



Cultural Considerations for Schizophrenia Spectrum Disorders II: Assessment and Treatment

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Introduction

In the previous chapter on diagnosis and prevalence of *Diagnostic and Statistical Manual of Mental Disorders* fifth edition (DSM-5) (APA, 2013) schizophrenia spectrum and other psychotic disorders (SSOPD), we reviewed prevalence rates of the disorder across age, gender, and ethnicities, discussed cultural considerations for symptom presentation, and considered impact of culture and ethnicity on diagnosis. New knowledge regarding the importance of cultural factors in the assessment and treatment of schizophrenia spectrum disorders has also emerged over the past couple of decades, and in this chapter we summarize this information to provide a resource for behavioral healthcare providers who provide assessment and intervention services to diverse populations with schizophrenia spectrum disorders.

The first part of this chapter addresses cultural factors relevant for assessment of SSOPD. Structured and semi-structured interviews commonly used to arrive at a diagnosis are summarized, with discussion of culture-

related diagnostic issues including cultural mistrust. Next, selected measures used to assess psychotic symptom severity and frequency are discussed including their translation from English into other languages, selected psychometric data, and symptom expression across racial and ethnic groups. A brief discussion of cultural sensitivity when assessing neurocognition and daily functioning for people with schizophrenia spectrum disorders is included given that neurocognitive deficits are identified as a core feature of schizophrenia and functional impairment is common. Last included is a review of recommendations to assure fairness in testing and assessment.

The second part of this chapter addresses cultural factors relevant for treatment of schizophrenia spectrum disorders. It begins with discussing the most recent review on cultural adaptations of psychosocial treatments for schizophrenia that proposed nine common themes of cultural adaptations. Cultural adaptations of the seven therapy approaches that received an evidence-based rating of “strong support” by the American Psychological Association’s (APA) Division 12 are then reviewed. References are provided for these culturally adapted treatment manuals to aid clinicians in accessing these resources. The chapter concludes with a general approach that allows the integration of cultural factors into any type of treatment approach.

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Cultural Factors Relevant for Assessment of Schizophrenia Spectrum and Other Psychotic Disorders

Diagnostic Assessment

Culturally informed assessment of psychotic symptoms for SSOPD diagnoses may be facilitated by the use of validated structured and semi-structured interviews. Other sources provide more detailed information regarding general considerations in clinical interviewing for diagnostic and treatment purposes (Allen & Becker, 2019a, 2019b), so here we emphasize cultural considerations when using available diagnostic assessment procedures. It should be noted that there are strengths and limitations to these approaches. For example, strengths of structured interviews include that they ensure the same information is being gathered across different clients by different clinicians, and the information gathered is relevant to standard DSM or ICD diagnoses. As a result, their use improves diagnostic reliability and validity. However, the extent to which they can be modified to address specific cultural factors and symptom expression is often quite limited, and they are also inherently limited when the diagnostic criteria are not culturally informed. It is relevant to recognize that although they improve the reliability and validity of diagnoses, they may not mitigate all diagnostic bias. A recent meta-analysis found that use of unstructured and structured interviews had only a small effect in reducing increased diagnoses of schizophrenia in Black individuals compared to White individuals (Olbert, Nagendra, & Buck, 2018). Diagnostic bias is one possible explanation for this disparity, although the increased rates of schizophrenia diagnoses in Black individuals may be due to a number of other factors, such as biases in the diagnostic criteria themselves, decreased access to care which may lead to delays in treatment and more severe symptoms at the time of diagnosis, and social factors such as discrimination and poverty that may contribute to increased incidence of numerous physical and mental disorders, including SSOPD (for review

see Olbert et al., 2018). Because there is abundant evidence that structured and semi-structured interviews increase diagnostic reliability and validity by reducing criterion-related error and there is evidence supporting a small decrease in diagnostic bias with use of structured interview procedures, clinicians should consider using a structured approach to diagnostic interviewing.

The comprehensiveness of any evaluation of psychotic symptoms depends on the setting, the clinician's expertise, and the patient's presentation. The Structured Clinical Interview (fifth edition, clinical version; SCID-5-CV; First & Williams, 2016) remains one of the most well-validated structured clinical interviews for diagnosing SSOPD and other DSM-5 disorders. The SCID-5 has been translated into 15 languages (APA, 2018) and has separate versions for research and clinical diagnoses. Currently, only the research version but not the clinician version is available in Spanish (APA, 2018). Besides the SCID-5, other semi-structured and structured interviews such as the Diagnostic Interview Schedule (fourth version; DIS-IV; Robins, Cottler, Bucholz, & Compton, 1995), the Schedule for Affective Disorders and Schizophrenia (SADS; Endicott & Spitzer, 1978), the Present State Examination (PSE; Wing, Birley, Cooper, Graham, & Isaacs, 1967), or the Schedules for Clinical Assessment in Neuropsychiatry (SCAN; World Health Organization, 1994) may also be used. The Composite International Diagnostic Interview (CIDI; Kessler & Üstün, 2004) and the Mini International Neuropsychiatric Interview (MINI; Sheehan et al., 1998) were developed for cross-cultural assessment purposes and so may be particularly helpful in decreasing diagnostic bias. More detailed information about these procedures and cultural considerations regarding their use can be found in several recent chapters (Allen & Becker, 2019b; Zink, Lee, & Allen, 2015), and interested readers are referred to these resources for additional information.

