Published in final edited form as:
Psychiatr Serv. 2010 August ; 61(8): 765–773. doi:10.1176/appi.ps.61.8.765.

The Impact of Patient Language Proficiency and Interpreter Service Use on the Quality of Psychiatric Care: A Systematic Review

Amy M. Bauer, M.D., M.S. and
Department of Psychiatry, Cambridge Health Alliance, 1493 Cambridge Street, Cambridge MA 02139 (abauer@challiance.org)

Margarita Alegría, Ph.D.
Center for Multicultural Mental Health Research, Cambridge Health Alliance, Somerville, MA

Abstract

Objective—To determine the effects of limited English proficiency and use of interpreters on the quality of psychiatric care.

Methods—A systematic literature search for English-language publications was conducted in PubMed, PsycInfo, and CINAHL and by review of the reference lists of included articles and expert sources. Of 321 citations, 26 peer-reviewed articles met inclusion criteria by reporting primary data on the clinical care for psychiatric disorders among patients with limited proficiency in English or in the providers' language.

Results—Little systematic research has addressed the impact of language proficiency or interpreter use on the quality of psychiatric care in contemporary US settings. Therefore, the literature to date is insufficient to inform evidence-based guidelines for improving quality of care among patients with limited English proficiency. Nonetheless, evaluation in a patient's non-primary language can lead to incomplete or distorted mental status assessment whereas assessments conducted via untrained interpreters may contain interpreting errors. Consequences of interpreter errors include clinicians' failure to identify disordered thought or delusional content. Use of professional interpreters may improve disclosure and attenuate some difficulties. Diagnostic agreement, collaborative treatment planning, and referral for specialty care may be compromised.

Conclusions—Clinicians should become aware of the types of quality problems that may occur when evaluating patients in a non-primary language or via an interpreter. Given demographic trends in the US, future research should aim to address the deficit in the evidence base to guide clinical practice and policy.

Background

The expanding population of individuals with limited English proficiency in the United States presents a challenge to the healthcare system given the national shortage of bilingual providers (1). Lack of English proficiency represents a serious barrier to communicating effectively in healthcare settings, providing quality care, and addressing healthcare disparities. Limited English proficiency is associated with poor access to medical care (2–6), lower quality care including more invasive management and excess hospitalizations, medical errors, and drug complications (7–11), and poor satisfaction with care (7). Use of

Disclosures: None for any author.

untrained interpreters may compound problems due to interpreting errors and the tendency to omit sensitive material (7, 12). Individuals with limited proficiency may have worse access to psychiatric care (13), although findings are inconsistent (14, 15).

There are numerous reasons to postulate that language proficiency may impact the quality of psychiatric care more than medical care. Psychiatric evaluation hinges on obtaining a thorough history since many key symptoms are not associated with directly observable behaviors and can only be elicited via self-report. Laboratory and radiological testing are of limited utility, typically helpful to rule out organic contributors. Language barriers may interfere with conducting a thorough mental status examination, potentially masking disorders of speech and language (e.g., aphasias, neologisms, etc.), thought process (e.g., flight of ideas, disorganization, tangentiality), thought content (e.g., grandiosity, delusions, obsessions, magical thinking) or perceptions (e.g., hallucinations). Finally, language barriers may hinder the identification of important contributors to the process of care, including stigma, shame, patients' explanatory models of illness, acceptance of diagnosis and treatment, and development of a therapeutic patient-provider alliance.

Despite extensive theoretical reasons to surmise that language proficiency may influence psychiatric care, little research has explored this phenomenon. This article conducts a systematic review of the literature to describe the effects of limited English proficiency and interpreter service use on the quality of care for psychiatric disorders.

Method

The databases used to identify articles for the systematic literature search included PubMed, PsycInfo, and CINAHL (from inception to 4/7/2009). A total of 321 articles were identified via the systematic searches for articles assessing the effects of language proficiency or interpreter use on psychiatric care, review of the reference lists of included articles, and expert sources (details in Appendix 1, available online at ps.psychiatryonline.org). Of these, 26 met inclusion criteria by reporting primary data on the assessment or treatment of psychiatric disorders among patients with limited proficiency in English or in the providers' language.

Results

Results from twelve reports of cases (16–27) are summarized in Appendix 2 (available online at ps.psychiatryonline.org). Results from fourteen empirical studies (Table 1) are organized according to the effects of language proficiency and interpreter use on three outcomes: psychiatric assessment and diagnosis (most studies), treatment, and patient-provider interaction. Where possible, results are presented separately for patients seen without interpreters, with interpreters, or by bilingual providers, although some studies provided insufficient information and not all of these are represented in the literature. Ad hoc interpreters included anyone facilitating translation that was not trained in medical interpreting (e.g., bilingual hospital staff, friends or family including minors, and other patients).

Psychiatric Assessment and Diagnosis

Four small-scale studies demonstrate that psychiatric assessment may be compromised among patients seen without interpreters (28–31). In South Africa, clinicians interviewing Xhosa-speaking inpatients without interpreters tended to use closed-ended questions and elicit brief replies, subsequently concluding that patients lacked intellectual capacity or had impoverished thoughts (31).

