



The Rugged Resilience Measure (RRM) User Manual

Version 1.1 | 2022



Table of Contents

Introduction.....	3
Overview of the RRM.....	3
Development of the RRM.....	4
Understanding resilience.....	5
Permissions and access.....	7
Adapting and translating the RRM.....	8
Translations.....	8
Adaptations.....	8
Administering the RRM.....	9
Scoring and interpreting.....	10
Understanding and interpreting scores.....	11
Combing with other measures of resilience.....	12
Data analysis service.....	12
Validity and reliability of the RRM.....	12
Sharing your research.....	15
Services and products we offer.....	16
References.....	17
Appendix A – Ethical protocol.....	18

1. Introduction

This manual is intended to give prospective users of the Rugged Resilience Measure (RRM) more information about the tool.

It contains information about the origins of the measure, how it can be contextualized, administered, scored, and more.

We recommend users review this information and the FAQs on the website prior to using the measure.

To cite this manual, please use:

Resilience Research Centre. (2022). *RRM user manual v1.1*. Halifax, NS: Resilience Research Centre, Dalhousie University. Retrieved from <http://www.resilienceresearch.org>

2. Overview of the RRM

The Rugged Resilience Measure (RRM) is a brief measure of psychological or 'internal' resilience. It draws on essential qualities associated with resilience that reside within each of us to give a sense of how 'rugged' a person is, and therefore how likely we are to cope with adversity and significant stressors.

It has been tested with individuals aged 16+ years but may be suitable for younger individuals depending on their reading ability and comprehension.

By default, the measure is scored on a 5-point scale. All items are positively worded and therefore scoring involves just a simple summing of responses.

Item focus

R1 Self-belief	R6 Optimism
R2 Adapting to challenging situations	R7 Emotional self-regulation
R3 Problem solving	R8 Pride in achievements
R4 Perseverance	R9 Willingness to take on challenges
R5 Ability to cope with competing demands	R10 Meaning making

When you use the measure, we ask you to cite the original source. The main source for the RRM is:

- Jefferies, P., Vanstone, R. & Ungar, M. (2022). The Rugged Resilience Measure: development and preliminary validation of a brief measure of personal resilience. *Applied Research Quality Life*, 17, 985-1000. <https://doi.org/10.1007/s11482-021-09953-3>.

Further information on scoring and other aspects of the measure is given later.

3. Development of the RRM

The RRM was developed when researchers at the Resilience Research Centre discovered there was no brief measure of resilience which reflected internal strengths. Although there are now many measures of resilience, none appeared to capture these ‘rugged’ qualities and provide a concise measure of internal or psychological resilience.

- For instance, the Brief Resilience Scale (BRS) is concise, but measures a general perception of an individual’s ability to ‘bounce back’ from hardship, which is very general and risks varying subjective interpretations of what bouncing back may look like or what hardships should be considered (this also applies to the CD-RISC-2).
- The popular CD-RISC-25 measures the strength of various protective factors and is therefore more aligned with current perspectives of resilience as a process. However, it includes both internal and external factors and combines these to also produce a general resilience score.
- Then there are various lengthy measures or those that may not work well outside the specific group they were developed with (e.g., the Resilience Scale [RS], the Scale of Protective Factors [SPF-24]).
- Finally, there are brief measures like the Resilience Evaluation Scale and the CD-RISC-10, but these include general statements like “I am resilient” (RES) or “I tend to bounce back...” (CD-RISC-10) among assessment of protective factors, thereby confusing their focus.
- For more, see the article by Jefferies, Vanstone, and Ungar (2022).

Therefore, using the guidelines for measure development, we set out to develop a novel measure, which would be succinct and focused on internal protective factors. This process resulted in the 10-item RRM, which asks individuals to rate themselves on 10 qualities that are associated with resilience.

You can read more about the development of the measure in:

- Jefferies, P., Vanstone, R. & Ungar, M. (2022). The Rugged Resilience Measure: development and preliminary validation of a brief measure of personal resilience. *Applied Research Quality Life*, 17, 985-1000. <https://doi.org/10.1007/s11482-021-09953-3>.

