

# The State of Current Knowledge on the Cultural Formulation Interview: A Scoping Review

Ahisha Jones-Lavallée<sup>1,2</sup> • Gabriel Bernard<sup>2</sup> • Jennifer Taing<sup>2</sup> • Yvan Leanza<sup>2</sup>

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#### Abstract

Culture is an important factor to be considered during any mental health intake assessment. The Cultural Formulation Interview (CFI) is a 16-item semi-structured patient assessment that was developed by the DSM-5's Cross-Cultural Issues Subgroup (DCCIS) and published in 2013 to aid clinicians in their cultural clinical assessment of mental illnesses. This scoping review aims to broadly summarize and review the existing literature on the CFI to see how the tool has been used since 2013. Following an initial search and screening in 4 databases, 30 articles were included in the final synthesis and evaluation. The main finding was that the CFI was a useful tool in a variety of settings throughout the world. The results suggest that employing the CFI increased rapport between patients and clinicians, aided in diagnostic and treatment planning, and increased the subjective exploration of the patient's illness narrative. The CFI was also deemed to have a positive impact on medical communication. Barriers to implementing the CFI were also presented. The available literature on the CFI is critically discussed, and the limitations of this review are explained.

Keywords Cultural formulation interview · Review · Cultural training · Scoping review

# Introduction

Research has highlighted the detrimental effects of culturally incompetent or insensitive clinicians on culturally diverse populations (e. g. Adeponle et al., 2012; Bhui & Bhugra, 2002). Cultural differences between professionals and clients such as age, gender, sexual orientation, ethnicity, socioeconomic status or language that have not been properly assessed during the evaluation or treatment planning can have several negative impacts on the therapeutic outcome. When cultural factors have not been properly appraised, clients may be given

 Ahisha Jones-Lavallée ahisha.jones-lavallee.1@ulaval.ca
Gabriel Bernard gabriel.bernard.1@ulaval.ca
Jennifer Taing jennifer.taing.1@ulaval.ca

Yvan Leanza Yvan.Leanza@psy.ulaval.ca

<sup>1</sup> Université Laval, Pavillon Félix-Antoine-Savard Local 1416, Québec, Québec G1V 0A6, Canada

<sup>2</sup> Department of Social Sciences, Laval University, Québec City, Québec G1V 0A6, Canada an incorrect diagnosis or the severity of their illness may be wrongly assessed (Adeponle et al., 2012). A lack of cultural sensitivity on the part of the clinician may also introduce severe communication barriers between the clinician and the client or affect the client's engagement and response during the therapeutic process (Bhui & Bhugra, 2002), possibly resulting in uselessly prolonging the client's suffering. On the other hand, it has been demonstrated that cultural sensitivity and culturally responsive care not only increase the likelihood of a strong therapeutic relationship by enhancing trust and improving communication between clinicians and clients (Brach & Fraser, 2000), but also increase the likelihood of clients using the services offered and diminish premature termination of the therapeutic process (Alegría et al., 2012). It is therefore critical for clients' wellbeing that clinicians remain culturally sensitive throughout the therapeutic process, including during the initial assessment. An initial assessment usually takes place during the first encounter and consists of the clinician and client exploring the symptoms and the causes of the problem the client is presenting with (Ordre des Psychologues du Québec, 2012). This process is important, as it is when the therapeutic relationship is established, and the information gathered during this interview plays a big role in treatment planning and diagnosis. Considering that an individual's

cultural context has a significant impact on how the symptoms of their illness are expressed and experienced (Gopalkrishnan, 2018; Kleinman, 1977; Leanza, 2011), exploring the patient's cultural background during the initial evaluation is critical to avoid misunderstandings that may potentially cause harm in the long run. As for client care in a mental health setting, cultural factors have an undeniable influence on many aspects of the therapeutic process. In fact, the cultural background of both the clinicians involved and the client can affect when, where, how and to whom the patient chooses to disclose their suffering (Kirmayer, 2006). Culture may also have an impact on the client's perceptions of care, including the type(s) and duration of treatment that are acceptable (Lewis-Fernández et al., 2013).

There is a growing body of literature supporting using the Cultural Formulation Interview (CFI) (American Psychiatric Association, 2013) as an assessment tool to gain a better understanding of a person's cultural background and to increase culturally responsive care (Kirmayer, 2012). The CFI's predecessor, the Outline for Cultural Formulation (OCF), was developed in response to an increasing need to develop a culturally appropriate assessment tool. Since its development, the OCF has been used in clinical practice and research studies all over the world (Canada, India, Denmark, Norway, Sweden, Spain, the USA and the United Kingdom) (Lewis-Fernández et al., 2016). Although the OCF had been employed in a variety of different settings (e.g., Kirmayer et al., 2012) and had yielded positive outcomes (e.g., Lewis-Fernández, 1996), it had several logistical limitations. When it came time to revise the OCF for the next DSM revision, research was conducted into ways of addressing the concerns that had been raised by clinicians regarding implementing the OCF in clinical practice. A group of experts referred to as the Cross-Cultural Issues Subgroup (DCCIS) therefore explored the then available literature on the OCF to create an assessment tool that would cater to the reality of the professionals who used it. The CFI, a 16item semistructured patient evaluation, was released along with the DSM-5 in 2013 (American Psychological Association, 2013).

