

University of Washington Resilience Scale – User Guide

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UNIVERSITY OF WASHINGTON RESILIENCE SCALE (UWRS) © USER GUIDE

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Permission to use the UWRS instruments does not grant permission to modify the wording or layout of items, to distribute to others in any form, or to translate items into any other language. Permission to modify, distribute, or translate must be requested in writing from the study principal investigator, Dagmar Amtmann, PhD at uwcorr@uw.edu.

Questions about the UWRS Instruments

If you have questions about the UWRS instruments or their use in clinical care or research, please contact the University of Washington Center on Outcomes Research in Rehabilitation (UWCORR).

Mailing Address	Phone & Email
UWCORR UW Department of Rehabilitation Medicine Box 354237 Seattle, WA 98195	Phone: (800) 504-0564 Fax : (206) 685-9224 Email: uwcorr@uw.edu

Overview of the UWRS

Construct:

The UWRS is intended measure an individual's perceived resilience. The construct was defined through a series of meetings with researchers and clinical psychologists with expertise in positive psychology in rehabilitation populations.

The panel defined resilience as the capacity to bounce back from and/or maintain function in the face of adversity. The panel felt the following points were also important regarding the definition of resilience: (1) Resilience is trait-like, meaning that it is generally stable across situations, but demonstrates malleability; (2) Resilience is always present, but is activated by the presence of adversity; (3) Resilient responses can include both internal states such as one's outlook as well as observable behaviors; (4) Resilience can exist in the presence of a range of severity of stressors, including acute/major (e.g., trauma), acute/minor (e.g. goal setback), chronic/minor (e.g. daily hassles) and chronic/major (e.g. stigma, disability); (5) Resilience may involve a return to pre-stressor baseline of function (i.e., "bouncing back") or maintenance of baseline function despite the presence of a stressor; (6) Resilience may manifest differently based on the type and severity of stressor; (7) Resilience is related to, but distinct from related constructs including optimism, hardiness, self-efficacy, and post traumatic growth.

Intended Application and Population:

The UWRS was developed in a sample of adults living with long-term physical disabilities and a community sample generalizable to the US population. The short forms require less than 5 minutes to administer. The UWRS was developed in English, and has not yet been translated into other languages. It was developed to be applicable to anybody, but particularly relevant to measuring resilience in people with chronic health problems or disability.

Instructions for using the UW Resilience Scale

The UWRS is an Item Response Theory (IRT) based instrument intended for measuring resilience in adults. The UWRS is a publicly available, psychometrically sound item bank for measuring resilience with a focus on resilience in people with chronic medical conditions or disability. It was developed with persons (N=1457) with multiple sclerosis (MS), spinal cord injury (SCI), post-polio syndrome (PPS), and muscular dystrophy (MD). The bank was also administered to a general population sample (N=300) matched to the US census on gender, age, race, and ethnicity. Scores were re-centered such that a mean of 50 with a standard deviation of 10 represents the mean in the general population sample. Focus groups and cognitive interviews were conducted in the process of development of the item bank to ensure that the instrument is both person-centered and clinically meaningful. The item bank was calibrated using IRT and item parameters for all items are available upon request.

Choosing a UWRS instrument:

Below you will find clinician or researcher versions of the full 28 item bank along with an 8-item and 4-item short form. For lowest respondent burden and most reliable score choose computerized adaptive testing (CAT). If CAT is not available choose the 8 item short form. If the 8 item short form is too long choose the 4 item short form, but understand the limitations of the score based on 4 items.

Versions of the short forms to be administered to participants or patients are available on the UWRS website as standalone versions (e.g. <https://uwcorr.washington.edu/measures/uw-resil-sf8.pdf>). For clinicians and researchers, versions with individual item scoring indicated can be found in this guide below. It is best practice **not to administer the version that shows scoring to the participants**. The full bank, that is all 28 items, is not intended to be administered for any purposes. The full item bank is intended for CAT which uses an algorithm to select items based on responses to previous items. However, we provide the scoring table for the full version as well in case it is of interest to researchers.

The 8-item short form can be administered by computer or on paper. It is recommended for use in situations where administration of CAT is not possible. The correlation between scores on the 8-item short form and on the full bank is 0.97. The reliability of the 8-item form is very high (>0.9) between scores of 22 and 64 and can be used with confidence for individual comparisons within this range.

