Using e-Health to Enable Culturally Appropriate Mental Healthcare in Rural Areas

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Abstract

The objective of this study was to review relevant research issues in the provision of culturally appropriate e-mental healthcare and make recommendations for expanding and prioritizing research efforts in this area. A workshop was convened by the Office of Rural Mental Health Research (ORMHR) at the National Institute of Mental Health (NIMH), the Center for Reducing Health Disparities at the University of California, Davis, the California Telemedicine and e-Health Center, and the California Endowment in December 2005, during which papers were presented concerning culture and e-mental health. Relevant literature was reviewed and research questions were developed. Major issues in the provision of culturally appropriate e-mental healthcare were defined, as were the barriers to the provision of such care in rural areas and interventions to overcome these barriers. Rural areas have increased barriers to culturally appropriate mental healthcare because of increased rates of poverty, increasingly large ethnic minority populations, and various degrees of geographical isolation and cultural factors specific to rural communities. Although culture and language are major barriers to receiving appropriate mental healthcare, including e-mental healthcare, they cannot be separated from other related influential variables, such as poverty and

geography. Each of these critical issues must be taken into account when planning technologically enabled rural mental health services. This review describes one in a series of ORMHR/NIMH efforts aimed at stimulating research using culturally appropriate e-mental health strategies that address unique characteristics of various racial/ethnic groups, as well as rural and frontier populations.

Key words: e-mental healthcare, rural areas, culture appropriateness

Introduction

The issue of how to deliver culturally appropriate mental healthcare has attracted national attention as more members of minority racial/ethnic groups are increasingly establishing residence in rural communities. For example, a recent United States Department of Agriculture report indicates that the Hispanic/Latino population in rural and frontier America has nearly doubled from 1.4 to 2.7 million, and is now the most rapidly growing segment of the population in nonmetropolitan counties.¹ Culture is known to influence a number of aspects of an individual's healthcare, including approaches to advanced directives, preferences for differing treatments, and individual health beliefs, as well as attitudes toward autopsy, organ donations, and the disclosure of medical information.² Also, a physician's cultural background may influence the interaction between themselves and a patient, potentially affecting patient access, use, treatment, quality, and outcomes.²

The delivery of culturally appropriate mental healthcare is particularly relevant in rural populations. Rural communities are burdened with limited access to mental healthcare specialty resources, never mind resources relevant to language or culture, which in itself can foster a culture of isolation. This cultural/geographical remoteness often creates a culture of fierce independence, which frequently manifests itself in grievances that are reflected in rural mental health

literature.³ This includes angry protests/calls for greater support for increased mental healthcare resources (such as specialty services and parity in mental health reimbursement) and complaints about the relatively low quality of treatment received by rural people, which result in poor outcomes. As a response to these calls for additional mental health resources, and improved healthcare access, there have been a number of influential reports identifying information technology as potentially offering at least a partial solution.^{4,5} However, with the exception of Goal Six—"Technology Is Used to Access Mental Healthcare and Information"—in the President's Mental Health Report, there has been little time spent in these various reports considering how technology can help solve these problems.⁴

Unfortunately, little is known about how to deliver "culturally appropriate e-mental healthcare," or even whether or not this is particularly different from the delivery of culturally appropriate mental healthcare delivered face-to-face in an office setting. Cultural differences may be more challenging during electronic consultations via videoconferencing, e-mail, or telephone, compared to face-to-face consultations. As the practice of e-mental health becomes more pervasive, it may be that managing cultural views and perspectives via technology will be even more important. To date, there has been a paucity of research concerning the provision of culturally appropriate mental healthcare, especially at a distance, and much of the completed research has been done with small samples and has employed weak experimental designs, with only a few exceptions.⁶⁻⁹

The goal of this paper is to review relevant research issues in the provision of culturally appropriate e-mental healthcare and make recommendations for expanding and prioritizing research efforts in this area. This work is an outgrowth of a National Institute of Mental Health (NIMH) workshop on e-mental health. The paper begins with a brief discussion of the workshop and defining "culturally appropriate" care, it then turns to a review and discussion of culturally appropriate e-mental care, and concludes with recommendations for future directions.