Studies of standardized evaluations of inpatients with schizophrenia conducted in both English (without interpreters) and Spanish report opposite findings on patients' overall Brief Psychiatric Rating Scale (BPRS) scores (28–30). Marcos and colleagues (28) found higher BPRS scores among patients assessed in English versus Spanish, whereas Price and Cuellar (30) reported lower scores for English-language evaluation. Several factors may have contributed to this discrepancy. Patients' responses to some questions differed in each language, for example, endorsing symptoms in English but denying them in Spanish (29). Patients spoke in the present tense more often in English than Spanish, suggesting current rather than past symptoms (29). In Marcos' study, psychiatrists rated evaluations in only one language, thus confounding the effects of rater and patient language (28, 29). Higher scores were given to patients in English (by English-speaking psychiatrists) versus Spanish on the scales "anxiety", "tension", "mannerisms and posturing", "somatic concern", "emotional withdrawal", "depressive mood", and "hostility".

Scores on these scales may have been influenced by characteristics of speech such as fluency, rate, and productivity (28, 29). In Price and Cuellar's study, patients were rated in both languages by bilingual raters who may have attributed speech disturbances in English to challenges of communicating in a second language rather than to psychopathology (30). However, because detailed BPRS score profiles were not reported, it is not possible to compare the total scores between the two studies or to determine which scales were elevated.

In Germany, Turkish and German psychotic patients were interviewed with the Schedules for the Clinical Assessment in Neuropsychiatry (SCAN) by a monolingual German-speaking psychiatric trainee (without interpreter) and a bilingual psychiatric trainee (32). Diagnostic disagreement occurred among 4% of German and 19% of Turkish patients. Results were similar for Turkish patients with "good" and "bad" German proficiency; however, the method of assessing proficiency was not described. The authors speculate that diagnostic uncertainty may be more closely linked to acculturation than to language proficiency. Alternately, psychometric properties of the Turkish and German versions of the SCAN may differ, thus accounting for some observed differences.

Together, studies suggest that the reliability of psychiatric assessments conducted in a non-native language may be reduced although the effect on overall impressions of psychopathology may vary according to symptom type (28, 30, 32).

Seven studies address the effects of interpreters on psychiatric assessment and diagnosis. Two studies audiotaped patients evaluated with ad hoc interpreters (33, 34). Errors in interpretation resulted from interpreters' inadequate language proficiency, lack of psychiatric knowledge leading to normalization of patients' disordered thought process, interjection of the interpreter's attitudes or editorializing comments, or interpreters providing answers for a patient without asking the patient (33, 34). Table A2 (in Appendix 2 online, available at ps.psychiatryonline.org) categorizes types of errors with illustrative examples. Interpreters with less English proficiency made more errors (34). Whereas a hospital orderly with no interpreter training but some experience made more addition errors, a less experienced orderly made more distortions of clinicians' questions (34). Interpreting errors were twice as likely to occur when patients spoke compared to when physicians spoke and were more likely with acutely psychotic patients compared to non-psychotic patients (34). Similarly, when patients provided lengthy or convoluted replies, omissions were especially likely (34). Interpreters may have difficulty registering and remembering a patient's statement if the interpreter cannot discern its meaning (34). Similarly, in South Africa, both ad hoc (e.g., bilingual nurses) and professional interpreters failed to translate psychotic patients' actual statements (31). Bilingual nurses were less likely than professional

interpreters to say they could not follow the patient, instead asserting their opinion that the patient was psychotic. Clinicians, however, preferred working with these nurses over professional interpreters who withheld judgments (31).

In England, patients with good or limited English proficiency were audiotaped and evaluated by both an English-speaking psychiatrist with a professional interpreter and a bilingual psychiatrist (35). The professional interpreter made errors including omissions, condensations, conceptual substitutions, and miscommunications due to the interpreter's inadequate language skills. Nevertheless, both psychiatrists generated similar overall checklist ratings of the patients' mental state. Methodological limitations may have obscured potential differences. Specifically, the interpreter knew that the study aimed to compare the two types of evaluations, and the same psychiatrist assessed patients and transcribed encounters.

Two studies reviewed medical records from initial health screenings among asylum-seekers in Switzerland (36, 37). Professional interpreter use was associated with increased disclosure of traumatic events and psychological symptoms compared to use of ad hoc interpreters or no interpreter (36). Patients reported few physical or psychological symptoms in encounters without an interpreter or when nurses reported communication was poor and more symptoms during encounters with professional interpreters (37). However, the presence of an ad hoc interpreter, typically a family member or friend, was associated with reports of many physical but few psychological symptoms. (37) Thus, disclosure of psychological symptoms may be more sensitive to language barriers than disclosure of physical symptoms.

