Published in final edited form as:
Cult Med Psychiatry. 2013 September ; 37(3): 505–533. doi:10.1007/s11013-013-9325-z.

Barriers to Implementing the DSM-5 Cultural Formulation Interview: A Qualitative Study

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Abstract

The Outline for Cultural Formulation (OCF) in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) marked an attempt to apply anthropological concepts within psychiatry. The OCF has been criticized for not providing guidelines to clinicians. The DSM-5 Cultural Issues Subgroup has since converted the OCF into the Cultural Formulation Interview (CFI) for use by any clinician with any patient in any clinical setting. This paper presents perceived barriers to CFI implementation in clinical practice reported by patients (n=32) and clinicians (n=7) at the New York site within the DSM-5 international field trial. We used an implementation fidelity paradigm to code debriefing interviews after each CFI session through deductive content analysis. The most frequent patient threats were *lack of differentiation from other treatments*, *lack of buy-in*, *ambiguity of design*, *over-standardization of the CFI*, and *severity of illness*. The most frequent clinician threats were *lack of conceptual relevance between intervention and problem*, *drift from the format*, *repetition*, *severity of patient illness*, and *lack of clinician buy-in.* The Subgroup has revised the CFI based on these barriers for final publication in DSM-5. Our findings expand knowledge on the cultural formulation by reporting the CFI's reception among patients and clinicians.

Keywords

cultural psychiatry; Cultural Formulation; clinical anthropology; medical anthropology; intervention development; implementation fidelity; DSM-5

Introduction

The clinical encounter in psychiatry is an act of double interpretation: the patient interprets distress in narrative form to the clinician who interprets patient experiences through a hermeneutic of symptoms (Good and Good 1980, Kleinman 1988b). To improve the clinician's interpretative abilities in diagnostic assessment and treatment, cultural psychiatrists and medical anthropologists created the Outline for Cultural Formulation ("OCF") in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition

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(DSM-IV) (Mezzich et al 1999; Mezzich 2008). The OCF marked a noteworthy contribution after other recommendations were rejected to enhance DSM-IV's cultural validity (Kleinman 1996; Canino et al 1998; Davis 1998; Jenkins 1998; Kirmayer 1998; Lewis-Fernández 1998; Manson and Kleinman 1998). The OCF has been consistently lauded as the most significant contribution of anthropology to psychiatry for emphasizing the patient's experience of illness (Good 1996; Kleinman 2001; Jenkins 2007).

The OCF encapsulates clinical experience across four domains: (1) cultural identity of the individual, (2) cultural explanations of illness, (3) cultural levels of psychosocial support and functioning, and (4) cultural elements of the patient-physician relationship, with a fifth domain for information influencing diagnosis and treatment (American Psychiatric Association 2000). Social theories inform each domain: the relevance of identity in clinical presentation (domain 1), clinical ethnography and explanatory models of illness (domain 2), the role of social networks in providing support or stress (domain 3), and professional reflexivity in garnering this information (domain 4) (Mezzich 2008; Aggarwal 2012a). For example, the emphasis on identity in domain 1 can help clinicians understand how culture shapes everyday practices that affect patient care such as diet, sleeping arrangements, sexual habits, emotional expressions, and decision-making processes (Mezzich et al 2009). Domain 2 draws heavily on Kleinman's work (1977, 1980) advocating for clinicians to conduct mini-ethnographies with patients who act as informants on the cause, onset, mechanism, course, severity, and treatment expectations of their illness. Domain 3 utilizes the theory of help-seeking pathways (Rogler and Cortes 1993) that influences how patients seek treatments from culturally-acceptable providers. Domain 4 rests on the theory of reflexivity to examine how the clinician's and power mold patient histories (Good 1994). The OCF instructs clinicians to avoid reducing the patient's history to symptoms by developing illness narratives, acknowledging the centrality of narrative within psychodynamic psychiatry (Lewis-Fernández 1996) and anthropology (Kleinman 1988a). The OCF was also intended to educate trainees and stimulate services research (Lewis-Fernández and Díaz 2002).

However, the reception of the OCF has been mixed. The OCF is used within cultural competency initiatives in psychiatry internationally (Kirmayer et al 2008; Bäärnhielm 2008; Caballero Martínez 2008) and in the United States (Lim 2006; Lu 2006; Fung et al 2008; Harris et al., 2008; Lim et al., 2008; Lim et al., 2008; Aggarwal and Rohrbaugh 2011). International outpatient clinics have included the OCF in routine assessment (Kirmayer et al 2003; Kirmayer et al 2008; Rohlof 2008; Bäärnhielm and Scarpinati Rosso 2009; Rohlof et al 2010). Nonetheless, its clinical implementation has identified key problems. The OCF's vague format may not help clinicians formulate specific questions (Lewis-Fernández 2009) or researchers reliably reproduce data (Alarcón 2009). Several versions are used internationally with different lengths (Kirmayer et al., 2008; Bäärnhielm and Rosso 2009; Groen 2009). Clinical guidelines show similar variations (Group for the Advancement of Psychiatry 2001; Mezzich et al 2009). The lack of implementation guidelines has raised questions about whether it forms a separate assessment from the standard interview (Caballero Martínez 2009) and in what service settings (inpatient or outpatient) it should be conducted (Aggarwal 2012b).

The DSM-5 Cultural Issues Subgroup has since converted the OCF into the Cultural Formulation Interview (CFI). The DSM-5, to be released in May 2013, is a manual on the prevalence, course, and symptom criteria for each mental disorder. The DSM-5 task force has paid unprecedented attention to culture by collaborating with international health organizations, adding cultural and international experts to DSM-5 work and study groups, and convening a Gender and Cross-Cultural Study Group (Alarcón et al. 2009). The DSM-5 Cultural Issues Subgroup is a smaller committee of cultural psychiatrists and medical anthropologists who have reviewed DSM-5 revisions for cultural validity among American minority groups and international populations (Aggarwal 2013). To enhance cross-cultural diagnostic assessment, the subgroup has revised the OCF into the CFI based on reported shortcomings. The revision process occurred in several ways. First, throughout 2010 and 2011, the subgroup conducted literature reviews on the OCF since 1994 to identify possible revisions. Second, revisions were discussed in bi-weekly conference calls from March until November 2011 to create a standard format with questions, explanations, and instructions for clinicians to use the CFI with all patients in all service settings (American Psychiatric Association 2012). Third, from November 2011 to October 2012, the subgroup conducted an international field trial to test the CFI's feasibility (can it be done?), acceptability (do people like it?) and perceived clinical utility (is it helpful?) among clinicians and patients. This paper presents data from the 14-question, field trial CFI whose results informed the final, 16-item version in DSM-5. Our data come from the Columbia University site that has led the international field trials.

Table 1 links CFI questions with corresponding DSM-IV OCF domain. The CFI starts with a broad question on the patient's presenting concerns and definition of the problem. Subsequent questions probe and utilize the patient's idiom of distress (Nichter 1981): "Sometimes people use particular words or phrases to talk about their problems. Is there a specific term or expression that describes your problem? What is it?" Clinicians are instructed to substitute this patient idiom for every question that includes the word "problem." This is one example of the CFI's attempt to introduce medical anthropological theories into clinical practice.

Here, we present results from ethnographic debriefing interviews that have informed revisions to the field trial CFI within the health services paradigm of intervention development. Models of intervention development require tests of feasibility and acceptability among patients and clinicians that iteratively inform revisions throughout pilot, efficacy, and effectiveness trials (Rounsaville et al 2001; Fraser and Galinsky 2010). Our literature reviews have pointed to worldwide interest in the cultural formulation without coordinated efforts toward intervention development. The DSM-5 Cultural Issues Subgroup has provided a collaborative forum to revise the OCF into the CFI with a pilot test. Feasibility and acceptability are typically measured through subject enrollment statistics and satisfaction questionnaires, respectively (Rounsaville et al 2001). We have supplemented this data with detailed interviews to compare the views of multiple stakeholders in an experience-near manner (Katz and Alegría 2009). Health researchers (Palinkas et al 2011) and medical anthropologists (McGarvey 2009; Pfeiffer and Chapman 2010) have demonstrated that the implementation of interventions in real-world settings can be enhanced through stakeholder feedback. Attention to clinician fidelity helps researchers distinguish barriers to the intervention from barriers arising in the context of its implementation (Gearing et al 2011). We sought to examine which barriers to CFI implementation would be mentioned by patients and clinicians, whether there would be differences between these groups, and whether we could revise the CFI accordingly. We focus on barriers since the subgroup revised the CFI based on problems reported by patients and clinicians. While the benefits reported by patients and clinicians are noteworthy, that content did not figure as prominently in revising the field trial CFI for DSM-5. We also wish to share our difficulties in mobilizing medical anthropological theories within clinical practice, even when medical anthropologists and cultural psychiatrists collaborate.