Culture-Related Diagnostic Issues The DSM-5 lists the following culture-related diagnostic issues clinicians should consider when diagnos-

ing schizophrenia spectrum disorders: (1) spiritual beliefs (e.g., witchcraft) or religious experiences (e.g., hearing an Angel's voice) that are normative in some cultures may be misinterpreted as delusions or hallucinations, (2) linguistic differences in narration that may be misinterpreted as disorganized speech, (3) cultural differences in emotion expression that may be misinterpreted as negative symptoms or support of other psychotic or mood symptoms, and (4) cultural expression of distress that may be misinterpreted as hallucinations (APA, 2013). When coming across a possible symptom of delusion with spiritual and religious content with which the clinician is not familiar, a culturally competent clinician may ask "Is this a common belief in your religion that other members of your community also hold?" If the answer is "yes," then there should be considerable doubt as to whether it truly represents a psychotic symptom. If a clinician is still not sure whether possible psychotic symptoms are better understood in the context of cultural factors, then the diagnosis should be postponed until colleagues, spiritual or religious leaders, or members of the community can be consulted and help with diagnostic clarification (Sue & Sue, 2016).

At every level of assessment, it has been suggested that clinicians consider cultural mistrust when treating people with severe mental illness from cultural backgrounds that differ from the cultural background of the treatment provider (Gurak, Maura, de Mamani, de Andino, & Rosenfarb, 2018). In this context, cultural mistrust describes trusting people from other cultural backgrounds less than people who share the same cultural background with oneself. Cultural mistrust has been found to be related to decreased help seeking behavior, preferences for clinicians from the same cultural background, and competency beliefs about clinicians (David, 2010; Townes, Chavez-Korell, & Cunningham, 2009; Whaley, 2001). There is some research to suggest that clinicians may misinterpret expression of cultural mistrust by African Americans as paranoia, which may further contribute to the higher diagnosis of schizophrenia in African-American

populations compared to Caucasian populations (Combs et al., 2006; Whaley, 2001). Hence, clinicians must be aware of the concept of cultural mistrust and educate themselves about historic and current events that justify cultural mistrust. For more detailed information on cultural considerations when assessing symptoms of psychosis, see our chapter in this volume on Prevalence, Symptoms, and Diagnosis.

Assessment of Psychotic Symptom Severity and Frequency

There are a number of measures that are available to assess the severity and frequency of psychotic symptoms. Table 27.1 shows a selection of measures which are most commonly used for populations with psychotic symptoms to assess severity and frequency of symptoms as well as impairment in neurocognition and daily functioning. The Positive and Negative Syndrome Scale (PANSS; Kay, Fiszbein, & Opler, 1987) and newer measures such as the Brief Negative Symptom Scale (BNSS; Kirkpatrick et al., 2011) and the Clinical Assessment Interview for Negative Symptoms (CAINS; Kring, Gur, Blanchard, Horan, & Reise, 2013) have been translated into Spanish. The BNSS and CAINS represent new-generation assessment approaches for negative symptoms of schizophrenia that were based on the 2005 Consensus Development Conference on Negative Symptoms sponsored by NIMH (Kirkpatrick et al., 2006). They include items that assess five symptom domains identified at the conference: anhedonia, avolition, asociality, blunted affect, and alogia. These newer rating scales are preferred over older scales. Other commonly used measures, such as the Scale for the Assessment of Positive Symptoms (SAPS; Andreasen, 1984) and the Scale for the Assessment of Negative Symptoms (SANS; Andreasen, 1982), have not been translated into Spanish. Considering that Spanish is the second most spoken language in the United States, more research on measures translated into Spanish is required.

Table 27.1 Translations of measures for schizophrenia spectrum disorders including psychometric properties of English and Spanish versions

Measure	Constructs	Type of measure	Number of translations	English or Spanish language/study	Internal reliability	Test-retest reliability	Inter-rater reliability	Concurrent validity
PANSS	Positive and negative symptoms	Scale	50	English/Kay et al. (1987); Kay, Opler, and Lindenmayer (1988) Spanish/Kay, Fiszbein, Vital-Herne, and Fuentes (1990)	0.73–0.83	–	0.69–0.94	–
SAPS	Positive symptoms	Scale	1	English/Norman, Malla, Cortese, and Diaz (1996) No Spanish translation	–	–	0.50–0.91	0.91
SANS	Negative symptoms	Scale	9	English/Andreasen (1982); Norman et al. (1996) No Spanish translation	0.89	–	0.86–0.93	0.88
BNSS	Negative symptoms	Scale	2	English/Kirkpatrick et al. (2011) Spanish/Mané et al. (2014)	0.93 0.98	–	0.89–0.96 0.86–0.97	0.80–0.84 0.68–0.74
CAINS	Negative symptoms	Scale	3	English/Kring et al. (2013) Spanish/Valiente-Gómez et al. (2015)	0.74–0.88 0.93	–	0.67–0.94 0.97	– 0.75–0.88
MATRICES	Cognitive domains	Performance-based	23	English (Spanish translation uses English norms)	–	0.48–0.89	–	–
UPSA	Functioning	Performance-based	8	English/Becatini-Oliveira, de Farias Dutra, de Oliveira Campos, de Araujo, and Charchat-Fichman (2018); Patterson, Goldman, McKibbin, Hughes, and Jeste (2001) Spanish-Brazil/Mantovani, Machado-de-Sousa, and Salgado (2015) Spanish-Spain/Garcia-Portilla et al. (2014)	–	0.75	0.91	0.86
					0.88	0.91	–	0.42
					0.90	0.96	–	0.46

PANSS Positive and Negative Symptoms Scale (Kay et al., 1987), SAPS Scale for the Assessment of Positive Symptoms (Andreasen, 1984), SANS Scale for the Assessment of Negative Symptoms (Andreasen, 1982), BNSS Brief Negative Symptom Scale (Kirkpatrick et al., 2011), CAINS Clinical Assessment Interview for Negative Symptoms (Forbes et al., 2010), MATRICS Measurement and Treatment Research to Improve Cognition in Schizophrenia Consensus Cognitive Battery (Kern et al., 2008; Nuechterlein et al., 2008), UPSA UCSD Performance-based Skills Assessment (Patterson et al., 2001)

