



Guidelines for Cultural and Linguistic Adaptation of ASQ®-3 and ASQ®:SE-2

Thank you for your interest in translating and adapting the *Ages & Stages Questionnaires®*, *Third Edition* (ASQ®-3) or the *Ages & Stages Questionnaires®: Social-Emotional, Second Edition* (ASQ®:SE-2). ASQ-3 and ASQ:SE-2 are widely-used developmental and behavioral screening tools that are completed by parents or others familiar with the child. The questionnaires include easy-to-answer questions about a child's development from ages 1 to 66 months (ASQ-3) or 1 to 72 months (ASQ:SE-2). Comparing a child's score on the questionnaires with empirically-derived cutoff points shows how closely the child's development matches that of other children of the same chronological age.

ABOUT THE GUIDELINES

Since ASQ-3 and ASQ:SE-2 were developed in the United States (US), the data used to study their psychometric properties and to set cutoff points came primarily from families and children living in the US. Many researchers and practitioners, both inside and outside the US, are interested in translating and adapting the ASQ-3 and ASQ:SE-2 for use with families from diverse cultures who speak other languages.

The tool developers and the publisher and copyright holder, Brookes Publishing, support use of the ASQ-3 and ASQ:SE-2 with diverse families around the world. In many cases, Brookes Publishing grants permission for translation and adaptation of tools. However, translation and adaptation of a tool for another culture requires planning and review. These guidelines outline the process for translating and adapting ASQ-3 and/or ASQ:SE-2 into a language other than American English and suggest ideas and considerations for each tool's cross-cultural use.

Adapting a measure for another culture requires careful consideration to make sure it is used correctly (Ball & Janyst, 2008). Screening or assessment tools that are not culturally appropriate may produce misleading or negative results with unintended consequences (Musquash & Bova, 2007). The developers and publisher of ASQ-3 and ASQ:SE-2 believe in the importance of cultural fit and strongly urge you to consider the guidelines that follow.

These guidelines cover three areas: 1) cultural considerations, 2) linguistic considerations, and 3) interpreter guidelines. This document also has a section on the importance of collecting data to establish new cutoff points appropriate for the culture and language for which the tool is being used. Appendix A outlines the steps in the recommended translation process. For more detailed instructions regarding adaptation and translation, see the *ASQ-3 User's Guide* (Squires, 2009; pp. 43–44) or the *ASQ:SE-2 User's Guide* (Squires, 2015; Appendix G, pp. 283–285).

Permission will not be required if you are considering a translation and/or adaptation to be used for *non-commercial purposes* and used *only at a single specific site*. However, if you are considering a translation and/or adaptation of ASQ-3 and/or ASQ:SE-2 that will be used *outside of the US*, sold *commercially*, or used *across multiple sites*, please contact the Subsidiary Rights Department at Brookes Publishing (rights@brookespublishing.com) to determine and receive the necessary permissions.

CULTURAL CONSIDERATIONS

1. Examine whether the purpose of ASQ-3 (i.e., to assess children’s developmental status through parent completion of a questionnaire) or ASQ:SE-2 (i.e., to assess children’s social-emotional competence through parent completion of a questionnaire) aligns with the cultural values and beliefs of the community.

For example, in some cultures parents may feel that professionals know more about child development than they do and may feel like it is the professionals’ responsibility to “evaluate” their child.

2. Consider the experience of the community with previous assessment and evaluation projects and how these experiences might affect how ASQ-3 and/or ASQ:SE-2 are introduced and adapted.

For example, in some communities, caregivers may be suspicious of the screening and might worry that children will be labeled and possibly excluded from programs as a result of screening.

3. Examine the instructions for using ASQ-3 and/or ASQ:SE-2 and change the instructions as necessary to ensure appropriateness for cultural norms and values of the community.

For example, does the culture have an oral tradition of sharing information rather than relying on written documents? If so, using a print questionnaire may not be appropriate with this group.

4. Examine each ASQ-3 and/or ASQ:SE-2 item and change the content as necessary to ensure cultural appropriateness for the community.

For example, when eating, some cultures use utensils such as chopsticks or may not use utensils at all. Thus, asking about children’s use of spoons or forks would not be appropriate. Some cultures do not let children use scissors for safety reasons, and parents may feel uncomfortable letting their children try to use scissors when completing ASQ-3.