In Saudi Arabia, a chart review of primary care patients found that Arabic-speaking physicians and non-Arabic-speaking physicians using interpreters (professional or ad hoc) diagnosed mental disorders at similar rates (38). Although this suggests that physicians were making psychiatric diagnoses when evaluating language-discordant patients (patients' primary language was not reported), this study provides little insight into either the accuracy of physicians' assessments or physicians' ability to differentiate among psychiatric disorders, both critical prerequisites for high quality care.

Results from these empirical studies indicate that interpreter-mediated encounters are prone to errors, although the clinical significance of errors varied in different studies. Nevertheless, interpreters (especially professional ones) appear to facilitate more complete disclosure, a crucial component in ensuring accurate psychiatric assessments.

Treatment

A review of administrative data found that among Latino patients with schizophrenia, limited English proficiency was associated with greater adherence to antipsychotic medication, lower rates of excess prescription filling, and fewer hospitalizations. In contrast, among Asian Americans, limited English proficiency was associated with lower adherence, and greater nonadherence and excess prescription filling (39). The authors speculate that cultural differences in family support structures and beliefs about mental illness and treatment may account for these findings.

In Switzerland, more asylum-seekers were referred for psychiatric care when professional interpreters were used or when language concordance was considered adequate by providers (36, 37). The positive effect of professional interpreter use on psychiatric referral disappeared once the effects of demographic variables, symptom severity, and disclosure of prior trauma were controlled. Importantly, however, professional interpreter use was associated with greater disclosure of psychological symptoms and trauma, suggesting that improved disclosure may have mediated the association between professional interpreter use

and referral, although this was not tested. Finally, adequate language concordance between patient and provider (compared to no concordance) was associated with higher rates of referral for psychiatric but not medical care.

Patient-Provider Interaction

A heterogeneous group of studies, reviewed under the theme of patient-provider interaction, addresses how language proficiency or interpreter use affects the process of psychiatric care from the perspective of patients or providers.

Two studies found less verbal production during audiotaped evaluations in English than in Spanish for psychotic patients with limited English proficiency. In English, patients had significantly more short replies to identical questions, slower speech, more pauses and disturbances (e.g., incomplete sentences, repetition, stutter, incoherent sounds) (29), and they scored lower on ratings of self-disclosure (30).

In a study of clinicians' impressions of their ability to create formulations of Latino outpatients based on interpreter-mediated encounters or interpreted videotaped encounters, clinicians reported a high degree of confidence in their assessments and believed the interpretations provided to them by ad hoc interpreters were accurate and free from bias (40). Most reported that the use of interpreters led to assessments of equal or greater severity than if no interpreter had been used. However, patient language proficiency was not assessed and the assessments of English-speaking and Spanish-speaking clinicians were not compared, thereby limiting the ability to determine the accuracy of clinicians' assessments. Similarly, there was no direct assessment of the interpretations to determine whether errors or bias may have been undetected.

A study of nurse evaluations of asylum-seekers in Switzerland found that the beneficial impact of an interpreter on communication was limited to professional interpreters. Nurses rated communication as "poor" or "fair" in 84% of evaluations without an interpreter and 72% with ad hoc interpreters, but only 6% with professional interpreters (36).

Patients and psychiatrists may have differing views of evaluations conducted via interpreters (41). Compared to Spanish-speaking patients seen without an interpreter, significantly more of the patients seen with an interpreter (type not specified) gained self-understanding and found the visit helpful. In contrast, the psychiatric residents were unanimous in feeling they helped patients seen with interpreters less than they helped patients seen without interpreters. Whereas most patients seen with an interpreter wanted a return visit, a minority of residents believed these patients wanted to return and only one felt comfortable seeing a patient with an interpreter for ongoing care. The authors postulated that residents projected their discomfort with caring for patients with limited proficiency onto patients, thus preventing residents from acknowledging patients' feelings of being helped and desire for continued care. In contrast to the positive experiences of patients above, in South Africa some patients with limited English proficiency refused to utilize interpreters for one of several reasons: they were insulted that their English skills were perceived as inadequate, they wanted to avoid interference by third parties, or they had overt paranoia regarding the interpreter (31).

Overall, psychiatric care for patients with limited English proficiency without interpreters may yield incomplete disclosure and thus limit the effectiveness of evaluation and treatment. Results are mixed on how ad hoc interpreters may affect patient-provider interaction with some studies suggesting negative effects and others indicating a benefit. There is a lack of research addressing how professional interpreters influence patient-provider interaction with

one study reporting improved patient-provider communication. Patients and providers may hold divergent views of the benefits of interpreter-mediated visits.

Summary

Patients provide longer replies with greater disclosure when interviewed in their first language than a non-native language (29, 30). When evaluating patients in English without interpreters, clinicians may alter their interview style to discourage lengthy replies, thus biasing assessments (31). Clinicians may understand short replies to signify a hostile or guarded mental state, intellectual impairment, impoverished thoughts, withdrawal, or tension. In one study, psychotic patients were rated similarly in English and Spanish on positive symptoms, but higher in English on domains most likely to be influenced by communicating in a non-primary language (28), whereas another study detected less overall psychopathology in English than Spanish (30). Therefore, English-language evaluation of patients with limited proficiency may obscure mental status findings among patients with schizophrenia (28, 30) and the effects of language proficiency may vary according to symptom type (28). Whether language proficiency affects the communication of depressive or anxiety symptoms, for example, in ways that differ from psychotic symptoms is unknown. Finally, studies using structured interviews (28–30, 32, 35–37) do not represent clinical practice, suggesting the need for research in naturalistic settings.