4. Understanding resilience

Most commonly, the term resilience has come to mean an individual's ability to overcome adversity and continue his or her normal development or functioning. However, the RRC uses a more ecological and culturally sensitive definition of resilience. Dr. Michael Ungar, founder and Director of the RRC, has suggested that resilience is better understood as follows:

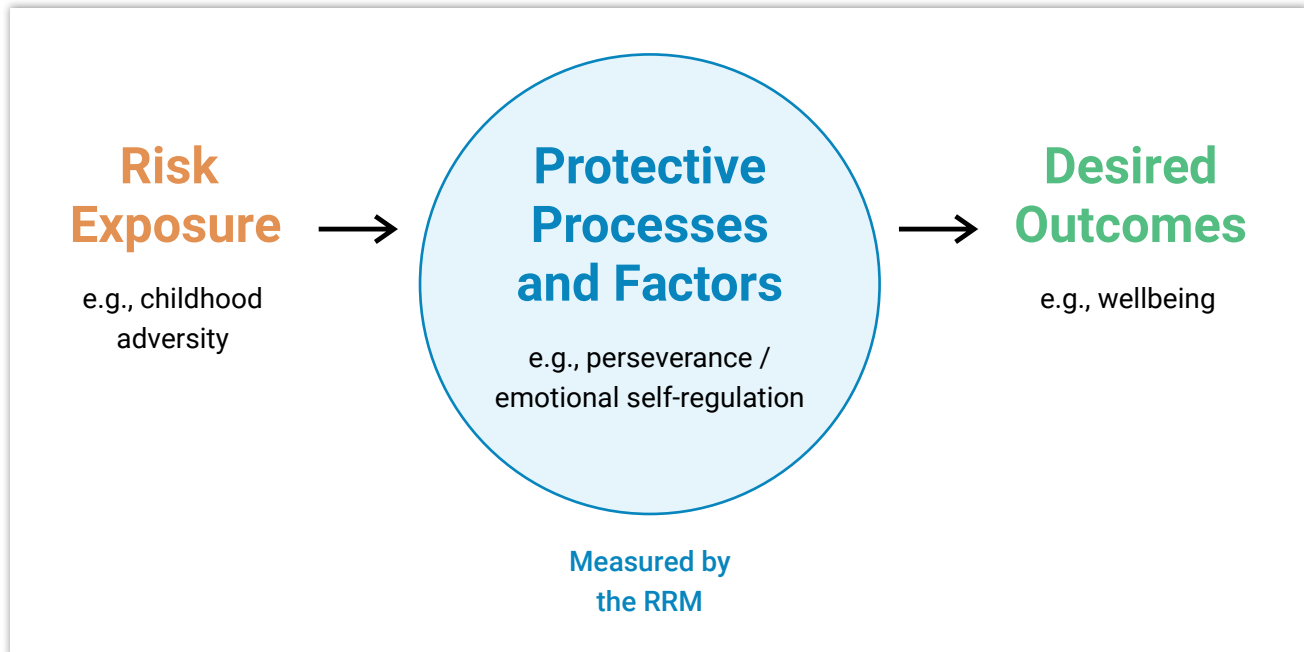
"In the context of exposure to significant adversity, resilience is both the capacity of individuals to navigate their way to the psychological, social, cultural, and physical resources that sustain their well-being, and their capacity individually and collectively to negotiate for these resources to be provided in culturally meaningful ways."

(see Ungar, 2008, 2011)

Understood this way, resilience requires individuals to have the capacity to access supportive resources that bolster well-being, while also emphasizing that it is up to families, communities, and governments to provide these resources in ways individuals value. In this sense, resilience is the result of both successful navigation to resources and negotiation for resources to be provided in meaningful ways.

The RRM is a measure of psychological resources that help individuals to navigate to and negotiate for these important resources in the contexts they live in. In this sense, it is a measure of the protective factors that reside within individuals, which enable them to manage or overcome many of the adversities they encounter.

