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Translations and Adaptations of Assessment Tools in Early Childhood Education: A Scoping Review

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Abstract

Objective: This scoping review sought to provide an insight into the key processes used in the translation and adaptation of assessment tools in peer-reviewed literature on assessment tools in early childhood education. Methods: Peer-reviewed articles published between 2012 and 2022 were identified via independent systematic searches using the databases Academic Search Complete, ERIC, Education Source, and APA PsycInfo. The articles included in this scoping were coded using a data extraction form developed for specifically for this study. Results: In the 56 articles selected, 33 reported forward translation; the analyses and findings of this scoping review were based on these 33. 30% of the articles did not report any methods of quality control methods. The most used quality control methods were back-translation only, and back-translation and expert review. 42% specified at what point the target population was included in the adaption process, and the preference was during pilot testing and focus groups. Regarding translators, 7 articles indicated the tools were translated by the researchers, 10 by independent bilinguals, and 3 utilized a team in the translation process. Conclusion: While cultural relevance and appropriateness were emphasized in these articles, there is limited information reported on what this process entailed. There were no specific or general guidelines reported. More focus should be placed on developing a culturally relevant protocol and related guidelines for the translation and adaptation process of assessment tools.

Keywords: assessment tools, early childhood, translation and adaptation, scoping review

1. Introduction

Worldwide, it is a common practice in intervention with young children and families to use assessment tools that were developed for another context or culture. Translation and adaptation processes are used to achieve this. A rigorous translation and cultural adaptation are necessary to ensure that the feasibility and culturally appropriateness of the assessment tools in early childhood. For translation, different methods exist and are described in the literature (e.g., forward and backward translation, double translation and reconciliation, translators' committee, concurrent test development). Cultural adaptation refers to the practical overall process of moving a test from one culture to another; it may include cultural modifications, and methods for verifying cultural appropriateness, validation, and standardization. The goal of this scoping review is to provide a broad overview and summary of the peer-reviewed literature regarding translation and cultural adaptation processes of assessment tools (screening assessment, curriculum based- assessment, inclusive practices assessments etc.) used in early childhood education research.

International guidelines have been developed over the years, such as the International Test Commission, (ITC, 2017) the World Health Organization Disability Assessment Schedule (WHODAS), and the World Bank (Fernald et al., 2009), for researchers to follow while adapting an assessment tool for another country or culture.

ITC (2017) suggested multiple guidelines when translating tests and tools into different languages. Guideline 1 specifically highlighted test development and adaptation for linguistically or culturally diverse populations. These guidelines stated that "the linguistic differences between the source and target languages and cultures (grammatical, syntactical, semantic, lexical, etc." (p. 306) should be considered when adapting tools for different cultures in different languages.

ITC (2017) further emphasized that persons "from different linguistic groups should be involved in the design of the items and the test to be adapted as they are best suited to identify any translation hurdles that may occur and make suggestions on how to circumvent those hurdles" (p. 306). It was also indicated that cultural components should be

considered in the translation process for example "items, scales, rubrics etc." (p.306) and the guidelines explained that tests should be adapted "from source to target not only linguistically, but also culturally" (p. 306).

The ITC (2017) guidelines stated,

> Knowledge/expertise in the target culture results from using translators who are native in the target language and are living in the target locale, with the former being essential and the latter highly desirable. A native speaker of the target language will not only produce an accurate translation, but also one that reads fluently and appears indigenous. Living in the target locale will ensure up-to-date knowledge of the current language use. (p. 11)

WHODAS indicated that it is critical that *equivalence* is of utmost importance when translating tools, since the goal is for the source and target tool are intended to achieve the same purpose. For instance, "conceptual equivalence can be arrived at only by involving in the translation, individuals who have a good understanding of the concept being asked in the source instrument and who also know the target language and culture well e.g. health experts, field workers etc." (WHODAS, p. 5). WHODAS further recommended that multiple people be involved in the translation process and emphasized that "they should know both the source language and the target language and should be familiar with the way the target language is spoken by the majority of people in the study population" (p. 6).