The 4-item scale is intended for use in situations where the 8-item short form or CAT cannot be administered. The correlation between the 4-item form and the full bank and 8-item form is

0.94 and 0.97 respectively. Scores based on the 4-items have high reliability only between 26 and 46 and 55 and 59 and cannot be used for individual comparisons outside of these ranges. The reliability of the 4-item short form is greater than 0.8 for scores between 25 and 65 points.

Scoring

Individual items are summed and the total sum is then transformed to an IRT-based T-score score using the scoring tables provided. **The sum score based on adding corresponding codes for each item should not be used for any purposes.** All reliability and validation information relates to the IRT based T-scores. Raw scores/codes for each item range from 1 to 5 as indicated in the investigator/clinician versions below. Only complete responses with no missing data can be scored using the provided scoring tables. However, information on scoring with missing data is also provided under “Scoring with Missing Data” below. Instructions for scoring each individual instrument are outlined here:

Full Item Bank (28 items): In the unlikely cases where all 28 items are administered, 28 items are summed first using the values/codes provided for each response available in the clinician/researcher version of the form. Please note that three items are reverse scored compared to the others and are specifically marked as such in the researcher/clinician version. Summing the codes/raw scores across the 28 items will give a total raw score that ranges from 28-140. The raw sum score is **not** a valid score and should not be used for any purposes other than looking up the IRT-based T-score. Only UWRS T-scores should be reported and used in analyses. Raw total scores should then be transformed to the IRT-based total T-score using the appropriate concordance table provided at the end of this document. As an example, a participant with a summary score of 80 would have a T-score of 40.2.

8 Item Short Form: The 8 items are summed as a first step using the values provided for each response available in the clinician/researcher version of the form. This will give a total score that ranges from 8 to 40. This is **not** a valid score and should not be used for any other purpose than looking up the IRT-based T-score. After summing the 8 items, the scores have to be transformed to the IRT-based score on a T-scale metric using the appropriate concordance table provided at the end of this document. For example, a participant with a summary score of 18 would have a T-score of 36.1.

4 Item Short Form: The 4 items are summed as a first step using the values provided for each response available in the clinician/researcher version of the form. This will give a total score

that ranges from 4-20. After summing the 4 items, raw total scores should be transformed to a t-scale metric using the concordance table provided at the end of this document. For example, a participant with a summary score of 6 would have a T-score of 29.5.

Scoring with Missing Data: The attached scoring table for the full item bank should only be used for complete data. For missing data use IRT software if possible. The 8-item short form scores can be approximated if a participant skips up to two questions. If more than 2 items are missing a score cannot be generated. On the 4-item short form, scores cannot be generated if any of the 4-items are missing. To score participants with missing data on the 8-item form, first check how many items were answered and confirm that 6 items were answered before proceeding. Next, sum the response scores from the items that were answered. Multiply this sum by 8 (the number of items in the short form). Finally, divide by the number of items that were answered. For example, if a respondent answered 6 of 8 questions and answered all items with the second lowest response option (2), you would sum all responses (12), multiply by the number of items in the short form (8) and divide by the number of items that were answered (6). Here $(12 \times 8) / 6 = 16$. If the result is a fraction, round up to the nearest whole number. This is a pro-rated raw score. Again, the formula is:

$$\text{(Raw sum x 8)/(Number of items that were actually answered) = pro-rated score}$$

Finally, locate the applicable 8 item score conversion table below and use this table to translate the pro-rated score into a T-score for the participant just as you would for any participant who did not have missing responses.

Interpreting UWRS Scores

The UWRS T-score is a standardized score with a mean of 50 and a standard deviation (SD) of 10. A higher T-score represents a higher level of resilience. T-scores are comparable across all UWRS instruments. This means that a score obtained by a respondent using the 6-item short form may be compared directly to a score obtained by a respondent using the full bank or a CAT administration of the scale with the understanding that the score based on CAT is more reliable (i.e., accurate) than the score based on the short form. T-scores of 50 represent the mean score of the general US population. Based on a normal distribution of UWRS T-scores, 50% of individuals in the general population are expected to have a T-score of 50 or higher. A respondent that receives a T-score of 60 has reported a level of resilience approximately 1 standard deviation above the mean of the general population, and that suggested resilience level higher than 84% of individuals in the general population sample.