NIMH e-Mental Health Workshop

The impetus for this paper was a 2-day national workshop held at the University of California Davis in Sacramento, convened by the Office of Rural Mental Health Research at the NIMH, the Center for Reducing Health Disparities at the University of California, Davis, the California Telemedicine and e-Health Center, and the California Endowment in December 2005.

In this meeting, culturally appropriate care was defined as the delivery of mental health services that are guided by the cultural concerns of all racial or ethnic groups, including psychosocial back-

ground, typical styles of symptom presentation, immigration histories, and other cultural traditions, beliefs, and values. The 30 attendees included psychiatrists, psychologists, experts in information technology, telemedicine and cultural diversity, rural health researchers, and research methodologists from a variety of universities and health institutions in addition to UC Davis, including UCLA and the California Department of Health. The discussions of the attendees were focused on cultural aspects of three primary domains: Research, Training, and Healthcare issues. Technology and cultural experts presented papers on culture and e-mental health and examined barriers to delivering culturally appropriate e-mental healthcare in rural areas. At the conclusion of the workshop, recommendations for prioritizing and stimulating new research efforts in the area of culturally appropriate e-mental health were developed. Assignments were given to several groups of participants to work together to produce research review papers incorporating these ideas and recommendations. This is one of those papers.

Definition and Goals of Culturally Appropriate e-Mental Health Interactions

Culturally appropriate care has been defined as "the delivery of mental health services that are responsive to the cultural and linguistic concerns of all racial or ethnic minority groups and non-minority groups, including their psychosocial issues, characteristic styles of problem presentation, family and immigration histories, traditions, beliefs and values."¹⁰ There are many concepts that have been defined in the literature that underlie the potential achievement of cultural competence, often referred to as culturally appropriate/sensitive care or individualized personal care.¹¹ These have been defined as the following:

1. Stereotyping versus Generalization

Interactions with individuals from a different cultural or ethnic background than one's own have long been characterized by stereotyping. A more appropriate approach would be to make a generalization as to which specific details about the individual can be made. This is especially important considering the derogatory nature of many cultural and ethnic stereotypes. A goal of culturally appropriate e-mental health interactions should be to use generalizations as a framework for working with individuals from various cultural backgrounds, rather than clinging to stereotypes.

2. Values of Cultural and Individual Importance

Different cultural and ethnic groups value the role and perspective of the individual differently. Certain cultural groups are highly individualistic, such as many individuals in the United States and in many western European countries. Other cultural groups, such as

many Asian societies, value instead the goals and needs of the group/society as a whole. With regard to their mental healthcare, they may not see mental health problems as individual challenges that can be successfully treated, but as shameful or burdensome to themselves or to their families. The value of the individual should be a consideration when planning e-mental health interventions.

3. World View

Individuals have great differences in their view of mental health and well-being. Since culture is of considerable influence in the development of a cohesive world view, individuals from different cultures may not see eye to eye on a number of mental health-related topics, treatments, and approaches to care. A critical understanding of an individual's global attitudes toward health and illness is important for providing culturally appropriate e-mental healthcare.

4. Ethnocentrism and Cultural Relativism

Ethnocentrism and cultural relativism both involve comparing one's own culture's way of doing things with other cultures' approaches. Ethnocentrism refers to the attitude that one's own culture is the "correct" one, while the relativist approach compares other cultures to one's own in a less punitive way. Adopting a relativist approach to providing e-mental healthcare to individuals from diverse backgrounds is an essential step toward culturally appropriate care.

5. Time Orientation

Adherence to time varies between different cultural groups. Some cultures are predominately present-oriented, and pay attention almost exclusively to their immediate needs in the here and now, while other cultures are traditionally past or future-oriented. Adopting a certain flexibility when working with diverse individuals is especially important in an e-health program, especially considering that many of the patients will be seen at a considerable distance.