The goal of this study was to review the existing research works on the CFI and provide a critical exploration of the literature. Although Jarvis et al. (2020) recently published a clinical synthesis on the CFI and its use in research since its release, their synthesis did not employ a systematic and rigorous methodology. Lewis-Fernández et al. (2020) published an editorial outlining the CFI's progress since its release, but, similar to Jarvis et al. (2020) clinical synthesis, its drawback is that the editorial is not systematic. This review therefore bridges a gap in the existing literature by using a recognized method for literature reviews and providing an independent view of the literature, thereby mitigating said shortcoming. A systematic narrative review was also recently published by Aggarwal et al. (2020b). Although their review was systematic in its methodologies, it was undertaken by the team who created the assessment tool. Our scoping review, on the other hand, provides an independent and critical outlook at the available research.

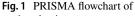
## Methodology

As this study consisted of reviewing previously published literature and did not involve human participants, no ethical approval was required or sought for the review. The scoping review methodology was used to examine the breadth of available literature and to map the field in terms of volume and nature, which made it particularly useful for an under-reviewed topic such as the CFI. A scoping review is defined as a research synthesis with a goal to 'map the literature on a particular topic or research area and provide an opportunity to identify key concepts; gaps in the research; and types and sources of evidence to inform practice, policymaking, and research' (Daudt et al., 2013). This study's methodology was guided by Arksey and O'Malley's (2005) method for conducting scoping reviews. Our review follows the five-stage model for conducting a rigorous scoping review, which includes identifying the research question, identifying relevant studies, selecting studies, charting the data, and collating, summarizing and reporting the results (Arksey & O'Malley, 2005).

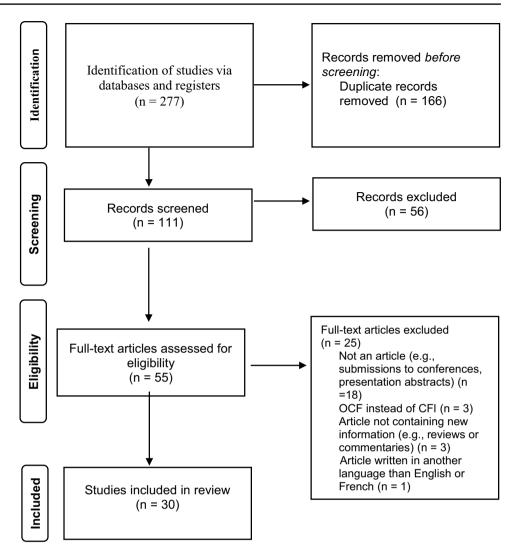
## **Data Sources and Searches**

The following four databases were searched for eligible studies published up to and in January 2021: Medline, PsycINFO, Web of Science and EMBASE (Excerpta Medica Database). The grey literature (reference lists, book chapters, websites) was also searched using similar keywords, and relevant articles were included in the review. In addition, the selected articles' reference lists were searched. The search term used was "Cultural Formulation Interview". As the review was not focused specifically on any one study design or any one application of the CFI, the search term was intentionally kept broad to ensure as much relevant literature as possible was found.

After the initial database search, duplicates were removed. Two independent researchers then systematically reviewed the abstracts of the remaining articles to determine whether the proper assessment tool was used (CFI vs OCF).



study selection process



## **Study Selection**

The authors retained studies that pertained to the CFI and were written in either French or English. Articles were eligible regardless of the methodology used, profession of the participants, clinical setting and country involved. The following types of studies were included in the final review: qualitative studies, quantitative studies, mixedmethods studies, case studies, pilot studies and international studies. Studies were excluded if they did not yield any new results (e.g., reviews, commentaries; DeSilva et al., 2018; Jarvis et al., 2020)or if they used assessment tools other than the core CFI (e.g., CFI-Informant version). The reference lists of these articles were, however, searched for grey literature.

## **Data Abstraction and Literature Synthesis**

A data extraction template was created and used in Covidence, a program that was developed to carry out literature reviews to categorize the literature into themes. Examples of areas that were identified are research methodology, country in which the research was carried out, outcome measures, results, and conclusions. Two researchers coded the literature independently for relevant data to extract and added/rejected additional articles as needed (e.g., identifying articles in reference lists or articles that did not meet the inclusion criteria). The primary author then compared the extracted data in Covidence. Any discrepancies in this process (rejected articles, data extraction) were discussed as a team until a consensus was reached. When needed, a third independent researcher was asked to make the final decision. The initial search yielded 110 results after duplicates were removed. Following the screening process, 30 articles were included in the synthesis and evaluation. See Figure 1 for the PRISMA flow diagram outlining the search process.