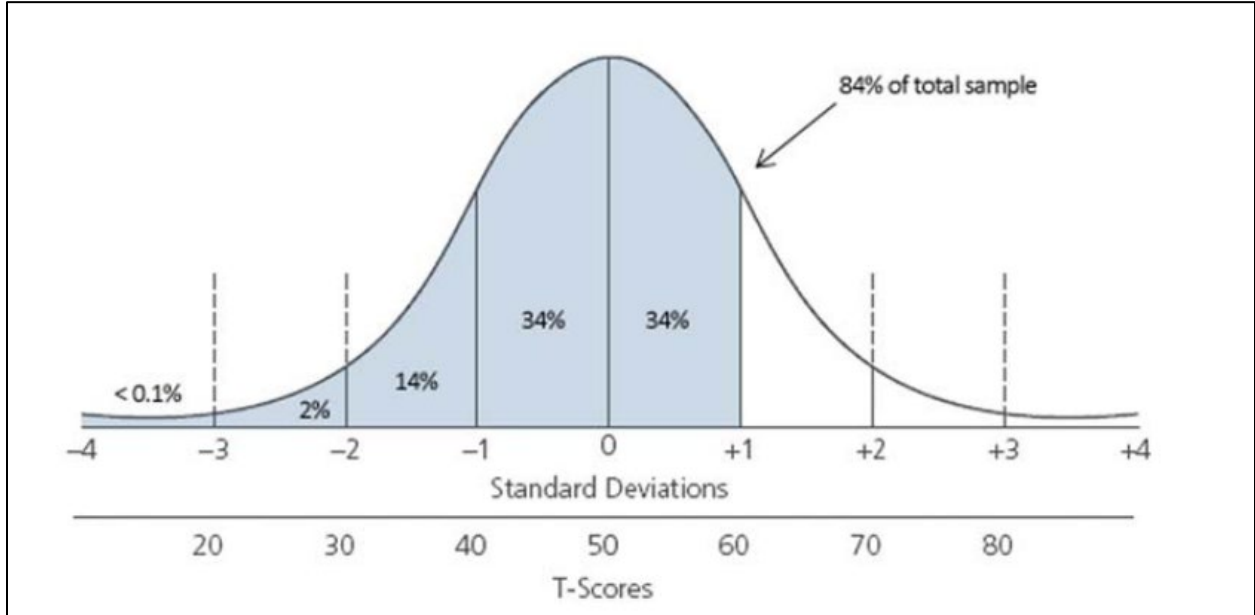


Figure 1 – A UWRs T-score of 60 indicates that approximately 84 percent of persons in the general population sample reported lower resilience, as reflected by the shaded area.

UW Resilience Scale Investigator or Clinician Forms

Versions 1.0 – English

University of Washington Resilience Scale Short Form – 8-Item V.1.0 ©
(Investigator/Clinician Version)

Please rate how well each statement describes you right now.

		Not at all	A little bit	Some what	Quite a bit	Very much
uwresil4	I maintain a positive outlook even in bad circumstances.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil10	When something happens that makes me feel stressed, I usually calm down quickly.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil36	When I experience a set-back, I keep moving forward.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil42	Although I feel bad sometimes, I usually bounce right back.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil49	During stressful times, I am usually calm and relaxed.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil68	I do what is important to me, even when stressed.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil71	When something stressful happens, I keep going.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil74	When things go wrong in my life, I can pick myself up and start again.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

University of Washington Resilience Scale Short Form – 4 Item V.1.0 ©
(Investigator/Clinician Version)

Please rate how well each statement describes you right now.

		Not at all	A little bit	Some what	Quite a bit	Very much
uwresil4	I maintain a positive outlook even in bad circumstances.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil10	When something happens that makes me feel stressed, I usually calm down quickly.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil71	When something stressful happens, I keep going.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil74	When things go wrong in my life, I can pick myself up and start again.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

University of Washington Resilience Scale Item Bank V.1.0 ©
(Investigator/Clinician Version)

Please rate how well each statement describes you right now.

