



Review

Cultural Adaptations of Evidence-Based Interventions in Dementia Care: A Critical Review of Literature

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Abstract

Cultural adaptation is essential for ensuring that interventions are relevant and effective across diverse sociocultural contexts. However, little is known about how these adaptations are conducted and whether they follow structured, evidence-based frameworks. This review critically evaluated how dementia-related interventions have been culturally adapted and assessed the extent to which these adaptations align with the three-step process outlined in the Integrated Strategy for Cultural adaptation of Evidence-Based Interventions. A total of 19 cultural adaptations reported in 23 publications were identified from PubMed, PsycINFO, CINAHL, and Scopus. Of the included interventions, six targeted behavioral and psychological symptoms of dementia, one addressed both people with dementia and their caregivers, and the remainder focused on informal caregivers. All adaptations were guided by structural frameworks and aligned mostly with the integrated strategy for cultural adaptation. Common adaptation processes included stakeholder engagement through focus group, pilot testing, and review and refinement. However, communities were not engaged in intervention selection, a critical gap in ensuring cultural relevance. Although many studies preserved core components, post-adaptation fidelity checks were not conducted in some of the studies. Future adaptations should prioritize stakeholder engagement in intervention selection and incorporate fidelity assessments to maintain both cultural fit and intervention integrity.

Keywords: cross-cultural comparison; cultural competency; dementia; caregivers; intervention fidelity



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1. Introduction

As the world's population ages, the prevalence of dementia is projected to increase significantly in the coming decades [1]. Current estimates indicate that over 55 million people live with dementia worldwide, with nearly 10 million new cases diagnosed each year [1]. This trend is expected to triple, with the number of people living with dementia estimated to reach over 150 million by 2050 [1]. Dementia is among the leading causes of disability and dependency in older adults, contributing significantly to morbidity, reduced quality of life, and increased mortality [2,3]. The impact extends beyond the people living with dementia, to caregivers who are mostly unpaid [2]. In the United States of America for instance, over 16 million family members and unpaid caregivers provided an estimated 18.6 billion hours of caregiving to people living with dementia [2]. This places considerable

physical, emotional, and financial pressure on family and other informal caregivers, who often experience high rates of stress, depression, and health deterioration as a result of prolonged caregiving responsibilities [4,5]. The global economic cost of dementia, including both direct medical expenses and the value of unpaid care, was estimated at over 1.3 trillion in 2019, and is projected to reach to about 1.7–2.8 trillion US dollars by 2030 [6,7].

The increasing prevalence of dementia has prompted significant investment in developing and disseminating evidence-based interventions aimed at improving the quality of life for both people living with dementia and their caregivers [8,9]. These interventions include behavioral and psychological interventions such as cognitive stimulation therapy, reminiscence therapy, exercise programs, music-based activities, and caregiver education and support groups [10]. These interventions are aimed at improving patient-related outcomes such as cognitive function, activities of daily living, and quality of life [10]. For caregivers, interventions often focus on reducing burden, improving coping skills, and addressing mental health needs [11]. For instance, Cognitive stimulation therapy (CST), resulted in significant improvements in cognition and quality of life among people with mild to moderate dementia, with benefits sustained for up to 24 months [12,13]. Reminiscence therapy has been associated with enhanced mood, communication skills, and social interaction [14]. Exercise programs have been linked to better mobility, improved activities of daily living, and slower functional decline [15]. For caregivers, structured education and skills training have been found to reduce subjective burden, improve coping strategies, and lower depressive symptoms [16,17].