6. Inequity versus Egalitarianism

Differing cultures are set up in different ways. In theory, America has a fairly egalitarian structure where everyone is intended to be equal, with success and power dependent on an individual's personal qualities and accomplishments. Other cultures, such as India, have a very precise social caste system where it is hard to move between different levels. Understanding these differences in perceptions is crucial to any healthcare interaction, but especially in the context of e-mental health, where individuals are separated by distance and by telecommunications devices.

These six broad conceptual areas of cultural differences are important to understand in the provision of mental health services in a

cross-cultural perspective, and their importance is multiplied when one takes into account the influence of language, and the potential barriers that can be created if a patient and provider cannot meaningfully communicate with one another, or even understand the practical language of their interaction, not to mention the cultural underpinnings of their differences. It is evident from the breadth and depth of these cultural concepts that understanding them is essential for providers to be able to deliver high-quality face-to-face mental healthcare, never mind high-quality e-mental healthcare.

The above all-enveloping definition of cultural mental healthcare is difficult to achieve in rural areas, particularly where resources for the provision of all types of care are short. For example, it can be very difficult to access linguistic interpreting services in rural areas.¹² Telemedicine could make such services more available and less expensive for smaller rural hospitals and clinics via telemedicine technologies. E-mental health represents a potential mechanism to move rural mental healthcare closer in line with the definition of culturally appropriate care.

A Brief Review of Culturally Appropriate e-Mental Healthcare Delivery

Hundreds of articles have been written on the topic of mental health and illness among members of different ethnic groups, as well as strategies for delivering appropriate, competent cross-cultural mental healthcare,¹³⁻¹⁵ but very few are related to e-mental health. Regardless of whether care is provided face-to-face or using e-health technologies, it is important to be mindful of the potential ethnic and cultural differences in the prevalence of certain disorders.

The small but growing literature on e-mental health with diverse populations consists mainly of descriptive studies and case reports of work with prisoners, children, and minorities. Shore and colleagues have written a series of papers describing cultural issues in a series of clinics that use videoconferencing to provide ongoing mental healthcare for American Indian veterans residing in Western rural reservations.¹⁶⁻¹⁹ They also conducted a controlled trial of videoconferencing with this population demonstrating the diagnostic reliability of structured psychiatric assessments (Structured Clinical Interview for DSM-III-R), acceptability of videoconferencing within a cultural context, and the potential cost savings for using e-mental health for research with diverse rural populations.^{18,19*}

Drawing on their experiences with these clinics as well as others, Shore et al. conducted a review of the impact of culture on telepsychiatry.²⁰ Here they highlighted the key cultural issues that arose in

*Shore JH, Savin D, Orton H, Grigsby J, Manson SM. Acceptability of telepsychiatry in American Indian veterans (unpublished).

their telepsychiatric experiences, and used the Outline for Cultural Formulation from the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) to frame principles for addressing these issues.²⁰ Two components of the Cultural Formulation were particularly emphasized as relevant in telepsychiatry: (1) How a patient's cultural background (the cultural identity of the individual) influences his/her comfort with technology; and (2) The impact of cultural differences on the patient-provider relationship, specifically the need for the psychiatrist to attend to how culture-specific communication styles may impact the videoconferencing session. They noted that although advances in telecommunications technology have decreased disruptions to communication in e-health, verbal and nonverbal communication are altered somewhat in telepsychiatry versus an in-person meeting. The authors recommend that camera settings be adjusted to accommodate the communication preferences of a specific cultural group.²⁰ Finally, Shore et al. noted that there are cultural differences between rural areas, where many e-mental health patients are located, and urban areas, where many e-mental health programs are found and made recommendations to address these differences.²¹

Current Barriers to Culturally Appropriate Care in e-Mental Healthcare in Rural Areas

One way of thinking about the provision of effective and culturally appropriate e-mental healthcare is to examine the potential barriers that interfere with this delivery process. Barriers to developing an e-health program in general have been described elsewhere.²¹ The additional obstacles associated with developing a culturally appropriate e-mental health program are attitudes toward technology and the socioeconomic status of the population of interest.