Symptom Expression Across Racial/Ethnic Groups A recent review has suggested that the high prevalence of schizophrenia spectrum disorders among ethnic minorities may be at least partly explained by factors such as differences in symptom expression across ethnic and racial groups (Schwartz & Blankenship, 2014) rather than diagnostic bias. This suggestion is consistent with the literature that indicates cultural groups express different patterns and severity of symptoms (Gurak et al., 2018). For example, one of the pioneering studies in this field has found that African Americans present with more severe positive symptoms of psychosis (such as auditory hallucinations, thought withdrawal or insertion, thought broadcasting, delusional perception) which resulted in more frequent diagnoses of schizophrenia and less frequent diagnoses of depression with psychotic features (Arnold et al., 2004; Strakowski et al., 1996). In comparison, Caucasian Americans express more persecutory delusions than African Americans (Strakowski et al., 1996) and Mexican Americans (Weisman et al., 2000). Interestingly, regarding schizophrenia spectrum disorders, Mexican Americans have been found to be more likely to report physical symptoms than Caucasian Americans (Weisman et al., 2000). There is further evidence from a recent large-scale study with a nationally representative sample of African Americans, Asians, Caribbean Blacks, and Latinos living in the United States that Latinos endorse delusions of reference and thought insertion/withdrawal significantly more often than African Americans and that African Americans are significantly less likely to endorse visual hallucinations but significantly more likely to endorse auditory hallucinations compared to Caribbean Blacks (Earl et al., 2015). Regarding negative symptoms, however, several studies have found no differences when comparing African Americans, Caucasian Americans, and Latino Americans (Dassori et al., 1998; Weisman de Mamani & Caldas, 2013). The structure of negative symptoms appears stable across cultures when newer measures of negative symptoms are examined (Ahmed et al., 2019), although factor analytic results for older measures such as the SANS indicate that negative

symptoms are represented as a unitary domain for Caucasian Americans but are represented as two domains (one representing diminished expression and one representing motivation and pleasure) for African Americans (Strauss & Culbreth, 2015). In conclusion, knowing about these cultural variations may assist clinicians in arriving at a culturally informed diagnosis in order to provide appropriate treatment.

Assessment of Neurocognition and Functional Impairment in Schizophrenia Spectrum Disorders

The Measurement and Treatment Research to Improve Cognition in Schizophrenia Consensus Cognitive Battery (MATRICS; Kern et al., 2008; Nuechterlein et al., 2008) is a neuropsychological assessment battery developed for assessment of cognitive changes in schizophrenia resulting from the effects of medication. The battery was derived based on expert consensus, incorporating existing neuropsychological tests that had strong validity and reliability evidence when used to assess individuals with schizophrenia. It assesses various cognitive domains including processing speed, attention/vigilance, working memory, reasoning and problem-solving, as well as social cognition. It has been translated into more than 20 languages and is used internationally in many settings (these translations use English norms). The development of the norms relied on patient and community samples from rural and urban settings that were representative of the US population regarding age, sex, racial and ethnic background, and education level (Kern et al., 2011). Hence, its norm-based approach may be considered culturally sensitive. It is commercially available, and more information can be obtained on the publishers website (<https://www.parinc.com/Products/Pkey/225>).

Assessment of functioning in daily activities such as managing finances, making appointments, or shopping may also be required in certain settings. The UCSD Performance-based Skills Assessment (UPSA; Patterson et al., 2001) is an assessment procedure to evaluate functional

impairment in schizophrenia spectrum disorders. As its name suggests, the UPSA requires completion of certain tasks that are essential to adaptive functioning in real-world setting, and so it differs from other assessment procedures that use self-report or informant-report to judge functioning. The UPSA has been translated into Spanish. In support of Spanish translations of measures of everyday functioning, a study has found no differences for monolingual Spanish speakers, Latino English speakers, and non-Latino English speakers who completed the assessment in their native language (Bengoetxea, Burton, Mausbach, Patterson, & Twamley, 2014). Also, there is support that Caucasian raters do not show an ethnic/racial bias when rating everyday functioning among African Americans, Caucasian, and Latino patients (Sabbag et al., 2015). Lower performance on measures of everyday functioning among patients from ethnic/racial minority backgrounds is related to lower levels of education and equivalent levels of cognitive performance (Sabbag et al., 2015). Adjusting UPSA results for the influence of education and acculturation eliminated differences between Latino and non-Latino patients (Mausbach, Tiznado, Cardenas, Jeste, & Patterson, 2016).

Fairness in Testing Differences in performance on personality, intellectual and neurocognitive tests are widely reported across cultural groups and have led to controversial opinions such as that intelligence inherently differs between ethnic and racial groups (Herrnstein & Murray, 1994). Such opinions have been rebutted over the past several decades (for review see Ma and Schapira, 2017) and promoted discussion and research into racial or ethnic factors that may unfairly bias test results. Thus, in this context, fairness in testing refers to diminishing the impact of variance in test performance that is not related to the construct that is being measured, but rather results from individual or cultural differences. There has been in-depth exploration that also considers factors such as language and acculturation contributing to differences in psychological test performance among cultural

groups (Boone, Victor, Wen, Razani, & Pontón, 2007). Efforts have also been directed at exploring how bias in the testing procedure itself can influence differences in neuropsychological performances between cultural groups (for review see Afolabi, 2014). The American Psychological Association's Standards for Educational and Psychological Testing (2014) suggest that fairness in testing can be promoted by (1) treating the test taker fairly during testing, (2) avoiding measurement bias, (3) providing access to measured constructs, and (4) individualizing interpretation of test scores. Melikyan, Agranovich, and Puente (2019) further suggest that fairness in psychological testing can be improved by (1) selecting the most valid test for a minority client by considering test constructs, test procedures, and stimulus materials, (2) asking diagnostic questions to determine which norms are the most appropriate for the individual case (researching whether norms for minority groups are available and valid), (3) assessing level of acculturation and assimilation to consider test wiseness and level of performance on tests, (4) determining the language in which the assessment should be conducted and considering that some unintended or atypical responses may be due to language, and (5) approximating the socioeconomic status and quantity/quality of education to account for test wiseness and test performance.