Cultural beliefs and values including patterns of communication, family structures, and a history of stigma can shape how individuals perceive health problems, interact with healthcare systems, and engage with treatment [18,19]. Cultural beliefs can influence help-seeking behaviors, treatment adherence, and acceptance of support services [18,20]. When interventions do not account for these sociocultural factors, inequities in access, utilization, and outcomes may arise [18], underscoring the need for culturally competent approaches to dementia care. Cultural adaptations, defined as the process of modifying interventions to be congruent with the beliefs, norms, language, and practices of a specific population has emerged as a critical strategy in dementia care [21,22]. Cultural adaptation is particularly important in dementia care, where beliefs about ageing, illness, cognitive impairment, and caregiving vary substantially across cultures [23]. For instance, in some communities, dementia may be attributed to spiritual causes or considered a normal part of ageing, which may influence help-seeking behaviors and adherence to treatments [20,23]. Also, sociocultural factors were identified as potential mediators of the reported higher levels of caregiver burden and lower utilization of formal healthcare services among Latino and black caregivers [24]. Moreover, many low- and middle-income countries, which previously reported comparatively lower rates of dementia, are now experiencing a rapid rise in cases and will need to culturally adapt existing interventions to meet the growing demand for care [24,25].

Interventions that are culturally adapted may lead to greater acceptance, engagement, and sustainability within the target population [26]. Cultural adaptations can also improve the relevance of an intervention, increase trust between participants and providers, and improve recruitment, retention, and effectiveness in intervention studies [21,22]. Cultural adaptation can also improve the feasibility of interventions, because the adaptations often account for differences in literacy levels, language, local customs, and caregiving structures between the group with which the intervention was originally developed and the target group [26].

Although there is a growing number of culturally adapted interventions in dementia care [21,22], there has been little synthesis of how these adaptations are actually conducted

and whether they align with established frameworks for cultural adaptation. Without such structure, adaptations risk omitting the core components that are responsible for an intervention's effectiveness, thereby limiting their impact and scalability [26]. Existing reviews tend to be narrow in scope, focusing either on a single intervention (e.g., iSupport for Dementia) [16] or a single cultural group (e.g., Latino family caregivers) [22] which leaves unclear how cultural adaptation is approached more broadly across interventions for people living with dementia and caregivers. Guided by Sidani et al.'s [26] integrated strategy for the cultural adaptation of evidence-based interventions, this paper presents a critical review of culturally adapted interventions in dementia care. Specifically, it addresses the research question: How have cultural adaptations of dementia interventions been conducted, and to what extent do they align with established frameworks for cultural adaptation? The objectives of this review are to: (a) Identify and describe the processes of cultural adaptations reported in dementia interventions for people living with dementia and their caregivers. (b) Critically appraise how adaptations align with Sidani et al.'s integrated strategy for cultural adaptation and highlight implications for practice and future research.

2. Materials and Methods

2.1. Search Strategy

To identify relevant studies, a structured search was conducted across four databases: PubMed, PsycINFO, CINAHL, and Scopus. The search combined terms related to cultural adaptation, evidence-based practice, and dementia. The following search string was used in PubMed and adapted as needed for other databases:

("Cultural Competency"[Mesh] OR "Cultural Adaptation" OR "Culturally adapted" OR "Cultural tailoring" OR "Cross-cultural comparison" OR "Cultural sensitivity") AND ("Evidence-Based Practice"[Mesh] OR "Evidence-Based Intervention*" OR "Program Adaptation" OR "Intervention Mapping") AND ("Dementia"[Mesh] OR "Alzheimer Disease"[Mesh] OR "Cognitive Impairment" OR "Neurocognitive Disorder*" OR "Memory loss"). We included only studies conducted from 2018 till date to align with the year of publication of framework used for this review. Additional studies were identified through reference list of included articles and hand-searching of relevant reviews. The final search was conducted in April 2025.

Studies were eligible for inclusion if they reported a cultural adaptation of an existing intervention for people living with dementia or their caregivers. Studies that adapted interventions only for contextual or logistical purposes (e.g., changing who delivers the intervention from professionals to caregivers) without consideration of cultural beliefs were excluded. Also, studies with full text published in other languages other than English were excluded from the review because the language proficiency of the authors were limited to English. We also decided to exclude gray literature to focus the review on studies that have been peer-reviewed.