Fernald et al. (2009) also outlined the steps to follow to ensure the accurate translation of a tool, highlighting "translation and back-translation (by two different individuals) of all test instructions and materials" (p. 45), reviewing and comparing the source tool to the translation, and modifying the translated tool if needed. Fernald et al. (2009) suggested that the translated tool is reviewed by another bilingual person as well as a child in the target community, as it was expressed that "often when there is local variation in a language, young children are only aware of the local words. Also, children may misunderstand instructions that do not present any difficult for adults" (p. 46). It was further suggested that the test content is adapted to the "to the local context (functional, cultural and metric equivalence)" (p. 46).

The ITC (2017), WHODAS, and World Bank (Fernald et al., 2009) have suggested similar adaptation guidelines stating that multiple people in the target population should be involved in the translation process of the assessment tool. These guidelines also described the importance of including persons from the target communities and cultural contexts in the adaptation process. WHODAS and Fernald et al., (2009) underscored the importance of equivalence of the assessment tool when translated. Overall, the emphasis was on incorporating persons of the relevant cultural, contextual, content and linguistic backgrounds in the adaptation process. These guidelines differ in the extent in which they describe including the target population. They vary in terms of specifying when the target population should be incorporated in the adaptation process. Further, while the equivalence of the assessment tools is discussed in the guidelines, different types of equivalence and quality assurance methods are suggested.

Research on these translation and adaptation processes has continued including DuBay and Watson (2019) who proposed multiple phases in the adaptation process of a tool, such as pre-planning, the reproduction of the tool in the target language, quality assurance methods and final consensus. DuBay and Watson (2019) suggested that multidisciplinary teams are included in the process comprising of "individuals who are knowledgeable in the terminology and constructs of the instrument and laypersons who are blind to the concepts of interest, yet knowledgeable in colloquial terminology, such as childcare providers or others who regularly interact with parents in the target culture" (p. 58). DuBay and Watson (2019) described various quality assurance methods that should be considered in the adaptation process such as pre-planning which "involves examining the source version to determine its translatability in the new cultural context" (p. 58), back-translation which Sperber (2004) suggested is when the tool is "translated into the target language by one translator and then translated back into the source language by an independent translator" (p.125), preliminary pre-testing, bilingual equivalence assessment, and expert review, "to identify and resolve discrepancies in linguistic, construct, or technical equivalence" (p. 58). It was also discussed that "a final consensus meeting with the translation team reviews data collected in these quality-checking phases and makes revisions to improve equivalence across versions" (DuBay & Watson, 2019, p.58).

While these guidelines exist, and are similar in several ways, unfortunately, they are not necessarily being included in the published peer-reviewed literature (Rios & Sireci, 2014). Often the focus is on reporting psychometric information. Challenges persist, as reported by El-Behadli et al. (2015), since there is no standardized framework available to evaluate translation and cultural adaptation processes in a cross-cultural assessment field. According to Sperber (2004) conducting cross-cultural research poses specific challenges methodologically, mostly related to the quality of the translation and being able to compare findings in different cultural and ethnic contexts. It was furthermore expressed that this can "lead to erroneous research conclusions" (p. 124). These inaccurate conclusions can result in harmful consequences including the early childhood context, including inaccurate labeling of children and their developmental challenges (Musquash & Bova, 2007).

Moving forward, "there is a need to increase our knowledge regarding cultural adaptation processes in real settings to

achieve a balance between high-quality requirements and concrete needs, purposes, and limitations" (Rousseau et al., 2021, p. 500). Furthermore, with increased prevalence and emphasis of early intervention that requires the use of assessment tools that are adapted for various cultural contexts, it is important to gain further insight into the adaptation process. As such, one of the aims of this scoping review was to synthesize and present the relevant peer-reviewed literature on translation and adaption processes in early childhood education using the following research questions.

Research Questions (RQs)

RQ1: What are the quality control indicators revealed in the literature about the translation and adaptation of assessment tools in early childhood research?

RQ2: How are assessment tools in early childhood research tested for cultural relevance?

2. Method

Search Strategy and Research Questions

The intention of the search strategy for this scoping review was to assess and analyze the peer-reviewed literature on assessment tools used in early childhood education to understand the adaptation process of these tools for other countries/contexts. The aim was to broadly identify this literature around the world to address the research questions as outlined in the introduction.