## Results

Of the 30 studies included, 9 were mixed methodologies, 10 were qualitative studies, 5 were quantitative studies, 5 were case studies and 1 was a content validity study. Studies were carried out in a variety of different countries, including Australia (1), India (2), Israel (1), Iran (1), Mexico (1), Denmark (1), Canada (1), the USA (13), Germany (1), Italy (1), Kenya (1), Sweden (1) and multiple countries (4). Most studies were conducted in adult outpatient psychiatric units; however, there were also studies conducted in a forensic unit and in resident training programs. The participants administering the CFI were mostly psychiatrists, although a few studies involved psychologists and social workers. Of the 30 studies included, 43% (13) stemmed from the CFI's international field trials and 17% (5) stemmed from case studies.

#### **Organization of the Results**

The results of this analysis are organized according to the main themes identified in the literature and according to context (e.g., international field trials, research outside of the international field xtrials, case studies, barriers to implementing the CFI, medical communication, and CFI training). Afterwards, other derivatives of the CFI are briefly presented.

## The CFI's Relevance for Clinical Practice

## The CFI's Feasibility, Acceptability and Utility: The International Field Trials

The international field trials refer to studies carried out to test an initial 14-item version of the core CFI. A significant portion of the research that exists on the CFI stems from these field trials that were conducted at 11 sites across 6 countries (the USA, Canada, India, Kenya, the Netherlands and Peru) (Lewis-Fernández et al., 2017). The objective of these field trials was to assess the feasibility, acceptability and perceived clinical utility of the core CFI (Lewis-Fernández et al., 2017). A mixed-methods methodology was used, and 75 clinicians and 318 patients, and 86 relatives from outpatient clinics were recruited. Researchers included patients with most mental health diagnoses as well as patients with comorbid disorders. Patients who were actively suicidal or homicidal, experiencing substance use withdrawal or had a condition that would impair assessment (e.g., dementia) were excluded from the trials. The researchers also emphasized the importance of not including interpreters in the study, meaning participants and clinicians were required to speak the same language (Lewis-Fernández et al., 2017). Participating clinicians attended a 2-hour training session on the CFI before administering the assessment tool to a minimum of three new patients. The results from this study deemed the CFI to be a feasible, acceptable and useful evaluation tool from the point of view of both clinicians and patients. Clinicians' initial concerns about using the CFI subsided after they used it a few times, and administration time diminished with practice, averaging out to approximately 20 minutes for the entire assessment tool (Lewis-Fernández et al., 2017).

In Pune, India, Paralikar et al. (2015) also attempted to measure the CFI's overall value in terms of its acceptability, feasibility and clinical utility. Perspectives of patients, clinicians and patients' family members were obtained at this site (Paralikar et al., 2015). A total of 10 clinicians and 36 patients and family members participated in the mixedmethods study. The results indicated that all three groups of participants rated the CFI positively; however, patients with severe mental illness rated the assessment tool less favorably than the others (Paralikar et al., 2015). After this initial study, Paralikar et al. (2020) furthered their investigation and conducted a qualitative analysis of the CFI (Paralikar et al., 2020). This research team compared the perceptions of the overall value of the CFI among patients with common mental disorders and serious mental disorders to explore the effect of psychopathology on cultural formulation (Paralikar et al., 2020). Patients with common mental disorders were more likely to elaborate further on their problem than those with severe mental disorders were. The CFI was also evaluated more favorably by patients than clinicians (Paralikar et al., 2020).

In the Netherlands, Rohlof et al. (2018) also aimed to assess the CFI's feasibility, acceptability and clinical utility in 30 patients and 11 clinicians (Rohlof et al., 2018). The CFI was used with both patients with foreign (17 patients) and Dutch origins (13 patients) in this mixed-methods design. This study stands out as the participating clinicians were mostly psychologists or psychotherapists (6/11) versus psychiatrists, who are usually the focus in other studies. Results from this study yielded that both patients and clinicians perceived the CFI to be a feasible, acceptable and useful tool, with patients rating clinical utility more highly than clinicians (Rohlof et al., 2018).

In a chapter of the DSM-5 handbook on the CFI, Bäärnhielm et al. (2016) summarize the research exploring CFI use at the Indian and Kenyan trial sites. Bäärnhielm et al. (2016) highlight that the Indian site was unique in that it was a very busy and high-volume environment with clinicians seeing between 200 to 250 patients daily, which may have impacted the patients' and clinicians' perspectives of the assessment tool. The patients at this site emphasized they appreciated the extra time they were allotted with the doctors during the international field trials. At the Kenyan site, the CFI was deemed to be useful in reassessing the patient and attributing an appropriate diagnosis in at least one case (psychosis being diagnosed as depressive disorder rather than schizophrenia) (Bäärnhielm et al., 2016). We were unable to find a published article specifically detailing aspects of the Kenyan site.