Thus, when conducting an evaluation with a Spanish or Chinese client, for example, one may choose to administer the MATRICS in Spanish or Chinese and utilize norms from a Spanish (Rodríguez-Jimenez et al., 2012) or Chinese (Shi et al., 2015) representative sample. Also, clinicians who are not fluent in the language of the test taker should perform the assessment with an interpreter present or refer to a clinician who is fluent in the test taker's language. Yet, beyond these decisions, each individual case still requires clinical expertise to judge other factors such as whether test constructs measured by the MATRICS are valued in the clients' culture (e.g., in Eastern cultures quality of work is often valued over speed), whether the client has acculturated/assimilated to a new culture and in this

culture gained testing experience and possibly test wiseness, or whether the clients' quality of education justifies the education-based correction of performance scores. In conclusion, we advise the reader to treat the information on culturally sensitive measures discussed in this chapter only as foundational knowledge but use clinical expertise, consultation, and existing research to arrive at optimal treatment decisions on a case-by-case basis.

Cultural Factors Relevant for Treatment of Schizophrenia Spectrum and Other Psychotic Disorders

Cultural factors should be considered in behavioral treatments for SSOPD. In the following sections, we discuss a recent review on cultural adaptations of psychosocial treatments for schizophrenia which identified nine common themes of cultural adaptations. Next, we introduce the seven therapy approaches that received a rating of "strong support" by APA's Division 12 and review cultural adaptations for each. Last, we discuss a general approach of how consideration of cultural factors may be integrated into any kind of treatment approach.

Of note, pharmacological treatment remains the first-line treatment for SSOPD (Miyamoto, Miyake, Jarskog, Fleischhacker, & Lieberman, 2012). For this reason, behavioral health specialists should regularly consult with their patients' psychiatrists or prescribing medical healthcare providers to be informed about their patients' current medications. Behavioral healthcare providers may also refer patients to prescribing medical healthcare providers in the community if their patient's pharmacological needs have not yet been met. Since medication management is often a challenge for patients with severe mental illness, behavioral strategies such as medication logs to assist with compliance may be beneficial (Eckman, Liberman, Phipps, & Blair, 1990).

Nine Common Themes of Cultural Adaptations of Psychosocial Interventions for Psychosis

Degnan et al. (2018) conducted a systematic review and meta-analysis of culturally adapted psychosocial interventions for psychosis. Their review included studies on culturally adapted CBT, social skills training, family psychoeducation, family interventions, combined interventions, and illness management and recovery programs. They summarized that cultural adaptations for psychosocial interventions of schizophrenia can be grouped according to the following nine themes: (1) language (direct translation into national language, incorporation of local dialect), (2) concepts and illness models (culture-specific explanatory models, focus on mental health stigma, acknowledgment of low mental health knowledge and education level), (3) family (importance of family involvement, culture-specific family structures, culture-specific family roles and responsibilities), (4) communication (cultural differences in openness and disclosure, culture-specific strategies of conflict resolution and problem-solving, culture-specific ways of teaching and learning), (5) content (addition of culture-relevant content, removing of culturally irrelevant content), (6) cultural norms and practices (culture-specific practices and coping methods, culturally relevant activities and scenarios, enhancing community and social networks), (7) context and delivery (location of intervention, flexibility in scheduling sessions, intervention mode, length of intervention), (8) therapeutic alliance (therapist and client matched for characteristics, therapist's cultural competency training, adapting therapeutic approach), and (9) treatment goals (intervention goals and outcome). Their meta-analysis results concluded that culturally adapted psychosocial treatments were more efficacious than treatment as usual regarding symptom severity, positive symptoms, and general symptoms. Moreover, the degree of cultural adaptation predicted symptom improvement.

There is a paucity of literature regarding psychosocial treatments of SSOPD for children and adolescents (Stafford et al., 2015) which is likely related to onset of psychotic symptoms before adolescence being rare (APA, 2013). Yet, considering literature on first-onset psychosis and adult psychosis, recommended treatments for youth include cognitive behavioral therapy, social skills, multifamily group therapy, and some briefer forms of cognitive rehabilitation training as well as an integration of supported vocational or academic programs (Baker, Howell, & Findling, 2016).

Culturally Adapted Evidence-Based Behavioral Treatments

Based on criteria proposed by Chambless and Hollon (1998) for empirically supported therapies, the American Psychological Association’s

Society of Clinical Psychology (Division 12) ascribes “strong support” to the following evidence-based treatments for schizophrenia and severe mental illness: cognitive behavioral therapy, social skills training, family psychoeducation, social learning/token economy programs, cognitive remediation, supported employment, and assertive community treatment (for more information regarding Division 12’s strongly supported evidence-based treatments, visit <https://www.div12.org/diagnosis/schizophrenia-and-other-severe-mental-illnesses>, APA, 2016). We briefly describe each of these treatments and their cultural adaptations (if any) below. See Table 27.2 for a list of resources of English materials and culturally adapted treatments.