Use of ad hoc interpreters may impede disclosure of sensitive material (33, 37) and contribute to distortions and errors (33, 34). Errors occur more often among acutely ill patients (34) and may lead to over- or underestimation of psychopathology (33). Nevertheless, some clinicians are confident in assessments conducted with such interpreters (40). Compromised disclosure with ad hoc interpreters may yield fewer referrals for follow-up care (36, 37), potentially impacting treatment and health outcomes. Professional interpreters, however, may facilitate improved disclosure (36, 37). Although errors also occur in encounters mediated by professional interpreters, their clinical impact may be less substantial (35). In the absence of standards for interpreters, both ad hoc and professional interpreters may lack sufficient language skills to facilitate the communication needed for quality psychiatric care (34, 35). More systematic study of the clinical consequences is warranted.

Discussion

There has been little systematic inquiry into how language proficiency or interpreter service use impacts the quality of psychiatric care. Few studies directly examine communication during interpreter-mediated encounters (e.g., 31, 33–35), and none of these address contemporary psychiatric practice in the United States.

Studies to date provide the background for the future systematic study of the potential impact of language barriers on quality of care that is needed to develop an evidence base to inform mental health services delivery and policy. Evidence suggests that ethnic minorities have fewer psychiatric disorders and that mental health disparities are related to receipt of lower quality care (42). Thus, understanding how language barriers hinder care represents an important direction in unraveling disparities.

There has been insufficient examination of how language barriers influence care for patients with varying presentations and diagnoses. Interpreting errors occur during psychiatric assessments, yet their clinical significance is poorly understood. Patient, provider, or interpreter characteristics that influence the likelihood of errors are not known, nor is it known how best to minimize errors and their impact. Moreover, authors disagree on whether interpreters should provide literal translations only and avoid attempts to clarify the

speaker's intent (43) or play an expanded role as cultural brokers (40). Similarly, it is not known whether specific methods of data-gathering enhance the likelihood that providers will elicit an accurate history.

This review has focused on analysis at the level of patient-provider encounters, which has been described as the gold standard for assessment of healthcare quality (44). However, analysis at broader levels of the healthcare system such as care teams, organizations, and the external environment including health policy, regulation, financing, and accreditation will also inform understanding of the effects of language proficiency and interpreter use on psychiatric care (44, 45). For example, recent research has examined methods to assess the need for interpreters (46), although more study along these lines and in psychiatric settings is indicated. How policies for language services, including interpreting standards or laws governing reimbursement, affect the provision and quality of mental health services warrants systematic evaluation.

To summarize, systematic review of the literature on the impact of language barriers on the quality of psychiatric care reveals multiple potential sources of miscommunication and distortion due to gaps in communication, particularly when no interpreters or ad hoc interpreters are present. There is insufficient evidence to determine whether quality of care is compromised and under what circumstances high quality psychiatric care can prevail in the presence of language barriers. Complementing the robust literature on medical interpreting, a small literature suggests that professional interpreter use during psychiatric encounters facilitates disclosure of sensitive material, and leads to greater patient satisfaction and self-understanding, thereby reinforcing the cornerstones of high-quality psychiatric care.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments

Author 1 is supported by a National Research Service Award 2T32 MH019733 (PI:). This study was supported by NIH Research Grant # 1P50 MHO 73469 funded by the National Institute of Mental Health and #P60 MD0 02261 (NCMHD) funded by the National Center for Minority Health and Health Disparities. Findings were presented as a poster at the Academy of Psychosomatic Medicine annual meeting in Las Vegas, NV, November 11–14, 2009.

References

1. Vega WA, Karno M, Alegria M, et al. Research issues for improving treatment of U.S. Hispanics with persistent mental disorders. Psychiatric Services. 2007; 58:385–394. [PubMed: 17325113]
2. Weinick RM, Krauss NA. Racial/ethnic differences in children's access to care. American Journal of Public Health. 2000; 90:1771–1774. [PubMed: 11076248]
3. Pippins JR, Alegria M, Haas JS. Association between language proficiency and the quality of primary care among a national sample of insured Latinos. Medical Care. 2007; 45:1020–1025. [PubMed: 18049341]
4. DuBard CA, Gizlice Z. Language spoken and differences in health status, access to care, and receipt of preventive services among US Hispanics. American Journal of Public Health. 2008; 98:2021–2028. [PubMed: 18799780]
5. Brach, C.; Chevarley, FM. Research Findings No. 28. Rockville, MD: Agency for Healthcare Research and Quality; 2008. Demographics and Health Care Access and Utilization of Limited-English-Proficient and English-Proficient Hispanics.
6. Ku L, Flores G. Pay now or pay later: Providing interpreter services in health care. Health Affairs. 2005; 24:435–444. [PubMed: 15757928]