Diagram on following page...



You can read more about resilience from this perspective in the following:

- Ungar, M. (2008). Resilience across cultures. *British Journal of Social Work*, 38(2), 218-235. <https://doi.org/10.1093/bjsw/bcl343>.
- Ungar, M. (2011). The social ecology of resilience: Addressing contextual and cultural ambiguity of a nascent construct. *American Journal of Orthopsychiatry*, 81(1), 1-17. <https://doi.org/10.1111/j.1939-0025.2010.01067.x>.
- Ungar, M. (2015). Varied patterns of family resilience in challenging contexts. *Journal of Marital and Family Therapy*, 42(1), 19-31. <https://doi.org/10.1111/jmft.12124>.
- Ungar, M. (2017). Which counts more? The differential impact of the environment or the differential susceptibility of the individual? *British Journal of Social Work*, 47(5), 1279–1289. <https://doi.org/10.1093/bjsw/bcw109>.
- Ungar, M. (2018). Systemic resilience: Principles and processes for a science of change in contexts of adversity. *Ecology & Society*, 23(4), 34. <https://doi.org/10.5751/ES-10385-230434>.
- Ungar, M. & Theron, L. (2020). Resilience and mental health: How multisystemic processes contribute to positive outcomes. *Lancet Psychiatry*, 7(5), 441-448. [https://doi.org/10.1016/S2215-0366\(19\)30434-1](https://doi.org/10.1016/S2215-0366(19)30434-1).

- Ungar M. (Ed.)(2021). *Multisystemic resilience: Adaptation and transformation in contexts of change*. New York: Oxford University Press. (Available open access: <https://oxford.universitypressscholarship.com/view/10.1093/oso/9780190095888.001.0001/oso-9780190095888>).

5. Permissions and access

There are no costs or special permissions required to use the RRM, provided that:

- a) Any reproduction of the measure is accompanied by the appropriate copyright information, found below;
- b) Any report or publication involving the measure is accompanied by the appropriate citation/reference, found below;
- c) The measure is not sold.

The measure is free to use for not-for-profit purposes but not for commercial purposes (i.e., it is free to use for activities like research or teaching). If you wish to use the measure for commercial purposes, please get in touch with us as licenses are available. Contact the Resilience Research Centre through email at RRC@dal.ca or phone at +1 (902) 494-8482.

To obtain the measure, you must complete the form on the Resilience Research Centre website (<https://rrm.resilienceresearch.org/access/>). Once the form is submitted, you will receive instant access to the measure. The information we collect helps us to understand the kind of projects the measure is being used in. It is retained for our records only.

Copyright for the RRM:

Copyright © 2022 by Philip Jefferies, Ph.D., Lisa McGarrigle, Ph.D., and Michael Ungar, Ph.D.

Reference for the RRM:

Jefferies, P., Vanstone, R. & Ungar, M. (2022). The Rugged Resilience Measure: development and preliminary validation of a brief measure of personal resilience. *Applied Research Quality Life*, 17, 985-1000. <https://doi.org/10.1007/s11482-021-09953-3>

6. Adapting and translating the RRM

Translations

The RRM was developed in English, but some translations of the measure are available from our website. We add new translations as we receive them.

These translations have been created by researchers who have worked with the RRC. However, each translation was done independently and, therefore, we cannot guarantee their accuracy.

You may translate the measure without permission.

If you would like to create your own translation, no special authorisation is required. We just ask that you [share your translation with us](#) so we can share it with others.

If you are considering a translation, please review the wording of the English version of each item and the conceptualisation provided in previous sections to facilitate accurate translation. We also recommend a translation and back translation process to enhance the validity of the translated measure. For information on back translation, see guides by [Brislin \(1970\)](#) and [van Ommeren and colleagues \(1999\)](#).

Adaptations

No adaptations to the content of the measure should be necessary prior to use.

This differs from our other measures (the CYRM and ARM), which are social-ecological measures of resilience. Their focus on social and environmental qualities means they often benefit from adaptation prior to use. This is a process of contextualisation where items may be revised, added, or even removed.