5. Revise scoring criteria to reflect culturally relevant experiences and norms.

For example, in some cultures eye contact is not encouraged between children and adults. For the ASQ:SE-2 question that asks, “Does your child look at you when you talk to him?,” scoring criteria should be modified to reflect the cultural norm and expectation, so that false concerns are not raised for children for whom this behavior isn’t the cultural norm or expectation.

LINGUISTIC CONSIDERATIONS

1. Focus on keeping the developmental skill level being assessed consistent with the original item rather than translating each item word-for-word. Follow this guideline unless the skill being assessed is not culturally acceptable.
2. Use simple words and phrases to ensure that parents and practitioners understand each item. The questionnaires are written at a basic reading level, and the adaptation should keep to this reading level as much as possible.
3. Consider using additional illustrations and examples to reflect item changes or to improve caregiver understanding.
4. Do not include activities that are unfamiliar or offensive to the community.
5. Examine variations in dialect to ensure the translation is appropriate for the specific community.

6. Complete a back translation to ensure accuracy.
7. For ASQ-3, consider substituting new Communication items to appropriately accommodate differences in the grammar of the language. For example, an item in the 42 month ASQ-3 questionnaire asks if the child uses word endings such as 's,' 'ed,' and 'ing.' These word endings are particular to the English language; the item would need to be modified to reflect the grammatical structure of a different language. Consulting with a linguist or speech language pathologist who specializes in child language acquisition of the target language is recommended.

ESTABLISHING CULTURALLY APPROPRIATE CUTOFF POINTS

ASQ-3 and ASQ:SE-2 cutoff points are used to determine if a child is developing similarly to same-age peers. Children who have scores beyond the established cutoff points should be monitored and/or referred for more comprehensive assessment. The ASQ-3 and ASQ:SE-2 cutoffs contained in the *ASQ-3 User's Guide* (Squires, 2009) and *ASQ:SE-2 User's Guide* (Squires, 2015) were gathered on children living in the US. Consequently, these cutoff points may not be valid for children being raised in different countries or cultures. Using ASQ-3 and ASQ:SE-2 within other cultures/languages requires collecting data to establish cutoff points that are valid for that specific group.

The adopting of a measure into a different culture requires careful consideration to ensure appropriate use. The developers and publisher of ASQ-3 and ASQ:SE-2 request that those who wish to translate ASQ-3 and/or ASQ:SE-2 to use them outside the US study the guidance offered in this document and refer as needed to other references listed in Appendix B. Screening for delays and identifying children at an early age is critical. ASQ-3 and ASQ:SE-2 provide a strong option for use with children around the globe.

RESEARCH AND METHODOLOGICAL CONSIDERATIONS FOR TRANSLATIONS

Pena (2007) recommends four critical areas to assess equivalence of test translations: linguistic, functional cultural, and metric. Linguistic equivalence includes careful attention to the language used in the translation. As mentioned above, use of both forward and back translation procedures is crucial. Back translation includes using a translator first from the source language to the target language, and a second translator to independently translate the target version back to the source language. The original and back-translated versions can then be compared to identify differences, which are then resolved.

Second, a functional translation includes assuring that equivalence is achieved in the function of the language, even if the translation needs to be revised in order to correct cultural insensitivity or incongruity in meaning. Functional equivalence ensures that the instrument and the elicitation method allow examination of the same construct in the test. For example, items testing the use of pronouns such as *I*, *me*, and *my* need to be revised for a language in which pronouns are not used.

Third, cultural equivalence focuses on the way members of different cultural and linguistic groups view or interpret the underlying meaning of an item. Cultural interpretations may affect how different families report information, such as information about a child's temperament or language. Finally, metric equivalence refers to having items that are equal in difficulty. Several methodological techniques for testing metric equivalence of languages can be used to measure metric equivalence (Pena, 2007).

GUIDELINES FOR USING INTERPRETERS

Many programs may not have access to translated questionnaires. Providers will need to work with interpreters who can translate ASQ-3 and/or ASQ:SE-2 items directly for the family. Practitioners and

interpreters should follow the guidelines below to help families effectively complete ASQ-3 and/or ASQ:SE-2.

