



# What Role Can Community Health Workers Play in Connecting Rural Women with Depression to the “De Facto” Mental Health Care System?

Claire Snell-Rood<sup>1</sup> · Frances Feltner<sup>2</sup> · Nancy Schoenberg<sup>3</sup>

Received: 27 September 2016 / Accepted: 26 December 2017 / Published online: 3 January 2018  
© Springer Science+Business Media, LLC, part of Springer Nature 2018

## Abstract

The prevalence of depression among rural women is nearly twice the national average, yet limited mental health services and extensive social barriers restrict access to needed treatment. We conducted key informant interviews with community health workers (CHWs) and diverse health care professionals who provide care to Appalachian women with depression to better understand the potential roles that CHWs may play to improve women’s treatment engagement. In the gap created by service disparities and social barriers, CHWs can offer a substantial contribution through improving recognition of depression; deepening rural women’s engagement within existing services; and offering sustained, culturally appropriate support.

**Keywords** Depression · Community health worker · Rural · Women

## Introduction

Although meeting the mental health care needs of the population at large is a daunting challenge, in certain communities—including rural, underserved areas—persistent health care professional shortages, logistical barriers, complex health needs, and intensive social demands significantly obstruct the receipt of mental health care. As mental health consumers, advocates, providers, and researchers critically assess the future of community mental health in an era of healthcare reform (Minkoff 2015), community health workers (CHWs) offer the opportunity to diversify the mental health workforce, build bridges to vulnerable populations who may not identify as mental health consumers, and sustainably strengthen vulnerable mental health systems

(Belkin et al. 2011; Cook and Mueser 2015). In this article, we explore potential roles that CHWs could play in deepening rural women’s engagement in depression treatment, even as rural regions in the U.S. continue to face shortages in care and rural women experience extremely high prevalence of depression.

In the United States, depression affects 38–51% of rural women (Hauenstein and Peddada 2007; Jesse and Swanson 2007; Price and Proctor 2009)<sup>1</sup> compared with 10% in the general population of U.S. women (CDC 2010). Women are more vulnerable to depression than men (CDC 2010), and rural women in particular face increased risk factors for depression including intimate partner violence (Annan 2008; Hillemeier et al. 2008) and poverty (Duncan 2000; Price and Proctor 2009; Tickamyer and Duncan 1990). At the same time, rural women tend to be diagnosed with higher rates of comorbidities (Brown et al. 2005; Hartley 2004), which can increase the severity of depression (Ho et al. 2014).

Despite these elevated rates of depression, rural women often do not receive needed treatment from a rural mental healthcare system that is described as “de facto”—loosely organized, of uneven quality, and low in resources (Fox et al. 1995; Hauenstein 2008). With 60% of rural residents residing in mental health provider shortage areas (U.S. Department of Health and Human Services 2012), it is not

✉ Claire Snell-Rood  
clairesnellrood@berkeley.edu

Frances Feltner  
frances.feltner@uky.edu

Nancy Schoenberg  
nesch@uky.edu

<sup>1</sup> Division of Community Health Sciences, School of Public Health, University of California, Berkeley, 207H University Hall #7360, Berkeley, CA 94720, USA

<sup>2</sup> Center of Excellence in Rural Health, Hazard, KY, USA

<sup>3</sup> Department of Behavioral Science, University of Kentucky College of Medicine, Lexington, KY, USA

<sup>1</sup> Prevalence estimates vary because of the challenges of accessing rural women who are remote and may have diverse cultural interpretations of screening questions.

surprising that rural women report long wait-times and brief visits (Logan et al. 2005) with the result that rural residents visit mental health providers less often in comparison to urban residents (Fortney et al. 1999; Hauenstein et al. 2007; Staton-Tindall et al. 2007). Moreover, those rural residents who do receive treatment are unlikely to receive the full course necessary for recovery (Greeno et al. 1999). Additionally, socially-rooted obstacles including stigma can present an even larger barrier to receiving services (Zhang et al. 2008). With limited depression awareness in rural areas, even severely depressed people may not acknowledge their symptoms as depression (Browning et al. 2000; Simmons et al. 2007; Snell-Rood et al. 2017). These factors contributing to low service use and isolation only exacerbate depression (Hauenstein 2003, 2008; Hauenstein et al. 2014; Snell-Rood et al. 2017).