7. Flores G. The impact of medical interpreter services on the quality of health care: A systematic review. Medical Care Research and Review. 2005; 62:255–299. [PubMed: 15894705]
8. Bard MR, Goettler CE, Schenarts PJ, et al. Language barrier leads to the unnecessary intubation of trauma patients. American Surgeon. 2004; 70:783–786. [PubMed: 15481294]
9. Waxman MA, Levitt MA. Are diagnostic testing and admission rates higher in non-English-speaking versus English-speaking patients in the emergency department? Annals of Emergency Medicine. 2000; 36:456–461. [PubMed: 11054199]
10. Hampers LC, Cha S, Gutglass DJ, et al. Language barriers and resource utilization in a pediatric emergency department. Pediatrics. 1999; 103:1253–1256. [PubMed: 10353938]
11. Gandhi TK, Burstin HR, Cook EF, et al. Drug complications in outpatients. Journal of General Internal Medicine. 2000; 15:149–154. [PubMed: 10718894]
12. Karliner L, Jacobs E, Chen A, et al. Do professional interpreters improve clinical care for patients with limited English proficiency? A systematic review of the literature. Health Services Research. 2007; 42:727–754. [PubMed: 17362215]
13. Sentell T, Shumway M, Snowden L. Access to mental health treatment by English language proficiency and race/ethnicity. Journal of General Internal Medicine. 2007; 22:289–293. [PubMed: 17957413]
14. Alegria M, Mulvaney-Day N, Woo M, et al. Correlates of past-year mental health service use among Latinos: Results from the National Latino and Asian American Study. American Journal of Public Health. 2006; 97:76–83. [PubMed: 17138911]
15. Abe-Kim J, Takeuchi D, Hong S, et al. Use of mental health-related services among immigrant and US-born Asian Americans: Results from the National Latino and Asian American Study. American Journal of Public Health. 2006; 97:91–98. [PubMed: 17138905]
16. Buxbaum E. The role of a second language in the formation of ego and superego. Psychoanalytic Quarterly. 1949; 18:279–289. [PubMed: 15391855]
17. Greenson RR. The mother tongue and the mother. International Journal of PsychoAnalysis. 1950; 31:18–23.
18. Krapf EE. The choice of language in polyglot psychoanalysis. Psychoanalytic Quarterly. 1955; 24:343–357. [PubMed: 13245891]
19. Del Castillo JC. The influence of language upon symptomatology in foreign-born patients. American Journal of Psychiatry. 1970; 127:242–244. [PubMed: 5473153]
20. Sabin JE. Translating despair. American Journal of Psychiatry. 1975; 132:197–199. [PubMed: 1111326]
21. Pitta P, Marcos LR, Alpert M. Language switching as a treatment strategy with bilingual patients. American Journal of Psychoanalysis. 1978; 38:255–258. [PubMed: 727300]
22. Javier RA. Linguistic Considerations in the Treatment of Bilinguals. Psychoanalytic Psychology. 1989; 6:87–96.
23. Vasquez C, Javier RA. The problem with interpreters: Communicating with Spanish-speaking patients. Hospital & Community Psychiatry. 1991; 42:163–165. [PubMed: 1997365]
24. Baxter H, Cheng LY. Use of interpreters in individual psychotherapy. Australian and New Zealand Journal of Psychiatry. 1996; 30:153–156. [PubMed: 8724340]
25. Oquendo MA. Psychiatric evaluation and psychotherapy in the patient's second language. Psychiatric Services. 1996; 47:614–618. [PubMed: 8726488]
26. Rueda-Lara MA, Buchert S, Skotzko C, et al. Psychiatric symptoms masking pituitary adenoma in Spanish speaking immigrants. General Hospital Psychiatry. 2003; 25:367–371. [PubMed: 12972230]
27. Bjorn G. Ethics and interpreting in psychotherapy with refugee children and families. Nordic Journal of Psychiatry. 2005; 59:516–521. [PubMed: 16316907]
28. Marcos LR, Alpert M, Urcuyo L, et al. The effect of interview language on the evaluation of psychopathology in Spanish-American schizophrenic patients. American Journal of Psychiatry. 1973; 130:549–553. [PubMed: 4699919]
29. Marcos LR, Uruyo L, Kesselman M, et al. The language barrier in evaluating Spanish-American patients. Archives of General Psychiatry. 1973; 29:655–659. [PubMed: 4773490]

