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Toward Evidence-based Interventions for Diverse Populations: The San Francisco General Hospital Prevention and Treatment Manuals

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Abstract

Clinical trials have seldom included adequate samples of people of color. Therefore, practitioners serving ethnic minorities often do not have access to readily-available evidence-based interventions. This article summarizes the development and empirical evaluation of prevention and treatment manuals designed for low-income ethnic minority populations at San Francisco General Hospital. The manuals were often designed by people of color familiar with the communities for which they were developed. Independent research teams in multi-site national and international clinical trials have evaluated many of these manuals with encouraging results. Some of the manuals are available for downloading at: http://www.medschool.ucsf.edu/latino/

Toward Evidence-based Interventions for Diverse Populations: The San Francisco General Hospital Prevention and Treatment Manuals

> Every *person* is in certain respects
>
> a. like all other *people*,
>
> b. like some other *people*,
>
> c. like no other *person*.
>
> Kluckhohn & Murray, 1953 (as cited in Sundberg, 1976, p.139; italicized, gender-inclusive language ours)

As the quote above suggests, human phenomena can be construed on at least three levels. First, all human beings share universal characteristics; second, groups of us share cultural norms like language, ways of socializing our young, and expectations about authority; and third, each of us is unique. Psychology, the science of mind and behavior, has done relatively well in addressing the first and third of these levels of knowledge. Psychologists have sought to find, describe, and test mental and behavioral processes that hold true for all people, and they have also developed effective measurement and intervention methods to assess and modify individual abilities. But the field has not been as successful in addressing the middle level: group-focused knowledge.

This shortcoming has been particularly evident in the area of clinical interventions. With few exceptions, clinical theory and practice have historically assumed that clinical and research work with European and European American groups yields universal knowledge. Now, however, the field is beginning to pay attention to the many critics who have pointed out that the perspective of non-European groups has been largely absent from mainstream literature.

Empirical clinical studies have not generally included non-White groups even when those groups comprised substantial segments of the communities in which the research took place.

Despite the fact that people of color were a large proportion of the U.S. population in the 2000 Census, with Latinos accounting for 12.5% and African Americans 12.3% (Suro, 2002), reviews of the empirical literature indicate that very few treatment efficacy studies have been conducted with ethnic minorities (Miranda, Azocar, Organista, Muñoz, & Lieberman, 1996). For instance, Miranda et al. (1996) could identify only one therapy outcome study for depression with an experimental design that included a Spanish-speaking sample (Comas-Diaz, 1981). Furthermore, the Division 12 Task Force charged with defining and identifying empirically supported therapies (ESTs) reported that not a single treatment met the criteria required to demonstrate treatment efficacy for ethnic minority populations (Chambless et al., 1996). Indeed, most ESTs were evaluated using samples drawn primarily from a White, middle-class, English-speaking, female population, and their utility for ethnic minorities is thus as yet unproven (Bernal & Scharron-del-Rio, 2001).

There is a very great need for the inclusion of minorities in treatment research. The Supplement to the Surgeon General's 1999 Report on Mental Health reported that while mental illnesses afflict individuals regardless of race and ethnicity, there are striking racial and ethnic disparities in the availability and quality of mental health care. Minorities are over-represented in certain subgroups at high risk for development of mental illnesses (e.g., incarcerated individuals), and they also have less access to mental health services than Whites, are less likely to receive needed services, and often receive a lower quality of care. As a result, minorities suffer a disproportionately high disability burden, in the form of more missed workdays and greater limitation of activities. Furthermore, this burden is increasing, for minorities are

becoming more populous while the barriers to care that they face have not yet diminished (U.S. Department of Health and Human Services, 2001). Minorities stand to benefit substantially from therapeutic interventions capable of addressing their needs, and research is sorely needed to identify such treatments.

In this paper, we offer an example of what can be accomplished when the focus of clinical research occurs within a setting that is committed to serving low-income people of color and in which people from the community (Daw, 2002) are in positions of leadership.

The Latino Mental Health Research Program at San Francisco General Hospital

In 1977, the Department of Psychiatry of the University of California, San Francisco (UCSF), began to administer the Department of Psychiatry at San Francisco General Hospital (SFGH), the county hospital for the City and County of San Francisco. The focus of the SFGH Department of Psychiatry was, from the beginning, on the community it was mandated to serve, namely low-income residents of San Francisco. As is the case in many urban areas in the U.S., this population includes very large proportions of people of color. SFGH is also located in the Mission District, San Francisco's *barrio*, where approximately half of the residents are Spanish-speaking Latinos. The hospital also serves sizable African American and Asian communities.