Díaz et al. (2017) recruited 30 monolingual Spanish participants from the CFI international field trials in Connecticut, USA. The authors of this qualitative study aimed to identify recurring themes in using the CFI that could lead clinicians to adopt more culturally responsive care in mental health settings (Díaz et al., 2017). The results from this study suggest that establishing trust, concentrating on the restoration of social ties, and discussing the potential impacts of stigma and the patients' urgent psychosocial needs are elements of culturally appropriate care for a Hispanic population in the USA (Díaz et al., 2017). The CFI was thus shown to enhance the cultural responsiveness of care in this population (Díaz et al., 2017).

Using a mixed-methodology, Hinton et al. (2015) assessed the participation of family companions in the international field trials and assessed the companions' perspectives of the CFI's feasibility, acceptability and clinical utility (Hinton et al., 2015). The authors highlighted that out of the 321 patient interviews conducted during the international field trials, only 86 (4 out of the 14 international sites) included family members or other relatives (Hinton et al., 2015). The CFI was deemed to be a clinically useful, acceptable and feasible assessment tool according to companions (Hinton et al., 2015). The relatives also appreciated that the CFI encouraged the patient to express themselves and discuss their background and difficulties in further detail (Hinton et al, 2015). There were, however, significant siteto-site differences in perceptions of utility and acceptability, with the companions at the Nairobi site rating the CFI more favorably than those at the other sites (e.g., relatives at the Indian site found the CFI questions to be "too personal") (Hinton et al., 2015).

## The CFI's Effects on Medical Communication

In the international field trials, Aggarwal and colleagues examined, by means of a deductive content analysis of the field trials debriefing interviews, whether and how using the CFI affected medical communication between patients and clinicians (Aggarwal et al., 2015). Results yielded that the CFI improved rapport between clinicians and patients, thus increasing medical communication. More specifically, the CFI increased satisfaction, the amount of information obtained through the evaluation and the weight given to the patient's perspective in the evaluation and aided in the communication of care (Aggarwal et al., 2015). Similarly, Aggarwal et al. (2020b) analyzed the effects using the CFI may have on patient-clinician communication at the New York international field trials site, specifically in terms of patients' perception of rapport with clinicians, clinicians' perceived efficiency in gathering information, and cultural models of health and illness (Aggarwal et al., 2020a). The researchers found that the open-ended questions used in the CFI favored the adoption of a patient-centered approach by encouraging the patient to elaborate on their opinions and perceptions of interpersonal, environmental and biomedical information using techniques such as inviting the patient to speak more, asking for the patient's opinion, providing reassurance, asking for permission, verifying understanding and using back-channel statements (Aggarwal et al., 2020b), allowing patients to better construct cultural models of illness and increase rapport in clinician-patient dyads (Aggarwal et al., 2020b).

## The CFI's Feasibility, Acceptability and Utility: Research Outside of the International Field Trials

As opposed to the international field trials that were using an initial 14-item version of the core CFI, research outside of the international field trials were using the published 16-item version of the CFI that can today be found in the DSM-5.

In Stockholm, Sweden, Wallin et al. (2020) assessed similar measures as the international field trials: the CFI's clinical utility, feasibility and acceptability from the perspective of 114 patients and 15 clinicians in an outpatient clinic. The mixed-methods study revealed that both clinicians and patients deemed the CFI to be a clinically useful, acceptable and feasible tool (Wallin et al., 2020). In fact, certain clinicians mentioned that the CFI gave them increased confidence in their diagnosis and aided them in conducting their psychiatric assessment by giving more weight to the patient's illness narratives (Wallin et al., 2020). The qualitative data obtained through clinician focus groups revealed that the following themes were identified: approaching the patients and their difficulties in a different manner, cocreating rapport and understanding, and affecting clinical reasoning and assessment (Wallin et al., 2020). However, in this study, 14.5% of the participants (6/57) mentioned finding the CFI questionnaires to be troubling or discomforting (Wallin et al., 2020).

In the USA, Lewis-Fernández, Aggarwal, and their research team conducted a mixed-methods pilot study in which the CFI was used in an inpatient service treating both forensic and nonforensic adult patients. In this study, a total of 13 clinicians administered the CFI and were assessed with a semi-structured phone interviews and quantitative measures five times over a 10month period to evaluate changes with increased practice using the CFI. The authors found that clinicians presented a general openness to implementing the CFI, with clinicians in the forensic units less likely to implement the CFI if it was a requirement than those in civil units (Aggarwal et al., 2020b). Although this study was conducted outside of the international field trials, many of its authors took part in creating the assessment tool and were members of the DCCIS.

Also in the USA, Muralidharan et al. (2017) qualitatively explored CFI use in a Veterans Affairs clinic with 14 patients mostly of African American descent who presented with chronic psychosis (Muralidharan et al., 2017). The results from this study suggest that patients appreciated the rapport they developed with clinicians. Patients felt that the clinicians were really listening to them and cared about their well-being, which increased their feeling of validation. They also mentioned that the CFI aided in coming to deeper realizations about themselves and their recovery (Muralidharan et al., 2017).