Community health workers (CHWs) are auxiliary health personnel who are employed in low-resource settings and seek to build community capacity, improve healthcare access, and enhance trust among hard-to-reach populations (Mutamba et al. 2013; Viswanathan et al. 2010). For these reasons, the Affordable Care Act targeted CHWs to play an increasingly crucial role in a changing healthcare landscape, with policymakers and providers charting how CHWs can address a variety of needs across diverse communities (Brooks et al. 2014; Katzen and Morgan 2014; Centers for Disease Control and Prevention 2016). While CHWs have been tapped for mental health task-shifting in low-resource countries with healthcare provider shortages (Belkin et al. 2011; Paudel et al. 2014; Petersen et al. 2012), they remain a largely untapped resource for mental healthcare in the U.S. (Cook and Mueser 2015). Like peer specialists who have come to play a critical role in community mental health (Cook et al. 2010; Daniels et al. 2010), CHWs tend to have deep knowledge of the people and communities with whom they work. They differ from peer providers in that CHWs are not required to personally experience the health issue their work addresses (Willging et al. 2016), though they may have a deep understanding of the lived experience of barriers that can increase vulnerability to poor health and limit healthcare access. Yet despite rural consumers' preference for CHWs for varied physical health conditions (Bird et al. 2001; O'Neill 2010), few studies have examined the potential ways in which CHWs may increase the engagement of rural populations in mental healthcare (Waitzkin et al. 2011; Willging et al. 2016).

We interviewed CHWs, primary care providers, and mental health providers to elicit their experiences responding to rural women with depression and to identify their perspectives on ways that CHWs could enhance mental healthcare for rural women with depression. In their role reaching out to rural women who are likely to be disconnected from health services (Schoenberg et al. 2001), CHWs serve many women

who do not identify as depressed, much less seek treatment. Primary care providers offer the majority of depression treatment in rural areas in the form of pharmacological treatment, even to women who may not identify their symptoms as depression (Fox et al. 1999; Wang et al. 2005). Rural mental health providers—often operating out of integrated care settings and community mental health centers—typically serve women with more severe presentation of depression, dual diagnosis, or comorbid SMI. Collectively, these diverse healthcare professionals are best suited to provide input on the barriers and opportunities to deepening rural women's engagement in mental health care through CHWs.

## Methods

### Study Design

We employed a key informant research design in this exploratory study to collect the perspectives of well-positioned community-based health personnel who worked with this hard-to-reach population. Elsewhere, we discuss rural women's perspectives on their treatment-seeking behaviors (Snell-Rood et al. 2017). We elicited commentary on patients' needs and preferences that could be used to adapt an evidence-based intervention for depression. Directed content analysis was used to describe how participant perspectives related to existing healthcare categories and systems (Hsieh and Shannon 2005).

### Sample and Recruitment

We focused on women with depression in Appalachian Kentucky, where depression disparities are especially high. Appalachian Kentucky has socioeconomic status (SES) indicators among the lowest in the US, with a poverty rate nearly twice that of the nation as a whole and the per capita income approximately half the US average (Appalachian Regional Commission 2014). Residents (both women and men) in 11 of the 17 counties where participants in our study worked reported an average of 6–8 mentally unhealthy days per month (Kentucky 2015), nearly twice the national average. Kentucky maintains the third highest rate of depression in the United States (Healthcare 2007), with 23.5% of adults having a lifetime incidence in comparison to 18% nationwide (BRFSS 2013). Like other rural regions, Appalachia's high rates of poverty, unemployment, and health disparities likely contribute to this elevated prevalence of depression (Hartley 2004; Zhang et al. 2008).