Cognitive Behavioral Therapy for Psychosis (CBTp) Similar to cognitive behavioral therapy (CBT) for other diagnoses, CBT for psychotic disorders (CBTp) involves fostering a working

Table 27.2 Cultural adaptations of evidence-based therapies for schizophrenia spectrum disorders

Therapy	English resources recommended by APA	Cultural adaptation resources
Cognitive behavioral therapy for psychosis (CBTp)	Cognitive Behavioral Therapy for Schizophrenia (Kingdon & Turkington, 1994) and Cognitive Therapy for Schizophrenia (Kingdon & Turkington, 2005) Cognitive Therapy for Delusions, Voices and Paranoia (Chadwick, Birchwood, & Trower, 1996)	CBT for Psychosis translated for Mexican patients (Zimmer, Duncan, Laitano, Ferreira, & Belmonte-de-Abreu, 2007) CBT for Psychosis translated for Chinese patients (Li et al., 2015) Culturally Adapted CBT for Psychosis (CA-CBTp) for Egyptian patients (Naeem et al., 2015) Metacognitive Training (MCT) for Indian patients (Kumar et al., 2010)
Social skills training	Social Skills Training for Schizophrenia (Bellack, Mueser, Gingerich, & Agresta, 2004) Social Skills Training for Psychiatric Patients (Lieberman, Derisi, & Mueser, 2001)	Skills Training (ST) adapted for Mexican-American, other Central American, and Caribbean patients (Kopelowicz, Zarate, Smith, Mintz, & Liberman, 2003) Psychosocial Skills Training (PSST) adapted for Mexican patients (Valencia et al., 2010) Social Cognitive Skills Training (PEDAL) adapted for Latino patients (Mausbach et al., 2008) Chinese Basic Conversation Skills Module (CBCSM) adapted for Chinese patients (Lak, Tsang, Kopelowicz, & Liberman, 2010) Social Cognition and Interaction Training (SCIT) adapted for Chinese patients (Wang et al., 2013) Social Skills Training adapted for Chinese patients (Weng, Xiang, & Liberman, 2005) Social Cognitive Skills Training (SCST) adapted for Egyptian patients (Gohar, Hamdi, Lamis, Horan, & Green, 2013)

(continued)

Table 27.2 (continued)

Therapy	English resources recommended by APA	Cultural adaptation resources
Family psychoeducation	<p>Family Psychoeducation Resource Kit (Substance Abuse and Mental Health Service Administration, SAMHSA, 2010a)</p> <p>Multifamily Groups in the Treatment of Severe Psychiatric Disorders (McFarlane, 2002)</p> <p>Family Care of Schizophrenia (Falloon, Boyd, & McGill, 1984)</p>	<p>Multiple-Family Group Treatment (MFGT) for Vietnamese patients (Bradley et al., 2006)</p> <p>Family Intervention for Schizophrenia adapted for Italian patients (Carrà, Montomoli, Clerici, & Cazzullo, 2007)</p> <p>Family Education (FE) for people with Schizophrenia adapted for Chinese patients (Li & Arthur, 2005; Ran et al., 2003)</p> <p>Psychoeducational Family Intervention adapted for Chinese patients (Xiang, Ran, & Li, 1994)</p> <p>Group Psychoeducation of Relatives of Schizophrenic Patients, adapted for Chinese patients (Zhang & Yan, 1993)</p> <p>Family-based Intervention for Schizophrenic patients, adapted for Chinese patients (Xiong et al., 1994)</p> <p>Multiple-Family-Group Intervention for Chinese families of patients with Schizophrenia (Chien & Chan, 2004)</p> <p>Family Intervention for Schizophrenia adapted for Iranian patients (Koolae & Etemadi, 2010)</p> <p>Psychoeducational Intervention for Caregivers of Indian patients (Kulhara, Chakrabarti, Avasthi, Sharma, & Sharma, 2009)</p> <p>Psychoeducational Group Program, adapted for Korean American patients (Shin & Lukens, 2002)</p>
Social learning/token economy programs	<p>Treatment and Rehabilitation of Severe Mental Illness (Spaulding, Sullivan, & Poland, 2002)</p> <p>The Token Economy (Ayllon & Azrin, 1968)</p>	None found in our literature search
Cognitive remediation	<p>Training Program for the Remediation of Cognitive Deficits in Schizophrenia (Delahunty & Morice, 1993)</p> <p>Remediation of Cognitive Deficits in Psychiatric Patients (Medalia, Revheim, & Herlands, 2002)</p> <p>Cognitive Remediation Therapy for Schizophrenia (Wykes & Reeder, 2005)</p>	<p>Cognitive Rehabilitation for Schizophrenia adapted for Korean patients (Lee & Lee, 2017)</p> <p>Cognitive Rehabilitation for Schizophrenia adapted for Brazilian patients (Pontes et al., 2013)</p>
Supported employment	<p>A Working Life for People With Severe Mental Illness (Becker & Drake, 2003)</p> <p>Supported employment implementation resource kit draft (SAMHSA, 2010b)</p>	Supported Employment Program adapted for Latino Americans (Mueser et al., 2014)
Assertive community treatment	<p>Assertive community treatment implementation resource kit draft (SAMHSA, 2008)</p> <p>Assertive outreach in mental health (Burns & Firm, 2002)</p> <p>Assertive Community Treatment of Persons with Severe Mental Illness (Stein, 1998)</p>	Assertive Community Treatment for Persons with Severe Mental Illness adapted for ethnic minority groups (Yang et al., 2005)