2.2. Framework for Cultural Adaptation Appraisal

Using the integrated strategy for cultural adaptation [26], we developed a 19-item checklist to guide the appraisal of the cultural adaptation in each included study. The integrated strategy for cultural adaptations recommends a structured, three-step approach: (1) assessing the ethno-cultural community's beliefs about the health problem, (2) examining the fit of existing interventions with those beliefs, and (3) adapting the intervention in ways that enhance cultural congruence while preserving its core components. The checklist assessed to what extent does the individual studies: engaged the target community in identifying culturally relevant indicators and determinants of dementia; how they com-

pared interventions against cultural beliefs and evaluated their acceptability; documented specific surface and deep structure adaptations; preserved intervention fidelity; and had a transparent reporting of the adaptation process. Each item was rated by MI as “Yes”, “Partial”, or “No” (see Supplemental File).

2.3. Data Extraction

Data were extracted by MI using Microsoft Excel. Extracted information included: (1) study characteristics (country, population, intervention adapted, framework used, and individuals engaged during the adaptation process); (2) modifications made during the adaptation (e.g., language, structure, values, content); and (3) reported outcomes of the adaptation (e.g., acceptance, acceptability, fidelity). The extracted data were reviewed and approved by all authors (see Supplemental File).

3. Results

3.1. Overview of the Adaptations Included in the Review

A total of 19 cultural adaptations from 23 publications of evidence-based interventions for people with dementia and/or caregivers were included in this review. All studies demonstrated clear documentation of community engagement, stakeholder involvement, and use of guiding frameworks. However, participants/stakeholders were not involved in the selection of which intervention to adapt and, five of the studies did not report conducting any formal fidelity check following adaptation.

Six of these were adaptations of interventions for people with dementia and included four cognitive stimulation therapies (CST) [27–30]. A group-based Montessori intervention for people with dementia [31], and a low-intensity behavioral activation intervention [32]. One of the adaptations was a dyad intervention that provided gentle exercises for people with dementia and training for caregivers to manage behavioral symptoms of dementia [25]. The rest of the adaptations focused on family caregivers with nine being an adaptation of the World Health Organization’s iSupport for dementia carers [33–44]. Others included a virtual training for family caregivers on how to manage behavioral and psychological symptoms of dementia [45,46], Adult Day Services Plus intervention [47], and the Savvy Caregiver Program [48].

3.2. Contexts and Populations

Most adaptations were carried out in upper-middle- and high-income countries, including the United States, Portugal, Germany, Sweden, Australia, the United Kingdom, and Greece (see Table 1). Others were from low- and middle-income countries such as Egypt, Pakistan, India, Indonesia, Thailand, Malaysia, and Brazil. While most of the adaptations targeted the general population within each country through national-level adaptation, some studies focused specifically on a specific population or minority ethnic groups. These included adaptations for Hispanic/Latino communities in the United States [45–47], the Chinese community in Australia [44], community-dwelling Korean-American caregivers with limited English proficiency [48], and a rural community in Spain—Castilla y León [39]. Others include an Italian-speaking region in Switzerland [37,38], and for young carers in the United Kingdom [36].

Table 1. Characteristics of Included Studies.