The study population consisted of CHWs ( $n=9$ ) and healthcare professionals (primary care providers, mental health specialists, health program administrators) ( $n=9$ ) based in the region who worked with Appalachian women

**Table 1** Participant characteristics

Community health workers (n=9)			
Education	High school		5
	Some college		4
Mean age			41
Race	White		89%
	African American		11%
Mean length of time living in region			36 years
Mean years working with appalachian women			11 years
Health professionals (n=9)			
Type of healthcare professional (all except one have graduate education)	Nurse, nurse practitioner		4
	Mental health specialist (LCSW, LPCC, RN, psychologist)		5
Work setting	Public clinic		4
	Community mental health clinic		2
	Administration		2
	Hospital		1
Mean age			46
Race	White		100%
Mean length of time living in region			34 years
Mean years working with appalachian women			16 years

with depression. All CHWs we interviewed work for Kentucky Homeplace, a state-funded CHW initiative to reach rural underserved Kentuckians, providing services in care coordination, chronic disease management, and other health-condition specific initiatives. In Table 1, we outline the background of our key informants. Inclusion criteria consisted of working in a healthcare role in Appalachian Kentucky and at least 3 years' experience working with Appalachian women with depression. Our sample reflected the demographics of Appalachian Kentucky but over-represented women because they dominate the CHW and healthcare provider workforce in the counties where we worked, all of which are designated as primary care and mental health provider shortage areas. Healthcare professional participants were recruited from several venues, including a federally qualified healthcare center and two community mental health centers. We included a broad range of providers in our sample because the expertise and roles of each group offers different types of interaction with the population of interest—women with depression. Healthcare professionals engaged with these women briefly in clinical settings to provide treatment, with administrators overseeing this treatment. In contrast, CHWs had more sustained interaction with women that occurred across home, service, and clinical settings, interacting with women not only on matters related to their depression, but to connect them to broader health and social services.

## Procedures

To avoid coercion, we informed participants that their involvement in the study was completely voluntary.

Guided by the Replicating Effective Programs Implementation Science framework, we created a semi-structured interview guide that was oriented toward identifying needs of the target population, existing community resources, and suitable interventions to match needs and resources (Kilbourne et al. 2007), focusing particularly on how we could employ the resources of the CHW program in the region in light of mental health provider shortages. Our questions concerned characteristics of Appalachian women with depression; patterns in the causes and treatment-seeking behaviors of this population; successful strategies for treatment and outreach; and personal and systemic factors to improve women's treatment outcomes through communication, outreach, and logistics. The lead author conducted all interviews. After we explained consent procedures, we invited participants to ask questions. We asked participants to complete a short questionnaire about their professional background before a 30-minute to one-hour one-on-one interview. We conducted an additional follow-up focus group with CHWs to explore themes further, using the same interview guide as earlier as well as inviting commentary on points made during previous individual interviews. We explained consent procedures, explained ground rules for the group, and gave the opportunity to ask questions before beginning the group. Participants responded to the questions individually as well as to each other's comments. Interviews and the focus group were recorded and transcribed. Participants were compensated \$30.

## Data Analysis

The lead author analyzed interview transcripts using MAXQDA data analysis software with the support of a research assistant. Following directed content analysis techniques, in the first reading of the transcripts, the lead author identified preliminary analytic categories based on established research on rural mental healthcare (Hsieh and Shannon 2005). After assembling the data into first-order categories, in focused coding, the research assistant and lead author further elaborated categories into a codebook. We affixed codes to the text through line-by-line coding to group data, writing memos about patterns in the data and the process through which we applied codes. In our analysis, we compared how codes appeared in the data and identified outliers for further investigation. The trustworthiness of the findings (Shenton 2004) was enhanced by member checking at a community research forum with community-based researchers and regional providers and follow-up interviews and focus groups with selected participants from the study. In addition, we compared and contrasted findings across the full range of participants, drawing attention to widespread agreement about the potential offered by CHW involvement in depression care and to disagreement about the potential of group-based therapeutic approaches. In our results below, we concentrate on predominant themes within the interview data; some quotes are lightly edited for ease of reading. The Institutional Review Board at the University of Kentucky approved this study. The authors have no known conflicts of interest.