Literature Search of Studies Published in Peer-Reviewed Journals

Articles within a ten-year timeframe (2012-2022) were identified based on independent searches in the databases: Academic Search Complete, ERIC, Education Source, and APA PsycInfo. The search strategy specified that the abstracts of the relevant articles include specific terms related to this research. The search strategy specifically did not include search terms on translation to extend the literature search as much as possible. The following search strategy was used to search each of the databases indicated above: AB ((Cultural* N3 (Responsive* OR Inclusiv* OR Relevan* OR Appropriate* OR Sensitiv* OR Adapt* OR Correct* OR Congruent* OR Competen*)) OR (cross-cultural OR transcultural)) AND AB ("Assessment tool *" OR Questionnaire* OR survey* OR scale* OR instrument* OR Inventory OR inventories OR "Evaluation* tool*") AND AB (preschool* OR Daycare* OR "early childhood" OR kindergarten or "Pre-kindergarten" OR "Pre-primary" OR "nursery care"). An expert in systematic searches was consulted prior to finalizing the above search strategy.

Criteria for Inclusion and Exclusion

The inclusion and exclusion criteria were established based on the research questions. The inclusion criteria specified that articles (1) must be peer-reviewed and published between the years 2012-2022, (2) were in English and/or had an English version, (3) were based only on children in early childhood, with the oldest age being six years old, (4) used tools in a variety of settings (example: education centers/schools, rehabilitation centers, home etc.), and (5) referred to either psychometric properties, translation, or both.

Five criteria were used to determine the exclusion of an article. Articles that were: (1) related to health, psychiatric, and health-related goals, (2) not limited to early childhood ages (birth to six years old), (3) based on cultural practices and pedagogy, teacher cultural responsiveness, and developmentally appropriate practices, (4) articles that used a tool in two or more countries, and (5) non-peer reviewed, published before 2012, dissertations, and not available in English.

Procedure for Review

The systematic search using the search strategy outlined above was conducted by the first author. The articles from each database search were exported to EndNote. All the articles for each database search were then combined, and the duplicates were removed. The procedure for the screening review was followed according to the Joanna Briggs Institute (JBI) Manual for Evidence Synthesis (Peters et al., 2020). The initial screening of the abstracts was done for fifty articles independently by the first and second author to ensure that the inclusion criteria was clear to both authors. The authors met to discuss any inconsistencies with the inclusion criteria. After the initial independent screening, both authors reached 75% agreement which according to Peters et al. (2020) indicated that all the abstracts can be reviewed in its entirety. Figure 1 displays the process of the selection of articles.

A data extraction form was created in Microsoft Excel to identify factors related to the cultural appropriateness of assessment tools in early childhood education. To create this data extraction form, categories were developed based on DuBay and Watson's (2019) figure of the representation of the translation and cultural adaptation process. It is important to note while DuBay and Watson (2019) made recommendations and proposed specific guidelines in the adaptation process, the data extraction form and categories were derived based on their model. This model was deemed to be directly relevant to this review because it specifically addressed a step-by-step process for translating and adapting an assessment tool for a target population.

Once the categories were created, data were extracted from ten articles and then reviewed by the first and second author to ensure consistency and clarity to finalize the extraction form. The final data extraction form was divided into four sections: General Information, Reproduction of Tool, Pre-testing, and Cultural Appropriateness. In the General Information section, the form had information on the article reference, the name of the assessment tool, and the country and context. The Reproduction of Tool l section included a dichotomous yes/no indication of whether the assessment tool was forward translated, translation information with regards to who translated the assessment tool and their experience, and quality control of the assessment tool (back translation, preliminary pre-testing, bilingual equivalence testing, expert review, pre-planning). The third section of the extraction form, Pre-Testing, had a dichotomous yes/no question for whether a consensus meeting was reported after translating the assessment tool, the type of qualitative or quantitative data used, and whether there was a need to modify or repeat the translation process from the beginning. The fourth section, Cultural Appropriateness, included whether the assessment tool was tested in the target population, whether it was incorporated in the translation process, and what part of the process was included. Details regarding the items of the questionnaire and how they were modified to be more culturally appropriate were also included. Information regarding the terms used to identify cultural appropriateness was also extracted.

The data from the selected articles was extracted by the first author using the data extraction form. Once all the data extraction was completed, the data were analyzed.