In contrast, the RRM focuses on internal/psychological qualities which are thought to remain generally stable around the world, and so there is no need to adapt the measure.

7. Administering the RRM

The RRM can be administered to participants in groups or individually. In groups, the measure can be read aloud but participants should respond privately to encourage truthfulness.

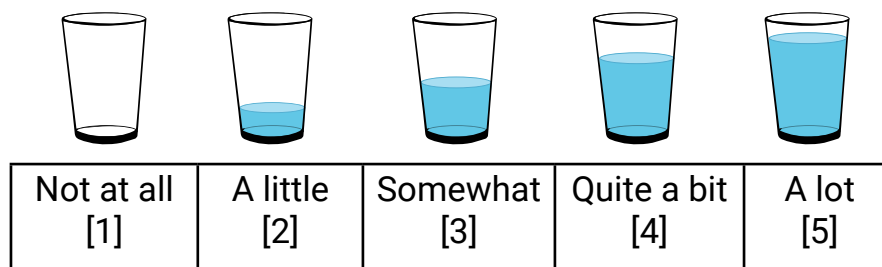
If you are sampling younger individuals or persons with comprehension challenges, we recommend you work individually with them to ensure they understand each item in the measure.

The measure takes less than 5 minutes to complete, depending on whether it is administered in the participant's native language, the age of the participant, and their comprehension ability.

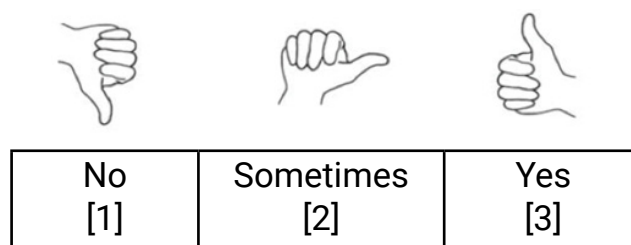
Visual scoring assistance

For younger children or those with literacy or comprehension difficulties, it may be useful to provide a pictorial scale to avoid comprehension. You can print these and share them with participants. We have included some possibilities below that may be useful:

- Panter-Brick and colleagues' (2018) glasses of water:

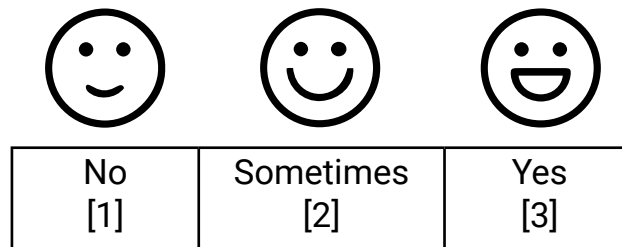
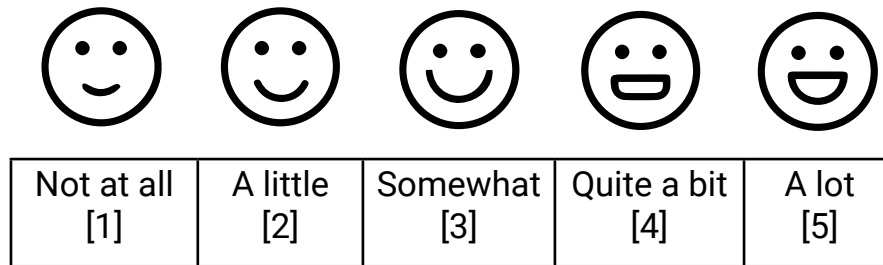


- For a substitute 3-item response scale, the thumbs up/down recommended by Erb and colleagues (2017) may be suitable:



- For younger children, we have previously recommended using smiley faces in response scales. A study by Hall and colleagues (2016) suggests that smiley faces should run from happy to very happy (rather than neutral to happy or unhappy to happy) in order for the full range of the scale to be used by children.

For example:



8. Scoring and interpreting

The items within the measure can be directly summed to gain a total score of an individual's resilience. There are no reverse-coded items and all are weighted equally.