## Results

While participants offered wide-ranging suggestions on improving access to depression treatment for rural women, we focus on predominant themes across diverse participants who viewed CHWs as instrumental in meeting the treatment needs of Appalachian women with depression. Participants provided suggestions on how CHWs can overcome challenges to identifying and assessing depression among Appalachian women; essential logistical support for attending appointments; education about treatment; offering a necessary continued point of contact; and improving access to primary care, pharmacological, and counseling treatment options. A summary of our findings is presented in Table 2.

### CHW Capacity for Recognizing Depression in a Vulnerable Population

With an intimate familiarity of the life stories and family life of the rural women with whom they worked, many CHWs commented that many of the women they served struggled

**Table 2** Summary of findings

Potential CHW role	Limitations of current care	Value added by CHW's	How CHW efforts link to rural healthcare
Recognizing women at risk	Depression under-identified, low priority for patients with complex social and health needs	Contribute understanding of women's cultural and health barriers to identifying depression, accessing treatment	Identify women at risk of depression who may need treatment or deeper engagement in treatment, services
Improving assessment	Assessment tools culturally inappropriate	Provide alternate forms of assessing risk for depression	
Improving access to treatment	Treatment access restricted by transportation, poverty, waitlists	Identify needs and reduce logistical barriers	Improve attendance at primary care and specialty care appointments
Education	Inadequate information about treatment, stigma	Educate about depression through accessible language	Increase treatment engagement
Point of contact	Limited contact between high-needs patients and providers	Maintain relationship, enable gradual recovery	Provide contact between appointments
Increasing patient self-advocacy	Patients unable to identify depression in primary care due to stigma, competing multiple morbidities	Offer strategies to patient to advocate for depression needs	Support communication with primary care providers
Improving medication adherence	Confusion about multiple medications, changes in prescriptions, affordability	Educate about medications, communication with providers to ensure consistency	Ameliorate difficulties posed by complex health conditions, challenges in specialist shortages
Counseling and group support	Limited availability of counseling due to provider shortages	Facilitate group support, increase women's attendance	Enhance limited treatment provided in primary care settings

with depression throughout their lives. Working with these women required persistence, explained one CHW, because, “I found so many of them suffered so much psychological trauma that any little thing would set them back.” Participants indicated that a number of factors shaped women’s tendency to deny their depression: a lack of recognition; an unwillingness to identify their depression as a problem to others; and a severity of depression that could limit their ability to even self-diagnose. Many CHWs observed that patients with depression experienced their depression somatically, presenting complaints of fatigue and stomach problems. Even those women who took depression medication might associate their medication with another bodily symptom, such as “nerves” or difficulty sleeping. As commonly as CHWs observed depressive symptoms in their underserved clients, very few approached CHWs for assistance with depression; and many hesitated to discuss it during assessments. One CHW estimated that while half of the depressed women she served would identify their depression, the rest understood depression as, “‘I’m just having a bad day. I should be stronger, I should be better,’ and, ‘I would get up but I don’t want to.’”