Study	Country	Intervention	Framework	Stakeholders Engaged
Alvares et al. [27]	Portugal	CST	FMAP	Multi professional healthcare team, PWD and caregivers
Baruah et al. [33,34]	India	iSupport for Dementia	HFCAL, WHO iSupport Adaptation & Implementation Guide	Family caregivers, multi disciplinary healthcare team, WHO dementia team
Blomberg et al. [32]	Sweden	LI-BA	MRC (phase 1), ADAPT guidance	Healthcare professionals, community stakeholders, PWD, & Caregivers.
Chaudhry et al. [31]	Pakistan	Montessori-based intervention for dementia	HFCAL	PWD, caregivers, community health workers, NGO staff, healthcare professionals and religious leaders.
Dahlan, et al. [28]	Malaysia	CST	FMAP	Multi professional healthcare team, PWD and caregivers.
Efthymiou et al. [35]	Greece	iSupport for Dementia	Ecological Validity Framework and WHO iSupport Adaptation & Implementation Guide	Carers, dementia experts, IT developers, Athens Alzheimer Association, WHO technical team.
Garcia et al. [45,46]	USA/Hispanic/Latino	STAR-VTF	HFCAL, Cultural Treatment Adaptation Framework, Discover, Design + Build, Test framework	Caregivers, health & social works professionals
Jang et al. [48]	USA/Community dwelling Korean American caregivers with LEP	Savvy Caregiver Program	HFCAL	Caregivers; bilingual lay community-health-worker, SCP original developer; community & research partners
Masterson-Algar et al. [36]	Young carers in UK	iSupport for Dementia	Ecological Validity Framework and WHO iSupport Adaptation & Implementation Guide	Young carers (12–16 yrs), professionals (young-carer charity staff & dementia researchers), illustrator & IT designers contributed
Messina, et al. [37,38]	Ticino Canton (southern Switzerland)	iSupport for Dementia	Ecological Validity Framework and WHO iSupport Adaptation & Implementation Guide	ADS staff/interventionists, caregivers, certified Spanish interviewer/translator,
Molinari-Ulate et al. [39]	Castilla y León-rural Spain	iSupport for Dementia	WHO iSupport Adaptation & Implementation Guidelines	Family & professional caregivers, PWD, dementia experts, technology engineers, Alzheimer-Spain reps, WHO technical team
Monteiro et al. [40]	Brazil	iSupport for Dementia	WHO iSupport Adaptation & Implementation Guidelines	Caregivers/former caregivers, multidisciplinary healthcare professionals, Alzheimer's associations, WHO technical team.
Parker, et al. [47]	USA/Hispanic/Latino	Adult Day Service Plus	CAP & FRAME	ADS staff/interventionists, caregivers, certified Spanish interviewer/translator,
Saleh et al. [29]	Egypt	CST	Guidelines for adapting cognitive stimulation therapy to other cultures	Multi professional healthcare team, PWD and caregivers

Table 1. Cont.

Study	Country	Intervention	Framework	Stakeholders Engaged
Teles et al. [41]	Portugal	iSupport for Dementia	WHO iSupport Adaptation & Implementation Guidelines	Dementia professionals, usability experts, caregivers
Tongsiri S et al. [25]	Thailand	RDAD	11-step process in Escoffery et al. [49]	Public Health officials, caregivers, multidisciplinary health team, PWD, RDAD originators.
Turana et al. [43]	Indonesia	iSupport for Dementia	WHO iSupport Adaptation & Implementation Guidelines	Caregivers, multi professional health team, Alzheimer's Indonesia leaders, WHO technical team
Werheid et al. [30]	Germany	CST	FMAP	International experts, PWD, caregivers, multiprofessional team
Xiao et al. [44]	Australia/Chinese community	iSupport for Dementia	Ecological Validity Framework	Caregivers, community care-workers, Chinese community organizations.

Notes: CST = Cognitive stimulation therapy; FMAP = Formative method for adapting psychotherapy; PWD = people living with dementia; STAR-VTF = STAR-Caregivers Virtual Training and Follow-up; LI-BA = Low-Intensity Behavioral Activation interventions; HFCAI = Heuristic Framework for the Cultural Adaptation of Interventions; MRC = Medical Research Council; RDAD = Reducing Disability in Alzheimer's Disease.

3.3. Frameworks/Theories Guiding Cultural Adaptation Processes

Across the 19 included studies, ten distinct frameworks were used to guide the cultural adaptation process (see Table 1). Adaptations of iSupport mostly used the WHO's Adaptation and Implementation Guidelines and sometimes supplemented with additional frameworks such as the Ecological Validity Model or Barrera and Castro's adaptation model. Adaptations of CST were predominantly guided by the Formative Method for Adapting Psychotherapy, with one study applying an alternative guideline. A smaller number of studies used the Ecological Validity Model or Barrera and Castro's model independently, while others applied unique frameworks, including ADAPT guidance, FRAME, the MRC framework, and the Cultural Adaptation Process Model.