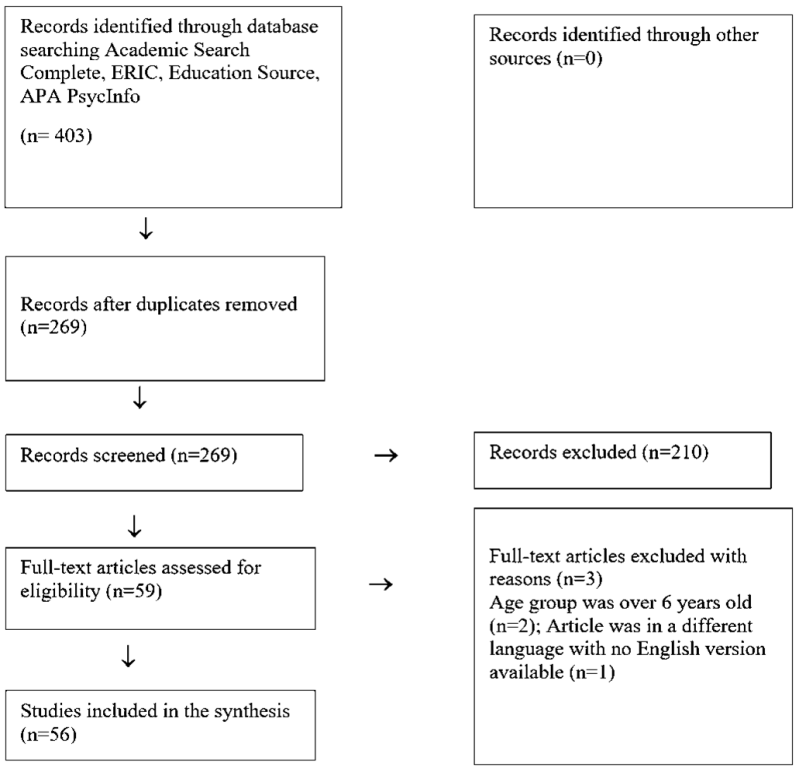

Figure 1. PRISMA Flow diagram of Screening Process

3. Results

Fifty-six articles were selected based on the inclusion criteria for this scoping review. During the review of the extracted data, 33 articles were selected for analysis, specifically because these articles indicated the tools that were forward translated, and not previously included in another article. Of these articles, 20 countries were represented. A detailed report of this sample can be found in Table 1.

The data on who translated the assessment tool is pertinent as it revealed information on the people who were involved in the process of translating the assessment tool for the specific population. It depicted whether the assessment tool was translated by researchers who were the experts on the content and bilingual or if a team of people with different backgrounds facilitated the translation process. Twelve percent of the articles reported using one translator, 73%, two or more translators, and 15% of the articles did not report the number of translators. The results as seen in Table 2 indicate 7 articles with tools that were translated by the researchers, 10 by independent bilinguals, and 3 articles utilizing a team in the translation process.

The findings of the quality control check combinations of the tools can be found in Table 3. Thirty percent of the articles in this sample did not report any methods of quality control methods. Further, 15% of the sample only conducted a back-translation as the quality control check. The combination of back-translation and expert review was used in 15% of the sample. Only 9% of the sample used the combination back-translation, expert review and semantic equivalence, and 6% of the sample used back-translation, expert review, semantic equivalence and conceptual equivalence and 6% of the sample used back-translation, expert review and linguistic equivalence.

Table 4 highlights the percentage of articles in the sample that used each of the quality control indicators. For instance, back-translation and expert review were the most used quality control methods with 55% and 48% of the sample respectively. 21% of the articles checked for semantic equivalence whilst the remaining equivalence quality indicator methods yielded low percentages.

In this sample, the results showed that 52% of articles reported that the population was included in the process; however, 48% of the articles did not report this information. These findings are shown in Table 5. Although 52% of articles indicated that the target population was included in the cultural adaptation process of the assessment tool, only 42% of the papers indicated the point in the process where they were included. These findings can be found in Table 6. The findings showed that the population was mostly included in the pilot testing (12%) of the tool. In addition, 9% of the sample engaged the target population in focus groups. For example, Kariuki et al. (2016) conducted focus group discussions and in-depth interviews with parents and teachers in order to determine the phrases and idioms that could have been used in the translated version. Lin et al. (2019) conducted two focus group discussions with parents to review word choice and to identify cultural irrelevance. Li et al. (2020) also reported using focus groups interviews with parents and teachers in their adaptation process.