As staff of a front-line public service institution, our primary mandate is to provide needed services to our low-income, diverse clientele. However, our mission also includes the development and empirical evaluation of clinical services, as well as provision of research training to students, interns, and residents (Muñoz, 1991). Given that few interventions had been tested with the groups we serve, the senior author and a number of other faculty, staff, and trainees initiated a program of research focused on developing bilingual (Spanish/English) intervention manuals and testing them empirically.

Our primary research focus is the prevention and treatment of depression among low-income people of color. Depression is the number one cause of disability worldwide (Murray & Lopez, 1996). Furthermore, there is evidence that immigrants to the U.S. may exhibit increased risk for depression over time. For instance, research shows that among Mexican Americans the lifetime prevalence of depression increases dramatically in connection with longer length of stay in the U.S., from 3.2% for recent immigrants to 14.4% among second-generation Mexican Americans (Vega et al., 1998). Given the magnitude of the problem, treatment alone is insufficient; we also need to reduce the number of new cases, that is, prevent depression from occurring in the first place.

Development of Culturally Appropriate Interventions

Three general components were critical to our development of culturally appropriate interventions: selection of therapeutic principles and techniques with (potentially) universal relevance, identification of culturally appropriate intervention approaches, and empirical evaluation of intervention outcomes.

Selection of therapeutic principles and techniques

The senior author selected social learning theory (Bandura, 1977) as the basis for the SFGH interventions, based on his hypothesis that the theory embodies principles of behavior change that are universally relevant, i.e., potentially applicable across cultures. Social learning theory emphasizes the principle of *reciprocal determinism*, in which we both shape and are shaped by our environments. Just as we have been taught to think and act in certain ways, we can also learn new, more adaptive ways to think and act when our old patterns are not helpful in dealing with our current situations. Indeed, such principles may be particularly apt for immigrants and members of ethnic minority groups, who often face the challenge of balancing

and choosing between behavioral patterns derived from their culture of origin versus those of the U.S. majority culture.

Principles of social learning theory are operationalized in cognitive-behavioral interventions (CBT), which have demonstrated efficacy in the acute treatment of depression, as well as prevention of relapse (Hollon & Shelton, 2001). Despite the fact that CBT was originally developed and tested with predominantly European American populations, we predicted that its core principles are likely applicable to diverse groups, provided they are presented in a culturally sensitive manner. As a result, specific intervention methods in our manuals were adapted from cognitive and behavioral approaches to depression (Lewinsohn, Muñoz, Youngren, & Zeiss, 1986). Pleasant activity scheduling, interpersonal skills training, and cognitive restructuring served as core elements, and their presentation was modified so as to be culturally relevant.

We acknowledge that there are other valid approaches to selection of therapeutic principles and techniques. For instance, use of group-specific customs or values as the primary means of intervention, as in *cuento* therapy for Puerto Rican children (Costantino, Malgady, & Rogler, 1986), appears very promising. Our team has not empirically assessed the relative efficacy of different approaches for selecting culturally-appropriate therapeutic principles, but we believe such research would be of great benefit.

Identification of culturally appropriate intervention approaches

Rogler, Malgady, Costantino, and Blumenthal (1987) have argued for the viability of developing culturally sensitive treatments, describing such efforts along a continuum or hierarchy with respect to their balance of traditional treatment elements on the one hand and culture-specific elements on the other. Our aim was to render social learning theory principles and traditional CBT techniques both accessible and acceptable to low-income, diverse clients.

Below we first describe core aspects of our intervention approach, followed by elements we believe to be important in working with such populations.

The manuals created at SFGH share a common emphasis on what the senior author has termed "The Healthy Management of Reality" (Muñoz, 1996). This approach was developed as a general way to adapt the principles of social learning theory for the ethnically diverse, low-income populations served at SFGH. It incorporates an explicit focus on the formidable stressors faced daily by such populations and emphasizes the possibility of creating positive meaning in one's life, even in difficult circumstances. Reality is described as consisting of two parts: *internal reality* (one's subjective mental reality) and *external reality* (the physical environment and all other aspects of one's reality). For SFGH clients, aspects of external reality (e.g., poverty, medical problems) often present seemingly insurmountable challenges. Clients are encouraged to shape aspects of their reality so as to reduce risk and severity of depressive episodes. The approach incorporates four levels: (1) identification of specific thoughts (e.g., "I'm worthless") and behaviors that worsen or improve mood, (2) empowering the client to make conscious choices that minimize the impact of harmful thoughts and behaviors, such as engaging in pleasant activities, (3) acquisition of skills for disputing harmful thoughts, using cognitive restructuring techniques, and (4) development of a personal sense of meaning and fulfillment in life.