30. Price CS, Cuellar I. Effects of language and related variables on the expression of psychopathology in Mexican American psychiatric patients. Hispanic Journal of Behavioral Sciences. 1981; 3:145–160.
31. Drennan G, Swartz L. The paradoxical use of interpreting in psychiatry. Social Science & Medicine. 2002; 54:1853–1866. [PubMed: 12113440]
32. Haasen C, Yagdiran O, Mass R, et al. Potential for misdiagnosis among Turkish migrants with psychotic disorders: A clinical controlled study in Germany. Acta Psychiatrica Scandinavica. 2000; 101:125–129. [PubMed: 10706012]
33. Marcos LR. Effects of interpreters on the evaluation of psychopathology in non-English-speaking patients. American Journal of Psychiatry. 1979; 136:171–174. [PubMed: 760545]
34. Price J. Foreign language interpreting in psychiatric practice. Australian and New Zealand Journal of Psychiatry. 1975; 9:263–267. [PubMed: 1062988]
35. Farooq S, Fear C, Oyebode F. An investigation of the adequacy of psychiatric interviews conducted through an interpreter. Psychiatric Bulletin. 1997; 21:209–213.
36. Eytan A, Bischoff A, Rrustemi I, et al. Screening of mental disorders in asylum-seekers from Kosovo. Australian and New Zealand Journal of Psychiatry. 2002; 36:499–503. [PubMed: 12169149]
37. Bischoff A, Bovier PA, Rrustemi I, et al. Language barriers between nurses and asylum seekers: their impact on symptom reporting and referral. Social Science & Medicine. 2003; 57:503–512. [PubMed: 12791492]
38. Dodd W. Do Interpreters Affect Consultations? Family Practice. 1984; 1:42–47. [PubMed: 6530062]
39. Gilmer TP, Ojeda VD, Barrio C, et al. Adherence to antipsychotics among Latinos and Asians with schizophrenia and limited English proficiency. Psychiatric Services. 2009; 60:175–182. [PubMed: 19176410]
40. Zayas L, Cabassa L, Perez MC, et al. Using interpreters in diagnostic research and practice: Pilot results and recommendations. Journal of Clinical Psychiatry. 2007; 68:924–928. [PubMed: 17592918]
41. Kline F, Acosta FX, Austin W, et al. The misunderstood Spanish-speaking patient. American Journal of Psychiatry. 1980; 137:1530–1533. [PubMed: 7435708]
42. Miranda J, McGuire TG, Williams DR, et al. Mental health in the context of health disparities. American Journal of Psychiatry. 2008; 165:1102–1108. [PubMed: 18765491]
43. Bradford DT, Munoz A. Translation in bilingual psychotherapy. Professional Psychology. 1993; 24:52–61.
44. Berwick DM. A user's manual for the IOM's 'Quality Chasm' report. Health Affairs. 2002; 21:80–90. [PubMed: 12026006]
45. Institute of Medicine Committee on Crossing the Quality Chasm. Adaptation to Mental Health and Addictive Disorders: Improving the Quality of Health Care for Mental and Substance-Use Conditions. Washington DC: National Academies Press; 2006.
46. Karliner L, Napoles-Springer A, Schillinger D, et al. Identification of Limited English Proficient Patients in Clinical Care. Journal of General Internal Medicine. 2008; 23:1555–1560. [PubMed: 18618200]

Table 1

Summary of Empirical Studies on the Effects of Language Proficiency and Interpreter Use on Psychiatric Assessment and Diagnosis, Treatment, and Patient-Provider Interaction

Author (Year) Location Setting	N, Sample	Interpreter Type	Method	Results	Comments
Marcos et al. (1973a) New York Inpatient (28)	10 Spanish-speaking patients with schizophrenia who were conversant in English	None	Closed circuit television recordings of standardized evaluations in Spanish and English rated by Spanish or English-speaking psychiatrists	Patients received higher psychopathology ratings in English than Spanish (BPRS scores of 93 versus 65, respectively). BPRS scales affected most by language were "depressed mood", "anxiety", "tension", "hostility", "emotional withdrawal", and "somatic concern" with patients scoring higher in English than Spanish.	Sample is the same as in Marcos et al., 1973b. Interview language and rating psychiatrists' language were confounded.
Marcos et al. (1973b) New York Inpatient (29)	10 Spanish- speaking patients with schizophrenia who were conversant in English	None	Closed circuit television recordings of standardized evaluations in Spanish and English rated by Spanish or English-speaking psychiatrists	Patients gave short replies (6 words or less) significantly more often and spoke slower in English compared to Spanish. Their responses contained more speech disturbances (such as grammatical problems, repetition, stutter, etc.) Patients gave different responses to the same question in English and Spanish interviews. Patients spoke in the present tense more often in English than Spanish. Patients appeared more uncooperative and guarded when evaluated in English compared to Spanish.	Sample is the same as in Marcos et al., 1973a
Price (1975) Australia Setting not specified (34)	Unspecified number of Hindustani-speaking patients evaluated by 1 of 3 psychiatrists	Ad hoc - 2 hospital orderlies with differing levels of experience and 1 educated man with schizophrenia in remission	Audiotapes of evaluations	Errors in interpretations of patients' utterances were twice as common as errors in interpretations of psychiatrists' utterances Omissions were likely to occur when patients provided long or rambling answers. More interpreting errors were made in utterances by acutely psychotic patients compared to patients without active thought disorders. The hospital orderlies had lower English proficiency and made more errors in interpreting than the lay interpreter. The experienced hospital orderly made addition errors that appeared related to his prior experience with history-taking, whereas the less experienced orderly distorted questions into leading questions.	2 psychiatrists were bilingual.
Marcos (1979) New York Setting not specified (33)	8 Chinese- speaking or Spanish- speaking patients	Ad hoc – psychiatric nurse, nurse's aid, patients' relatives	Audiotaped encounters	Errors in interpretation were related to inadequate language proficiency of interpreters, interpreters' attempts to"normalize" disordered thought process, minimization or amplification of pathology by relatives, or interpreters responding without asking the patient.	
Kline Los Angeles Outpatient (41)	a. 61 Spanish-speaking patients (21 with limited English proficiency and 40	No interpreter or professional interpreters (training not specified)	Questionnaires assessing effectiveness of communication at psychotherapy intake appointments from patient and provider perspectives	a. Compared to patients seen without interpreters, patients seen with interpreters felt more helped (76% versus 40%) and gained more self-understanding (90% versus 53%). Most patients seen with interpreters wanted return visits (76%).	Patients were selected by surname. Patients' English proficiency was not assessed.