In Denmark, Skammeritz et al. (2020) explored the CFI's acceptability and clinical utility in a mixed-methods methodology with 12 physicians and 71 migrant patients in a transcultural mental health clinic. Interpreters were used to aid just over half (58%) of the migrants during the evaluation process, making this one of the only studies to have involved interpreters. The results from this study suggest that when the CFI is used in addition to a standard assessment, it is useful to physicians for treatment planning and for exploring patients' views of their cultural and social context (Skammeritz et al., 2020). Patients reported high overall satisfaction with the CFI. However, certain physicians did not find the CFI to be helpful in determining a diagnosis (Skammeritz et al., 2020). It is important to note that in this study, the CFI was used in the second evaluation session with the patients instead of the first session as recommended. This was done to compare and evaluate the additional value clinicians gained from the CFI after performing a routine clinical assessment during the first session (Skammeritz et al., 2020). The results from this study also differed from the international field trials results, as interpreters were intentionally excluded from the field trials. The use of interpreters was raised by the authors as a factor that potentially impacted the doctors' overall value assessment of the CFI. In fact, the presence of interpreters may have yielded less information overall due to the patients using abbreviations or being less open (Skammeritz et al., 2020).

The CFI has also been translated into Spanish and was used by a research team in Mexico (Ramírez Stege &

Yarris, 2017). A total of 11 service providers administered the CFI to 19 patients in a regional outpatient clinic. Contrary to the clinicians at the international field trial sites, the clinicians at the Mexico site did not receive any CFI training beforehand. Also, the CFI was used in the context of follow-up appointments versus the original intended use of the CFI, which is to be used as part of the intake assessment interview administered during the first session. Despite these shortcomings, the CFI was shown to be appreciated by service providers and patients (Ramirez Stege & Yarris 2017). The CFI aided in building trust and increased the clinicians' understanding of contextual factors affecting mental illness, ultimately aiding in diagnosis and treatment planning (Ramirez Stege & Yarris 2017). However, clinicians and patients found the CFI questions relating to "culture" to not be clinically useful and to have limited effect on the assessment interview (Ramirez Stege & Yarris 2017). This result may be due to the lack of pre-administration training, during which clinicians would have had the opportunity to gain a better understanding of the goals of each question and practice using the questions in a roleplaying setting.

Zbidat et al. (2020) conducted a qualitative study that used 17 questions mostly inspired by those in the CFI to analyze the representation of trauma, self-reported complaints, somatization and coping strategies among 16 Syrian refugees in Germany. According to the authors, the core CFI was not integrally applied due to past literature indicating its questions were too abstract and complicated to be used with a refugee population (Zbidat et al., 2020). The modified CFI-inspired questions permitted the researchers to gather information on many different aspects of the refugee experience. The authors suggest that Syrian refugees be screened for somatization, depression and post-traumatic stress disorder, and be offered targeted and specific treatment plans that consider and support their individual coping strategies (Zbidat et al., 2020). This article provided no information on the usefulness or acceptability of the CFI or the interviewers' perceptions of it in the research or data collection.

A research team in Iran translated the CFI into Persian to investigate its content validity (Shariati et al., 2018). A panel of twenty members from various fields (e.g., clinical psychology, psychiatry, social work, nursing) assessed the content validity of the Persian version of the CFI. The results from this study deemed the CFI to be acceptable in terms of content validity. However, the authors suggest modifying two domains of the CFI (cultural perception of the context and cultural factors affecting help-seeking) in order to optimally adapt it to Iranian culture (Shariati et al., 2018).

### **Relevance for Clinical Work: Case Studies**

Some research teams have also reported using the CFI in specific case studies. Callegari et al. (2016) conducted two case studies with migrants in Italy: a man born in Morocco and a man born in Sierra Leone. The authors deemed the CFI to be helpful with diagnosis, increasing communication, building a strong therapeutic relationship with the patients and increasing treatment adherence (Callegari et al., 2016).

A case study was also conducted in Israel with two Ethiopian adolescent women with eating disorders (Shem-Tov et al., 2018). The authors of this case study highlighted the role the CFI played in treatment breakthroughs by allowing the clinicians to gain a better understanding of cultural and familial meanings of stomach-ache and actively including the mother in treatment, ultimately facilitating recovery (Shem-Tov et al., 2018).

La Roche and Bloom (2018) explored the CFI's usefulness with young children via a case study of a 6-year-old boy of Somali decent. In this case, the CFI was deemed to be a powerful tool in assessing the child's symptoms in a culturally sensitive manner and in creating an adequate and more thorough treatment plan that incorporated prayers and family support (La Roche & Bloom, 2018). However, it was noted that the CFI was too dependent on verbal communication skills for most children, and the authors do not suggest using the assessment tool with children under 11 years old. The authors recommended developing a supplementary module specifically addressing using the CFI with young children, in which the evaluation relies not solely on words, but rather on specific questions to be answered and play (e.g., drawing, building, acting) to represent children's views of themselves and their contexts (La Roche & Bloom, 2018). This was the sole article examining using the CFI with children.