Above and beyond this framework, we have found the five elements outlined below to be important in developing our interventions in a culturally sensitive manner. The specific examples we offer are generally drawn from our work with Latino populations, given that our original interventions were developed for those groups. However, we believe the elements are relevant to cultural adaptation with various groups.

1. *Ethnic minority involvement in intervention development*. In our experience, having members of the cultural groups we serve author intervention manuals is a critical element in rendering therapeutic principles culturally relevant. In this way, the conceptual and linguistic components of the intervention are not merely translations, but are rather adaptations of universal principles for specific cultural groups.

The SFGH interventions aimed at Latino clients were both manualized and delivered in large part by the bilingual and bicultural members of the Latino Mental Health Research Program. Attention was given, not only to issues of language and culture but also to clients' level of education and income. Thus, we modified the vocabulary in order to make it accessible to individuals with less than a high school education, added culturally-appropriate examples and sayings, simplified exercises that involved extensive mathematical calculations, and included graphics illustrating the concepts. Culturally-relevant images, metaphors, and stories were often used to illustrate key concepts. For example, the saying *"la gota de agua labra la piedra*" ("drops of water can carve a rock") is used to illustrate how thoughts, though ephemeral, can gradually affect one's view of life and produce and maintain depression.

As a result of our diverse faculty and staff at SFGH, we were able to offer the manual in English, Spanish, Cantonese, and Mandarin (Chan, Ying, & Muñoz, 1986). In other settings, it has since been translated into Japanese, Korean, German, Norwegian, and Finnish, including a Finnish version for the deaf.

2. *Cultural values*. Whenever possible, relevant cultural values were acknowledged and addressed through intervention strategies. In working with Latino populations, values often embraced by Latino cultures were incorporated as appropriate, including *familism* (promotion of strong bonds among family members) and collectivism (emphasis on mutual interdependence

and on the well-being of the group over that of the individual). For instance, many Latino immigrant clients have left family members behind in their countries of origin and face reduced social support networks in the U.S. Intervention strategies may include brainstorming with clients regarding ways to increase their support networks, as well as maintaining a sense of connection with family members who are geographically distant.

3. *Religion and spirituality*. Although the SFGH interventions do not explicitly invoke God or particular religious beliefs, at times they draw broadly on spiritual concepts in helping clients to cultivate a sense of personal meaning in their lives. We have observed that this emphasis often resonates with Latino and other ethnic minority clients served at SFGH, many of whom cite spirituality and religion as important aspects of their worldview. For instance, The Healthy Management of Reality (Muñoz, 1996) discusses the teachings of Brother Lawrence, a religious figure from the Middle Ages who developed what he termed "the practice of the presence of God" (Brother Lawrence, 1691/1977). By reminding himself that he was in the presence of his God at all times, he found that he imbued even menial tasks, such as scrubbing the floor, with a sense of meaning and importance. Such ideas can be adapted (e.g., "the practice of the presence of *good*") to facilitate awareness of ways to increase good health, being good to others, and being a good person. Other spiritual traditions (e.g., Eastern practices of mindfulness) can be similarly helpful in this regard. A willingness to inquire about, acknowledge, and incorporate spiritual themes generated by clients is highly encouraged.

As would be expected in a very diverse patient population, responses to our interventions vary widely. For example, an African American participant in the Depression Prevention Course stated that what we teach is what the Bible teaches, but we say it in different words. On the other hand, a Latin American woman participant refused to practice the deep muscular relaxation

techniques we teach, because, she said, they were too much like yoga, and she did not want to engage in practices from another religion.

4. *Acculturation*. The process of adaptation to a new culture is often a very stressful one, as individuals struggle to navigate different values and norms and often a new language as well. Therapists are encouraged to create a safe environment for discussion of these issues. For instance, our Mamás y Bebés/Mothers and Babies Course aimed at preventing depression among pregnant, predominantly Latina women, addressed cultural differences in the role of mothers in the U.S. versus Latin America. Strategies for empowering clients include addressing how to attain greater agency by selecting positive cultural values and practices from both one's culture of origin and the majority culture. The course also makes explicit children's need to become conversant with U.S. culture, and the dangers of intergenerational alienation if parents do not handle this process mindfully.

5. *Racism, prejudice, and discrimination*. Many ethnic minorities face racism, prejudice, and discrimination on a regular basis, and those experiences can have an extremely negative impact on mental and physical health. Therapists are encouraged to acknowledge the reality and traumatic impact of such experiences and to provide a safe environment for clients to discuss their thoughts and feelings on the subject. Strategies to empower clients include learning to challenge stereotypic beliefs. Some of these beliefs are espoused by the U.S. majority culture (e.g., "lighter skin color is more attractive"), but can also stem from Latin American culture (e.g., "*mejorar la raza*," which means "improving the race" by marrying someone with lighter skin). Other strategies include identifying positive role models in one's own community, making conscious decisions about how to instill cultural knowledge and pride in one's children, and affiliating with cultural centers that foster a sense of community and positive identity.