Author (Year) Location Setting	N, Sample	Interpreter Type	Method	Results	Comments
	with some English proficiency) b. 16 psychiatric residents			b. Few psychiatric residents believed that patients seen with interpreters were helped (0%) or wanted to return to the clinic (31%). One resident (6%) felt comfortable providing ongoing care to patients who need interpreters.	Use of an interpreter was based on patient request, which may have contributed to favorable ratings of interpreter-assisted evaluations.
Price & Cuellar (1981) San Antonio Inpatient (30)	32 bilingual Mexican- American patients with schizophrenia (31/32 patients were native Spanish- speakers)	None	Videotaped standardized psychiatric evaluation conducted in both English and Spanish rated by bilingual Masters-level mental health professionals	Patients were judged to have greater psychopathology on the BPRS during Spanish-language interviews than English- language interviews. Patients had greater self-disclosure during interviews in Spanish. Verbal fluency (in English) predicted the difference in detected psychopathology between languages.	
Dodd (1984) Saudi Arabia Primary Care (38)	Unspecified number of patients treated by 10 Arabic- speaking physicians or 10 non-Arabic- speaking physicians	Professional and ad hoc (bilingual nurses) interpreters	Retrospective medical record review determining the number of new diagnoses of ICD mental disorders and “signs, symptoms and ill-defined conditions”	Arabic-speaking and non-Arabic speaking physicians diagnosed similar proportions of patients with mental disorders and similar proportions of patients with signs, symptoms and ill-defined conditions	Patients’ language proficiency not specified.
Farooq et al. (1997) United Kingdom Setting Not Specified (35)	20 patients (10 English- proficient, 7 Mirpuri- speaking and 3 Punjabi-speaking patients with limited English proficiency)	Professional interpreter	Audiotaped encounters of patients interviewed via checklists by bilingual psychiatrist and English-speaking psychiatrist via interpreter	Common interpreting errors included omission, conceptual substitutions, condensations, miscommunication due to interpreter’s lack of language skills and subtle changes in phrasing. No significant differences between the psychiatrists on scoring of mental status items.	Interpreter was not blinded to study aims. Bilingual psychiatrist conducted interviews and coded transcripts.
Haasen et al. (2000) Germany Inpatient (32)	150 patients with psychotic symptoms (100 Turkish patients with good or bad German proficiency and 50 German patients)	None	Comparison of clinical diagnosis with diagnoses from structured interviews conducted by 2 psychiatric residents (1 bilingual in Turkish and German; 1 monolingual German-speaking)	Low agreement between clinical and both research diagnoses for Turkish but not German patients and lower agreement between research diagnoses for Turkish than German patients. Diagnostic disagreement occurred in 4% of German patients and 19% of Turkish patients. Turkish patients’ level of proficiency in German did not affect rate of diagnostic disagreement.	Method of determining patients’ German proficiency was not described. Method of determining clinical diagnosis (including use of interpreters) was not specified. Authors did not specify whether the standardized instrument has been validated in German and Turkish.
Drennan and Swartz (2002) South Africa Inpatient (31)	Unspecified number of Xhosa- speaking patients	Professional, ad hoc (e.g., bilingual nurses and staff), and no interpreter	Mixed qualitative study using retrospective chart review, semi-structured interviews with interpreters and staff and notes from direct observation of encounters	When language abilities not accounted for, clinicians were likely to conclude that intellectual impairment or thought disorders (e.g., impoverished thought) were present. Interpreters offered opinions on patients’ intelligence and motivation. Reasons patients refused interpreters included pride in their English-speaking abilities, paranoia about the	