If you are using an unmodified 5-point measure (with response options from 1-5), the minimum score is 10 and the maximum score is 50.

If a person skips or misses an item, their overall scores should not be computed, as they will be artificially lower than others who fully complete the measure. If this happens, you can discard the incomplete result or consider methods of managing missing data (e.g., <http://www.stat.columbia.edu/~gelman/arm/missing.pdf>).

We do not currently provide scoring syntax for software or a scoring tool.

Understanding and interpreting scores

Higher scores on the measure indicate characteristics associated with stronger resilience.

In any given context, there will be individuals with higher and lower levels of resilience. For this reason, we recommend comparing high scorers to low scorers and investigating potential reasons for these differences. You may wish to rank your sample by score and contrast the top half of scorers against the lower half to determine what might account for these differences.

Thresholds and cut-offs

We have received requests for cut-offs or thresholds to help users understand their scores and what score is necessary to have a “good” or “normal” level of resilience. We are currently compiling large datasets to discover typical scores.

Provisionally, we recommend the following:

- Low resilience: 10-27
- Moderate resilience: 28-41
- High resilience: 42-50

These are based on the original study by Jefferies, Vanstone, and Ungar (2022) who sampled 5,880 individuals aged 16-29 from seven different countries, where thresholds are tentatively set at ± 1 SD of the mean of the overall sample.

The same study also determined that individuals meeting the threshold for Social Anxiety Disorder (SAD) on a measure of social anxiety had RRM scores of $M=31.78$ ($SD=7.07$), while those below the threshold for SAD scored $M=35.47$ ($SD=6.99$).

Please also consider that males tend to score slightly higher on the measure than females, and there may be small differences between individuals from different countries. However, these differences tend to be modest (see Jefferies et al., 2022, for more).

As we receive more data from large datasets, we may be able to update these thresholds.

Combing with other measures of resilience

The RRM is a measure of resilience which reflects personal strengths and skills (rugged qualities). However, for a more holistic appraisal of resilience, you may wish to consider also including the Child and Youth Resilience Measure (CYRM) or Adult Resilience Measure (ARM), which are measures of social-ecological resilience that our centre also offers.

When used together, the RRM provides an appraisal of important internal protective factors, while the CYRM/ARM provides an appraisal of important external protective factors, thereby giving a richer account of the resilience of your sample.

Data analysis service

Not everyone has the time or skills to clean, explore, and analyse the data they collect. We offer a service for the management of your data. This can involve just particular tasks (e.g., data cleaning, just particular analyses, etc) or a comprehensive data analysis, leading to a finalised report of findings and recommendations.

Please get in touch with us to enquire about this. Contact the Resilience Research Centre through email at rrc@dal.ca or phone at +1 (902) 494-8482.

9. Validity and reliability of the RRM

We are in the process of gathering information about the psychometric properties of the RRM.

Currently, the study by Jefferies, Vanstone, and Ungar (2022) shared the following:

Internal reliability/consistency

Cronbach's alpha (α) = .87.

McDonald's omega (ω_h) = .83.

Rasch validation

(In preparation).

Content validity

Face validity: *From Jefferies, Vanstone, and Ungar (2022): "As part of the item development phase, we then reviewed extant measures of resilience to generate a list of potential unique factors, drawing on the subscales and relevant items of measures. This was achieved by noting factors a measure purported to target (e.g., humour and creativity from the subscales of Hurtes & Allen's (2001) Resiliency Attitudes and Skills Profile) or interpreting a possible target factor (if one was not described) (e.g., flexibility from Bartone et al.'s (1989) Dispositional Resilience Scale reverse-coded item "It bothers me when my daily routine gets interrupted"). This led to a list of approximately 20 initial internal factors which were then reviewed by four experts in the field of resilience (university researchers) and a professional specialising in personal coaching for building resilience. A Delphi approach based on the recommendations of Hasson et al. (2000) was then employed to help review the list and gain consensus on a shortlist of the most important psychological protective factors associated with overcoming adversity. The experts initially reflected on the list and contributed further unique factors based on their experience and expertise (a further two were identified). They then considered each in turn to determine importance and conceptual overlap and therefore factors that may be merged or dropped. ... Multiple statements were created that could potentially be used as self-report items (e.g., for perseverance: "I can keep going despite difficulties" and "If there is a setback, I can persevere"; pride in achievements: "I take pride in things I have achieved", "My achievements are a source of strength"). The most appropriate statement for each factor was agreed by the expert panel." [p3-4]*