DIFFERING CULTURAL ATTITUDES TOWARD TECHNOLOGY

While technology is certainly reported as being highly beneficial in enhancing mental health outcomes, actual access to information technology is extremely variable and such technologies themselves may also be viewed and understood differently by individuals of different ethnic and cultural backgrounds. The issue of disparate access to technology by individuals of different ethnic and cultural backgrounds reveals that access to information technology differs significantly, depending not only on an individual's race or ethnicity, but also their income, their education level, and their geographical location.²² African American and Hispanic/Latino individuals tend to report more affinity for information technology than whites do, but tended to have lower access to this type of technology, and poorer skills to use it effectively. When poverty

and low socioeconomic status were taken into account, only the Hispanic/Latino group in Mossberger and colleagues' study²² actually had significantly poorer access to technology than the other two groups. Interestingly, these authors found that zip codes in areas of concentrated poverty were the most significant predictors of access to technology. The question then became, "Who lives in areas of concentrated poverty?" The answer is often ethnic minorities, and this appears to be true in both rural and urban areas. The conclusion of Mossberger and colleagues' research was that overall, concentrated poverty had a greater impact on technology access for African American populations than for white populations, but that they were not able to control for other factors signifying differences between urban and rural settings.

A parallel issue of cultural differences in interest in technology and its trappings has been demonstrated in cultural differences in the capacity to form online relationships. Despite little research being done on this issue, one study has shown that Asians, especially Koreans, were more likely to form online relationships than whites.²³ Differences in affinity for using technology may have a number of different sources, including access, training, and socioeconomic variables that are not necessarily directly tied to an individual's cultural background. However, the circumstances faced by many ethnic minorities in the United States seem to set the stage for differences in interest in, attitudes toward, and experience with technology that will certainly influence the process of delivering quality e-mental health services. Shore et al. recommend a specific assessment of the impact of culture on an individual's willingness and comfort to engage in the use of technologies.²⁰

SOCIOECONOMIC ENVIRONMENT

Poverty seems, according to the literature, to be the most significant barrier to receiving culturally appropriate mental healthcare, whether in person or by telecommunications. Poverty not only affects the technology experience, often causing limited or complete lack of easy access, or access only via outdated technologies, but it also potentially adversely affects the experience of use as well as capacity to change healthcare outcomes. Community poverty is very common in rural areas; 14.2% of the nation's rural population is classified as poor, compared to 12.5% of the general population nationally.²⁴ Indeed, 81 nonmetropolitan counties in the United States have poverty rates above 30%, and 12 have rates above 40%, with Tulare County in California noted as the most impoverished county in the nation. These rates of poverty are magnified among rural ethnic minority groups, which on average suffer double the rate of poverty of their counterpart white rural populations. Rural white

populations report poverty in 11% of their members, compared with rural African Americans (33%), rural Native Americans (30%), and rural Hispanic/Latinos (27%). Rural areas are known to spend less per capita on mental health than their urban counterparts, and thus, are less likely to support a mental health practice and less likely to attract and retain mental health specialists.²⁵ Individual and family poverty also has been well described as a predictor of poor mental health utilization and health outcomes and reduced overall quality of mental healthcare.

Another major confounder across many of these studies is education level, which tends to be related to poverty, as well as to socioeconomic status, and which may be related to decreased use of appropriate mental health services. An individual's educational background may also be correlated with previous exposure to technology, which could in turn impact their comfort and openness to engage in e-mental healthcare. Although Shore et al. discuss this hypothesis, to our knowledge it has not been rigorously assessed.²⁰ It is also important to keep in mind that there are differences between structural or community-level poverty and individual or family poverty. It is possible for there to be a disconnect between the economic standard of a specific community or cultural group and the economic standard of a particular individual or family who belongs to that community.