alliance, providing psychoeducation and normalization, and a case formulation and treatment plan that consider the interplay of thoughts, feelings, and behaviors (APA, 2016). In addition, CBTp may include setting goals that specifically address psychotic symptoms such as learning how to reattribute, understanding the content of, and using coping strategies for hallucinations; assessing antecedents and consequences of delusions and generating alternatives; or working on negative symptoms in the short and long term (Kingdon & Turkington, 2005). The overarching treatment goal is typically to help patients manage their symptoms, decrease personal distress, and improve functioning in daily life (APA, 2016). There is much meta-analytic evidence supporting the efficacy of CBTp (Burns, Erickson, & Brenner, 2014; Hazell, Hayward, Cavanagh, & Strauss, 2016; Turner, van der Gaag, Karyotaki, & Cuijpers, 2014). There is also evidence for the efficacy of translations and cultural adaptations of CBTp. A cognitive behavioral program translated for the use with Mexican patients showed significantly greater positive effects on cognitive variables, social-occupational functioning, and quality of life compared to treatment as usual (Zimmer et al., 2007). CBTp translated for use with Chinese patients was found to be significantly more efficacious than supportive therapy for reduction of overall symptomatology, positive symptoms, and social outcomes functioning (Li et al., 2015). Further, metacognitive training (MCT), a variant of CBT, translated for the use with Hindi-speaking patients showed a greater decline in positive symptoms with medium to large effect sizes compared to treatment as usual (Kumar et al., 2010).

Naem et al. (2015) went beyond translating CBTp by also incorporating the following cultural adaptations for the use with Pakistani patients: (1) inclusion of a spiritual dimension in case formulation and treatment plan, (2) usage of Urdu equivalents of CBT jargons in therapy, (3) development of culturally appropriate homework assignments, and (4) incorporation of folk stories and examples related to local religious beliefs to explain therapeutic concepts. Importantly, treat-

ment length was limited to six sessions to overcome the barrier of geographical distance to the treatment facility. An additional session for the whole family and the involvement of a carrier throughout treatment acknowledged the importance of family in Pakistani culture. This treatment showed significantly greater improvement in overall symptomatology, positive symptoms, negative symptoms, and insight when compared to treatment as usual (Naem et al., 2015). These examples speak to the success of translating and culturally adapting CBTp for the use in countries outside the United States, yet future studies are needed that develop and assess cultural adaptations for the use of culturally diverse patient populations residing within the United States.

Social Skills Training (SST) for Schizophrenia Social skills training (SST) for psychotic disorders is usually conducted in groups and involves therapists modelling social skills broken down into concrete steps as well as patients learning the skills in role-plays with other group members and repeatedly practicing the skills (APA, 2016). Specific social skills exercises may relate to conversing with others, being assertive, managing conflict, living with others, interacting with friends and romantic partners, managing health-related situations, functioning in work situations, or coping with drug and alcohol use (Bellack et al., 2004). There is meta-analytic evidence of the efficacy of SST related to improvement of general psychotic psychopathology and specifically of negative symptoms (Turner et al., 2017). There are also several studies that support the efficacy of culturally adapted SST for Spanish-speaking patients including Latino-American patients (Kopelowicz et al., 2003; Mausbach et al., 2008) and Mexican patients (Valencia et al., 2010; Valencia, Rascón, Juárez, & Murow, 2007). Further, there are studies that support SST programs culturally adapted for the use with Chinese patients (Lak et al., 2010; Weng et al., 2005). Interestingly, the Social Cognition and Interaction Training (SCIT), a relatively new variant of social skills training that considers recent research on social cognition in individuals with psychotic disorders, adapted for

the use with Chinese patients showed significant improvement in emotion perception, theory of mind, social functioning, and attributional style compared to no treatment (Wang et al., 2013). Translating a similar cognitive skills training (SCST) program into Arabic for Egyptian patients also led to significant improvement in identifying emotions and managing emotions and overall emotional intelligence compared to the control condition (Gohar et al., 2013).

In addition to straightforward translation of existing manuals and stimuli, these studies also employ more complex and creative methods. For instance, Kopelowitz, Zarate, Smith, Mintz, and Liberman (2003) attempted to create a “universal Spanish” that could be understood by Spanish-speaking patients from different backgrounds by considering various Latino dialects and colloquialisms and focusing on Spanish vocabulary at the elementary school level. Videos presenting social modelling examples were substituted by in-session modelling (Valencia et al., 2010), by performances by local actors (Lak et al., 2010), or by newly made videos (Wang et al., 2013).

The abovementioned studies went beyond translation efforts and additionally included various cultural adaptations. Adaptations to Latino culture focused on creating a sense of personalismo (i.e., importance of a personal connection with others) by including a time for *platica* (small talk) in the beginning or end of sessions, having therapists offer appropriate self-disclosure, or sharing food (Kopelowicz et al., 2003; Valencia et al., 2010). Adaptations to Chinese culture involved changing examples of social situations from Western culture to Eastern culture—for instance, changing an example of a party situation to an example of a “yum cha,” a tea gathering at a restaurant (Lak et al., 2010). Cultural adaptations for Egyptian and Arabic culture involved excluding stimuli that depicted unfamiliar recreational activities such as drinking alcohol or playing American football (Gohar et al., 2013). Moreover, in culturally adapted programs for both Latino and Chinese patients, family members were involved in therapy (Kopelowicz et al., 2003; Valencia et al., 2010; Weng et al., 2005).

Overall, social skills trainings for psychotic disorders have been adapted broadly for culturally diverse clients and in general appear to be well suited to be adjusted to individual patients by incorporating personally relevant examples of social situations.