Construct validity: An EFA produced a single factor model with good fit statistics (RMSEA = .04, 90% CI = .04–.05; RMSR = .02). A multigroup CFA indicated a good fit of the single factor model to the data of the sample (CFI = .98; TLI = .97; RMSEA = .05; SRMR = .03), with appropriate configural, metric, and scalar invariance between males and females and the seven tested countries. Alignment tests were also satisfactory: R^2 loadings = .999, R^2 intercepts = .999; 0% of item parameters noninvariant.

Criterion validity

Concurrent validity: Scores on the RRM positively correlated with a measure of social-ecological resilience (ARM-R; $r=.68$, $p<.001$). The RRM also negatively correlated with a measure of social anxiety (SIAS; $r=-.29$, $p<.001$), and at a similar magnitude as the ARM-R and the SIAS ($r=-.25$). Also, a point biserial correlation test indicated that individuals who met or exceeded the threshold for Social Anxiety Disorder (SAD; a "known group" experiencing adversity) had lower RRM scores than the non-SAD group ($rpb=-.25$, $p<.001$). These findings were consistent for genders and countries.

Convergent and discriminant validity: Discriminant validity was examined through a CFA involving the RRM and a measure of social-ecological resilience (ARM-R) and social anxiety (SAS), where the Average Variances Extracted (AVE) was calculated for the RRM and compared to the highest squared correlation with the constructs of the other measures to ensure it was higher (the Fornell-Larcker criterion). It was .396 and higher than the square of the correlations with the ARM-R and SIAS, and also appropriately below the composite reliability of the measure (.867; a further indication of discriminant validity). In addition, the Heterotrait-Monotrait (HTMT) ratio of correlations was tested to ensure the values between the RRM and ARM and SIAS were lower than 1, which they were (RRM-ARM-R=.774; RRM-SIAS=.327), indicating good discriminant validity.

Incremental validity

A model involving social anxiety scores predicted by social-ecological resilience scores was further improved by adding the RRM as an additional predictor (original model: $R^2_{adj} = .060$; $F[15878] = 377.5$, $p < .001$; with RRM: $R^2_{adj} = .089$; $F[25877] = 289.6$, $p < .001$; change: $\Delta R^2_{adj} = .029$; $F[15877] = 189.61$, $p < .001$).

Using a similar approach, a model using social-ecological resilience scores to predict social anxiety disorder status was also improved by including RRM as an additional predictor (original model: Nagelkerke $R^2 = .058$, $\chi^2[1] = 254.87$, $p < .001$; model with RRM: Nagelkerke $R^2 = .086$, $\chi^2[1] = 381.74$, $p < .001$; change: $\Delta \text{Nagelkerke } R^2 = .028$; $\chi^2[1] = 126.87$, $p < .001$).

Test-retest reliability

Not available yet.

Other statistics and information

Will be shared as this information is produced or shared with us.



10. Sharing your research

We like to know how our measures are being used around the world. If you are able to share details of your study with us, please send us the following information. It will be kept confidential unless otherwise stated.