Prior to Administration

1. Read through ASQ-3/ASQ:SE-2 with the interpreter or give the questionnaire to the interpreter to allow them sufficient time to understand the items. Give the interpreter a short description of the family.
2. If you or the interpreter are unclear about the skill measured by the item, discuss it with someone who is familiar with child development to ensure the interpretation correctly reflects the skill measured by the original item.
3. If a certain item is not culturally appropriate, discuss it with someone who is familiar with child development and the culture to find relevant substitutes. Record the new item below the original item and note the adaptation.

During Administration

1. At the beginning, in the family's native language if possible, introduce yourself through the interpreter; explain the purpose of ASQ-3/ASQ:SE-2 and that the screening is confidential; and review the process and explain how caregivers will be involved.
2. Limit the amount of information given. Pause at times so that the interpreter can process and translate the information and reflect on the family's understanding.
3. Speak slowly and clearly. Talk directly to the family rather than to the interpreter.
4. Encourage the involvement of caregivers and the interpreter. Sometimes the child feels more comfortable with his or her native language. You can provide ideas and strategies for a questionnaire item for the caregiver or the interpreter to try.
5. While completing the questionnaire, regularly check with the family to ensure cultural relevance of the items. If caregivers express concerns or confusion, make a note on that relevant item.

After Administration

1. Respond to all final concerns and questions from the family. You or the interpreter will then summarize what has been done, next steps, and how the caregiver can receive the results. If you need another visit, schedule it at the end of the session.
2. Note the items that the family found confusing or culturally inappropriate. Create a main file for these notes and remember them for the next time you use ASQ-3/ASQ:SE-2.

FINAL THOUGHTS

ASQ-3 and ASQ:SE-2 can be used successfully with families and children from diverse cultures and across many linguistic backgrounds if appropriate steps are taken to adapt and/or translate the screening tools for such use. In addition to these cultural, linguistic, and interpreting guidelines, please see Appendix A, *Recommended Translation and Adaptation Process*, for further information about steps to follow, and see Appendix B, *References Associated with Cultural Adaptation and with Translation of ASQ-3/ASQ:SE-2*, for a list of relevant journal article citations.

Please contact the Subsidiary Rights Department at Brookes Publishing (rights@brookespublishing.com) should you have any questions about these guidelines or the permissions required to translate or adapt ASQ-3 or ASQ:SE-2.

Citations

Ball, J., & Janyst, P. (2008). Enacting research ethics in partnerships with Indigenous communities in Canada: "Do it in a good way." *Journal of Empirical Research on Human Research Ethics*, 3(2), 33–52.

Musquash, C., & Bova, D. (2007). Cross cultural assessment and measurement issues. *Journal of Developmental Disabilities*, 13(1), 53–66.

Pena, E.D. (2007). Lost in translation: Methodological considerations in cross-cultural research. *Child Development*, 78(4), 1255–1264.

Squires, J., Bricker, D., Twombly, E., & Potter, L. (2009). *ASQ-3 User's Guide*. Baltimore: Paul H. Brookes Publishing Co.

Squires, J., Bricker, D., Twombly, E. (2015). *ASQ:SE-2 User's Guide*. Baltimore: Paul. H. Brookes Publishing Co.

Appendix A

Recommended Translation and Adaptation Process

Step 1: Obtain permission from Brookes Publishing if developing a commercial, multi-site, or outside-the-US adaptation or translation.

Contact the Subsidiary Rights Department at Brookes Publishing (rights@brookespublishing.com) to obtain the permissions needed to translate and adapt ASQ-3 and/or ASQ:SE-2.

Step 2: Translate forward.

Identify a native speaker who has an excellent grasp of American English and who is familiar with the early childhood field and child development. This native speaker translates ASQ-3/ASQ:SE-2 from English into the target language.

Step 3: Translate back.

Use a different translator who is proficient in both languages and *unfamiliar* with ASQ-3/ASQ:SE-2 to translate back into English, without referencing or exposure to the original English version.

Step 4: Compare the back translation with the original English version.

