

Depression Research in Under-Resourced Populations: An Academic–Community Partnership

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Epidemiologic studies have reported that depressive and anxiety disorders are the most prevalent mental health disorders in the United States, and these disorders are associated with a high burden of physical symptoms, increased social and vocation impairment, and high comorbidity with physical disorders such as diabetes or heart disease.¹ Despite the high prevalence and impact of these illnesses on patients' functioning, quality of life, and adherence to chronic illness care regimens, only approximately one half of respondents with depressive and anxiety disorders receive mental health treatment.² In a large epidemiologic study of a nationally representative adult population, approximately half of those receiving treatment accessed mental health care in primary care and half in community settings, such as specialty mental health agencies.²

For people living below US poverty levels, there is a higher incidence of depression and anxiety, greater persistence of symptoms,^{3,4} and a higher prevalence of comorbid trauma, post-traumatic stress disorder (PTSD), and substance abuse.⁴ This high incidence and persistence is likely due to the many social stressors people living in poverty experience, as well as the lack of mental health treatment available. Patients living in poverty are also more likely to have less education, problems with health literacy, more misperceptions about mental health problems and treatments, and more physical health problems.⁵ Furthermore, in many states, these patients are not able to access community mental health centers because funding limitations for these centers have led them only to serve the more severely mentally ill, such as patients with repeated psychiatric hospitalizations, and/or schizophrenia or bipolar illness. People living in poverty often do access community safety net social systems, such as Women, Infants, and Children (WIC) Food and Nutritional Services, homeless shelters, and substance abuse programs, but provision of evidence-based mental health treatment in these systems is rare. Accordingly, for this vulnerable population, the ideal in

America of people being provided a level playing field through educational opportunities and access to health care in order to succeed in life is markedly impaired.

In this volume of *Journal of General Internal Medicine*, two papers have examined the prevalence of depressive disorders and use of primary care and community services in respondents living below US poverty levels in two regions of Los Angeles,⁶ as well as results of a randomized trial of quality improvement (QI) for depression.⁷ These papers describe a Community-Based Participatory Research Initiative developed by the Community Partners in Care (CPIC) program. This program was designed and implemented by a unique partnership between 35 leaders from three academic and 24 community based agencies. Respondents were screened for depression using the PHQ-8 from five types of community settings including primary care, substance abuse residential and outpatient centers, outpatient mental health programs, homeless social and housing services, and other social and community-based services. Approximately 50 % of the reached and eligible agencies agreed to participate.

The authors are to be commended on the extensive scope and vision of this program and their ability to enroll a large number of community programs that often had no or little experience with research. There is often mistrust between minority leaders, community programs and academic centers, because of historic issues like the Tuskegee syphilis program and academic programs that have completed research on underserved populations with little input from community leaders in development of research questions, research techniques, or input on the results of this research. The community-based participatory research techniques used by the authors of these papers that promoted equal authority and partnership of community and academic collaborators, partnered working groups and community forums for input likely overcame much of the historic distrust between community programs, minority leaders and academic leaders.

The first paper by Miranda and colleagues reported that approximately 33 % of 4,440 screened respondents had a PHQ-8 score of 10 or greater, including 35 % of primary care patients and even higher prevalence rates in respondents attending mental health, substance abuse and homeless and social/community services. The positive predictive value of a PHQ-8 of 10 or greater is approximately 50 %

compared to a major depression diagnosis made by structured psychiatric interview, suggesting that the point prevalence rate of major depression in this sample would be approximately 16.5 %. To put these data into perspective, prevalence rates of major depression based on structured psychiatric interview in a random sample of Americans are between 3 and 5 %, ¹ and in mixed income primary care populations are between 5 and 12 %. ⁸ Thus, this study demonstrates that this largely minority (44.6 % Latino, 40.3 % African American) underserved population in Los Angeles that had only 22.5 % currently employed, 49.6 % with no health insurance, 38.8 % with less than a high school education, and 64.5 % having a family income of 10,000 dollars or less, had an extremely high prevalence rate of significant depressive symptoms.

The utilization data from the prior 6 months also demonstrated that among depressed respondents, although approximately 70 % had one or more primary care visit, only 42 % had a mental health/depression-related primary care or mental health service-related visit. Among the 42 % with a mental health/depression-related visit, the mean number of service sectors visited was approximately two, but it was unclear whether there was any communication between service sectors.

These data suggest that the majority of community respondents with depression from these underserved communities are not receiving evidence-based depression treatments. Extensive prior research has demonstrated the gaps in diagnosis and treatment of depression in primary care, ⁹ but data from this study also show likely extensive gaps in treatment of depression in underserved populations attending mental health and substance abuse centers, as well as those accessing homeless services and social and other community services.

The second paper by Wells and colleagues describes the results of a randomized trial at the program-level, testing whether there is added value to utilizing community engagement and planning (promoting inter-agency collaboration) versus a Resources for Services intervention to implement depression quality improvement toolkits. The Resources for Services control group involved providing a depression toolkit including 12 webinars to enhance use of training tools, as well as potential site visits by community agencies to primary care sites. This community-partnered participatory research project posited that community engagement and planning (involving inviting administrators to biweekly meetings for 5 months to build training capacity for implementing toolkits and networks for services) would increase service use for depression compared to the Resources for Services intervention, and would lead to improved quality of depression care, depressive outcomes, and mental health quality of life. The manualized toolkit supported clinical assessment, medication management, case management, patient and provider education, and cognitive behavioral treatment for use by diverse agencies.

This ambitious randomized-trial randomized 1,246 respondents from 133 eligible community agencies and primary care clinics. The results of this trial on quality of depression care were mixed, with non-significant intervention versus control effects in percentage of patients taking an antidepressant for 2 months or more, in the total number of outpatient visits for depression, and in the total number of counseling visits for depression over the 6 months post-randomization. However, intervention patients were less likely to have had any type of behavioral health hospitalization and were more likely to have two or more primary care visits for depression.

The results of the primary mental health outcomes at 6 months were also mixed, with no group differences in the percent of patients with a PHQ-9 score of 10 or more, but significantly less intervention than control patients having poor mental health quality of life. Although most other secondary mental health outcomes favored intervention patients compared to controls, the large number of reported outcomes raises concerns about multiple comparisons. Other limitations include that the trial was evidently not entered into the Clinical Trials database until after the trial was completed, and that of the 1,246 who provided consent, only 981 (78.7 %) completed baseline surveys and only 759 (61.1 %) completed 6-month telephone surveys.

Despite the above limitations, the efforts of this research team are to be lauded. Americans living below poverty levels in our US cities and in rural areas have limited options for treatment, are often seen in multiple sectors with little coordination of care, and rarely receive evidence-based treatment. The efforts of this academic-community partnership to attempt to bridge these gaps in coordination of care and provide effective treatment were impressive, but the fact that over 60 % of patients randomized to either intervention still likely met major depression criteria at 6 months (based on a PHQ-8 score of 10 or more) suggests there is a lot more work to do to find ways to improve quality of care and outcomes for our most vulnerable populations.

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