Recommendations for Expanding and Prioritizing Research Efforts in the Area of Culturally Appropriate e-Mental Health

It is clear from this review that there is a substantial need for more concerted research on intersecting issues of culture, language, social class, ethnicity, geography, and e-mental health. There are a number of scientific and policy questions that arise from this review. These include the following:

SCIENTIFIC RECOMMENDATIONS

1. What kind of assessment tools, methods, and measures are needed to assess the patients, providers, systems, technology, and other important issues that bear on the provision of culturally appropriate or competent mental healthcare to diverse populations by technology?
2. What are the intersections of culture, class, geography, and technology in our current mental health system, and how do these intersections vary across differing racial/ethnic and class subculture groups? How do we distinguish between community/structural barriers to e-mental health care (e.g., a low-income community) and individual characteristics (that may vary with

in and between racial/ethnic/class groups) that reduce use of e-mental health technologies?

3. To what extent can technology be used to increase access to high-quality mental health services, and how will confounding (or in some cases, mediating) variables such as geography, poverty, education, and socioeconomic status prevent the provision/receipt of culturally/linguistically appropriate care that could translate into effective outcomes?
4. Can culturally and linguistically appropriate mental health outcomes (acceptability, accessibility, utilization, continuity of care, improved mental health status, etc.) be achieved electronically and if so, what types of electronic platforms work best for patients and providers?
5. Will patients' disorder, racial/ethnic identity, socioeconomic status, and geographic characteristics determine whether e-mental health or face-to-face care is more effective? Should a hybrid model of face-to-face and electronic services provide more accurate diagnosis and a higher quality outcome? For instance, should policymakers target electronic care only to Asian Americans with depression in rural areas, and attempt to provide more face-to-face care for Hispanic/Latino patients with an anxiety disorder in rural communities, rather than providing e-mental healthcare broadly across the whole community?

POLICY IMPLICATIONS

1. Should policymakers downplay the influence of culture on the use of technology, and pay more attention to factors such as poverty and socioeconomic status when planning the provision of e-mental health services, or must they consider all such factors? Is it economically realistic to target e-mental healthcare toward existing monocultural clinics where it is common to have a clinic primarily focused on, for instance, Asian Americans, North American Indians, or similar ethnic groupings?
2. What is the most cost-effective and logistically feasible way to provide language and interpreting support for e-mental health programs? Should such support be provided with interpreters at the specialty end of the videoconference, the patient's end, or should interpreters be routinely connected to a conference as if they were a third party? How should policymakers maximize automated written translation services, now available on many Web sites, which clearly could be used in the health industry to rapidly translate the written word for e-mail or instant messaging follow-up and treatment? What is the most effective way to link cultural interpreters to the language interpretation process? Should we attempt to interpret language and culture

simultaneously, or in many instances is language interpretation all that is required?

3. What new approaches to care, that take into account cultural and ethnic issues, can we create using technologies? Such approaches could involve using store-and-forward technologies, where patient interviews could be videotaped and translated and written documentation automatically translated, all before being sent to an expert for an opinion.
4. How does one specifically examine the six core cultural concepts discussed in this paper in the electronic environment, and how does one educate providers, and in many cases patients, to communicate more effectively? For instance, is a focus on the values and concepts of diversity in the workplace sufficient in, and necessary for, any mental health service providing electronic services, or should there be specific additional policies relating to the electronic world?

These are questions and research issues of critical importance. As globalization increases, the concept of providing quality, culturally appropriate mental health services will continue to become more important. E-health technologies appear to be uniquely suited to providing such services, but additional attention is needed from an e-mental health research and policy perspective. Using e-health to provide culturally appropriate mental health services is likely to require substantially increased funding from Federal and State levels and private payers, as well as an interest from the scientific and mental healthcare services community, but certainly seems an essential endeavor as the cultural diversity of our population rapidly increases.

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