Have a native English speaker with strong familiarity with ASQ-3/ASQ:SE-2 (in some cases this may be one of the tool developers) compare the back translation from Step 3 with the original to identify items in which discrepancies occur. Note discrepant items.

Step 5: Modify the forward translation.

Based on discrepancies identified in Step 4, modify items in the initial translation according to notes made by the ASQ-3/ASQ:SE-2 expert. Ideally, this step is done with the translator from Step 2 or at least with a native speaker who is familiar with child development.

Step 6: Pilot the translated version.

Using the latest version of the adapted ASQ-3/ASQ:SE-2 developed in Step 5, pilot test the new translation with caregivers who are native speakers of the target language. Ask caregivers to provide feedback on any items that are difficult to understand or observe due to linguistic uncertainties or references to items that are culturally inappropriate.

Step 7: Modify the pilot version.

Modify the pilot-tested version after considering the caregivers' feedback in Step 6. This final version of the ASQ-3/ASQ:SE-2 translation is ready for general use.

Step 8: Use the final translation of ASQ-3 or ASQ:SE-2.

Continue to refine the translation while it is in general use, and work to establish local norms and develop cutoff scores for the intended population.

Adapted from Squires, J., Bricker, D., Twombly, E., & Potter, L. (2009). *ASQ-3 User's Guide*. Baltimore: Paul H. Brookes Publishing Co., p. 44.

Appendix B

References Associated with Cultural Adaptation and with Translation of ASQ-3/ASQ:SE-2

- Ball, J., & Janyst, P. (2008). Enacting research ethics in partnerships with Indigenous communities in Canada: "Do it in a good way." *Journal of Empirical Research on Human Research Ethics*, 3(2), 33–52.
- Bian, X., Yao, G., Squires, J., Wei, M., Chen, C., & Fang, B. (2010). Studies of the norm and psychometric properties of Ages and Stages Questionnaires in Shanghai children. *Zhonghua Er Ke Za Shi*, 48(7), 492–496.
- Bornman, S., Jevcik, R., Ronski, M., & Pae, H. (2010). Successfully translating language and culture when adapting assessment measures. *Journal of Policy and Practice in Intellectual Disabilities*, 7(2), 11–118.
- Campos, J., Squires, J., & Ponte, J. (2010). Universal development screening: Preliminary studies in Galicia, Spain. *Early Child Development and Care*, 1–11.
- Clifford, J., Squires, J.K. & Murphy, K. (2017) Not Lost in Translation: Modifying the Ages & Stages Questionnaires™ for Use in Cross-Cultural Contexts. *Current Developmental Disorders Reports*, 4: 130. Retrieved online at <https://doi.org/10.1007/s40474-017-0121-2>.
- Dionne, C., Squires, J., Leclerc, D. (2004, June). Psychometric properties of a developmental screening test: Using the Ages and Stages Questionnaires (ASQ) in Quebec and the US. *Journal of Intellectual Disability Research*, 48(4–5), 408.
- Dionne, C., Squires, J., Leclerc, D., Peloquin, J., & McKinnon, S. (2006). Cross-cultural comparison of a French Canadian and U.S. developmental screening test. *Developmental Disabilities Bulletin*, 34(1–2), 43–56.
- Elbers, J., Macnab, A., McLeod, E., & Gagnon, F. (2008). The Ages and Stages Questionnaires: Feasibility of use as a screening tool for children in Canada. *Canadian Journal of Rural Medicine*, 13(1), 9–14.
- Fallah, R., Islami, Z., & Mosavian, T. (2011). Developmental status of NICU admitted low birth weight preterm neonates at 6 and 12 months of age using Ages and Stages Questionnaire. *Iranian Journal of Child Neurology*, 5(1), 21–28. Retrieved online at <http://journals.sbmu.ac.ir/ijcn/article/viewFile/2120/1827>.
- Heo, K., Squires, J., & Yovanoff, P. (2008). Cross-cultural adaptation of a preschool screening instrument: Comparison of Korean and U.S. Populations. *Journal of Intellectual Disability Research*, 52, 195–206.
- Janson, H., & Squires, J. (2004). Parent-completed developmental screening in a Norwegian population sample: A comparison with U.S. normative data. *Acta Paediatrica*, 93(11), 1525–1529.
- Janson, H. (2003). Influences on participation rate in a national Norwegian child development screening questionnaire study. *Acta Paediatrica*, 92(1), 91–6.
- Janson, H., Squires, J., & Richter, J. (2008). Effect of violating the age window for a parent-completed child development screening questionnaire. *Australian Journal of Educational and Developmental Psychology*, 8, 98–102.
- Juneja, M., Mohanty, M., Jain, R., & Ramji, S (October 31, 2011). Ages and Stages Questionnaire as a