Table 1. General Information on Selected Articles (n=33)

Article Number	Countries	Forward Translation	Tools/Instruments Identified
11	Australia	Yes	Ages and Stages Questionnaire, 3rd Edition (ASQ-3)
29	Brazil	Yes	Survey of Wellbeing of Young Children (SWYC)
10; 16	Chile	Yes	Perceptions of Play Scale (PPS); I Can Problem Solve (ICPS)
44; 47; 48	China	Yes	Siblings Relationship Questionnaire; Preschool Learning Behavior Scale (PLBS); The Family Involvement Questionnaire (FIQ)
37	Denmark	Yes	The Caregiving Experience Questionnaire (CEQ)
40	Dominican Republic	Yes	Malawi Developmental Assessment Tool (MDAT) renamed Tamizaje de Desarrollo Infantil Dominicano (TDID) or Dominican Child Development Screening Tool after adaptation
8; 24; 25; 26	Hong Kong	Yes (twice)	The Young Children's Participation and Environment Measure; The Penn Interactive Peer Play Scale (PIPPS); The Preschool Play Behavior Scale (PPBS); "Chinese Inventory of Children's Socioemotional Competence (CICSEC)"
39	Iran	Yes	The Gilliam Autism Rating Scale (2nd Edition: GARS) GARS2
28	Jordan	Yes	Preschool Activity Card Sort (A-PACS)
2; 21	Kenya	Yes	Dimensions of Mastery Questionnaire; Child Behaviour Checklist (CBCL)
18	Korea	Yes	Ages and Stages Questionnaires: Social Emotional (ASQ: SE)
30	Mozambique	Yes	Phonological Awareness Test through Oral Production (PATOP)
43; 44	Poland	Yes	Early Childhood Behavior Questionnaire (ECBQ); Public Opinion Survey on Human Attributes-Stuttering/Child (POSHA-S/Child)
23; 35	Singapore	Yes	Parents Evaluation of Developmental Status (PEDS); Family Outcomes Survey-Revised (FOS-R)
3	South Africa	Study 1: No; Study 2: Yes	The Early Learning Outcomes Measure (ELOM)
6	Sweden	Yes	Autism Program Environment Rating Scale Preschool/Elementary (APERS-P-SE)
20; 27	Taiwan	Yes	Chinese Version of the Assessment of Preschool Children's Participation for Children with Physical Disabilities; Activity Support Scale (ACTS)
22	Thailand	Yes	ADHD Self–Report Scale Thai version (ASRS-V1.1)
9	Turkey	Yes	Early Childhood Creativity Scale (ECCS)
7	United States	Yes	Adjustment Scales for Preschool Intervention (ASPI)
13; 32; 34	United States (Latinx children; Spanish speaking families)	Yes	The Behavioral Assessment System for Children-Third Edition (BASC-3), Behavioral and Emotional Screening System (BESS); EMT en Espanol; Ages and Stages Questionnaires, Third Edition (ASQ-3)

Table 2. Reproduction of tool (n=33)

Article Numbers	**Who translated the tool?**
2,8,13, 21, 24, 25, 26, 28, 29, 43, 45	Bilingual/independent translators/speakers
18, 20, 37, 39, 40, 44, 47	Researchers
10, 16	Professional translator; certified translator & research team
11, 22	Linguistic consultant (bicultural, bilingual); language experts
27	Native speakers
6	Clinician
9,23, 48	Team (specialists, language expert; research assistant, health professionals; researcher, faculty member, parent)
7, 3,30, 32,34, 35	Not reported

Table 3. Quality Control Combinations (n=33)

Quality Control Indicators	Article Number	Percentage
Back-translation	3, 22, 23, 37, 43	15%
Expert Review	8, 13, 30	9%
Semantic Equivalence	2	3%
Back-translation & Expert Review	7, 20, 24, 25, 26	15%
Back-translation & Linguistic Equivalence	9	3%
Back-translation, Expert Review & Semantic Equivalence	27, 28, 29	9%
Back-translation, Expert Review, Semantic Equivalence & Conceptual Equivalence	10, 48	6%
Back-translation, Expert Review, & Linguistic Equivalence	18, 21	6%
Expert Review, Semantic Equivalence, Conceptual Equivalence, Item Equivalence, Operational Equivalence	11	3%
Not Reported	6, 16, 32, 34, 35, 39, 40, 44, 45, 47	30%

Table 4. Quality Control (n=33)