3.4. Evaluating Cultural Adaptation Processes Through the Lens of Sidani's Framework

The following section presents a critical review of the included studies using Sidani's Integrated Strategy for Cultural Adaptation as an analytical lens. This framework outlines three key steps in the adaptation process: assessment of community beliefs, examination of intervention fit with these beliefs, and the adaptation of the intervention. Each subsection below critically examines how the studies aligned with these steps, highlighting patterns, strengths, and gaps in the cultural adaptation of interventions for people with dementia and their caregivers.

3.4.1. Assessing the Ethno-Cultural Community Beliefs

As a preparatory step for the cultural adaptation process, Sidani et al.'s integrated strategy [26] recommends a review of the literature to identify indicators and determinants of the health problem, as well as potential interventions that address these issues. All studies included in this review reported conducting some form of literature review to identify the needs of people with dementia or their informal caregivers. Community engagement to understand the cultural context, beliefs, and preferences of the target population was also a common first step across the studies and aligns with the initial phase of Sidani's framework.

This engagement typically involved stakeholder consultations such as workshops and focus groups [27,30,39]. However, some studies relied primarily on the authors' own cultural knowledge and professional expertise for initial adaptation before engagement with the community [36,39,40,43,44]. Specifically, only four of the nine iSupport adaptations conducted a community assessment prior to making any adaptations [34,35,38,41].

3.4.2. Examining Interventions Fit with the Community's Beliefs

The goal of this stage of the process is to identify and rank a range of health interventions that address the community's needs based on their alignment with cultural beliefs and practices [26]. The integrated strategy recommends presenting a list of possible interventions identified from the review of the literature to stakeholders for deliberation and selection of the most appropriate and acceptable option. However, none of the studies in this review reported taking this step in the adaptation process. For example, in the adaptation of the Reducing Disability in Alzheimer's Disease program, the authors justified the choice of the intervention based on a literature review of its effectiveness in behavioral and psychological symptoms of dementia, adaptability across different settings [25], but this decision was not informed by community discussion or consensus. Moreover, the alternative interventions found in the literature were not presented in the study. Similarly, other studies that involved expert panels, focus groups or community workshops focused primarily on reviewing already selected interventions rather than assessing fit among a range of culturally appropriate options. This represents a missed opportunity to enhance cultural alignment and local ownership of the intervention.

3.4.3. Adapting Interventions

To determine what needs to be modified in the original intervention to suit the needs of the culture or population, the integrated strategy for cultural adaptation recommends the engagement of participants in semi-structured discussions [50]. Nearly all the studies adopted an iterative approach toward modification of the interventions. In the adaptation of CST, the common approach was to conduct a focus group with participants and stakeholders to identify needed modifications, followed by a pre-post pilot study of the modified version of the CST, and then another round of group discussions to evaluate the experiences with the use of the intervention [27–30]. In one of the studies, two rounds of pilot testing was conducted after each level of modification before the final revision [30]. All the CST studies included participants with dementia and informal caregivers in the focus groups. The adaptations of other interventions such as the Reducing Disability in Alzheimer's Disease [25], Adult Day Service Plus [47] and behavioral activation program [32] also followed similar approaches.

Similarly, in the iSupport studies, preliminary adaptation by authors were followed by focus groups with informal and formal caregivers to review and determine further modifications. The modified version is then subjected further expert panel appraisal/discussion [39–41,43]. Some of these studies conducted pilot studies to assess effectiveness and user feedback [34–36,41].

3.4.4. Modifications Made to the Original Interventions and Fidelity Check

Several modifications were made to the original interventions during the adaptation process. These modifications included translation of the contents into the local language, changes to the contents and materials used to increase familiarity with the local resources. This means that historical names and places, foods, songs, and tools were modified to reflect familiar cultural references and caregiving practices. Also, the modifications reflected important sociocultural and religious values of the local community. The most common values emphasized in the adapted versions were familism, respect for older adults, spirituality, and positive emotional response to caregiving (see Table 2).

Table 2. Modifications to the original interventions.