Author (Year) Location Setting	N, Sample	Interpreter Type	Method	Results	Comments
				interpreter, and wanting to eliminate third-party interference.	
Eytan et al. (2002) Switzerland Primary Care (36)	319 asylum- seekers entering Switzerland from Kosovo	Professional interpreters, ad hoc interpreters (family and friends), and no interpreter (when patients were bilingual or when an interpreter was needed but not available)	Medical record review of standard health screening questionnaires administered to asylum- seekers by nurses	Nurses rated more communication as “poor” or “fair” in 84% of evaluations without interpreters and 72% of evaluations with ad hoc interpreters, but “good” in 94% of evaluations with professional interpreters. Use of professional interpreters was associated with increased disclosure of traumatic events (77% of patients seen with professional interpreters, 46% with ad hoc interpreters, 55% without interpreters) and psychological symptoms (33% of patients seen with professional interpreters, 14% with ad hoc interpreters, 12% without interpreters) but not physical symptoms (25% of patients seen with professional interpreters, 22% with ad hoc interpreters, 14% without interpreters) Use of professional interpreters was associated with greater referral for psychiatric care (15% of patients seen with professional interpreters, 3% with ad hoc interpreters, 4% without interpreters). When age, gender, severity of symptoms and prior trauma exposure were controlled in multivariate analyses, the effects of professional interpreter use on referral disappeared.	Because professional interpreter use was associated with greater disclosure of trauma and of symptoms, this may be an important pathway by which referrals for psychiatric care came about. It is unclear why the authors chose to control for these variables rather than assess whether these variables mediated the effects of professional interpreters on referral rates.
Bischoff et al. (2003) Switzerland Primary Care (37)	723 asylum- seekers entering Switzerland, primarily from Balkan states	Professional interpreters, and ad hoc interpreters (family and friends), and no interpreter (when patients and providers shared a common language or when an interpreter was needed but not available)	Medical record review of standard health screening questionnaires administered to asylum- seekers by nurses	Lack of any interpreter was associated with low reporting of physical and psychological symptoms (18% and 18%, respectively). Use of professional interpreters led to higher reports of both types of symptoms (25% and 32%, respectively). Use of ad hoc interpreters led to higher reports of physical symptoms (26%) and low reports of psychological symptoms (16%). When nurses believed communication was good (versus poor), patients reported more physical symptoms (OR 2.1, 95%CI 1.2–3.6), psychological symptoms (OR 3.7, 95% CI 1.5–4.8), and exposure to trauma (OR 4.7, 95% CI 3.0–7.5). Referral for psychological care but not medical care was more likely when language concordance was adequate (bilingual provider or professional interpreter) compared to no concordance (OR 3.2, 95% CI 1.2–8.6). Partial concordance (ad hoc interpreter or nurse with some language skills) did not improve referral rate compared to no concordance (OR 1.6, 95% CI 0.5–4.9).	Sample includes participants in the study by Eytan and colleagues (2002).
Zayas et al. (2007) USA Outpatient (40)	98 Latino patients (with good or limited English proficiency or bilingual) evaluated by Latino (n = 16) or non-	Ad hoc - 2 bilingual mental health professionals, one untrained and one with some training in interpreting. Interpretation was in-person for English-speaking	Comparison of encounters with interpreters (n = 71) to those without (n = 27). Questionnaire of clinicians’ assessment of the interpreting process	Clinicians believed they were getting accurate translations and reported that use of the interpreter improved their confidence in diagnosis. Clinicians believed that the presence of the interpreter led to assessments of equal or greater severity of psychopathology and impairment of functioning.	In the majority of encounters assessing the effects of interpreters (65/71), the clinician was Spanish-speaking and the interpreter was

Author (Year) Location Setting	N, Sample	Interpreter Type	Method	Results	Comments
	Latino (n = 33) clinicians of varying backgrounds	clinicians (n = 6) or interpretation of videotapes for interviews conducted by Spanish-speaking clinicians (n = 65).			not present during the encounter, thus differing from encounters between English-speaking providers and patients with limited English proficiency seen with in-person interpreters. The assessments of Spanish- speaking clinicians who conducted the interviews were not compared to the impressions of the English-speaking clinicians reviewing videotapes. No direct assessment of the accuracy of interpretation was conducted to validate clinicians' impressions.
Gilmer et al. (2009) San Diego Outpatient (39)	7784 patients with schizophrenia (5695 English- proficient non- Latino whites, 1196 English-proficient Latinos, 523 Latinos with limited English proficiency, 298 English- proficient Asians, and162 Asians with limited English proficiency)	Unknown	Review of administrative data including antipsychotic prescription renewal rate and hospitalization rate	Among Latinos, limited English proficiency was associated with greater medication adherence (41% versus 36% of English-proficient Latinos) and less excess prescription filling (15% versus 20% of English-proficient Latinos). Among Asians, limited English proficiency was associated with lower medication adherence (40% versus 45% of English-proficient Asians) and excess prescription filling (13% versus 17% of English-proficient Asians) and greater nonadherence (29% versus 22% of English-proficient Asians) Controlling for adherence, limited English proficiency was associated with lower hospitalization rates.	Language of care was used as a proxy for English language proficiency.