In applying these elements to intervention development, it is of course important to keep in mind the considerable variability within each cultural group, which highlights the need for cultural case conceptualizations of individual clients. At the same time, it is necessary to consider the extent to which common elements and interventions can generalize across cultures. The degree to which an intervention adapted for one ethnic minority population (e.g., Latino immigrants) may be relevant for another (e.g., African Americans; see Kohn, Oden, Muñoz, Leavitt, & Robinson, 2002) is likely variable. We have found that certain cultural values and experiences (e.g., importance of family, experiences of discrimination) play a powerful role across multiple ethnic minority groups, while others do not. The realities of clinical practice in a public sector setting often mandate inclusion of members from varied cultural backgrounds within a single intervention group, and, in our experience, such heterogeneity can prove quite valuable. The awareness and explicit acknowledgement of cultural similarities and differences is very important in such a context.

Empirical Evaluation of Intervention Outcomes

The third component of our intervention development process is the assessment of intervention outcomes. In the remainder of this paper, we summarize findings from our own research, as well as research conducted in other settings using interventions adapted from the SFGH manuals. Our aim is not to provide detailed descriptions of research methodology from individual studies but rather to illustrate broadly how the SFGH interventions have been applied and tested with low-income, multicultural populations.

Intervention Assessment at San Francisco General Hospital

The Depression Prevention Research Project

The first manual developed by the senior author and his colleagues was the Depression Prevention Course, which was designed to teach mood management skills to primary care patients in order to prevent major depressive episodes. Conducted from 1980 through 1986, the Depression Prevention Research Project (DPRP; Muñoz & Ying, 1993, Muñoz et al., 1995) included a randomized prevention trial conducted in Spanish and English with SFGH primary care patients to evaluate the efficacy of the manual. Patients with clinic appointments were recruited, and those who met criteria for current depressive or other psychiatric disorders were excluded from the study and referred for treatment. The final sample of 150 participants was 24% African-American, 24% Latino, 36% White, 10% Asian, and 5% Native American (Muñoz & Ying, 1993). Those in the intervention condition received the Depression Prevention Course (Muñoz, 1984), consisting of eight 2-hour sessions in a small group format, the rest received usual care.

Of the 150 randomized participants, 139 were assessed at one year. Of these, six met DSM criteria for major depression during the last year: four in the control group, and two in the experimental condition (both of whom dropped out early from the intervention). Although results are in the desired direction, the low incidence does not allow sufficient power to test whether the rate of new cases was significantly reduced. Depressive symptoms measured by the Beck Depression Inventory, but not the CES-D, were significantly lower after intervention when compared with the control condition. There was also evidence that cognitive-behavioral variables mediated the reduction in symptoms as predicted (Muñoz et al., 1995).

The SFGH Depression Clinic CBT Group Treatment Manuals for Depression

We opened the Depression Clinic at SFGH in 1985, after determining that many of the primary care patients at SFGH suffered from major depression but were not comfortable seeking services in community settings other than the hospital where they received medical care. The Clinic provides individual and group cognitive-behavioral therapy to primary care patients referred by SFGH primary care physicians. A manual for cognitive-behavioral treatment of depression was developed both in Spanish and English for this purpose (Muñoz, Aguilar-Gaxiola, & Guzmán, 1986; Muñoz & Miranda, 1986). The intervention approach is very similar to the one employed in the Depression Prevention Course, although it is explicitly a treatment and also incorporates greater focus on psychoeducation concerning major depression. A three-year retrospective study of 175 outpatients treated at the SFGH Depression Clinic found significant reductions in depressive symptoms, no differences in effectiveness between individual or group formats, and higher drop out rates in patients who were younger, minority, and treated with group therapy (Organista, Muñoz, & González, 1994).