CHWs noted the complexity of physical, economic, and social demands that made it challenging for the rural women they worked with to acknowledge their symptoms as depression, much less prioritize depression treatment. CHWs found that their clients’ higher prevalence of comorbid chronic conditions contributed to their depression and, concomitantly, the depression worsened their comorbid conditions. In these cases, depression rarely took priority in self-management. One CHW recalled the perspective as, “‘Oh we’ll not even worry about that’; ...it just feels like too much to have to deal with that in addition to all the other health problems.” Several participants reported that many younger women were challenged by drug use and related social issues of custody and housing. Other younger women with children were often too busy to seek treatment. Many participants described how caring for their families was crucial for the cultural and personal identity of their female patients, but that the demands of this caregiving could be overwhelming, both contributing to their own depression and limiting their ability to seek care for themselves. Speaking both for herself and the women she worked with, one CHW commented that many women “don’t feel like we can talk about [depression] because we have to try to fix everybody else’s problems before we fix our own; we put it on the back burner and then we watch ourselves crumble just about every night.” Admitting depression could be at odds with the social expectations of women, because “the role of women is to take care of their kids and take care of their home and take care of their spouse...so to acknowledge depression is almost seemingly a weakness for them.” In this context, participants recommended that CHWs could detect women

at risk of depression who may need treatment or those for whom further services were needed beyond the pharmacological treatment provided as the default in primary care.

Responding to these community perceptions of depression, CHWs felt that most existing tools for assessing depression in Appalachian communities were culturally inappropriate, and, consequently, under-represented the true prevalence of depression in the region. When one CHW asked her older clients to estimate how often they had felt depressed, they responded, “Oh honey, I just went ahead and got up and went on and done what I needed to do.” Clients avoided answering her questions about mental health because they felt that reporting depressive symptoms would be perceived as complaining. Others feared the social consequences of being depressed. Younger women, one participant pointed out, may wonder, “‘Is [a label of depression] going to reflect on my kids,’ ‘Could social services get a hold of that,’ ‘I’m a single mom; I can’t be depressed.’” For some patients, social networks reinforced the idea that women’s feelings were not depression. Even when the depression was severe, noted one CHW, “‘their family’s like, ‘they need to pull theirself up and go on.’”

As a result of these strong social consequences, CHWs described alternate means to detect depression. They were attuned to when patients only scheduled appointments later in the day, noting that such late appointments might signal an inability to get out of bed, characteristic of those with depression. Several were aware that some patients, unable to leave the home due to their depression, sent family members to complete their errands. Participants knew that many women might be using depression medication for their symptoms, while still denying their depression. Thus, they asked their patients about what medication they used and drew attention to broad physical complaints that may be somatic expressions of mental distress.

### Reducing Barriers to Accessing Treatment

Like other rural communities, psychiatric hospitals, community mental health care centers, and primary care comprise the predominant depression treatment options in Appalachian Kentucky. Yet patients struggled to access care due to transportation barriers, long waitlists at community mental health centers, and poverty. Throughout, participants emphasized the benefits of having CHWs play a deeper role in engaging women with depression in treatment and improving the continuum of care. CHWs and mental health social workers recommended that CHWs investigate women’s needs in depth through questioning or visiting the home. As one social worker explained, to engage a patient in treatment, they must determine, “‘Why haven’t you reached out for help? It might be, ‘I don’t have a car; I have to ask so and so and I’m embarrassed.’ What she considers the barriers

is where you start.” All healthcare professionals advocated for CHWs’ complex role in facilitating women’s access to depression treatment: “You gotta make sure that everything is lined up from transportation to insurance.” Providers acknowledged that ultimately they should build on women’s family and community support systems, but that, “sometimes there’s not anybody. So in those cases, that, I mean we need to be that somebody else sometimes.” When patients were still unable to make appointments due to the complex demands and health problems they faced, CHWs noted the need for understanding and persistence.

### Education About Treatment

Many of their clients, CHWs explained, simply were unaware of what depression was. Describing how depression felt—“This is why I go back to bed after the kids leave or why I cry,” one CHW explained—could help women recognize that their feelings were not intrinsic to their personalities. In a context in which few women recognized their depression as an illness, let alone one that could be treated, CHWs suggested they could help women with depression realize that depression was a condition that could be treated—rather than a character trait or flaw. Offering educational resources, however, was inadequate: “printing off education, print this book and give that to them and send them home with it is useless. It ends up in my garbage can out there by my door; that’s as far as it gets.” Many participants explained that women’s social responsibilities prevent them from even having sufficient time to acknowledge their depression, and when they might eventually seek treatment, it was too burdensome to complete. “They may go one time for counseling,” reflected one participant, “they’ll tell you it helped but then they don’t go back because there’s too many other family responsibilities and they don’t take that time for themselves.” Instead, CHWs’ strength was to educate through culturally specific messages fighting Appalachian women’s tendency to neglect themselves. One clarified, “We want to take care of everybody...But it’s okay to take care of yourself.” In a region where pharmaceutical treatment is more common, participants proposed that CHWs advise those taking medicine of further treatment options.