Family Psychoeducation for Schizophrenia

Family psychoeducation for schizophrenia involves treatment models that include family members in interventions. The goals of this type of treatment are to decrease the family’s burden, increase family communication and improve relationships, as well as reduce distress of family members. Psychoeducation includes aspects of education about crisis intervention, general information about schizophrenia, help with family problem-solving, support, and family communication training. Family psychoeducation programs have been shown to reduce relapse rates, benefit the family’s well-being, and improve recovery for patients with schizophrenia (Dixon et al., 2001; Jewell, Downing, & McFarlane, 2009; McFarlane, Dixon, Lukens, & Lucksted, 2003). Because schizophrenia typically causes significant functional impairment, burden on family members is a common occurrence (Awad & Voruganti, 2008). There are, of course, cultural differences in regard to the importance of family on an individual. In fact, one study found that as many as 60% and 75% of African-American and Latino patients (respectively) lived with their family, as compared to 30% of White patients with schizophrenia (Guarnaccia, 1998).

There is an abundance of literature discussing cultural adaptations of family psychoeducation for schizophrenia that takes into account spiritual, linguistic, and other cultural contextual factors. Indeed, some families (especially those that have more collectivistic family values) prefer to care for their family member with schizophrenia at home rather than have them reside in inpatient treatment facilities, and so psychoeducation can greatly benefit these groups (Chien, 2008; Khoshknab, Sheikhsana, Rahgouy, Rahgozar, & Sodagari, 2014). Language of psychoeducation has demonstrated benefits for post-

psychoeducation symptom reduction as well as family coping and reduction in caregiver burden (Barrio & Yamada, 2010; Cheng & Chan, 2005; Kopelowicz et al., 2012). Family psychoeducation approaches for schizophrenia have been adapted for Chinese (Chien & Chan, 2013; Li & Arthur, 2005; Ran et al., 2003; Zhang, He, Gittelman, Wong, & Yan, 1998), Korean American (Shin & Lukens, 2002), and Iranian patients (Koolae & Etemadi, 2010). Spirituality has been shown to be associated with lower negative symptoms (Shah et al., 2011), and religious methods of coping have also been shown to produce good outcomes for symptom reduction and coping as well as family coping with schizophrenia (Mohr et al., 2011; Murray-Swank et al., 2006; Revheim, Greenberg, & Citrome, 2010; Rosmarin, Bigda-Peyton, Öngur, Paragament, & Björngvinsson, 2013; Tabak & Weisman de Mamani, 2014; Weisman de Mamani, Weintraub, Gurak, & Maura, 2014). Lopez, Kopelowicz, and Cañive (2002) present strategies for adapting family psychoeducation interventions for Latino groups. Lefley (2009) describes family psychoeducational practices from around the world.

Social Learning/Token Economy Programs for Schizophrenia Social learning and token economy programs for psychotic disorders are typically used in inpatient or residential facilities and involve rewarding adaptive/appropriate behaviors (e.g., treatment participation, medication adherence, self-care, or vocational activities, among others) with rewards (e.g., tokens or points) (APA, 2016). A recent review on token programs for psychotic disorders concluded that while studies provide support for the efficacy of these programs, most studies are restricted by methodological flaws and the historical context of when they were conducted decades ago (Dickerson, Tenhula, & Green-Paden, 2005). Our literature review did not find cultural adaptations of social learning and token economy programs for psychotic disorders.

Cognitive Remediation for Schizophrenia Due to the significant functional impairment that cog-

nitive deficits (such as executive function, memory, processing speed, and attention) cause in patients with schizophrenia, cognitive remediation treatment for schizophrenia works to improve these cognitive abilities through cognitive training. This treatment modality is typically very time-limited and can include both computerized and paper-and-pencil cognitive tasks. While this treatment presents a theoretically sound basis for managing impairment associated with schizophrenia, effects are moderate for cognitive ability improvement and small for symptom reduction (McGurk, Twamley, Sitzler, McHugo, & Mueser, 2007; Wykes, Huddy, Cellard, McGurk, & Czobor, 2011). When combined with psychiatric rehabilitation (or psychosocial intervention to improve community functioning and well-being), outcomes improved (McGurk et al., 2007; Wykes et al., 2011). It is unclear whether these cognitive training tasks cause sustained ability improvement. Research regarding combined treatment with cognitive remediation has demonstrated some support for the use of functional skills training (Bowie, McGurk, Mautsach, Patterson, & Harvey, 2012), supported employment (Bell, Choi, Dyer, & Wexler, 2014), and vocational rehabilitation (Ullevoldsæter Lystad et al., 2017). In general, cognitive remediation alone does not make a significant impact on functional outcomes for schizophrenia; however, when combined with other forms of treatment, robust improvements can occur. Only two cultural adaptations were found for cognitive remediation that included use of linguistically appropriate cognitive remediation exercises (Lee & Lee, 2017) and use of simpler and more affordable (e.g., noncomputerized) methods of service delivery for a developing country (Pontes et al., 2013). Adaptations that should be investigated in the future include changes in the use of language of administration of cognitive training tasks.

Supported Employment for Schizophrenia Supported employment programs for patients with psychotic disorders integrate vocational rehabilitation and mental health programs and focus on job placement in the community and

continued individualized job development and support (APA, 2016). There are various studies supporting the effectiveness of supportive employment approaches for patients with severe mental illness (Bond, Drake, Meuser, & Becker, 1997; Drake, Becker, Biesanz, & Wyzik, 1996; Drake et al., 1999; Lehman et al., 2002). A recent study found that Latino-American patients in a supportive employment program had better competitive job outcomes compared to Latino-American patients in standard services or clubhouse programs, and overall supported employment programs produced comparable rates of competitive work for Latino-American, African-American, and non-Latino patients (Mueser et al., 2014). Adaptations of supportive employment programs for psychotic disorders targeting patients who have experienced a first psychotic episode (Nuechterlein et al., 2010), patients that are middle-aged or older (Twamley, Narvaez, Becker, Bartels, & Jeste, 2008), and patients that live in rural areas (Gold et al., 2006) also report positive results. Supportive employment approaches have been adopted for countries other than the United States including Australia (Killackey, Jackson, & McGorry, 2008), Canada (Corbière, Bond, Goldner, & Ptasiński, 2005), Hong Kong (Kin Wong et al., 2008), Japan (Sato et al., 2014), and several European countries (Fioritti et al., 2014).