Study	Language Translation	Content & Materials	Beliefs, Norms, & Context
[25]	Thai	Replaced activities and tools, delivered by local care managers	Caregiver expectation; integrated within Thai care systems
[27]	European—Portuguese	Adapted names, songs, cultural topics (food, history)	Reflected Portuguese traditions; local day care/community settings
[28]	Malay	Local food, sounds, games, cultural references	Collectivism, respect for elders; familiar venues
[29]	Arabic	Replaced unfamiliar activities	Religious and social values (e.g., respect for elders), and literacy.
[30]	German	Used familiar references (names, places, words)	Removed activities that will trigger negative memories; integrated into German health system
[31]	Urdu	Introduced prayer mats, local images, food	Islamic beliefs, respect for elders, rural/low-resource settings
[32]	Swedish	Adapted examples, routines, images	Swedish care values, patient autonomy, digital community/home delivery
[33,34]	Not translated	Adapted examples/resources to Indian context	Extended family roles, caregiving expectations, socio-political context
[35]	Greek	Introduced Greek food, history, names	Familism, caregiver expectations
[36]	youth language	Age-appropriate content, new modules	Normalized emotional responses; role of schools & youth networks
[37,38]	Italian	Adjusted tone, text, illustrations, scenarios	Family values; addressed regional barriers to support
[39]	Spanish	Modified visuals, tone for rural context	Rural caregiving norms; limited digital/professional support
[40]	Brazilian—Portuguese	Replaced names, local resources	Addressed stigma low dementia awareness
[41]	European—Portuguese	Changed names, words, and literacy levels	Habits, customs, and traditions
[43]	Bahasa Indonesia	Replaced terms, illustrations, and activities	Religion, social values like respect, politeness and familism
[44]	Chinese	Food, music, activities	filial piety, respect for elders; embedded in Chinese-Australian services
[45,46]	Spanish	Replaced “caregiver” term; added multigenerational examples	Familism, collectivism; low resource & digital literacy
[47]	Spanish	Changed flyers, FAQs, and letters	Social values (familismo, respeto)
[48]	Korean	Modified case examples, session materials	Filial piety, collectivism, emotional restraint; community venues

To ensure that the adaptation does not substantially alter the core principles of the intervention which are fundamental to their effectiveness, a fidelity check was conducted in almost all the studies (see Supplemental File). In most of the reviewed studies, fidelity was maintained through the preservation of the core structures, elements, and principles of as well as providing the final version for technical check by the original developers. However, there was no evidence of formal evaluation or fidelity check in five of the studies [27–29,32,44].

4. Discussion

This critical review synthesizes how EBI for dementia care have been culturally adapted across diverse contexts, using the Integrated Strategy for the Cultural Adaptation of Evidence-Based Interventions as a guide [26]. The findings showed that the adaptation processes were largely consistent across studies, involving rich engagements with the community, caregivers and people living with dementia, multiprofessional healthcare teams and intervention experts. This aligns with literature, where cultural adaptation has been shown to improve uptake of interventions among diverse populations [51,52]

A key finding from this review is that most studies adopted a systematic approach to modifying existing healthcare interventions to fit into the cultural values of the new context. All the adaptations were guided by an adaptation guideline, which ensured consistency across the studies. Previous reviews of cultural adaptations similarly recommended that adaptations should be approached systematically, using standardized guidelines as they provide a much needed roadmap for multiple dimensions of cultural fit, including language, content, and delivery [16,21]. It is also recommended that cultural adaptations should be led by a multiprofessional, digitally competent, and culturally sensitive team as well as continuous engagements with stakeholders [52,53]. In this present review, we reported an extensive engagement of a good range of expert panels including healthcare professionals from diverse backgrounds, researchers, community members, and end knowledge users who contributed significantly to the outcome of the cultural adaptation.