Quality Control Indicators	Article Number	Percentage
Back-translation	3, 7, 9, 10, 18, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 37, 43, 48	55%
Expert Review	7, 8, 10, 11, 13, 18, 22, 20, 24, 25, 26, 27, 28, 29, 30, 48	48%
Semantic Equivalence	2, 10, 11, 27, 28, 29, 48	21%
Conceptual Equivalence	10, 11, 48	9%
Linguistic Equivalence	9, 18, 21	9%
Item Equivalence	11	3%
Operational Equivalence	11	3%
Not Reported	6, 16, 32, 34, 35, 39, 40, 44, 45, 47	30%

Table 5. Was the tool tested in the population? (n=33)

Article Number	Yes, No/Not Reported
2, 3, 6, 7, 8, 10, 18, 21, 26, 27, 28, 29, 30, 32, 34, 43, 48	Yes (52%)
9, 11, 13, 16, 20, 22, 23, 24, 25, 35, 36, 39, 40, 44, 45, 47	No/Not Reported (48%)

Table 6. At what point in the process was the population included? (n=33)

Article Number	When was population included?
32,7	After translation (6%)
3	During assessment (3%)
21, 27, 26	Focus groups (9%)
10, 28, 43, 48	Pilot testing (12%)
2	Small-scale field trial & focus group discussion (3%)
34	Preliminary field testing (3%)
18	Step 2 for analysis of item difficulty & appropriateness and step 4 for completion of questionnaires & parent feedback (3%)
8	Throughout the entire process (3%)
6, 9, 11, 13, 16, 20, 22, 23, 24, 25, 29, 30, 35, 37, 39, 40, 44, 45, 47	Not reported (58%)

4. Discussion

From studies in a ten-year timeframe (2012-2022) focusing on assessment tools that were culturally adapted for different countries and cultural contexts, one of the priorities should have been ensuring cultural relevance in the adaptation process of the tool. It is to be noted that in every article there was mention of ensuring cultural appropriateness by using numerous expressions to emphasize this concept (culturally sensitive; culturally equivalence, culturally unique, for example). However, the findings of this scoping review suggest that information on how this was attained was not reported, or limited information was provided on the steps taken to ensure that the tool was culturally relevant to the target population.

The assessment tools that are intended for administration in different countries or cultures are generally translated by academics who are helping people in a specific culture have access to the tool. It was apparent in this scoping review, while this practice still exists within the last decade of early childhood education research, it is slowly evolving into a more multidisciplinary approach. That is, the team conducting the translation and adaptation process including multiple professionals with different areas of expertise. The finding that three articles used a team of people to adapt a tool is particularly interesting because the team was composed of different individuals with specific skillsets and backgrounds.

According to DuBay and Watson (2019) and other researchers (Acquadro et al., 1996; Beaton et al., 2000; Guillemin, 1993; Sousa & Rojjanasrirat, 2011), this multidisciplinary approach can include both conceptual and content experts of the tool, as well as others who are unfamiliar with the content but aware of the vernacular of the target population. This multidisciplinary approach seeks to include persons in the target population who are familiar with the customs, practices, and language, from the beginning of the reproduction and cultural adaptation process. While this is currently an emerging practice in the field, we strongly propose that this approach continues to be adopted by researchers and others intending to translate and adapt a tool for another country and culture as it yields multiple advantages. As part of this multidisciplinary approach, it is encouraged to also include certified translators or linguistic experts in the process. Collaboration with individuals with different backgrounds, expertise and skillsets is the first step in ensuring that an assessment tool is culturally appropriate and relevant.

DuBay and Watson (2019) expressed, “Once an instrument has been reproduced in the new language, the quality of the translation should be inspected using quality assurance methods” (p.58). The importance of conducting a quality control check of translated and culturally adapted instruments is to highlight any issues and ensure that they are all resolved (DuBay & Watson, 2019) before administering it to the target population. The findings of scoping review revealed that a

significant number of articles did not report or indicate any form of quality control in the adaptation process. This is a concerning finding because there is no way to determine whether the tool was adapted appropriately in terms of the content, concepts, and semantics. Furthermore, this finding revealed little to no information regarding the verification of cultural relevance.