Mood Management Intervention for Methadone Maintenance Patients

Reducing depression among injection drug users has the potential to generate substantial public health benefits, given that depression appears to contribute to high-risk behaviors in this population, increasing the spread of HIV infection. The Depression Prevention Course was adapted for use with methadone maintenance patients at SFGH, and evaluated in a pilot study in Spanish (González, Muñoz, Pérez-Arce, & Batki, 1993) and a randomized trial in English (Roehrich, Muñoz, & Sorensen, 1998). For the latter study, twenty-three patients were randomized either to receive a ten-week, twice weekly mood management course immediately or to receive the same course after a five-week delay (Roehrich et al., 1998). All participants were

low income, most were minorities, and 87% were HIV positive. Depressive symptoms were significantly reduced for both groups following the course, whereas no depression reduction was observed during the five-week delay. In addition, the course predicted a decrease in HIV high-risk behaviors, a trend toward reduced drug use, and increased patient confidence in their ability to avoid drugs. This study suggests that the SFGH intervention produces clinical benefits and may be an effective and economical adjunct to methadone maintenance treatment.

Mood Management Intervention for Psychiatric Inpatients

The Depression Clinic manual was also adapted for use in the Latino-focused acute psychiatric inpatient unit at SFGH. The inpatient version of the manual consisted of nine sessions, five focused on thoughts and four on activities. While retaining the basic intervention elements that had proven effective in the Depression Clinic, the inpatient manual also included topics of particular relevance to an inpatient sample, such as Coping with Hospitalization, Thoughts about Medications, and Dealing with Discharge/Relapse Prevention. A randomized controlled trial was conducted in which the cognitive-behavioral therapy group was compared with usual inpatient care in a sample of 44 patients, who were followed for 60 days after discharge. The CBT group was found to be significantly more likely to attend outpatient appointments and less likely to return to Psychiatric Emergency Services, which produced a trend for their mental health costs to be lower than the control group (Alvarez, McQuaid, & Belk, 1997).

The Mamás y Bebés/Mothers and Babies: Mood and Health Project

The Mamás y Bebés/Mothers and Babies: Mood and Health Project, a research program currently underway, is aimed at preventing major depressive episodes in mothers-to-be. Approximately 10 to 15% of women develop postpartum depression, which has negative

implications for the future mental health of the mother, the social and cognitive development of the infant, and the quality of the mother-infant relationship (e.g., O'Hara, 1994). Preventing major depression in mothers-to-be could play an important role not only in preventing the onset of a chronic, recurrent condition in the mothers but also in reducing lifetime risk for depression in their infants.

The Mothers and Babies project includes two longitudinal studies. In the first, 100 English and Spanish-speaking pregnant women patients at SFGH were assessed periodically for up to six months postpartum to obtain data on the naturalistic course of depressive symptoms in mothers, as well as the impact of maternal depression on babies. This study indicated that we can recruit low-income, primarily Spanish-speaking Latinas into longitudinal research, and we can identify a subgroup of this population at high risk for developing depression (Le & Muñoz, 2001; Le, Muñoz, Soto, Delucchi, & Ghosh Ippen, in press). The second study involved the development of a 12-session preventive intervention for mothers-to-be on "constructing a healthy reality" for themselves and their babies (the Mothers and Babies Course, Muñoz et al., 2001a and 2001b), as well as a randomized controlled pilot trial to evaluate its efficacy. Forty-one pregnant women (approximately 85% Latina) at high risk for developing depression were randomly assigned to the Course or to a control condition, and their depressive symptoms were assessed periodically (Mendelson, Le, Soto, Lieberman, & Muñoz, 2003). This research will assess the long-term effects of a mood management intervention on mothers and babies.

Beyond San Francisco General Hospital

The evidence-based, manualized interventions developed at SFGH for use with low-income, low-education populations who have multiple social and health problems have been of interest to investigators in other settings. The manuals are now being used in various parts of the

world, and researchers have begun to evaluate their effectiveness in settings outside San Francisco and even outside the United States.

Partners in Care (PIC)

Wells and his colleagues (Sherbourne et al., 2001; Wells et al., 2000; Wells et al., 2004) conducted a multi-site randomized controlled trial on the effects of quality improvement (QI) programs in managed care settings. Forty-six matched, primary care clinics in six U.S. managed care organizations were randomly assigned to usual care (UC) or to one of two QI interventions: (1) *QI-meds intervention*, in which nurse specialists provided monthly medication assessments and support for six or twelve months, or (2) *QI-therapy intervention*, in which local psychotherapists were trained to provide 12-16 sessions of manualized individual and group CBT treatment (Muñoz & Miranda, 1986; Muñoz, Aguilar-Gaxiola, & Guzmán, 1986) in English or Spanish. The sample of 1,356 consenting individuals with current depressive symptoms was 57% White, 29.6% Latino, 7.1% African-American, and 6.3% from other minority groups.