Methods

Study Setting and Design

Cultural psychiatrists and medical anthropologists participated in the CFI field trial through the DSM-5 Cultural Issues Subgroup led by the New York State Psychiatric Institute and Columbia University. These institutions and their outpatient clinics formed the New York site. The study started in November 2011 and ended in October 2012, although the New York site completed data collection in May 2012. Data acquisition from all sites is underway with each site agreeing to enroll at least 30 patients. The field trial has enrolled 321 patients across sites in the United States (5 locations), Peru (1), Canada (3), the Netherlands (3), Kenya (1), and India (2). Treating clinicians approached patients to enter the study. Research staff obtained informed consent and scheduled the CFI interview. The interview with a research clinician new to the patient consisted of first performing the CFI, designed for completion in 15–20 minutes, followed by a standard evaluation. In general, the DSM-5 field trials have tested dimensional assessments that ask patients about symptoms common to multiple disorders – for example, anxiety as a symptom of the anxiety and depressive disorders – to guide the clinician’s diagnostic evaluation (Narrow et al 2013); similarly, the CFI acted as a cultural dimensional assessment to guide the clinician’s diagnostic evaluation. All sessions were audio-taped. Patients and clinicians completed questionnaires before and after the session (explained below). The Institutional Review / Ethics Board at each site approved the study based on local requirements. In New York City, outpatients were recruited from the New York Presbyterian Hospital and the New York State Psychiatric Institute. These clinics serve people with serious mental illness, defined as a mental, behavioral, or emotional disorder that meets diagnostic criteria in DSM-IV with consequent functional impairment that substantially interferes with or limits one or more major life activities (Epstein, et al., 2002).

Participants

Eligible patients were of any racial or ethnic background; between 18 and 80 years old; fluent in the language of the site’s clinicians; and with any psychiatric diagnosis as determined by their treating clinicians. However, patients were excluded if acutely suicidal; intoxicated or in substance withdrawal; or with any condition that could interfere with the interview such as dementia, mental retardation, or florid psychosis. Patients were purposively sampled in that treating clinicians referred new or extant outpatients who could provide informed consent for participation. Patients were read a recruitment script standardized across all sites. Patients were recruited in New York from November 2011 to May 2012 until 32 outpatients had been enrolled.

Eligible research clinicians were on staff at the New York State Psychiatric Institute or New York Presbyterian Hospital with a terminal degree (MD, MSW, PhD, APRN). Each clinician conducted between 3 and 6 interviews. We decided that clinicians who completed fewer interviews might not experience a learning curve with the CFI, potentially affecting feasibility, acceptability, and perceived clinical utility. Clinicians were restricted to 6 interviews to increase participation. Prior to the interview, each site hosted a 2-hour training session, consisting of reviewing the CFI, a video demonstration, and role-playing exercises. Clinicians provided informed consent during training. Clinicians were excluded if they could not attend training or conduct 3 interviews. Clinicians did not interview their own patients since their extant knowledge could confound the study.

Interventions

Data gathering consisted of pre-interview, interview, and post-interview phases. Patients and research clinicians completed a routine demographic survey during the pre-interview phase. Treating clinicians also completed pre-CFI referral forms on the patient’s diagnosis and treatment plan. All patients completed a consent quiz. Patients over 64 years old completed a mini-cognitive exam to assess capacity to provide consent.

The interview phase comprised the CFI session which included the CFI followed by a standard diagnostic assessment. A research clinician audio-recorded the interview with patient consent. Clinicians received a copy of the CFI and administration guidelines.

The post-interview phase included debriefing interviews with patients and clinicians by research staff. The research clinician completed the same form on diagnosis and treatment as the pre-CFI treating clinician. Patients and clinicians completed quantitative instruments developed for the study on CFI feasibility, acceptability, and clinical utility after every encounter. Patients and clinicians also participated in open-ended, semi-structured, debriefing interviews after every encounter. All interviews were conducted with patients and did not include family members.

Clinicians completed additional assessments: a semi-structured interview on training after the first CFI session; a quantitative debriefing instrument with items on feasibility, acceptability, and clinical utility after the first and third sessions to test the effects of multiple CFI administrations; and an open-ended, semi-structured debriefing interview after the first and third sessions for the same reasons.

Sites conducted translations based on need. For our site, the senior author worked with the first and second authors to translate forms into Spanish. These forms were checked with our collaborators in New Haven and Lima, Peru to ensure their applicability for all sites.

Data Source: Open-Ended Questionnaires

This study reports data from all open-ended, semi-structured interviews on feasibility, acceptability, and clinical utility with patients and clinicians. Table 2 lists the debriefing interview questions for patients and clinicians.

Data Analysis

Frequencies and percentages described the study sample. The analytical team consisted of the first three authors: a research psychiatrist with a Master's degree in South Asian Studies, a clinical psychiatrist with a Master's degree in anthropology, and a Master's-level rehabilitation counselor. The rehabilitation counselor and research psychiatrist independently transcribed all interviews in English and Spanish verbatim for a quality check (Bernard 2006). We conducted a content analysis of all patient and clinician debriefing interviews through established methods. Content analysis is a systematic, objective method to describe and quantify phenomena through replicable, valid inferences from data to context (Krippendorff 2013). Deductive content analysis is used to test previous theories through the following steps: (1) selecting the textual unit of analysis → (2) developing a codebook of mutually exclusive categories based on extent theories → (3) coding the data → (4) reporting the data by category (Elo and Kyngäs 2008). We report our process for each step.

Selecting the textual unit of analysis—In qualitative data analysis, multiple coders may draw different interpretations from a text. We selected each individual debriefing interview as the unit of analysis and each meaning unit to be the words or sentences that relate to each other through context and content (Graneheim and Lundman 2004). The first and third authors, bilingual in English and Spanish, reviewed all transcriptions together for data quality and finalized 1 transcription per interview. Afterward, all 3 team members read the transcript independently for content familiarity (Hsieh and Shannon 2005). We decided that the meaning unit should be longer than a word, but no longer than a paragraph to insure that all text would be coded discretely and appropriately.

Developing the codebooks—The strength of deductive content analysis is that extant theory can be supported, refuted, and extended. We searched the literature for theoretical frameworks from which codes and categories could be created into codebooks (Hsieh and Shannon 2005). For our implementation barriers codebook, we used Gearing et al's (2010) framework that differentiates internal and external barriers to implementing an intervention. Internal barriers are problems with the intervention whereas external barriers are problems in the implementation of the intervention related to clinician and organizational variables (Gearing et al 2010). The first author created the codebook with definitions for codes from the article.

Coding the data—Each team member coded 5 randomly-selected transcriptions of patient and clinician debriefing interviews with the implementation barriers codebook (approximately 20% of the total interview sample). Each team member coded each meaning unit with 1 unique code. Examples of internal barrier codes included *complexity*, *required resources and materials*, and *time needed* whereas external barrier codes included *contamination/spill-over of other interventions*, *variability of interventionist training*, and *lack of motivation/buy-in*. To maintain analytical distance and reduce bias, no team member coded interviews in which he or she participated. Each team member independently coded transcriptions to generate preliminary codes. Team members created new codes when extant codes did not match their understanding of the content. We worked iteratively so that new codes could be compared with extant codes. We met 3 times to review transcripts, discuss codes, and reach coding consensus. New codes were added to the codebook following a process of iterative revisions that included all team members. We discussed concordance among codes and concepts, inviting challenges to initial interpretations. We then clustered codes into categories to derive themes. Descriptive memos were drafted to specify code definitions and parameters (appropriate and inappropriate use) through data examples. Independent coding continued for 2 rounds until new information produced no change to coding categories or revised codebooks. The first author uploaded all transcriptions into NVivo (QSR International, 2012) and then coded all transcripts. This process involved generating queries and reports in NVivo on major codes, exploring patterns, and drafting analytical memos on themes and subthemes. To ensure rigor and validity of analysis, we used an audit trail of analytical memos and meeting notes, triangulation of narrative data, peer-debriefing sessions, and team member-checking activities (Hsieh and Shannon 2005). The codebook in all of its iterations is available upon request.

Reporting the data by category—We used descriptive statistics to rank all themes since qualitative analysis rarely results in data that can be compared with statistical tests of difference (Krippendorff 2013).

Sample Characteristics

Table 3 presents sample characteristics by study site. Patients in this study were mostly female (68.8%) and Hispanic/Latino (68.8%), approaching the means of the clinics (75% Hispanic/Latino in 2012). The most common diagnosis was major depressive disorder (43.8%) with the majority having a serious mental illness (90.6%). A minority were employed part-time (15.6%). A total of 7 clinicians participated in the study. Clinicians were also mostly women (71.4%). Hispanic/Latino clinicians outnumbered others (42.9%). Psychiatrists conducted more sessions (42.9%) than other clinicians, but social workers and psychologists also participated.

Results

Barriers to Implementation Fidelity Themes

Table 4 presents themes from the barriers to implementation fidelity framework as proposed by Gearing et al (2011) and as represented in our coding sessions. Gearing et al (2011) included internal barriers that we tried to code but for which we could not find instances, such as *required resources and materials*, *co-morbidity of illness*, *resistance to the intervention*, and *anger/hostility at the intervention*. This might be expected due to the pilot nature of our trial since our site provided requisite resources and clinicians volunteered for the study, reducing resistance, anger, and hostility at the intervention. We did not exclude patients based on co-morbidity of illness other than our exclusion criteria so patient comorbidities did not constitute a barrier in our study. Similarly, Gearing et al (2011) included external barriers that we tried to code but for which we could not find instances, such as *number of treatments available to implementers*, *variability of supervisors' training*, *staff turnover/attrition*, *absenteeism*, *financial resources of the organization*, *organizational barriers to participation*, *scheduling*, *improvement measures that change over time*, and *interventionist attrition*. We standardized training for all clinicians and facilitated environmental conditions so that clinicians could complete the CFI, likely explaining why these external barriers did not appear as themes in our coding.