### Continued Point of Contact

Even once women became engaged in care, CHWs potentially filled the gaps between appointments. As one social worker explained, “You have your therapist and the psych nurse practitioner but you don’t get to see them that frequently. Lots of things can happen in a 2-week period of time.” Further, CHWs recognized the importance of their contribution in a region when their primary contact with healthcare providers often involved the receipt of

pharmacological treatment: “You’ve got your family physicians that want to prescribe, prescribe, prescribe. When maybe some of these women just need to talk.” Throughout a woman’s process with engaging in treatment, most participants envisioned that the CHW serve as a continued point of contact. One expounded, “Hey, I’m here for you and I’m a phone call away. It may just be that you’re overwhelmed because the baby’s crying and you just need a minute to vent.” CHWs and providers noted that the relationship-building was a key asset to engaging rural women over time that cannot be similarly served by the time schedules of rural primary care practitioners. One CHW described that, “If I can’t help you with your medicine, I can’t help you with your health care, I can at least I can pray with you.” Unlike counselors and physicians beholden to frantic schedules, participants proposed that CHWs’ ability to slowly build relationships allowed women to slowly engage in the recovery process. Describing how he<sup>2</sup> built trust with the women with whom he worked, a CHW commented, “I turned the knob [of the door] and I just left a crack in it to see if they would walk through the door and when they do, they share with me things and then I’m able to help them to know what to ask and not to feel ashamed.” But this was a slow process with starts and stops, requiring CHWs to recognize that “you only push so far before you gotta pull back and say, ‘Okay I’ll wait until she’s ready to talk.’” CHWs argued that their established relationships with clients enabled them to address depression when they were ready, as part of their overall health. Knowing that “hounding” women made them “antsy,” CHWs described waiting for the appropriate time to address a more sensitive issue. Realizing the fears and reticence of the community members they served, CHWs emphasized the crucial role of encouragement, recognizing what their clients valued.

In serving as a continued point of contact, CHWs differentiated their role in the rural setting from the peer specialist role in mental health services for individuals with serious mental illness. “We don’t have to say that we were depressed to help them,” explained one CHW, but they did need to ensure that women knew that CHWs avoided judgment and ensured that women felt that “you’re on their level; that you’re not above them.” In contrast to the more disciplinarian role of practitioners who might remind patients that “they’re doing something they shouldn’t be,” the CHW’s role was to establish a trusting peer role, “to get them to know, ‘Hey, I’m just like you.’” In this way, CHWs made sure to wear clothing that did not communicate status difference and recounted their own life struggles to avoid socially differentiating their clients. Still, CHWs asserted the need

<sup>2</sup> Most CHWs are women, but some—like this participant—are men and can also be perceived as assets.

to acknowledge the limits of their shared experience: “My story is my story and it’s emotional and it’s a tearjerker too. But theirs [story] is beyond my story.”

