to align with those of others or suppressing aspects of individuality. While these strategies may foster social acceptance, they can also contribute to a reduced sense of personal authenticity and increased social fatigue. The items with the highest ratings were: 25. In social situations, I feel like I am pretending to be 'normal'. (Strongly Agree) 19. I feel free to be myself when I am with other people. (R) (Disagree) 22. When talking to other people, I feel like the conversation flows naturally. (R) (Disagree) 3. I rarely feel the need to put on an act in order to get through a social situation. (R) (Somewhat Disagree)
.	ing and interpretation information
Scor	For comprehensive information on the CAT O, see here
	The Camouflaging Autistic Traits Questionnaire (CAT-Q) provides scores for overall camouflaging as well as three subscales, with higher scores indicating greater use of camouflaging strategies.
	- Compensation (Items 1, 4, 5, 8, 11, 14, 17, 20, and 23). Strategies for overcoming social challenges, such as using learned social scripts or imitating behaviours.
	- Masking (Items 2, 6, 9, 12, 15, 18, 21, and 24). Efforts to hide or suppress Autistic traits to appear more neurotypical.
	- Assimilation (Items 3, 7, 10, 13, 16, 19, 22, and 25). Attempts to fit into social situations, such



Cli	ent Name Generic Client
Scoring	g and Interpretation Information (cont.)
	The respondent's total and subscale scores are expressed as percentiles based on normative data for Non-Autistic adults of the same gender (e.g., male, female, or non-binary) (Hull et al., 2020). The percentiles contextualise the respondent's scores relative to the typical scores of Non-Autistic adults. For example, the 50th percentile represents typical levels of camouflaging among Non-Autistic adults, while scores on the 90th percentile fall within the top 10% when compared to Non-Autistic adults.
	The scoring approach uses qualitative descriptors to categorise CAT-Q scores. Each qualitative descriptor corresponds to a specific range of scores. The ranges for these descriptors were determined using percentiles derived from a Non-Autistic sample of 472 male, female, and non-binary adults obtained from a study by Hull and colleagues (2020). The ranges for the total CAT-Q score are as follows.
	- Extremely Low (total score of 25 to 51) (less than or equal to the 5th percentile)
	- Moderate (total score of 113 to 136) (percentile between 25 and 24)
	- Extremely High (total score of 137 to 175) (greater than or equal to the 95th percentile)
	Graphs comparing the respondent's total and subscale scores to the normative distribution of scores among Non-Autistic and Autistic individuals are presented, with shaded areas corresponding to scores between the 25th and 75th percentile. This graph contextualises the respondent's scores relative to typical levels of camouflaging among Non-Autistic and Autistic adults.
	If administered more than once, a meaningful change in camouflaging is defined as a change of 13 or more points in the total score based on a Minimally Important Difference (MID) calculation.
	It is recommended to interpret CAT-Q scores in light of the following considerations. - Firstly, sex and gender differences exist in camouflaging, with Autistic females and non-binary and gender-diverse Autistic people typically scoring higher than Autistic males (Cook et al., 2021; Hull et al., 2020). Considering camouflaging is particularly important when assessing Autism in these groups, as greater use of camouflaging strategies may result in lower scores on measures of autistic traits (Cook et al., 2021, 2024). - Secondly, while camouflaging strategies are often associated with Autism — particularly among females and non-binary and gender-diverse individuals — they are not an inherent feature of, or specific to, Autism (Lai et al., 2020). Camouflaging represents strategies used by both Autistic and Non-Autistic people to adapt to and navigate social environments. The CAT-Q does not fully differentiate camouflaging strategies used by Autistic people from similar strategies used by Non
	Autistic people. - Thirdly, some items on the CAT-Q may conflate autistic camouflaging with similar strategies arising from social anxiety or other mental health challenges (Fombonne, 2020). High scores may therefore reflect efforts to manage social anxiety or neurodivergence more broadly (e.g., ADHD).
	- Lastly, greater use of camouflaging is associated with increased mental health challenges among Autistic adults (Cook et al., 2021). Although the direction of this relationship is not yet understood, it underscores the importance of considering mental health challenges when interpreting CAT-Q scores.



Assessment powered by NovoPsych

Client Name Generic Client

Client Responses

		Strongly Disagree	Disagree	Somewh at Disagree	Neither Agree nor Disagree	Somewh at Agree	Agree	Strongly Agree
1	When I am interacting with someone, I deliberately copy their body language or facial expressions.	1	2	3	4	5	6	7
2	I monitor my body language or facial expressions so that I appear relaxed.	1	2	3	4	5	6	7
3	I rarely feel the need to put on an act in order to get through a social situation.	7	6	5	4	3	2	1
4	I have developed a script to follow in social situations.	1	2	3	4	5	6	7
5	I will repeat phrases that I have heard others say in the exact same way that I first heard them.	1	2	3	4	5	6	7
6	I adjust my body language or facial expressions so that I appear interested by the person I am interacting with.	1	2	3	4	5	6	7
7	In social situations, I feel like I'm 'performing' rather than being myself.	1	2	3	4	5	6	7
8	In my own social interactions, I use behaviours that I have learned from watching other people interacting.	1	2	3	4	5	6	7
9	I always think about the impression I make on other people.	1	2	3	4	5	6	7
10	I need the support of other people in order to socialise.	1	2	3	4	5	6	7
11	I practice my facial expressions and body language to make sure they look natural.	1	2	3	4	5	6	7
12	I don't feel the need to make eye contact with other people if I don't want to.	7	6	5	4	3	2	1
13	I have to force myself to interact with people when I am in social situations.	1	2	3	4	5	6	7
14	I have tried to improve my understanding of social skills by watching other people.	1	2	3	4	5	6	7
15	I monitor my body language or facial expressions so that I appear interested by the person I am interacting with.	1	2	3	4	5	6	7
16	When in social situations, I try to find ways to avoid interacting with others.	1	2	3	4	5	6	7
17	I have researched the rules of social interactions to improve my own social skills.	1	2	3	4	5	6	7
18	I am always aware of the impression I make on other people.	1	2	3	4	5	6	7
19	I feel free to be myself when I am with other people.	7	6	5	4	3	2	1

NovoPsych

Page 5 of 6





Client Name Generic Client

Client Responses (cont.)

		Strongly Disagree	Disagree	Somewh at Disagree	Neither Agree nor Disagree	Somewh at Agree	Agree	Strongly Agree	
20	I learn how people use their bodies and faces to interact by watching television or films, or by reading fiction.	1	2	3	4	5	6	7	
21	I adjust my body language or facial expressions so that I appear relaxed.	1	2	3	4	5	6	7	
22	When talking to other people, I feel like the conversation flows naturally.	7	6	5	4	3	2	1	
23	I have spent time learning social skills from television shows and films, and try to use these in my interactions.	1	2	3	4	5	6	7	
24	In social interactions, I do not pay attention to what my face or body are doing.	7	6	5	4	3	2	1	
25	In social situations, I feel like I am pretending to be 'normal'.	1	2	3	4	5	6	7	

Assessment powered by NovoPsych

Page 6 of 6