Our team produced one new barrier. We changed the internal barrier *lack of standardization of elements* to *over-standardization of elements* based on clinician responses that the CFI guidelines were too rigid. Clinicians may have felt this way since they were asked to read questions serially and as closely as possible. We followed this procedure to estimate the time needed to complete the CFI that, on average, took between 15 and 25 minutes.

Below, we present all themes for barriers: (1) by number of respondents, and (2) by total number of references among all respondents. This type of analysis clarifies the extent to which a theme appeared within patient and clinician samples and also elucidates the seriousness with which sub-samples of respondents identified a theme. For example, the first theme *lack of differentiation from other treatments* appeared in 12 patient debriefing interviews totaling 12 references, i.e. 1 reference per respondent. In contrast, the second theme *lack of motivation/buy-in* appeared in 8 patient debriefing interviews totaling 14 references, i.e. almost 2 references per respondent. The prevalence of the first theme may be greater than the second among all patients, but the severity of the second theme may be greater given its multiple references per respondent. Both data points taken together provide richer information than either point alone. Spatial limitations prevent a full distribution report of each reference by respondent [available on request], so we include this data to illuminate possible future sub-analyses with this technique.

Barriers to Implementation Fidelity from Patient Perspectives

Patients reported 5 themes related to CFI implementation barriers: *lack of differentiation from other treatments* (n=12), *lack of motivation/buy-in* (n=8), *ambiguity of design* (n=4), *over-standardization of the CFI* (n=1), and *severity of illness* (n=1). All patient data fell under internal barriers. We present qualitative data with representative patient quotations on the first 3 barriers since those reported by single patients may represent idiosyncratic responses.

Lack of differentiation from other treatments — was the most common theme. This theme appeared in 12 of 32 patient interviews (37.5%) for a total of 12 different references. We defined this theme as: any discussion of how the CFI seems to be closely related to other aspects of the standard interview, intake, or set of treatments. Patient responses emerged from the same question: "How different were these questions from those of your other clinicians?"

The response of a married man in his 40s typified this barrier. Born in the United States, he has received mental health treatment for over 25 years. He identified his race as non-

Hispanic Caucasian, but declined to answer questions about ethnicity. The following exchange exemplified how some patients could not differentiate the CFI from other standard assessments:

> Clinician: “How different were these questions from those of your other clinicians?”
>
> Patient: “They were, like, the same questions. ‘Do I hear voices? Am I hearing any now?’ But everything is okay right now. I’m not hearing voices. I’m okay.”
>
> Clinician: “Were all of the questions the same? Were there any different questions?”
>
> Patient: “She [the doctor] asked me different questions. There was something about it, but nothing that I can mention that I remember right now about the questions she had.”
>
> Clinician: “Can you remember what some of those different questions might be?”
>
> Patient: “There were the same questions. Some of them were different. She asked me to tell her the hospital that I have been in, things about my experience, she asked me to tell her things like that.”

The coding team considered lack of differentiation from other treatments to be a barrier since clinicians may not use the CFI if they believe that it does not add information. When we discussed this fragment in our peer debriefing sessions, we noted the patient’s ambivalence about the novelty of the CFI (“There were the same questions. Some of them were different.”). We debated whether the patient believed that the CFI included genuinely different questions or whether his answers resulted from the debriefing interviewer’s probing style. The patient’s recollection demonstrated that CFI questions on his illness experience might have been different from those asked by others, but that other CFI questions on hearing voices may have been similar. The context of the study may have influenced this theme: as with other DSM-5 field trials (Clarke et al 2013), study clinicians conducted single assessments without creating and implementing treatment plans in subsequent appointments. Therefore, clinicians could have elicited cultural content through the CFI, but not actively incorporated this content into treatment plans. Since treatment plans were not shared with patients, patients may have wondered how the CFI’s questions on culture differed from standard assessments.

Lack of motivation/buy-in – was the second most common theme. This theme appeared in 8 of 32 patient interviews (25%) for a total of 14 different references. We defined this theme as: any discussion of negative attitudes or emotions regarding the CFI. Patients offered 2 main reasons: discomfort with discussing the past (12 of 14 references, 85.7%) or discussing religion explicitly (2 references, 14.3%). This discomfort decreased enthusiasm for the CFI.

Seven patients answered that their lack of motivation/buy-in with the CFI came from uneasiness in discussing the past. A woman in her 70s from the Dominican Republic who migrated to the United States approximately 50 years ago expanded on this theme. She supplemented her treatment of over 40 years with active involvement in church. She remarked during her debriefing interview:

> "*Yo me sentí un poquito incómoda al principio, no podía contestar, porque tenía que soltar mis pensamientos 40 años atrás, que fue cuando comencé a oír voces, o más de 40, hacen como 45, mi hija tiene 40. Cuando yo comencé a oír voces me sentía mal* [I felt a little uncomfortable at the beginning, I couldn't answer, because I had to release my thoughts from 40 years ago. That was when I started to hear voices, or more than 40, more like 45, my daughter is 40. When I started to hear voices, I felt bad]."

In addition, she acknowledged apprehensions in discussing religion. When asked about what CFI questions were least helpful, she replied:

> "*Y yo creo que según se ha tratado a las personas con voces, 40 años atrás, le decían demonia, le decían demoníaca, le decían que te salía el diablo, que tú no tienes religión, tú no puedes creer en Dios. Todas esas preguntas antes me la habían hecho, y ella fue tan delicada que no me las hizo. En cuanto a mi religión, eso me afecta un poquito, me es incómodo* [And I think that according to how people who hear voices have been treated, 40 years ago, they used to call them demons, used to call them demoniacal, used to tell them the devil is coming out of you, that you don't have religion, that you cannot believe in God. They had asked me all of those questions before, and she was so delicate that she didn't ask me those. With regard to my religion, that affects me a little and it's uncomfortable to me]."

The coding team considered lack of motivation/buy-in to be a barrier if patients are uncomfortable discussing the past. Cultural psychiatry experts have held that clinicians should ask patients about past coping patterns (Rogler and Cortes 1993) and religious supports and stressors (Peteet et al 2010) as cultural factors contributing to a patient's illness. The current CFI may not ask these questions in a way that patients found acceptable for an initial interview. In the context of the DSM-5 field trial, we assumed that a patient is willing to discuss intimate details about past history and religion at an initial appointment with a study clinician who will not provide them with treatment. It is possible that this threat may not exist in initial appointments with treating clinicians in actual practice.

Ambiguity of design — was the third most common theme. This theme appeared in 4 of 32 patient interviews (12.5%) for a total of 5 different references. We defined this theme as: any discussion of how CFI content is unclear. The main reason was the lack of clarity with questions in the field trial CFI.

One patient offered an eloquent explanation typical of other patient responses. An English-speaking, Caucasian patient from the United States in his early 30s, he had been in mental health treatment for less than 5 years. He identified as a musician from a "WASPY New England background." When asked about what was least helpful with the CFI, he answered:

> "There was one where I wasn't sure about the phrasing, but he corrected it because it has to do with the treatment I'm having now. I forget which one it was, but it's

> not very specific. We talked about it a lot. I think in the questionnaire the only problem with the question was that it was phrased for the past, but the meaning was for the present. Or the question was phrased for the present. I don't remember exactly."

The coding team considered ambiguity of design to be a barrier based on confusion. This patient emphasized misunderstandings in grammar with the field trial CFI before it was revised. Clinicians may not use the CFI if patients do not easily comprehend it.

Barriers to Implementation Fidelity from Clinician Perspectives

Clinicians reported 16 themes related to CFI implementation barriers. Since clinicians conducted between 3 and 6 interviews (7 clinicians enrolled in the New York site), we present themes according to number of times referenced by clinicians during debriefing interviews: *lack of conceptual relevance between intervention and problem* (n=31), *drift* (n=20), *repetition* (n=20), *severity of illness* (n=19), *motivation/buy-in* (n=14), *time needed* (n=14), *ambiguity of design* (n=11), *over-standardization of elements* (n=7), *behavior change* (n=6), *complexity* (n=6), *variability of interventionist training* (n=6), *lack of differentiation from other treatments* (n=5), *barriers to participation* (n=4), *experience* (n=3), and *contamination/spill-over* (n=1). Eleven threats were internal and 5 were external. Given spatial constraints, we present qualitative data with representative clinician quotations for the first 6 themes that appear in 8 or more unique interviews (≥25% of the total interview sample).

Lack of conceptual relevance between intervention and problem — was the most common theme. This theme appeared in 22 of 32 clinician interviews (68.8%) for a total of 31 different references. We defined this theme as: any discussion of how the purpose of the CFI is unclear. Lack of conceptual relevance occurred around the purpose of the CFI and certain topics.