The QI interventions increased the probability of appropriate care by about ten percentage points, and they produced an impressive 20-30% improvement in rates of probable depressive disorder at six and twelve months (Wells et al., 2000). QI-therapy reduced overall poor outcomes by about eight percentage points throughout two years as compared with UC, and by ten percentage points compared with QI-meds at the 24-month assessment (Sherbourne et al., 2001). A five-year follow-up indicates that both QI interventions significantly reduced the percentage of participants with probable depressive disorder (Wells et al., 2004). Moreover, the QI-therapy condition differentially improved health outcomes and reduced unmet need for

appropriate care for Latinos and African Americans, reducing outcome disparities related to usual care.

In sum, QI interventions outperformed usual care with respect to quality of care and clinical outcomes for patients in primary care settings. Furthermore, QI-therapy was found to facilitate longer-lasting benefits in a number of clinical domains than QI-meds, and, at five-year follow-up, reduced outcome disparities for Latinos and African Americans. These findings indicate that the CBT treatment of depression developed at the SFGH Depression Clinic can be effectively implemented in other U.S. communities, both in English and Spanish, with very encouraging results. Moreover, the effect of this intervention, perhaps because it was developed in a clinic serving a predominantly low-income minority population, appears to reduce disparities when used elsewhere.

Outcomes of Depression International Network (ODIN)

The Outcomes of Depression International Network (ODIN; Dowrick et al., 1998, 2000) was the first international, community-based, randomized controlled trial of psychological interventions for depression. The study employed an epidemiological sampling frame to identify probable cases of depression and a randomized controlled design to assess the relative efficacy of two therapies. Nine urban and rural communities in Finland, Republic of Ireland, Norway, Spain, and the United Kingdom participated, and a total of 425 respondents who met criteria for a depressive disorder were randomized to one of three conditions: (1) *individual problem-solving* (adapted from Hawton & Kirk, 1989), consisting of six individual sessions to define, clarify, and solve problems in a structured way; (2) the Depression Prevention Course (DPC; Muñoz, 1984) consisting of eight 2.5-hour sessions of cognitive-behavioral skills training in groups of 6-10; or (3) a *control condition* in which no intervention was offered.

Both individual problem-solving treatment and the DPC groups were found to be effective interventions for individuals with depressive disorders in European urban and rural community settings. However, individual problem solving had a somewhat stronger impact, as well as a higher retention rate. Unfortunately, the study design did not permit a balanced comparison of the relative efficacy of the two therapeutic approaches, in that *treatment modality* (individual versus group) was confounded with *treatment content* (problem solving versus the DPC). The individual treatment had the advantage of greater accessibility because it was frequently offered in participants' homes, whereas the DPC required travel to a mental health clinic (Dowrick et al., 2000). In addition, the individual format may have been less stigmatizing and more culturally acceptable to certain participants, particularly in small rural communities. Nonetheless, the study suggests that the Depression Prevention Course developed at SFGH holds promise for reducing symptoms and cases of depression in a wide range of community settings.

Depression in Low-Income Minority Women in the U.S.

Researchers have also begun to conduct randomized controlled trials that specifically address the mental health needs of low-income and minority populations. For instance, Miranda and her colleagues (Miranda et al., 2003) recruited a sample of 267 impoverished women in the D.C. area (43.8% Black, 50.2% Latina, and 6% White) who met criteria for major depression and randomly assigned them to receive a six-month antidepressant medication intervention, an eight-week cognitive-behavioral intervention based on the SFGH Depression Clinic treatment manuals (extended to sixteen weeks as needed) (Muñoz, Aguilar-Gaxiola, & Guzmán, 1986; Muñoz & Miranda, 1986), or referral to community mental health services. The interventions included intensive outreach, provision of child care and transportation, and initial education meetings in which participants were oriented to treatment.

At the six-month assessment, depressive symptoms and social functioning were significantly improved in both the medication and psychotherapy interventions as compared with the community referral group. Treatment outcomes did not vary by ethnicity. This research suggests that when guideline-based mental health treatment is made sufficiently accessible through outreach, child care, and transportation, low-income minority women can be engaged in such treatment with very beneficial results.

Depression among Adolescents and Adults in Puerto Rico

Research by Bernal and his colleagues in Puerto Rico supports the feasibility of using a 12-session cognitive-behavioral (CBT) intervention adapted from the SFGH Depression Clinic manual in Latin American settings. For instance, Rosselló and Bernal (1999) found that both the CBT intervention based on the SFGH manuals and Interpersonal Therapy (IPT) were superior to a waitlist condition at reducing depressive symptoms in a randomized controlled trial of 71 Puerto Rican adolescents. Rosselló and Bernal (2004) also compared the SFGH CBT intervention with IPT among 112 Puerto Rican adolescents using a 2 x 2 randomized controlled design in which group and individual formats for each type of intervention were compared. Findings indicate that, while both treatment approaches significantly improved mood, the SFGH CBT intervention produced a greater decrease in depression than the IPT intervention, with the SFGH CBT individual treatment producing the highest rate of change. These studies suggest that the SFGH Depression Clinic manuals can be effective with adolescents as well as adults. In addition, pilot research currently underway by the same research group suggests that the SFGH CBT intervention may outperform pharmacotherapy in adult primary care patients in Puerto Rico (Reyes, Vera, Bernal, & Huertas, 2002). These findings provide further evidence for the efficacy and transportability of the intervention.