While stakeholders were commonly engaged in assessing the fit of selected interventions to the target culture, the Integrated Strategy for Cultural Adaptation recommends involving them earlier in the adaptation process [26]. Specifically, it advises that research teams identify a range of potentially relevant interventions that address the targeted health problem and then engage stakeholders in reviewing these options to determine which is most culturally appropriate for adaptation. This proactive, participatory approach ensures that the selected intervention reflects both evidence and cultural relevance from the outset. A recent scoping review of cultural adaptations of the iSupport intervention for caregivers similarly emphasized the importance of involving caregivers in the early stages of intervention selection to enhance contextual fit and community ownership [16]. Similarly, in the adaptation of the START intervention for carers in South Asia, stakeholder involvement from the outset was critical to tailoring content to local caregiving norms [54]. Moreover, in some of the studies [25,27,29,30], the end users such as people living with dementia who are important stakeholders, are engaged at the later stages of the adaptation, specifically at the pilot phase after the initial adaptation has been completed. This limited engagement can potentially reduce their level of input and hence result in an adapted version that does not reflect their values and preferences.

One major challenge in cultural adaptation is balancing fidelity; defined as preserving the intervention's core components with fit to a given culture, or how well the intervention aligns with cultural context [55,56]. Finding the right balance between cultural competence and maintaining fidelity to the core components that made the original version effective is often contentious [57,58]. This challenge is a major obstacle to replicating and disseminating evidence-based interventions to diverse populations [58]. It has been argued that following a systematic rather than a spontaneous approach to cultural adaptation is the solution to achieving the right balance and overcoming this challenge. It is also recommended that embedding adaptation steps within the intervention design, rather than treating it as an afterthought is also an effective approach [21,56]. Fidelity check which is a process of assessing how the core components of the original intervention is retained in the newly adapted version [26] was not consistently applied across the studies in the review. Five studies in this review did not report any post-adaptation fidelity check which is concerning,

as modifications without systematic verification risks either unintended deviation from the original model or dilution of culturally meaningful adaptations. Castro et al. [56] argue that planned fidelity monitoring such as expert reviews, developer consultation or audits is important to ensure that adaptations enhance cultural fit without compromising efficacy. Interestingly, a notable strength in the cultural adaptation of iSupport was its embedded adaptation and implementation guidelines, which explicitly include fidelity checks as part of the adaptation protocol [59]. This guideline was followed by eight of the nine studies adapting iSupport, and hence it was not surprising that iSupport is extensively adapted and implemented in different settings [59].

This review has several limitations. First, while it provides a comprehensive synthesis of the adaptation processes, it does not assess the effectiveness or outcomes of the adapted interventions, as the primary focus was on how adaptations were carried out rather than their impact. Second, only studies published in English were considered, the exclusion of non-English publications and grey literature may have introduced some bias, potentially omitting relevant adaptations conducted in local or non-academic contexts. Third, structuring the review around integrated framework may have led to a framework-centric interpretation that overlooks adaptation strategies that do not neatly align with these models. Finally, we only appraised the adaptation process and did not conduct a quality appraisal of the included studies, meaning that variations in methodological rigor were not accounted for in the synthesis. These limitations should be considered when interpreting the findings.

5. Conclusions

This review showed that cultural adaptations are enabling the replication and implementation of evidence-based interventions in culturally diverse populations. While these adaptations followed a systematic and structured approach to replicating effective interventions in a new setting, there is the need for engagement of local communities early in the process to improve cultural sensitivity of the newly adapted version of the interventions.

This review contributes to that goal by offering a structured synthesis of current practices and identifying key opportunities to strengthen future adaptation efforts.

Future cultural adaptation efforts should begin by actively involving stakeholders, including end users, in the early stages of the process particularly in selecting which interventions to adapt to ensure cultural fit and community ownership. Research should also prioritize assessing the fidelity and effectiveness of adapted interventions to confirm that essential components remain intact while accommodating cultural values. Finally, developers of new interventions are encouraged to embed clear adaptation guidelines such as those provided by the WHO iSupport model to support transparent adaptation and promote broader uptake across diverse settings.

This review also draws attention to broader implications for research and practice. Cultural adaptation is not only a methodological approach to research, but also a means of advancing equity in health research by ensuring that diverse populations benefit from evidence-based care. Positioning adaptation as a standard part of intervention development and implementation can help normalize its use, facilitate comparability across studies, and accelerate the global uptake of effective practices.

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Abbreviations

The following abbreviations are used in this manuscript:

CST Cognitive stimulation therapy
WHO World Health Organization

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