The CFI's conceptualization of culture was marked as problematic in 15 references. The response of a clinical psychologist typified how some clinicians did not understand the CFI's helpfulness in addressing cultural misunderstandings. A Latino from the United States with over 5 years of providing care to patients, he described himself as having a high frequency of contact with patients from other cultures. He acknowledged important obstacles in the CFI's construction of culture:

> "It's aimed at getting cultural information, but I haven't really been getting much cultural information from them unfortunately. I learn about them as people, but I'm not hearing themes of race, ethnicity, culture, religion. Those things aren't really coming out so much in my interviews, unfortunately. So it's not so much of a cultural interview as much as an interview about themselves, learning about them as people."

After another interview, he emphasized:

> "I don't know how you guys are defining culture or what you expected to get out of those questions, but I didn't feel like I was getting much of the cultural element out of the interview. I mean, I think it was good in helping to establish rapport with the

> patients, but I don't know, you know, what the aim is of the interview and what we ultimately hope that clinicians find out in asking those questions."

Other clinicians did not understand specific parts. For example, a Caucasian female with a doctorate in social work and decades of patient contact disliked the question on patients' idioms of distress: "Less helpful about [the CFI was] whether the patient names this problem in a particular way. I ended up using some words he used, but he didn't actually name it that way." In a debriefing interview with a different patient, she added: "I don't think it's so easy for people to relate to this use of particular words or particular expressions." Other clinicians named the following CFI topics as irrelevant: the culture of the clinician in the clinical encounter (n=3), barriers to treatment (n=1), and the role of family and social networks in the illness (n=1).

The coding team considered lack of conceptual relevance between the intervention and problem to be a barrier to CFI implementation. Certain themes on this lack of conceptual relevance may have arisen based on the context of the field study. For example, an advanced psychiatry trainee with an interest in cultural psychiatry noted his discomfort with question 12 in the field trial CFI: "Is there anything about my own background that might make it difficult for me to understand or help you with your problem?" He explained:

> "The question to patients on my background that you think would be detrimental to you in some sort of way, I feel, has not always been as prominent among the patients that I've interacted with. I think there's always a place where it fits very much into, less a clinical practical reality, and more how anthropology within its place in psychiatry may have biased the use of this question. When I'm trying to think about how it's practical, I don't think that its utility is everything that it could be."

His response typified responses of 3 other clinicians who noted that they would omit this question or ask it in follow-up appointments. A female attending psychiatrist with over a decade of experience added that the process of establishing care usually uncovers cross-cultural problems without the need for anticipating it in a relationship without future appointments. Therefore, the context of the CFI field trial may have led to this theme appearing more prominently than in a clinical relationship based around treatment rather than research.

Repetition – was the second most common theme. This theme appeared in 15 out of 32 clinician interviews (46.9%) for a total of 20 different references. We defined this theme as: any discussion of how parts of the CFI were repetitive. The most common sub-theme was that content elicited at the beginning of the CFI recurred later (17 references).

The female attending psychiatrist mentioned above described a frequently mentioned repetition after several interviews: "I'm beginning to think the questions are repetitive. Question 3, 3a… Automatically they'll tell you the term, the expression they use to describe their problem. They automatically say what it is, so I feel like I'm asking the same thing, Question 3 and Question 3a."

Clinicians identified Questions 3 and 3a as eliciting repetitive content in 18 out of 20 references, though they did not dispute the value of these questions. In this way, repetition represents a barrier to CFI implementation if clinicians believe that the CFI asks for the same content inefficiently.

Drift — was the third most common theme. This theme appeared in 13 out of 32 clinician interviews (40.6%) for a total of 20 different references. We defined this theme as: any discussion of how clinicians expressed doubts about using the CFI in its entirety at the beginning of an evaluation. The three drift sub-themes were: using parts of the CFI rather than the whole questionnaire (14 of 20 references, 70%), tailoring the CFI based on patient characteristics (3 references, 15%), and using the CFI at the end of the interview rather than at the beginning (3 references, 15%).

The trainee with an interest in cultural psychiatry discussed his preference for certain questions over the entire CFI. After several sessions, he stated: “More and more, I don’t necessarily view all 14 questions as being, sort of, helpful. There were portions of it that became more important for me in terms of highlighting things.” He indicated ways that his use might exhibit drift: “I think that there’s a lot of components of it [the CFI] that if they were to be integrated throughout the interview more, some of it throughout the social history, some of it just thinking about it at the end, ‘What are the things you’re hoping for?,’ it would have a more natural flow.”

Another advanced psychiatry trainee discussed how the CFI could be tailored for individual patients: “Like if you’re having trouble with a patient who, you know, doesn’t seem to be, the treatment plan is not working, you might want to ask [question] number 5. Or if the patient is not showing up, you might want to ask number 2, so that it’s more targeted, practical solutions to different problems.” This clinician viewed the CFI less as an integrated whole and more as a set of distinct components.

Finally, the social worker introduced earlier favored using the CFI at the end of the interview. When asked if and how she would use the CFI, she answered: “I think it could be useful, but a lot would depend on how it’s incorporated. I could use these types of questions at the end of my interviews. To organize it, to make sense, with styles and techniques.” When asked why she would use the CFI at the end, she responded: “I think that these should be the ending questions to wrap up the interview to understand whether culture has anything to define the illness.” Here, the questions on culture were seen as secondary to other clinical questions.

The coding team considered drift to be an implementation barrier. Clinicians may adapt the CFI rather than use it in its entirety. This would raise questions about general adherence to the CFI and the “dose” of questions delivered if only certain topics were asked.

Severity of illness — was the fourth most common theme. This theme appeared in 10 out of 32 clinician interviews (31.3%) for a total of 19 different references. We defined this theme as: any discussion of how a patient’s presenting illness affects use of the CFI. Psychotic disorder appeared in most references (n=9), followed by developmental disorder (n=3), depression (n=1), and borderline intellectual functioning (n=1). In other debriefing interviews, clinicians did not mention specific diagnoses, but said that the CFI may be inappropriate for certain patients.

Given the high prevalence of psychosis as a potential threat, we report a representative vignette. The female Caucasian clinician with a doctorate in social work emphasized the challenges in using the CFI with patients who are psychotic:

> "The cultural background ones and the ones about religion were hard. This person was, you know, baseline was a bit psychotic and has very little education. And so getting the idea of what his background was or his race or ethnicity was kind of hard. I finally had to ask him where his mother and father were from but I couldn't get a sense. And he responded to one of my questions as he thought that someone would shoot him in the head like he was Kennedy. And I wasn't sure if that was an association to Kennedy's culture and race or whether it was just a random thing. I actually thought it probably his way of telling me he was Irish. But I really don't know because I had already asked several questions about it. I couldn't get anywhere."

The coding team considered severity of illness to be an implementation barrier. One case study (Aggarwal 2012a) has reported that the CFI may not be helpful for bipolar patients with acute mania who struggle to communicate with pressured speech. Our clinicians perceived psychotic patients to suffer from cognitive impairments that limit CFI use. In general, clinicians may not use the CFI if they feel that it cannot be used with all patients or if it needs clearer instructions on the types of patients for which it can be used.

Lack of motivation/buy-in — was the fifth most common theme. This theme appeared in 12 out of 32 clinician interviews (37.5%) for a total of 14 different references. We used the same definition for this theme in clinician and patient debriefing interviews (explained earlier). Clinicians' reasons included the CFI's format (n=3), and the perceptions that the CFI: felt too much like an exercise (n=3), may not help with diagnosis (n=1), and may not be reimbursable based on time spent (n=1).

Most commonly, clinicians doubted that patients would answer as the CFI intended (n=6), particularly when asked about the role of the clinician's cultural identity in affecting the patient's care (n=4). The vignette below represents the predominant sentiment. An advanced psychiatry resident mentioned her frustrations with this question: "I think patients might be a little hesitant to answer, you know, question 12. Like anything about me, it's somewhat socially inappropriate for them to say 'Yes.' So I don't know if it can be framed in a different way."

The coding team considered lack of motivation/buy-in to be an implementation barrier. Clinicians may not use the CFI if they feel that it is not useful in its current form.

Time needed — was also the fifth most common theme. This theme appeared in 11 out of 32 clinician interviews (34.4%) for a total of 14 different references. We defined this theme as: any discussion of how using the CFI takes up too much time.

The advanced psychiatry resident with an interest in cultural psychiatry illustrated the dilemmas with time used for the CFI:

> "I ended up spending, I think, eighty minutes talking with this guy. And I think that it does seem very interesting, so I'm not sure if it's just my inability to run a structured interview in that way or I just don't know how to interview somebody well who can be very verbose or talk slowly, but I spent a lot of time with him. I feel like afterwards, I know a lot about this guy that might not otherwise be true in other clinical intakes, so I think the real question becomes about clinical utility in the long term versus the short-term goal about making a diagnosis. So I think that's where in my head I kept coming back to. So it does help to facilitate some components of it. I think it helps inform some of the other questions I had while I was doing the rest of the interview, but I don't know that it necessarily provides an opportunity to do things quickly, at least for me. So I don't know what the balance is."

The coding team considered time needed to be an implementation barrier. Clinicians may not use the CFI if it takes too much time. Researchers have discussed how busy clinicians may not use cultural assessments if the perceived cost of time needed outweighs the benefit of useful information (Caballero Martínez 2009; Lewis-Fernández 2009; Aggarwal 2012b).