1. **Site details:** Provide the location of your research site, as well as contact information for your project leader. Please include a contact name, telephone number, and e-mail address.
2. **Context:** Outline the context (geographic, political, economic, etc.) within which your participants live, and describe the risk factors they may face.
3. **Participants:** Describe your research participants: breakdown numbers by sex/gender, the range and mean of age and education level, as well as the way they are perceived as a group by their community (if applicable).
4. **Local resilience:** Describe what resilience means in your particular site. Explain how this is demonstrated and consider including a quote from an individual that expresses what resilience means in your site's particular context.
5. **Scores:** Provide the mean scores and standard deviation of the measure. If you have any important demographic variables, include the mean and standard deviation of scores for these groups too (e.g., refugees, non-refugees).
6. **Adaptations:** Describe any alterations you have made to the measure and why you made the changes.
7. **Quotes:** If possible, provide a quote from a participant that is relevant to, and descriptive of, your research and/or its findings. Alternatively, you could include a summary statement that does the same.
8. **Photo:** If possible, please also include one or two photographs relevant to your site and research. Please make sure you have permission to share any photographs, including release forms for any people that appear in the photographs.
9. **Data:** If you are able to share your entire dataset with us, this will help us to develop our understanding of norms. Make sure any identifying information is removed prior to sending it. From time to time we use datasets in analyses that result in publications, but would contact you first about this to discuss further.

11. Services and products we offer

The RRM is free to use for research and education purposes.

However, we also offer the following products and services, which are priced according to offset costs.

- Commercial users: We offer volume and site licenses.
- Measure preparation: We can conduct or advise on the process of modifying the RRM to suit your particular setting.
- Data analysis and reporting: Once your data has been collected, we offer services including full data analysis and reporting to help understand the scores of your sample.

To enquire about any of the products or services offered, please contact the Resilience Research Centre through email at rrc@dal.ca or phone at +1 (902) 494-8482.



References

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- Ungar, M. (2017). Which counts more: Differential impact of the environment or differential susceptibility of the individual? *The British Journal of Social Work, 47*(5), 1279–1289. <https://doi.org/10.1093/bjsw/bcw109>
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- van Ommeren, M., Sharma, B., Thapa, S., Makaju, R., Prasain, D., Bhattarai, R., & de Jong, J. (1999). Preparing instruments for transcultural research: Use of the Translation Monitoring Form with Nepali-speaking Bhutanese refugees. *Transcultural Psychiatry, 36*(3), 285–301. <https://doi.org/10.1177/136346159903600304>

Appendix A – Ethical protocol

The following is a brief guide to ethical considerations required when using the measure and strategies to mitigate risk. We strongly recommend that all research and evaluations that use the measure go through a review process by a Research Ethics Board, or equivalent community consultation process with a local advisory committee (where no REB exists).

The RRM can be administered to individuals or groups similar to any other survey. However, some participants may experience mild discomfort or distress when answering survey questions. Participants may also recall stressful situations, which may trigger uncomfortable memories. To mitigate these emotional risks, participants should be made aware of these possibilities prior to administering the measure, and that they can pause or terminate their involvement at any time. This should be made clear in an information or introductory letter/statement as part of a process of gaining informed consent.

If administering the measure as part of a longer survey, be mindful of how long the total survey will take to complete as some participants may experience fatigue when completing lengthy surveys. This can lead to premature termination, lack of focus when answering questions, and other issues such as participants tending to select the same response option to proceed faster.

If you are providing the measure for participants to complete themselves, ensure literacy skills and comprehension ability are sufficient. If you suspect participants may struggle to complete the measure themselves, read it aloud to them. However, if you need to ask participants whether they feel confident and comfortable completing the measure, be mindful that this may cause embarrassment to some participants who have lower levels of literacy.

You should ensure that participants are able to submit their responses anonymously, even if the measure is being read aloud. No identifying information should accompany responses. Consent forms are typically numbered and that number recorded on the participant's copy of the survey.

Confidentiality should be assured and if responses are stored – electronically or as a hard-copy – this should be done securely (e.g., a locked filing cabinet or using encryption), without identifying information, and only accessible to authorised individuals. You should also dispose of the data within a reasonable amount of time (the time frame may be specified by your country or organisation).

For further in-depth advice on ethical protocol related to survey administration we recommend the Ethical Considerations page from the Cross-Cultural Survey Guidelines group: <https://ccsg.isr.umich.edu/chapters/ethical-considerations/>.