Assertive Community Treatment (ACT) for Schizophrenia

ACT is a community-based, multidisciplinary treatment program that works to keep patients with schizophrenia out of the hospital by attending to community factors that might make them vulnerable to rehospitalization (Scott & Dixon, 1995; Stein & Test, 1980). ACT team members may include psychiatrists, psychologists, and other behavioral health professionals who share a caseload and have frequent contact with patients. ACT teams assist with medication management, social service delivery and connection to resources, as well as rehabilitation. ACT is particularly useful for those individuals who have difficulty remaining in traditional outpatient settings (e.g., homeless

patients; Rosenheck & Dennis, 2001). Indeed, a recent meta-analysis reported that ACT is significantly better than traditional case management models of treatment for homeless individuals with schizophrenia (Coldwell & Bender, 2007). There is some debate about ACT in the literature because while many patients report being satisfied with ACT (44%, Gerber & Prince, 1999), some clinicians and researchers cite ethical issues with some aspects of ACT (i.e., confidentiality, coercion through the use of legal methods to ensure medication compliance, and privacy; Szmukler & Holloway, 1998) that has been explored in the literature with inconsistent findings regarding feelings of coercion and treatment outcomes (Galon & Wineman, 2011; Jaeger & Rossler, 2010; Lamberti et al., 2014; Stanhope, Marcus, & Solomon, 2009). Qualitative evidence suggests that coercive means of treatment compliance may serve as a barrier to accessing healthcare (Hughes, Hayward, & Finlay, 2009; Swartz, Swanson, & Hannon, 2003). There is currently no quantitative evidence that the use of legal methods to ensure medication and treatment compliance in schizophrenia leads to negative outcomes; however, the issue remains debated in many professional circles.

Regarding cultural adaptations for ACT, there was only one study citing specific adaptations that were evidence-supported (Yang et al., 2005). This study utilized matching ACT team members to patients who were linguistically diverse (e.g., English was not their native language), which resulted in a significant reduction in hospitalizations and symptoms (Yang et al., 2005). The use of linguistic matching as well as culturally relevant social programming to enhance community integration (e.g., Chinese noodle group, yoga classes, etc.) and legal resources that may benefit cultural groups specifically (e.g., refugee claims, immigration issues) were supported in this study (Yang et al., 2005). Although no other studies citing specific cultural adaptations for ACT were found, the Department of Human Services in Minnesota created a resource implementation

guide that provides case examples integrating cultural competence into ACT service delivery (Minnesota Department of Human Services, 2002).

General Approach of Integrating Ethnic and Cultural Background Considerations

The review of culturally adapted evidence-based treatment approaches above hints at the challenges inherent in adapting every treatment for every likely combination of cultural factors. Practicing clinicians may require a more readily available method to meet the cultural needs for every individual client. Therefore, we propose to integrate interviews that assess ethnic and cultural background as a general approach to culturally adapt any kind of evidence-based treatments for SSOPD. When possible, cultural adaptations that already exist and are supported in the research should be utilized. For example, the DSM-5 includes the Cultural Formulation Interview whose 16 questions address (1) the cultural definition of the problem; (2) cultural perceptions of cause, context, and support; and (3) cultural factors affecting self-coping and past help seeking behavior. Lately, cultural interviews for specific ethnic groups are also being developed. For instance, guidelines for Hispanic adult assessment (National Hispanic and Latino ATTC, 2017) address assessment of risk/stressors and protective factors in the following eight domains: (1) discrimination of stress defined as problems due to ethnic or cultural orientation; (2) marital stress which may be related to cultural values; (3) health stress related to available or accessible healthcare (including culturally appropriate care); (4) family stress that may be related to family conflict, low family unity, or cultural differences; (5) parental stress that may reflect cultural differences in parenting or cultural orientation between children and parents; (6) occupational stress that reflects problems related

to one's culture or identity; (7) unemployment and economic stress related to immigrant status or cultural orientation; and (8) immigration stress including problems with legal status, deportation, and social isolation. These types of cultural interviews can easily be added on to other evidence-based treatment modalities. In long-term behavioral treatment, instruments of cultural factors may be divided up over several sessions and can clearly add much value to the process and the outcome of therapy.

Conclusion

Here we presented a comprehensive discussion of how cultural factors can be considered by behavioral healthcare providers in assessment and treatment of SSOPD. Behavioral health specialists are most often in the role of conducting assessments for SSOPD, and therefore we outlined in detail how cultural factors can be considered in all steps of assessment. First, a diagnostic evaluation may use semi-structured interviews (such as the SCID) that have been translated into multiple languages and consider culture-related diagnostic issues outlined in the DSM-5. Assessment of symptom severity should include culturally sensitive symptom severity measures and generally be informed by literature on different symptom expressions across ethnicities and racial groups. Last, when conducting assessments of neurocognition and functional impairments of patients with schizophrenia spectrum disorders, it is necessary to know for which cultural groups such measures have been validated and to consider fairness in testing. We concluded the chapter with a review of how cultural factors have been considered in psychosocial treatments of schizophrenia. This review showed that the most research on culturally adapted evidence-based therapy approaches is available for cognitive behavioral therapy, social skills trainings, and fam-

ily psychoeducation approaches. We propose a general approach to integrate a consideration of cultural factors into any evidence-based treatment approach for SSOPD by incorporating interviews that assess ethnic and cultural background.

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