Discussion

This is the first study to report implementation barriers to the cultural formulation as reported by multiple patients and providers. Past studies have reported single clinician experiences with the OCF (Caballero Martínez 2008). Due to the lack of guidelines in DSM-IV, OCF implementation suggestions have ranged from integration throughout the standard assessment (Caballero Martínez 2009; Aggarwal 2012b) to extensive consultation services (Kirmayer et al 2008). The CFI has been developed as a lead-in to the standard assessment to balance the integrity of patient narrative (Lewis-Fernández 1996) with constraints in clinical practice (Lewis-Fernández 2009; Caballero Martínez 2009; Aggarwal 2012a). Our study reports experiences of patients and clinicians with the CFI in a pilot study that has informed the final DSM-5 version.

This study adds to empirical research on stakeholder experiences with cultural assessments in mental health. Patients and clinicians differed in the numbers and types of potential barriers against CFI use. The most common patient barrier appeared in only 12 of 32 interviews whereas 4 themes appeared in most clinician interviews. Patients and clinicians reported internal barriers to CFI implementation whereas clinicians also added external barriers. This may result from differing role expectations in the interview. Patient themes pertained to CFI content: its degree of similarity to the standard history, the extent to which past history should be discussed, and whether the wording of questions was clear. Clinician raised additional concerns around logistics of service delivery: uncertainty about questions on culture; redundancy; patients for whom the CFI may not work well; and the extra time, length, training, and experience needed to deploy the CFI. This study illustrates the value of soliciting varying perspectives from clinicians and patients in intervention development (Proctor et al 2009). Our study has devised a coding framework for barriers to CFI implementation that can be used as data analysis for all sites. Future work can determine whether our themes are replicated elsewhere, whether sites produce new themes, and whether themes change with CFI use in treatment situations.

Our study also contributes original research to implementation fidelity. Gearing et al's (2011) framework on barriers to implementation was based on a systematic literature review that accounted for most, but not all, themes in our study. For example, we substituted *over-standardization of elements* for *lack of standardization of elements*. Clinicians who mentioned themes of *over-standardization* have raised issues previously unconsidered: How do clinicians use the CFI in clinical practice outside of research studies? Do clinicians view the CFI as a unified intervention or does each individual question transform the CFI into a complex intervention? What is the optimum dose of CFI necessary to achieve cultural competence, however defined, and how does the CFI affect clinical outcomes? Future research among clinical and social scientists can address these questions.

In addition, our study shows the benefits of in-depth interviews as data sources to supplement literature reviews. Gearing et al.'s (2011) framework included external barriers for which we could not find instances. This may be due to the fact that the research staff anticipated logistical issues to facilitate CFI use. For example, we standardized training across all study sites, avoiding *variability of supervisors' training*. We excluded clinicians who could not conduct at least 3 CFI sessions, reducing *staff turnover/attrition*. By finding times convenient for patients and clinicians, research staff avoided barriers with *scheduling*, *interventionist attrition*, and *absenteeism*. The New York State Psychiatric Institute houses research in culture through the New York Office of Mental Health's Center of Excellence for Cultural Competence, overcoming *organizational barriers to participation*. Aside from unpredictable *staff turnover/attrition*, health care organizations may facilitate CFI use by controlling for external barriers. Future work can ascertain if numbers and types of barriers vary by phase of intervention development from controlled conditions and effectiveness trials to clinical practice.

Furthermore, our study displays the challenges in revising interventions to align patient, clinician, and developer incentives. A tension arises in determining whether, which, and to what extent respondent critiques merit revision. This is especially significant since our themes have emerged in a purposive study sample and reflect the views of clinicians likely to use the CFI after DSM-5's publication. Revisions that resolve barriers may increase CFI use among this population. For example, some barriers are easily countered such as ambiguity from unclear questions, but other barriers may contest the intended uses of the cultural formulation. Several clinicians disliked questions on the patient's cultural identity and questions on the patient-physician relationship. We have revised these questions for the final version, but not eliminated them. For example, questions on cultural identity in the final CFI begin with the prompt:

> "Sometimes, aspects of people's background or identity can make their problem better or worse. By background or identity I mean, for example, the communities you belong to, the languages you speak, where you or your family are from, your

> race or ethnic background, your gender o sexual orientation, and your faith or religion."
>
> Question 8: "For you, what are the most important aspects of your background or identity?"
>
> Question 9: "Are there any aspects of your background or identity that make a difference to your problem?"
>
> Question 10: "Are there any aspects of your background or identity that are causing other concerns or difficulties for you?"

We have also revised the question on reflexivity in the patient-clinician relationship. In the DSM-IV OCF, this section calls on clinicians to reflect on how their role and the treatment setting influence the patient's illness experience, symptom expression, and treatment response (American Psychiatric Association 2000). Our clinicians disliked this CFI field trial question, leading to problems with understanding how the culture of the clinician affects cultural competence and to problems with clinician motivation/buy-in. For the final version, we have changed this question to: "Sometimes doctors and patients misunderstand each other because they come from different backgrounds or have different expectations. Have you been concerned about this and is there anything that we can do to provide you with the care you need?" The prompt is meant to decrease the directness of the field trial version. At the same time, our site has recognized that the onus of engaging in clinical reflexivity has now shifted to the patient in the CFI. This change may decrease the responsibility of the clinician in engaging self-reflexivity as prior studies have shown that clinicians may reject this tenet of medical anthropology (Aggarwal and Rohrbaugh 2011). We opted to keep this question, even if it changes original intent, so that the clinician's culture can be openly discussed in the therapeutic process.

These multiple dilemmas point to the differences between "clinical social science" and what we term as "translational social science." "Clinical social science" mobilizes concepts from cultural anthropology for direct clinical application (Kleinman 1977, 1978; Kleinman et al 1978). As researchers promoting social science in health intervention development, we believe that a preceding process of "translational social science" is necessary to build an evidence base that convinces clinicians to use an intervention. By "translational," we draw upon the National Institute of Health definition for translational research of "applying discoveries generated during research in the laboratory, and in preclinical studies, to the development of trials and studies in humans" (National Institute of Health 2005). We expand this definition to include social scientists whose theories and findings require translation before clinical application. More work is needed on whether clinicians generally object to the specific content or question style for social science concepts such as idioms of distress, cultural identity, and the patient-physician relationship. Models are also needed that translate social science for clinical research and that revise interventions with stakeholder input.

In this regard, a fundamental issue for cultural mental health specialists lies in translating culture for clinical practice. Culture has been defined differently in the psychiatry and social sciences literature over time (Jayasuriya 2008). Our definition of culture in the field trial CFI may have confused some clinicians. We tried to operationalize culture from the tradition in interpretive medical anthropology that has emphasized "the process through which ordinary activities and conditions take on an emotional tone and a moral meaning" (Kleinman and Benson 2006). Our definition also allowed for varieties of experience possible through globalization and information technology (Bibeau 1997) that enable hybrid forms of identity (Aggarwal 2012b). In the field trial CFI, we defined culture as

> "the values, orientations, and assumptions that individuals derive from membership in diverse social groups (e.g., ethnic groups, the military, faith communities), which may conform to or differ from medical explanations. The term *culture* also refers to aspects of a person's background that may affect his or her perspective, such as ethnicity, race, language, or religion" (American Psychiatric Association 2012).

Clinicians who critiqued the lack of conceptual relevance between the CFI and the problem of cross-cultural assessment relied upon a concept of culture that rested on demographic traits. Our study thus shows a mismatch in how anthropologists and clinicians conceptualize culture. Anthropologists have critiqued uses of culture in health care, cultural competence initiatives that mechanically materialize explanatory models to solicit patient illness experiences (Kleinman and Benson 2006), promote ethical reflection among health professionals without addressing structural imbalances such as poverty (Shaw and Armin 2011), and entrench trait-based stereotypes in a US political environment that recognizes health disparities through group identities (Jenks 2011). Despite the attempt to include recent anthropological understandings of culture in our definition as process-oriented (Carpenter-Song et al 2007), multi-faceted and dynamic (Gregg and Saha 2006), clinicians felt that our original definition was too "patient-centered" on individual experience in moving away from racial and ethnic demographic traits. Recently, researchers have traced the convergence of patient-centeredness and cultural competence as biomedical organizations individualize health care for members of disadvantaged groups with a wide range of worldviews (Saha et al 2008). Nonetheless, our study shows that concepts of culture among clinicians differ markedly from concepts of culture among researchers in medical anthropology and health services. Herein lies a crucial issue for health disparities researchers: How do we develop models of cultural competence that translate insights from the social sciences in intelligible, practical, and sustainable ways for clinicians?