Back-translation was reported in 15% of the articles in the sample as the only quality control method used in the adaptation process. Further, 55% of the articles reported using back-translation as one of the quality control methods in the adaptation process. While this is a commonly used method to ensure that the intention of the original tool is captured as the findings revealed, Rousseau et al. (2021) rightfully stated that back-translation "may result in limitations regarding the broader cultural adaptation process" (p. 498). DuBay and Watson (2019) shared several ways to determine quality control for tools, and while it seems like an arduous practice, using multiple of these approaches can assist in addressing any discrepancies in the adaptation process. Three articles in this sample reported using four or more quality control methods in their adaptation process. D'Aprano et al. (2016) reported several details of quality control for their questionnaire for the Aboriginal community in Australia as they tested for conceptual equivalence, semantic equivalence, item equivalence, operational equivalence, and conducted an expert review. Subsequently Coo et al. (2020) and Xia et al. (2021) conducted a back-translation, expert review, and tested for semantic and conceptual equivalence. Diversity on quality control, some processes are more frequent than others. For example, back-translation and expert review are used alone but are also used combined. Considering the global urgency and push for assessment tools to be more culturally relevant and appropriate for diverse populations, the reality is that this has yet to be completely applied in research practice.

One important aspect of the cultural adaptation process of an assessment tool is to include the target population in the process. As highlighted in the introduction, previous literature (Fernald et al., 2009; ITC, 2017; WHODAS) have suggested similar approaches. We would like to reiterate based on the findings of this scoping review that involving persons from the target population is another way to establish cultural relevance and appropriateness in the adaptation process. This can be done by consulting with bilingual persons in the target population from the beginning of the process, one being an expert in the tool, and cultural context, the other being a potential recipient of the tool and familiar with the cultural context. While more than half of the papers reviewed did not report when in the process the target population was included, pilot testing and focus groups appeared to be the preferred ways to get feedback on the tool.

5. Limitations

There are several limitations to this scoping review. This review was limited to only peer-reviewed, empirical literature, thereby excluding potential research that may have been used in theses or dissertations and even reports and manuals. Another limitation is that the articles analyzed had to be written in English or available an English translation. As a result of this, one article that was excluded from this review. It is important to note that the number of articles analyzed in this scoping review was limited and the interpretation of these results should not lead to any hasty generalizations regarding the adaptation process of all assessment tools in early childhood education. Furthermore, it is possible that other relevant peer-reviewed literature may exist, and may have been omitted, despite our rigorous search strategy and methodology.

Conclusions and Recommendations

There are several conclusions that can be drawn from the findings of this scoping review. The relevant articles for this review had all different approaches in the translation and adaptation process for early childhood assessment tools. The researchers all indicated the objective of being culturally relevant and appropriate in their reproduction process but there was a discrepancy in their intention to do so, and what was reported. There was also little to no specificity in ways in which they were ensuring cultural relevance. Furthermore, a lot of information was not reported in the selected articles, and this emphasizes the need for more in-depth reporting on the translation and adaptation process in the literature.

Based on the findings of this scoping review, we propose the following recommendations. First, during the cultural adaptation of a tool, we recommend that researchers continue to include multiple translators on their team. We suggest that this team include a native speaker, a linguistic consultant, someone who will use and implement the adapted tool, and an expert on the tool. We also recommend that this information is clearly reported in forthcoming published research.

A second recommendation is that a variety of quality control approaches is used in the adaptation process. While there are a variety of methods to use, and it has been previously recommended to utilize these approaches, we want to reiterate that a combination of three or more can ensure that the translated tool is effective for the target community. Among these are back-translation, expert review, cultural equivalence, semantic equivalence and linguistic equivalence to name a few.

Third, we recommend that all the adapted tools are pilot tested in the target community and suggest that prior to this that the community is included in the adaptation prior to pilot testing. There is a need for culturally relevant guidelines that suggests collaboration with experts in content, language and culture, from the beginning to the end of the translation and adaption process of assessment tools in early childhood education. Finally, we believe that it is imperative that researchers to report information on their cultural adaption process including how and when the target population was incorporated as well as more detailed information of the questions that were asked when they were a part of the focus groups for example.

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Authors contributions

All authors contributed to the study conception and design. Material preparation, data collection and analysis were performed by Dr. Chelseaia Charran and Dr. Carmen Dionne. The first draft of the manuscript was written by Dr. Chelseaia Charran, and all authors commented on and revised the manuscript thereafter. All authors read and approved the final manuscript.

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Obtained.

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Data sharing statement

No additional data are available.

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