Item #		Not at all	A little bit	Some what	Quite a bit	Very much
uwresil16	When I get stressed out, I'm usually able to get back to my old self in no time.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil55	I stay calm no matter what is thrown at me.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil76	People who know me say I can maintain a level head when things get stressful.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
Uwresil4	I maintain a positive outlook even in bad circumstances.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil68	I do what is important to me, even when stressed.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil82	I move forward despite adversity.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil9	I can stay focused on my goals even when bad things happen in my life.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil10	When something happens that makes me feel stressed, I usually calm down quickly.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil77	I am easily thrown off by everyday hassles.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
uwresil43	When something really bad happens to me, I usually feel bad for a long time.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
uwresil15	When things get stressful, I keep focused on my values and goals.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil36	When I experience a set-back, I keep moving forward.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

uwresil45	It does not take me long to feel fine again after feeling stressed.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil37	Even when I experience a set-back, I keep moving toward my goals.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil74	When things go wrong in my life, I can pick myself up and start again.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil22	When faced with challenges, I keep working toward a solution.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil12	When bad things happen to me, I bounce back quickly.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil72	I get back to my priorities after stressful events.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil32	I maintain a clear head when something stressful happens.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil35	I keep things in perspective when something stressful happens.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil79	I tend to give up easily when I face set-backs.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
uwresil71	When something stressful happens, I keep going.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil38	When I experience a set-back, I know I am able to get back to my usual self.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil42	Although I feel bad sometimes, I usually bounce right back.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil81	I stay focused on things that are important to me while under pressure.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil49	During stressful times, I am usually calm and relaxed.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil61	I bounce back when difficulties come my way.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
uwresil69	I take care of what is important to me when facing stress or adversity.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5

Summary Score to T-score Conversion Tables

Full 28 Item Bank

Summary Score	T-score	Summary Score	T-score	Summary Score	T-score	Summary Score	T-score
28	12.8	60	32.9	92	44.6	124	59.4
29	14.6	61	33.3	93	45	125	59.9
30	16.1	62	33.6	94	45.4	126	60.4
31	17.4	63	34	95	45.8	127	60.9
32	18.5	64	34.4	96	46.2	128	61.5
33	19.4	65	34.8	97	46.6	129	62
34	20.3	66	35.1	98	47	130	62.6
35	21.1	67	35.5	99	47.4	131	63.3
36	21.9	68	35.9	100	47.8	132	64
37	22.5	69	36.2	101	48.3	133	64.8
38	23.1	70	36.6	102	48.7	134	65.7
39	23.7	71	36.9	103	49.2	135	66.6
40	24.3	72	37.3	104	49.6	136	67.8
41	24.8	73	37.7	105	50.1	137	69.1
42	25.3	74	38	106	50.5	138	70.8
43	25.8	75	38.4	107	51	139	73
44	26.3	76	38.7	108	51.5	140	76.1
45	26.7	77	39.1	109	52		
46	27.2	78	39.5	110	52.5		
47	27.6	79	39.8	111	53		
48	28	80	40.2	112	53.5		
49	28.5	81	40.5	113	54		
50	28.9	82	40.9	114	54.5		
51	29.3	83	41.3	115	55		
52	29.7	84	41.6	116	55.4		
53	30.1	85	42	117	55.9		
54	30.5	86	42.4	118	56.4		
55	30.9	87	42.7	119	56.9		
56	31.3	88	43.1	120	57.4		
57	31.7	89	43.5	121	57.9		
58	32.1	90	43.9	122	58.4		
59	32.5	91	44.2	123	58.9		

8 Item Short Form Scale - Summary Score to T-score Conversion Table

Summary Score	T-score
8	19.4
9	22.4
10	24.6
11	26.4
12	28.1
13	29.6
14	31.0
15	32.3
16	33.6
17	34.8
18	36.1
19	37.3
20	38.5
21	39.6
22	40.8
23	41.9
24	43.1
25	44.3
26	45.6
27	46.9
28	48.3
29	49.6
30	51.1
31	52.5
32	54.0
33	55.6
34	57.2
35	58.8
36	60.5
37	62.4
38	64.6
39	67.4
40	71.6

4 Item Short Form Scale - Summary Score to T-score Conversion Table

Summary Score	T-score
4	22.4
5	26.5
6	29.5
7	32.0
8	34.3
9	36.5
10	38.7
11	40.8
12	43.0
13	45.4
14	47.9
15	50.4
16	53.0
17	55.9
18	59.2
19	62.8
20	68.0