In response, we have revised the DSM-5 CFI to add questions for clinicians on the views of the patient's families and friends as important sources of "cultural collateral" information (Aggarwal and Rohrbaugh 2011). In addition to the two components of culture mentioned earlier, we also include the following third component: "the influence of family, friends, and other community members (the person's *social network*) on the person's illness experience." This stance retains a person-centered perspective on culture while acknowledging that individuals are influenced by collective processes inhering in families and larger social groups. This approach also enables use of the CFI with individuals from any background, including those who think that "culture" is something that applies only to racial and ethnic minorities (Santiago-Irizarry 1996). We are actively attempting to reverse the trend of assessing for "cultural factors" in patients who do not adhere with biomedical treatments or assuming that Caucasian Americans do not have cultural issues relevant in their health care

(Aggarwal 2010; Jenks 2011). The fact that the DSM-5 Cultural Issues Subgroup consists of medical anthropologists and cultural psychiatrists attests to the challenges of translating culture for clinical practice. Jenks (2011) has called on anthropologists to observe how health organizations fashion subcultures of cultural competence; this critical approach can help us interrogate how future CFI subcultures operationalize the construct of culture.

It is important to situate our findings on CFI use with patients in other studies. Our clinicians reported concerns about CFI use among patients with psychosis. However, in a study from McGill’s Cultural Consultation Service (CCS), Adeponle et al (2012) reviewed 323 medical records and case conference transcripts over 10 years. Thirty-four (49%) of 70 cases with a referral diagnosis of a psychotic disorder were re-diagnosed as non-psychotic disorders whereas only 12 (5%) of 253 cases with a referral diagnosis of a non-psychotic disorder were re-diagnosed as a psychotic disorder. The intensive CCS process consists of a clinical coordinator who fields a consultancy request, a consultant who assesses the patient in a series of interviews with cultural and linguistic brokers and writes a report, and a multidisciplinary case conference (Kirmayer et al 2008). Our clinicians were less receptive to CFI use among patients with psychosis, reporting that tangential thought processes and paranoia threatened the cognitive resources necessary to provide a coherent narrative. Psychotic patients in the McGill study may have responded positively to elements of the CCS other than the cultural formulation such as more interviews, contact with brokers, or time spent on assessment. In contrast, the CFI shifts the responsibility of cultural competence to the clinician rather than a clinical service to enhance dissemination since many institutions cannot invest in CCS-type services. Neither study reports symptom severities, pointing to new areas for research.

This study has several limitations. Our interviews present data from the New York site and may not be generalizable. As part of the DSM-5 team conducting the field trial, patients and clinicians may have under-reported implementation threats. Nonetheless, we believe that our data exhibit a frank degree of candor that limits the likelihood of responses based on social desirability. Second, CFI clinicians transitioned into the regular clinical assessment after conducting the CFI. Even though clinicians introduced the CFI with a standard script and signaled the start of the remaining assessment, patients may have confused the CFI with other questions. However, many patients favorably compared their experiences with the CFI against previous interviews. Third, all patients knew that our study was a field trial and not a clinical interview with a therapeutic purpose. This may explain why many external barriers did not appear in our coding analysis.

Despite these limitations, this paper points to new research directions at the intersection of clinically applied medical anthropology and cultural psychiatry. Applied medical anthropologists have repeatedly shown interest in analyzing patient-provider interactions for their constructed meanings and social significations (Kleinman 1977; Kleinman 1985). Health services researchers have advocated for the study of patient and clinician behaviors, attitudes, and decision-making (Atkinson 1993; Pope and May 1995). Our project on CFI implementation barriers represents a reflexive gaze on the CFI that we have helped to create to improve future versions. A major victory for medical anthropology has been its cultivation of self-reflection among cultural psychiatrists (Good 1994). By triangulating views of patients, clinicians, and experts, we wish to contribute as much to theories in qualitative research as to service delivery through feasible, acceptable, and useful models of cultural competence.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments

Dr. Aggarwal is supported by a NIMH T32 post-doctoral fellowship in clinical research. Dr. Aggarwal is an advisor to the DSM-5 Cultural Issues Subgroup of which Dr. Lewis-Fernández is the chairperson. The authors acknowledge a grant from the American Psychiatric Association for the DSM-5 field trial.

References

Adeponle, Ademola B.; Thombs, Brett D.; Groleau, Danielle; Jarvis, Eric; Kirmayer, Laurence J. Using the Cultural Formulation to Resolve Uncertainty in Diagnoses of Psychosis Among Ethnoculturally Diverse Patients. Psychiatric Services. 2012; 63(2):147–153. [PubMed: 22302332]

Aggarwal, Neil Krishan. Reassessing Cultural Evaluations in Geriatrics: Insights from Cultural Psychiatry. Journal of the American Geriatrics Society. 2010; 58(11):2191–2196. [PubMed: 20977437]

Aggarwal, Neil Krishan. The Psychiatric Cultural Formulation: Translating Medical Anthropology into Clinical Practice. Journal of Psychiatric Practice. 2012a; 18(2):73–85. [PubMed: 22418398]

Aggarwal, Neil Krishan. Hybridity and Intersubjectivity in the Clinical Encounter: Impact on the Cultural Formulation. Transcultural Psychiatry. 2012b; 49(1):121–139. [PubMed: 22218399]

Aggarwal, Neil Krishan. Cultural Psychiatry, Medical Anthropology, and the DSM-5 Field Trials. Medical Anthropology: Cross-Cultural Studies in Illness and Health. 2013 in press.

Aggarwal, Neil Krishan; Rohrbaugh, Robert. Teaching Cultural Competency through an Experiential Seminar on Anthropology and Psychiatry. Academic Psychiatry. 2011; 35(5):331–334. [PubMed: 22007094]

Alarcón, Renato D. Culture, Cultural Factors and Psychiatric Diagnosis: Review and Projections. World Psychiatry. 2009; 8(3):131–139. [PubMed: 19812742]

American Psychiatric Association. The Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition. Arlington: American Psychiatric Publishing, Inc; 2000.

American Psychiatric Association. [accessed June 25, 2012] DSM-5 Cultural Formulation Interview. 2012. http://www.dsm5.org/proposedrevision/Documents/DSM5%20Draft%20CFI.pdf

Atkinson, Sarah J. Anthropology in research on the quality of health services. Cadernos de Saúde Pública. 1993; 9(3):283–299.

Bäärnhielm, Sofie. Cultural Formulation: A Reader for Psychiatric Diagnosis. Lanham: Jason Aronson; 2008. Introducing the Cultural Formulation to Mental Health Care in Stockholm, Sweden.

Bäärnhielm, Sofie; Rosso, Marco Scarpinati. The Cultural Formulation: A Model to Combine Nosology and Patients' Life Context in Psychiatric Diagnostic Practice. Transcultural Psychiatry. 2009; 46(3):406–428. [PubMed: 19837779]

Bernard, H Russel. Research Methods in Anthropology: Qualitative and Quantitative Approaches. Oxford: AltaMira Press; 2006.

Bibeau, Gilles. Cultural Psychiatry in a Creolizing World: Questions for a New Research Agenda. Transcultural Psychiatry. 1997; 34(1):9–41.

Bradley, Elizabeth H.; Curry, Leslie A.; Devers, Kelly J. Qualitative Data Analysis for Health Services Research: Developing Taxonomy, Themes, and Theory. Health Services Research. 2007; 42(4): 1758–1772. [PubMed: 17286625]

Caballero Martínez, Luis. Seminario Sobre: Formulación y Abordaje Cultural de Casos Psiquiátricos. Madrid: Luzán 5, S. A; 2008. Formulación Cultural de Casos Psiquiátricos DSM-IV-tr.

Caballero Martínez, Luis. DSM-IV-TR Cultural Formulation of Psychiatric Cases: Two Proposals for Clinicians. Transcultural Psychiatry. 2009; 46(3):506–523. [PubMed: 19837784]

Canino, Ian; Canino, Glorisa; Arroyo, William. Cultural Considerations for Childhood Disorders: How Much Was Included in DSM-IV? Transcultural Psychiatry. 1998; 35(3):343–355.

Carpenter-Song, Elizabeth A.; Schwallie, Megan Nordquest; Longhofer, Jeffrey. Cultural Competence Reexamined: Critique and Directions for the Future. Psychiatric Services. 2007; 58(10):1362–1365. [PubMed: 17914018]

Clarke, Diana E.; Narrow, William E.; Regier, Darryl A.; Janet Kuramoto, S.; Kupfer, David J.; Kuhl, Emily A.; Greiner, Lisa; Kraemer, Helena C. DSM-5 Field Trials in the United States and Canada, Part I: Study Design, Sampling Strategy, Implementation, and Analytic Approaches. American Journal of Psychiatry. 2013; 170(1):43–58. [PubMed: 23111546]

Davis, Dona L. The Sexual and Gender Identity Disorders. Transcultural Psychiatry. 1998; 35(3):401–412.

Elo, Satu; Kyngäs, Helvi. The Qualitative Content Analysis Process. Journal of Advanced Nursing. 2008; 62(1):107–115. [PubMed: 18352969]

Epstein, Joan; Barker, Peggy; Vorburger, Michael; Murtha, Christine. Serious Mental Illness and its Co-occurrence with Substance Use Disorders. Vol. 2002. Rockville: Substance Abuse and Mental Health Services Administration; 2002.

Fung, Kenneth; Andermann, Lisa; Zaretsky, Ari; Lo, Hung-Tat. An Integrative Approach to Cultural Competence in the Psychiatric Curriculum. Academic Psychiatry. 2008; 32(4):272–282. [PubMed: 18695028]

Fraser, Mark W.; Galinsky, Maeda J. Steps in Intervention Research: Designing and Developing Intervention Programs. Research on Social Work Practice. 2010; 20(5):459–466.