screening tool for developmental delay in Indian children. *Indian Pediatrics*. Advance online publication. Retrieved online at: <http://www.indianpediatrics.net>.

Kapi, E., Kucuker, S., & Uslu, R., How applicable are the Ages and Stages Questionnaires for use with Turkish Children? *Topics in Early Childhood Special Education*, 30(3), 148–161.

Kerstjens, J., Bos, A., ten Vergert, E., de Meer, G., Burcher, P., & Reijneveld, S. (2009). Support for the global feasibility of the Ages and Stages Questionnaire as developmental screener. *Early Human Development*, 85(7), 443–447.

Kovanen, P., Maatta, P., Leskinen, & Heinonen, K. (2000, June/August). Parents as developmental screeners: The applicability of the Ages and Stages Questionnaire in Finland. *Journal of Intellectual Disability Research*, 44(3 & 4), 353.

Kucuker, S., Kupci, E., & Uslu, R. (2011). Evaluation of the Turkish version of the Ages and Stages Questionnaires: Social-Emotional in identifying children with social-emotional problems. *Infants & Young Children*, 24(2), 207–220.

Lando, A., Klamer, A., Jonsbo, J., Weiss, J., & Greisen, G. (2005, May). Developmental delay at 12 months in children born extremely preterm. *Acta Paediatrica*, 94, 1604–1607.

Mushquash, C., & Bova, D. (2007). Cross cultural assessment and measurement issues. *Journal of Developmental Disabilities*, 13(1), 53–66.

Pena, E.D. (2007). Lost in translation: Methodological considerations in cross-cultural research. *Child Development*, 78(4), 1255–1264.

Richter, J., & Janson, H. (2007). A validation study of the Norwegian version of the Ages and Stages Questionnaires. *Acta Paediatrica*, 96, 748–752.

Saihong, P. (2010). Use of screening instrument in northeast Thai early childcare settings. *Procedia - Social and Behavioral Sciences*, 7, 97–105.

Schjølberg, S., Eadie, P., Zachrisson, H. D., Øyen, A. S. Prior, M. (2011). Predicting language development at age 18 months: data from the Norwegian mother and child cohort study. *Journal of Developmental & Behavioral Pediatrics*, 32(5), 375–383.

Schonhaut, L., Salinas, P., Armijo, I., Schönstedt, M., Álvarez, J., & Manríquez, M. (2009). Validación de un cuestionario autoadministrado para la evaluación del desarrollo psicomotor. (*Validation of a self administered questionnaire for the evaluation of psychomotor development.*) *Revista Chilena de Pediatría*, 80(6), 513–519.

Shahshahani, S., Vameghi, R., Azari1, N, Sajedi, F, and Kazemnejad, A. (2010). Validity and reliability determination of Denver Developmental Screening Test-II in 0-6 year-olds in Tehran. *Iranian Journal of Pediatrics*, 20(3), 313–322.

Squires, J., Bricker, D., Twombly, E., & Potter, L. (2009). *ASQ-3 User's Guide*. Baltimore: Brookes Publishing Co.

Squires, J., Bricker, D., Twombly, E. (2015). *ASQ:SE-2 User's Guide*. Baltimore: Brookes Publishing Co.

Tsai, H.A., McClelland, M., Pratt, C., & Squires, J. (2006). Adaptation of the 36 month Ages and Stages Questionnaire in Taiwan. *Journal of Early Intervention, 28*(3), 213–225.

Yao, B., Bian, X., Squires, J., Wei, M., & Song, W. (2010). Cutoff scores of the Ages and Stages Questionnaire-Chinese for screening infants and toddlers. *Zhonghua Er Ke Za Shi. Chinese Journal of Pediatrics, 48*(11), 824–828.