Gearin et al. (2020) also explored the CFI's role in the case formulation of a Jamaican American woman with a history of psychosis. After using the CFI, the care team emphasized the use of prayer, diminished the use of antipsychotics and modified the initial diagnosis of schizophrenia to a less severe diagnosis of delusional disorder (Gearin et al., 2020). Overall, the authors deemed the CFI to be a useful tool in facilitating dialogue between the patient and the clinician, making it easier to gain an understanding of the person's unique experience of their symptomatology as well as improve diagnostic accuracy and aid in aligning treatment with the patient's values (Gearin et al., 2020).

Finally, in Australia, Kayrouz et al. (2017) report on a case in which the CFI was implemented as the second step of a protocol aiming to aid clinicians in adequately communicating mental health diagnoses to patients from different cultural and linguistic backgrounds (CFI-SPIKES program, where S = Support, P = Perception using CFI, I = Invitation, K = Knowledge and E = Emotions) (Kayrouz et al.,

2017). The authors applied the CFI-SPIKES protocol to the case report of a Middle Eastern man with generalized anxiety disorder. The results suggest using the CFI in combination with the SPIKES protocol aided in communicating the mental health diagnosis, permitted a collaborative approach between the clinician and the patient, permitted further exploration of the stigma associated with mental health difficulties, increased the patient's engagement, and increased informed shared decisionmaking between the clinician and the patient (Kayrouz et al., 2017).

#### **Barriers to Implementing the CFI**

Barriers to implementing the CFI were explored in a qualitative study conducted at the New York international field trials site. Patients' primary concerns included a lack of differentiation between the CFI and other treatments, a lack of buy-in, ambiguity in the design, overstandardization of the assessment tool and the severity of the patient's illness (Aggarwal et al., 2013). For clinicians, barriers included a lack of conceptual relevance between the intervention and the patient's problem, a drift from the format, repetition, the severity of the patient's illness and a lack of clinician buyin (Aggarwal et al., 2013). These implementation barriers were addressed, and changes were made to the CFI before it was published.

Other barriers to CFI implementation were raised by Aggarwal and his team in a mixed-forensic and non-forensic unit (Aggarwal et al., 2020c). Clinicians' concerns regarding CFI implementation were mostly related to the skills, abilities and confidence needed to administer the assessment tool, external requirements, and the easiness of integrating the CFI in their routine clinical practice (Aggarwal et al., 2020b). Clinicians were also particularly worried about patients being in psychosis and thus having their capacities limited at the time of the interview. To offset this barrier, the authors suggest administering the CFI only once the patient has been stabilized instead of strictly doing so during the intake interview (Aggarwal et al., 2020b).

Several barriers were also identified by relatives at certain international field trial sites. For example, some relatives thought the CFI questions were difficult to understand, with this barrier being exacerbated for those who were less literate (Hinton et al., 2015). Also, relatives at two Indian trial sites found the CFI questions to be "too personal" or "take too much time" (Hinton et al., 2015).

# **CFI Training**

Considering the lack of attention that is paid to culturally competent care in most university programs and the challenges that are present when working with culturally diverse populations in mental health settings, training clinicians to adequately use and interpret the information obtained through the CFI is of upmost importance. When it comes to how clinicians prefer to receive this training, a study conducted by Aggarwal et al. (2016) revealed that most clinicians prefer learning about the CFI via active behavioral simulations. Video demonstrations were deemed to be the least helpful. According to this study, the most effective training protocols combine reviewing the written guidelines, watching video demonstrations and participating in behavioral simulations (Aggarwal et al., 2016). These results stem from qualitative interviews with 75 clinicians from 6 different countries concerning their training preferences. It has been shown that the clinician's ability to effectively conduct the CFI was directly correlated with the quality and usefulness of the information gathered (Ramírez Stege & Yarris, 2017).

Another research team explored using interdisciplinary case discussions (ICDs) to discuss information obtained through the CFI (Rousseau et al., 2018). During ICDs, clinicians discussed information about the client and proceeded to complete case formulations and develop treatment plans. It was found that the ICDs expanded and oriented the clinician's intake of information, allowing them to gain a better understanding of the client's background (Rousseau et al., 2018). Clinicians were also able to more easily read cultural cues and identify information missing from the case formulation, to rely more on the client's strengths and resources rather than simply focusing on symptoms. The ICDs also sometimes led clinicians to envision a change in diagnosis and strengthened the relationship between the professional and the client (Rousseau et al., 2018).

Mills et al. (2016; 2017) conducted research with the objective of assessing whether a 1-hour didactic session on the CFI impacts perceived cultural competence in psychiatry residents. The results from these studies (a pilot study and a full-scale study) demonstrated that residents' levels of perceived cultural competence were significantly higher following the training session (Mills et al., 2016, 2017) regardless of previous cultural competence training.