Gearing, Robin Edward; El-Bassel, Nabila; Ghesquiere, Angela; Baldwin, Susanna; Gillies, John; Ngeow, Evelyn. Major Ingredients of Fidelity: A Review and Scientific Guide to Improving Quality of Intervention Research Implementation. Clinical Psychology Review. 2011; 31(1):79–88. [PubMed: 21130938]

Good, Byron. Medicine, Rationality and Experience: An Anthropological Perspective. Cambridge: Cambridge University Press; 1994.

Good, Byron. Culture and DSM-IV: Diagnosis, Knowledge, and Power. Culture, Medicine and Psychiatry. 1996; 20(2):127–132.

Good, Byron; Good, Mary-Jo DelVecchio. The Relevance of Social Science for Medicine. Dordrecht: D. Reidel Publishing Company; 1980. The Meaning of Symptoms: A Cultural Hermeneutic Model for Clinical Practice.

Graneheim UH, Lundman B. Qualitative Content Analysis in Nursing Research: Concepts, Procedures and Measures to Achieve Trustworthiness. Nurse Education Today. 2004; 24(2):105–112. [PubMed: 14769454]

Green, Judith. Commentary: Grounded Theory and the Constant Comparative Method. BMJ. 1998; 316(7137):1064–1065. [PubMed: 9558994]

Gregg, Jessica; Saha, Somnath. Losing Culture on the Way to Competence: The Use and Misuse of Culture in Medical Education. Academic Medicine. 2006; 81(6):542–547. [PubMed: 16728802]

Groen, Simon. [Accessed June 13, 2012] The Brief Cultural Interview 2009 (BCI-09). 2009. http://www.mcgill.ca/iccc/sites/mcgill.ca.iccc/files/Interview.pdf

Group for the Advancement of Psychiatry. Cultural Assessment in Clinical Psychiatry. Washington, DC: American Psychiatric Publishing, Inc; 2001.

Harris, Treniece Lewis; McQuery, Joy; Raab, Barbara; Elmore, Shekinah. Multicultural Psychiatric Education: Using the DSM-IV-TR Outline for Cultural Formulation to Improve Resident Cultural Competence. Academic Psychiatry. 2008; 32(4):306–312. [PubMed: 18695032]

Hsieh, Hsiu-Fang; Shannon, Sarah E. Three Approaches to Qualitative Content Analysis. Qualitative Health Research. 2005; 15(9):1277–1288. [PubMed: 16204405]

Jayasuriya, Laksiri. Constructions of Culture and Identity in Contemporary Social Theorising. International Journal of Culture and Mental Health. 2008; 1(1):30–43.

Jenks, Angela C. From “List of Traits” to “Open-Mindedness”: Emerging Issues in Cultural Competence Education. Culture, Medicine and Psychiatry. 2011; 35(2):209–235.

Jenkins, Janis H. Diagnostic Criteria for Schizophrenia and Related Psychotic Disorders: Integration and Suppression of Cultural Evidence in DSM-IV. Transcultural Psychiatry. 1998; 35(3):357–376.

Jenkins, Janis H. Textbook of Cultural Psychiatry. New York: Cambridge University Press; 2007. Anthropology and Psychiatry: The Contemporary Convergence.

Katz, Arlene M.; Alegría, Margarita. The Clinical Encounter as Local Moral World: Shifts of Assumptions and Transformation in Relational Context. Social Science and Medicine. 2009; 68(7):1238–1246. [PubMed: 19201074]

Kirmayer, Laurence J. The Fate of Culture in DSM-IV. Transcultural Psychiatry. 1998; 35(3):339–342.

Kirmayer, Laurence J.; Groleau, Danielle; Guzder, Jaswant; Blake, Caminee; Jarvis, Eric. Cultural consultation: a model of mental health service for multicultural societies. Canadian Journal of Psychiatry. 2003; 48(3):145–153.

Kirmayer, Laurence J.; Rousseau, Cécile; Guzder, Jaswant; Eric Jarvis, G. Training Clinicians in Cultural Psychiatry: A Canadian Perspective. Academic Psychiatry. 2008; 32(4):313–319. [PubMed: 18695033]

Kirmayer, Laurence J.; Thombs, Brett D.; Jurick, Tomas; Eric Jarvis, G.; Guzder, Jaswant. Use of an Expanded Version of the DSM-IV Outline for Cultural Formulation on a Cultural Consultation Service. Psychiatric Services. 2008; 59(6):683–686. [PubMed: 18511590]

Kleinman, Arthur. Lessons From a Clinical Approach to Medical Anthropological Research. Medical Anthropology Quarterly. 1977; 8(4):11–15.

Kleinman, Arthur. Clinical Relevance of Anthropological and Cross-Cultural Research: Concepts and Strategies. American Journal of Psychiatry. 1978; 135(4):427–431. [PubMed: 637136]

Kleinman, Arthur. Interpreting Illness Experience and Clinical Meanings: How I See Clinically Applied Anthropology. Medical Anthropology Quarterly. 1985; 16(3):69–71.

Kleinman, Arthur. The Illness Narratives: Suffering, Healing, and the Human Condition. New York: Basic Books; 1988a.

Kleinman, Arthur. Rethinking Psychiatry. New York: The Free Press; 1988b.

Kleinman, Arthur. Culture and Psychiatric Diagnosis: A DSM-IV Perspective. Washington, D.C: American Psychiatric Press, Inc; 1996. How is Culture Important for DSM-IV?.

Kleinman, Arthur. Why Psychiatry and Cultural Anthropology Still Need Each Other. Psychiatry. 2001; 64(1):14–16. [PubMed: 11383436]

Kleinman, Arthur; Benson, Peter. Anthropology in the Clinic: The Problem of Cultural Competency and How to Fix It. PLoS Medicine. 2006; 3(10):e294. [PubMed: 17076546]

Kleinman, Arthur; Eisenberg, Leon; Good, Byron. Culture, Illness, and Care: Clinical Lessons from Anthropologic and Cross-Cultural Research. Annals of Internal Medicine. 1978; 88(2):251–258. [PubMed: 626456]

Krippendorff, Klaus. Content Analysis: An Introduction to its Methodology. Thousand Oaks: Sage Publications; 2013.

Lewis-Fernández, Roberto. Cultural Formulation of Psychiatric Diagnosis. Culture, Medicine, and Psychiatry. 1996; 20(3):133–144.

Lewis-Fernández, Roberto. A Cultural Critique of the DSM-IV Dissociative Disorders Section. Transcultural Psychiatry. 1998; 35(3):387–400.

Lewis-Fernández, Roberto. Editorial: The Cultural Formulation. Transcultural Psychiatry. 2009; 46(3): 379–382. [PubMed: 19837777]

Lewis-Fernández, Roberto; Díaz, Naelys. The Cultural Formulation: A Method for Assessing Cultural Factors Affecting the Clinical Encounter. Psychiatric Quarterly. 2002; 73(4):271–95. [PubMed: 12418357]

Lim, Russell F. Clinical Manual of Cultural Psychiatry. Washington, D.C: American Psychiatric Publishing, Inc; 2006.

Lim, Russell F.; Luo, John S.; Suo, Shannon; Hales, Robert E. Diversity Initiatives in Academic Psychiatry: Applying Cultural Competence. Academic Psychiatry. 2008; 32(4):283–290. [PubMed: 18695029]

Lim, Russell F.; Diamond, Ronald J.; Chang, Jacquelyn B.; Primm, Annelle B.; Lu, Francis G. Using Non-Feature Films to Teach Diversity, Cultural Competence, and the DSM-IV-TR Outline for Cultural Formulation. Academic Psychiatry. 2008; 32(4):291–298. [PubMed: 18695030]

Lu, Francis G. DSM-IV Outline for Cultural Formulation: Bringing culture into the clinical encounter. Focus. 2006; 4(1):9–10.

Malterud K. Qualitative Research: Standards, Challenges, and Guidelines. Lancet. 2001; 358(9280): 483–8. [PubMed: 11513933]

Manson, Spero M.; Kleinman, Arthur. DSM-IV, Culture and Mood Disorders: A Critical Reflection on Recent Progress. Transcultural Psychiatry. 1998; 35(3):377–386.

McGarvey, Stephen T. Interdisciplinary Translational Research in Anthropology, Nutrition, and Public Health. Annual Review of Anthropology. 2009; 38:233–249.

Mezzich, Juan E. Cultural Formulation: A Reader for Psychiatric Diagnosis. Lanham: Jason Aronson; 2008. Cultural Formulation: Development and Critical Review.