Having a Broader Impact: Non-traditional Methods of Intervention Delivery

> …interventions and prevention activities should take place in the environments in which real people live, work, and go to school – in the community. Consequently, prevention and therapeutic activities are …thought to be best delivered in homes, schools, workplaces, or even via the mass media. (Sundberg, Winebarger, & Taplin, 2002; p.426).

While the clinical research results obtained at SFGH and in other settings are encouraging, only a limited number of individuals have been able to benefit clinically from these efforts. Our research team at SFGH is committed to providing access to these interventions to other groups in need of services. The following section describes ways in which the senior author and his colleagues have gone beyond the traditional delivery of services (i.e., via professional offices and clinics) and have sought out other methods, such as the mass media, to target a broader audience. Non-traditional methods have the potential advantage not only of reaching more individuals but also of reaching low-income people of color throughout the world who may face financial, social, and cultural barriers to accessing mental health care through more traditional channels.

Intervention via Television

In 1978, NBC filmed the senior author and his colleagues teaching a course based on their book, *Control Your Depression* (Lewinsohn et al., 1978). Ten four-minute segments of these tapes were aired on the news each weekday for two weeks. Phone surveys of a random sample of San Francisco residents were conducted the week before and the week after the segments were aired. Findings indicated that, for individuals with low levels of depression symptoms, exposure to the televised course had little impact. However, for those with high levels

of depression symptoms, depression decreased significantly after exposure to the segments. Though not a randomized trial, this study suggests that intervention methods can have a measurable impact when delivered via nontraditional methods, such as television (Muñoz, Glish, Soo-Hoo, & Robertson, 1982).

Intervention via the Mail

Based in part on his collaboration efforts with Sharon Hall and her smoking cessation research team at UCSF (Hall et al., 1993, 1994, 2002), the senior author conducted a randomized controlled smoking cessation trial in Spanish using an intervention delivered entirely via the mail (Muñoz, Marín, Posner, & Pérez-Stable, 1997). Spanish-speaking smokers recruited using radio and television spots were randomly assigned to receive either a standard smoking cessation brochure or the same brochure plus a mood management intervention called "Tomando Control de su Vida" ("Taking Control of Your Life") (Programa Latino Para Dejar De Fumar, 1997). The standard smoking cessation guide produced approximately an 11% quit rate at three and six months. However, this rate more than doubled (to 23%) among participants receiving both the standard guide and the mood management intervention. Findings indicated that participants with no history of major depressive episodes (MDEs) did equally well in either treatment condition. However, those with a past history of MDE derived even more substantial benefits from the mood management intervention, reaching quit rates of 38%. Thus, mood management interventions may have a particular impact on smoking cessation for individuals with a history of major depression. Furthermore, an intervention delivered entirely via the mail produces measurable treatment gains. This study is, thus far, the only randomized trial for smoking cessation with U.S. Latinos to show a significant effect (Lawrence, Graber, Mills, Meissner, & Warnecke, 2003).

Intervention via the Web

We are currently adapting this line of research to the World Wide Web. Phase 1 of the project, which was recently completed, demonstrated the feasibility of a web site for randomized controlled trials on smoking cessation. We recruited 3,550 English-speaking smokers and 1,048 Spanish-speaking smokers from 89 countries. Most of the Spanish speakers came from countries outside the United States, such as Spain (n = 375), Venezuela (n = 187), Argentina (n = 116), Mexico (n = 107), and Peru (n = 70). Our findings support the hypothesis that smokers suffering from major depressive episodes are the least likely to quit smoking (Muñoz et al., 2004). We have also found that Spanish-speaking participants have higher educational levels than English-speaking participants. This reflects the higher penetration of the Internet in the United States into the general population. As we begin using the Internet to provide evidence-based interventions, those who already have access (the more educated, those with access to the web at work) will be able to benefit first. This benefit will gradually spread to those with lower incomes. The penetration of web access to larger segments of the population is occurring slowly but surely. Developing culturally appropriate interventions as well as interventions that can be used by individuals who cannot read or write (using graphics and sound) will accelerate this process.