Various training programs targeting different populations have also been developed. For example, an online CFI training module was developed by Lewis-Fernández et al. (2020) at the New York State Center of Excellence for Cultural Competence. The training module was completed by 423 health care providers, who deemed the program to be very helpful and indicated it would have a lasting impact on their clinical practice (Aggarwal et al., 2018). Similarly, Díaz et al. (2016) developed a brief training for second-year psychiatry residents consisting of four 90-minute sessions with the aim of increasing their cultural sensitivity. Although the training curriculum was not specifically focused on the CFI, the assessment tool was presented in certain segments of the program, and participants reported appreciating the opportunity to gain experience practising the CFI questions (Díaz et al., 2016). Another research team also attempted to increase cultural competency by using small-group objective structured clinical examinations (OSCEs) to teach psychiatry residents how to use the CFI (Padilla et al., 2016). The results demonstrated that using OSCEs increased the psychiatry trainees' comfort with culturally appropriate interviewing and improved their knowledge of cultural syndromes (Padilla et al., 2016). The clinical examinations also increased and fine-tuned the psychiatry students' diagnostic abilities by helping them differentiate between acceptable and psychotic expressions of religion (Padilla et al., 2016). However, some residents, despite deeming the CFI to be a useful tool, voiced concerns about the logistics of implementing the assessment tool in constrained time limits (Padilla et al., 2016).

## **Other Derivatives of the CFI**

A few research teams have developed other interesting tools based on the CFI. For example, Aggarwal and colleagues developed the Cultural Formulation Interview – Fidelity Instrument (CFI-FI) to explore clinicians' fidelity in implementing the CFI, for research and administration purposes only (Aggarwal et al., 2014).

Similarly, Paralikar et al. (2017), the authors who reported on the Indian international field trials site, proposed the development of an outline of a family version of the CFI (CFI-F) (Paralikar et al., 2017). The authors highlighted the importance of using a version in family-centered societies such as India. According to the article's abstract, the CFI-F's goal is to elicit family members' consistent and divergent views regarding an individual's illness experience and ultimately allow clinicians to gain further insight into the significance of certain cultural factors (Paralikar et al., 2017). However, this article was not included in our analysis as the research team did not have access to it. Similarly, before the CFI was released, a Dutch team piloted a shortened version of the OCF in response to critiques that the OCF took too long to administer, making it unrealistic to use in routine clinical practice (Groen et al., 2017). This article was also not included in our analysis as it focused on the OCF, not the CFI. Finally, Smid et al. (2018) proposed the adoption of a bereavement and grief supplementary module to aid the clinician to appropriately assess the impacts of cultural factors on grief-related psychopathologies (Smid et al., 2018).

## Discussion

#### **Summary of the Main Results**

The CFI was shown to be an acceptable, feasible and clinically useful assessment tool for both patients and

clinicians in the context of the international field trials, research outside of the international field trials and case studies. The CFI also seems to play an important positive role in medical communication. However, certain barriers and limitations remain for it to be routinely implemented. The importance and implications of CFI training was discussed, and certain derivatives of the CFI were presented.

### Gaps in the Literature and Recommendations

Based on the results of the scoping review, we have identified the following research gaps in the literature on the CFI.

Firstly, a large proportion (43%) of existing research on the CFI stems from the international field trials. This indicates that much of the knowledge that we currently have concerning the effectiveness and generalizability of the CFI comes from the same body of research, involving the same database of participants and research team, that has been interpretated in a variety of ways. Since the international field trials were conducted by members of the DCCIS and the CFI was created specifically for the purpose of being included in the DSM-5, the CFI itself remains a cultural production constructed for a manual that has been severely critiqued for ignoring context in the diagnosis of psychopathologies (Bredström, 2019). The CFI may play a role in diminishing the power dynamic in clinician-patient or migrant-clinician dynamics by increasing patients'/migrants' subjective illness narrative and increasing medical communication; however, the DSM's stance on the biomedicalization of psychopathology still stands. Moreover, considering that the international field trials were carried out across 11 sites in 6 countries, most of the individual site-specific publications originated from the sites in westernized locations (e.g., the USA) or, presumably, the sites with the resources to publish sitespecific findings (e.g., India), leaving certain international field trial sites without much published individual information (e.g., Kenya). In fact, to our knowledge, the Kenyan site is described only in the CFI handbook chapter written by Bäärnhielm et al. (2016). This leads to the data from individual sites being bundled together without distinguishing or providing further information regarding the sites' cultural context (e.g., how busy the clinics are, how the medical field is perceived in the country). These aspects of the cultural context are important, as they are known to influence how the clinician-patient relationship is shaped and how treatment plans are delivered and are accepted by patients. When all of this is considered together, it seems there was a certain degree of publication bias (Rothstein et al., 2005) at play in the international field trials when evaluating the CFI. This bias seems to be present despite concrete actions taken by the DCCIS to avoid this (i.e., recruiting from five continents),

although other structural factors (i.e., site-specific resources, research group priorities) may have been at cause. Further research outside of the international field trials is needed, as is independent data exploring each field trial site's specific cultural context and how differences may impact the assessment tool's acceptability, feasibility and clinical utility.