Mezzich, Juan E.; Caracci, Giovanni; Fabrega, Horacio, Jr; Kirmayer, Laurence J. Cultural Formulation Guidelines. Transcultural Psychiatry. 2009; 46(3):383–405. [PubMed: 19837778]

Mezzich, Juan E.; Kirmayer, Laurence J.; Kleinman, Arthur; Fabrega, Horacio; Parron, Dolores L.; Good, Byron J.; Lin, Keh-Ming; Manson, Spero. The Place of Culture in DSM-IV. Journal of Nervous and Mental Disease. 1999; 187(8):457–464. [PubMed: 10463062]

Narrow, William E.; Clarke, Diana E.; Janet Kuramoto, S.; Kraemer, Helena C.; Kupfer, David J.; Greiner, Lisa; Regier, Darrel A. DSM-5 Field Trials in the United States and Canada, Part III: Development and Reliability Testing of a Cross-Cutting Symptom Assessment for DSM-5. American Journal of Psychiatry. 2013; 170(1):71–82. [PubMed: 23111499]

National Institute of Health. [accessed November 14, 2012] RFA-RM-06-002: Institutional Clinical and Translational Science Award. 2005. http://grants.nih.gov/grants/guide/rfa-files/RFA-RM-06-002.html

Nichter, Mark. Idioms of Distress: Alternatives in the Expression of Psychosocial Distress: A Case Study from South India. Culture, Medicine and Psychiatry. 1981; 5(4):379–408.

Palinkas, Lawrence A.; Aarons, Gregory A.; Horwitz, Sarah; Chamberlain, Patricia; Hurlburt, Michael; Landsverk, John. Mixed Method Designs in Implementation Research. Administration and Policy in Mental Health and Mental Health Services Research. 2011; 38(1):44–53. [PubMed: 20967495]

Peteet, John R.; Lu, Francis G.; Narrow, William E. Religious and Spiritual Issues in Psychiatric Diagnosis: A Research Agenda for DSM-V. Arlington: American Psychiatric Publishing, Inc; 2010.

Pfeiffer, James; Chapman, Rachel. Anthropological Perspectives on Structural Adjustment and Public Health. Annual Review of Anthropology. 2010; 39:149–165.

Pope, Catherine; Mays, Nick. Reaching the Parts Other Methods Cannot Reach: An Introduction to Qualitative Methods in Health and Health Services Research. BMJ. 1995; 311(1):42–45. [PubMed: 7613329]

Proctor, Enola; Landsverk, John; Aarons, Gregory; Chambers, David; Glisson, Charles; Mittman, Brian. Implementation Research in Mental Health Services: An Emerging Science with Conceptual, Methodological, and Training Challenges. Administration and Policy in Mental Health and Mental Health Services Research. 2009; 36(1):24–34. [PubMed: 19104929]

QSR International. NVivo. 2012.

Rogler, Lloyd H.; Cortes, Dharma E. Help-Seeking Pathways: A Unifying Concept in Mental Health Care. American Journal of Psychiatry. 1993; 150(4):554–561. [PubMed: 8465869]

Rohlof, Hans. Cultural Formulation: A Reader for Psychiatric Diagnosis. Lanham: Jason Aronson; 2008. The Cultural Interview in the Netherlands: The Cultural Formulation in Your Pocket.

Rohlof, Hans; Knipscheer, Jeroen W.; Kleber, Rolf J. Use of the Cultural Formulation with Refugees. Transcultural Psychiatry. 2009; 46(3):487–505. [PubMed: 19837783]

Rounsaville, Bruce J.; Carroll, Kathleen M.; Onken, Lisa S. A Stage Model of Behavioral Therapies Research: Getting Started and Moving on From Stage I. Clinical Psychology: Science and Practice. 2001; 8:133–142.

Saha, Somnath; Beach, Mary Catherine; Cooper, Lisa A. Patient Centeredness, Cultural Competence and Healthcare Quality. Journal of the National Medical Association. 2008; 100(11):1275–1285. [PubMed: 19024223]

Santiago-Irizarry, Vilma. Culture as Cure. Cultural Anthropology. 1996; 11(1):3–24.

Shaw, Susan J.; Armin, Julie. The Ethical Self-Fashioning of Physicians and Health Care Systems in Culturally Appropriate Health Care. Culture, Medicine and Psychiatry. 2011; 35(2):236–261.

Table 1

The Cultural Formulation Interview

CFI Question	Relevant OCF Domain
1. What problems or concerns bring you to the clinic?	Cultural explanations of the individual’s illness
2. What troubles you most about your problem?	Cultural explanations of the individual’s illness
3. People often understand their problems in their own way, which may be similar or different from how doctors explain the problem. How would you describe your problem to someone else?	Cultural explanations of the individual’s illness
3a. Sometimes people use particular words or phrases to talk about their problems. Is there a specific term or expression that describes your problem? 3b. What is it?	Cultural explanations of the individual’s illness
4. Why do you think this is happening to you? What do you think are the particular causes of your problem?	Cultural explanations of the individual’s illness
5. What, if anything, makes your problem worse, or makes it harder to cope with?	Cultural explanations of the individual’s illness
5a. What have your family, friends, and other people in your life done that may have made your problem worse?	Cultural factors related to psychosocial environment and levels of functioning
6. What, if anything, makes your problem better, or helps you cope with it more easily?	Cultural explanations of the individual’s illness
6a. What have your family, friends, and other people in your life done that may have made your problem better?	Cultural factors related to psychosocial environment and levels of functioning
7. Is there anything about your background, for example your culture, race, ethnicity, religion or geographical origin that is causing problems for you in your current life situation? In what way?	Cultural identity of the individual
8. On the other hand, is there anything about your background that helps you to cope with your current life situation? In what way?	Cultural identity of the individual
9. Sometimes people consider various ways of making themselves feel better. What have you done on your own to cope with your problem?	Cultural explanations of the individual’s illness
10. Often, people also look for help from other individuals, groups, or institutions to help them feel better. In the past, what kind of treatment or help from other sources have you sought for your problem?	Cultural explanations of the individual’s illness
10a. What type of help or treatment was most useful? Why?/How?	Cultural explanations of the individual’s illness
10b. What type of help or treatment was not useful? Why?/How?	Cultural explanations of the individual’s illness
11. Has anything prevented you from getting the help you need--for example, cost or lack of insurance coverage, getting time off work or family responsibilities, concern about stigma or discrimination, or lack of services that understand your language or culture? What got in the way?	Cultural factors related to psychosocial environment and levels of functioning
12. Now let’s talk about the help you would be getting here. Is there anything about my own background that might make it difficult for me to understand or help you with your problem? 12a. In what way?/Why not?	Cultural elements of the relationship between the individual and the clinician
13. How can I and others at our clinic be most helpful for you?	Cultural elements of the relationship between the individual and the clinician
14. What kind of help would you like from us now, as specialists in mental health?	Cultural elements of the relationship between the individual and the clinician

CFI - Cultural Formuation Interview

OCF - DSM-IV Outline for Cultural Formulation

Table 2

Sample Characteristics

	NYPH (n=10)	**WHCS (n=22)**	**Total (n=32)**	
Patients				
Mean age (SD)	59.10 (10.56)	50.95 (14.40)	53.50 (13.69)	
Female	9	13	22	
Race/ethnicity				
Non-Hispanic White	1	3	4	
African-American	2	3	5	
Hispanic/Latino	6	16	22	
Other	0	0	0	
Missing	1	0	1	
Employed (at least part-time)	2	3	5	
Primary diagnosis Post-CFI				
Depression	7	7	14	
Bipolar	2	5	7	
Schizophrenia	0	8	8	
Substance	0	0	0	
Other	1	2	3	
Other_specified	OCD	Psychosis NOS		
	NYPH (n=2)	**WHCS (n=2)**	**NYSPI (n=3)**	**Total (n=7)**
Clinicians				
Mean age (SD)	53.00 (1.41)	35.50 (.71)	31.67 (2.31)	38.86 (9.92)
Female	2	1	2	5
Race/ethnicity				
Non-Hispanic White	1	1	0	2
African-American	0	0	0	0
Hispanic/Latino	1	1	1	3
Other	0	0	2	2
Profession				
Psychiatrist	0	1	2	3
Psychologist	0	1	0	1
Social worker	2	0	0	2
Nurse	0	0	0	0
Other	0	0	1	1
NYPH - New York-Presbyterian Hospital				
NYSPI - New York State Psychiatric Institute				
OCD - Obsessive Compulsive Disorder				
SD - Standard Deviation				
WHCS - Washington Heights Community Service				

Table 3

Threats to Implementation Fidelity from Qualitative Interviews

Theme	**Gearing's et al's Framework**	**Our Qualitative Analyses**
Internal threats		
Complexity of the intervention	x	x
Required resources and materials	x	
Time needed	x	x
Length		x
Behavior change to implement the intervention	x	x
Ambiguity of design	x	x
Lack of differentiation from other treatments	x	x
Repetition	x	x
Lack of standardization of elements	x	
Overstandardization of elements		x
Drift of procedures	x	x
Motivation/buy-in	x	x
Experience needed with the intervention	x	x
Severity of the individual's illness	x	x
Co-morbidity of illnesses	x	
Resistance	x	
Anger/hostility	x	
External threats		
Contamination/spill-over of other procedures	x	x
Number of treatment agents available to implementers	x	
Variability of interventionist training	x	x
Variability of supervisors' training	x	
Staff turnover/attrition		
Absenteeism		
Financial resources of the organization	x	
Lack of conceptual relevance between intervention and problem	x	x

Theme	**Gearing’s et al’s Framework**	**Our Qualitative Analyses**
Organizational barriers to participation	x	
Scheduling	x	
Improvement measures may change over time	x	
Interventionist attrition	x	
Barriers to participation	x	x