It is critical that we actively explore means of increasing access to evidence-based health and mental health interventions for low-income populations and preliterate individuals. In third-world countries, Internet cafés, *cabinas Internet,* or *cybers,* provide low-cost access to those without computers at home. We also envision the routine use of "Internet health resource rooms" in public sector clinics to screen individuals for common disorders and to provide empirically tested web-based interventions in their own languages. Once these interventions have been developed and found effective for Internet administration, they can be delivered to great numbers

of users worldwide at little per-user cost. Advances in nontraditional methods of service delivery can be used either as adjuncts to traditional services or, when no such services are available locally, as stand-alone sources of help (Christensen, Miller & Muñoz, 1978). Our goal is to adapt the manuals developed at SFGH so they can be administered and evaluated via the Internet, as well as to initiate programs for increasing Internet access among underserved populations (e.g., offering free Internet tutorials and access through SFGH and community organizations). We plan to carry out web-based randomized controlled trials in various languages to determine the feasibility of providing culturally appropriate evidence-based interventions to persons in need locally, nationally, and internationally.

Reflections and Recommendations

We began this article by highlighting three conceptual levels that are involved in all interventions: universal principles, group adaptations, and individual applications. The historical development of psychology in primarily European contexts and the preponderance of European American and English-speaking professionals and consumers in clinical research has obscured the fact that moving from universal principles to individual application of those principles necessarily involves group-specific adaptations. That is, English-speaking interventions designed for white middle-class individuals are adaptations of universal principles to these groups. The rapid growth of ethnic minority populations in the United States highlights the need for the development of interventions that adapt universal principles into interventions that are linguistically and culturally accessible to other groups.

It is our position that certain psychological theories (e.g., social learning theory) describe universal aspects of human behavior and can thus profitably inform core therapeutic strategies. However, the effective clinical application of such strategies requires group-specific knowledge

and cultural adaptation to increase the likelihood of positive outcomes. We echo Rogler et al.'s (1987) assertion that culturally sensitive interventions must facilitate accessibility of services and must employ methods that are acceptable and appropriate given the cultural values of the client population in question. Of course, interventions must be further tailored for each individual client, given the substantial variability that exists within groups.

In addition to encouraging European American investigators to pursue intervention research with diverse populations, we need to bring more investigators from under-represented ethnic groups into leadership positions in the field, so they can attract more trainees like them into our professions. Data indicate that professionals who are members of non-European American ethnic groups are much more likely to engage in clinical practice in low-income neighborhoods and to do their teaching and research with these groups (Turner & Turner, 1996). They are also more likely to attract patients, trainees, and research participants from these groups than are European American professionals.

The ultimate test of whether culturally effective interventions have been adequately crafted is whether the desired clinical outcomes are attained. Thus, empirical studies evaluating efficacy should be part of the process of developing culturally appropriate interventions. Integrating rigorous empirical research at front-line public sector settings is admittedly difficult to do. Resources for full-scale randomized trials are often not available, and recruitment and retention of low-income, multi-cultural populations in research can be quite challenging. Implementing more modest evaluation studies is nonetheless valuable. Results of such studies can guide the further development of manuals and serve as pilot data to inform the design of full-scale trials.

The public sector patients at SFGH are very different from the patient populations that have been the focus of most large scale depression treatment trials. For example, of the Depression Clinic patients studied in the Organista, Muñoz, and González (1994) study, 65% were minorities, 44% were Spanish-speaking, they averaged 11 years of education, most were unemployed, and over half had serious medical problems. In comparison, most treatment outcome studies explicitly exclude patients with comorbid medical or psychiatric conditions and implicitly exclude those who are unable to attend scheduled clinic appointments reliably or fill out questionnaires. Thus, while it is not surprising that the evaluation studies conducted at SFGH may in some cases produce more modest findings than those in mainstream randomized controlled trials, such studies offer the advantage of being more generalizable to other public sector settings. Indeed, studies that have used the SFGH manuals in other contexts and with other populations have generally found them to be effective. This suggests that, while group-specific adaptation has been an important part of our intervention development process, the intervention principles and approach have broader relevance across groups that allows for transportability and relative ease of adaptation.

Our group has responded to the need for culturally appropriate evidence-based interventions by developing such interventions, specifying them in detail in the form of manuals, testing them within a public sector front-line service setting, and making them available to others for clinical purposes and further empirical evaluation. We encourage professionals who work with low-income, public sector minority patients to develop and evaluate additional interventions with the help of members of the communities they serve, or to use interventions developed and evaluated in similar settings. The SFGH manuals are available at http://www.medschool.ucsf.edu/latino/manuals.aspx.

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