Secondly, in the international field trials, most of the clinicians were psychiatrists and most of the clinical settings were outpatient psychiatry units, which makes the results difficult to generalize for other clinical settings. Further research is needed to validate and confirm the CFI's pertinence in diverse clinical practices. Similarly, only two case studies explored the CFI's effectiveness among a non-adult population. Further large-scale research is needed to explore using the CFI with younger populations as well as to suggest possible adaptations. Additional research is also needed to explore the role of family members during the evaluation process and in treatment planning, especially if family members are important to the patient's illness narrative or protective factors. As previously mentioned, a limited number of sites included family members in their research protocol, and those that did were primarily in collectivist communities (e.g., India). The research field may benefit from exploring the effects of including family members in a wider range of contexts around the world, especially as the literature supports including family members as part an important aspect in building trust with patients during assessments (Kirmayer et al., 2011).

Thirdly, the international field trials' insistence on excluding interpreters during CFI implementation may also be a shortcoming. Considering that a significant portion of intercultural interventions is conducted with the help of interpreters (Lee et al., 2006), trained or not, it is crucial to further examine how the CFI remains useful, feasible and acceptable in the context of an interpreted evaluation. The need to translate the CFI into more languages, as was done for certain research teams, was also emphasized by certain researchers. Bäärnhielm and colleagues go as far as suggesting training materials need to be adapted to align with the reality of the local non-English-speaking community (Bäärnhielm et al., 2016). Some authors also highlighted the importance of adopting a flexible approach to using the CFI rather than a manualized standardized application of the questions. Doing so may address some of the barriers and limitations addressed by both patients and clinicians.

Fourthly, research evaluating the impact of cultural training programs remains scarce, making it hard to determine the effectiveness of these programs (Bhui et al., 2007). Evaluating the effects of CFI training programs is thus an important strength in the literature available in this domain (e.g., Mills et al., 2017). However, further research evaluating clinicians' changes in practice, case formulation or cultural competence following CFI training would be beneficial. Additionally, as CFI training seems to be an important variable in determining clinicians' satisfaction with the assessment tool, it seems crucial to further this training so as to have clinicians not only be competent in administering the questions of the CFI, but also be competent in directing the gathering of important information, synthesizing the information, and using the appropriate information during case formulation, diagnosis and treatment planning. Ongoing supervision or case discussions (ICDs), as suggested by Rousseau and colleagues (Rousseau et al., 2018), may be an interesting solution for this limitation.

Finally, further research is needed to explore the impact of using the CFI on patient-centered, clinical outcomes such as patient satisfaction, patient engagement in the treatment, quality of life and symptom reduction. Similarly, as one of the main goals of the CFI is to facilitate and increase the precision of psychiatric diagnosis, there is also a lack in research evaluating the impact of using the CFI on the overall diagnostic accuracy in patients. Considering the important findings yielded by a study conducted by Bäärnhielm and colleagues stating that the use of a cultural formulation brought major diagnostic revisions in over 50% of patients (Bäärnhielm et al., 2015), further research exploring this aspect is of upmost importance. In addition, although there is a small body of literature available exploring the clinician's perceived barriers to using the CFI, research exploring possible implementation strategies to increase utilization of the CFI in routine clinical practice is still needed.

## Limitations

Although this study identified several important trends in the use of the CFI, it has some weaknesses. First, the scoping review methodology is descriptive by nature and does not involve quantitative synthesis. Although the authors used rigorous and transparent scoping review methods throughout the process, the scoping review methodology targets breadth rather than depth. Consequently, no statistical conclusions may be drawn from the results regarding effects, statistical significance or bias evaluation. However, the scoping methodology permits many different types of methodologies to be analyzed in a single review, creating a rich overview and portrait of the existing research. Furthermore, the search yielded only one non-English publication, probably because English search terms were used. It is therefore likely that we missed insights published in other languages that are used where international field trial sites were located or that the CFI is not yet known or used outside of a limited, mostly English-speaking academic population. Due to the use of a single search term, certain English sources may have also not have been detected if other search words were used (i.e., "CFI"). However, the broadness of the search term mitigated this limitation.

#### Conclusion

In summary, this review highlights the finding that the Cultural Formulation Interview is a useful tool to aid clinicians in conducting culturally appropriate evaluations. The CFI was found to increase patient-clinician rapport, aid in diagnostic and treatment planning, encourage further subjective exploration of the patient's illness narrative and positively impact medical communication. The evidence from this scoping review suggests that there is a moderate amount of literature available on the CFI and that a significant portion (43%) of the existing studies stem from the same dataset and research team. Further research must be conducted in a variety of clinical contexts and with a variety in clinical populations to solidify the CFI's use as a valid cross-cultural assessment tool.

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**Data Availability** The authors confirm that the data supporting the findings of this study are avalable within the article.

#### Declarations

Ethical Approval No ethical approval was required or sought for the review.

**Conflict of Interest** The authors have no conflicts of interest to declare that are relevant to the content of this article.

**Experiment Participants** There were no experiment participants as this was a scoping review, no participants were recruited.

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