### Increasing Patients’ Self-Advocacy in Primary Care

Even as primary care constituted the primary site for rural depression treatment, CHWs recognized that many opportunities for providing treatment were still missed in this setting. They found that, “a lot of people are at the point of tears and they don’t know why they feel the way they do,” yet still many “don’t mention anything to their family doctor and for a lot of people that’s the only person they see.” Because patients were often hesitant to assert their mental health needs, CHWs suggested the importance of “encouraging the person as to how they can use that appointment to work for them and helping them get enough courage to let the doctor know that they think they’re depressed.” CHWs advised that, in some cases, patients may appreciate having them attend appointments to help facilitate the conversation about depression—much as they already did for other health conditions. In their work as care coordinators for other conditions (i.e., diabetes, stroke), CHWs are accustomed to mediating the hierarchical relationship between patients and providers about which many patients felt uncomfortable. Providers recognized that CHWs referred their clients to them, worked with clients to further adherence to medicine, and removed barriers to attending appointments. In this sense, one CHW described, “you just bring them all together and there’s already a comfort feeling there.”

### Improving Pharmacotherapy Adherence

With many patients juggling multiple medications for their comorbidities, participants advised that CHWs play a vital role in explaining the purpose and use of depression medications. Providers hoped that further training of CHWs would enable them to offer basic education about medications to prevent requests for particular kinds of medication that might pose higher risks. CHWs noted that many of their patients with multiple chronic conditions “don’t understand what they’re taking or why they’re taking it” and could help to explain depression medication. Primary care providers expressed hope that their patients would contact their CHWs to observe that, “I don’t think the medication’s working, do you care to contact my provider and say, I’m having some side effects.” Further, CHWs might explain the urgency of continuing medication to clients balancing tight budgets: “I understand the danger of somebody that casually says, ‘Well I’m out of medicine, I can’t afford it and I ain’t going to take it.’” Finally, providers hoped that CHWs would mediate medication problems that arose from provider shortages in the region. With little outpatient support to patients

discharged from psychiatric hospitals, patients were quickly readmitted, only to find new providers who prescribed entirely new medications, resulting in extreme complications for patients who switched medications multiple times within a short period of time. CHWs providing care to such patients might ensure that, even if specialist personnel shifted, they would be informed of patient medication needs.

### Enhancing Counseling and Group Support

In a rural region where pharmacological treatment predominated, all participants advocated for more honest forums in which women with depression were able to share their feelings. They found their patients to be receptive to practical techniques to improve their coping and negotiate their complex lives. For women who had not previously considered therapy, participants advised that CHWs might clarify its purpose—that receiving therapy “does not mean you’re sick or crazy,” but instead “just about anyone could benefit.” Mental health specialists proposed that CHWs encourage patients with negative past treatment experiences to reconsider counseling: “It’d be nice for them to have the understanding that, ‘Hey you know it may take 2, 3 or 4 [times],’ don’t be afraid to give it a few tries.” Some mental health specialists hoped that CHWs serve as a resource for feedback to improve the therapeutic relationship.

Though mental health social workers at area community mental health centers sometimes offered therapy in group settings, providers explained that many rural women would not consider seeking treatment at such centers due to the long waits required to receive care and the stigma of being seen in a mental health clinic setting. A number of participants proposed that women with depression could benefit from group support led by CHWs. Group settings helped destigmatize depression; through hearing others’ experiences, depressed women would learn about the process of recovery. Several participants cautioned that group support for depression in Appalachia would need to avoid prescriptive self-care lessons; and that the focus should be on social support rather than mental health alone. Noting the pervasiveness of concerns about social anxiety and loss of confidentiality in rural communities, CHWs cautioned that rural women would be more receptive to group sessions if CHWs met with them individually prior to the group meeting. Such a visit would prepare women for the option of peer support before attending group sessions, so they would anticipate “‘There is other people who feel the way I do and have the same problem’ and that might ease the door open for somebody.” Through CHWs’ role in creating new social relationships and facilitating group peer support, participants envisioned that CHWs would decrease the isolation of rural women by de-individualizing their struggles, and by “let[ting] them know they’re not the only ones in the community that struggles.”

Some submitted that CHWs would be ideal facilitators for manualized group interventions that do not require advanced education, such as Wellness Recovery Action Planning (Cook et al. 2010, 2011, 2014), because they would not employ the specialized mental health language that might come more naturally to someone with advanced training in behavioral health.

## Discussion

Participants of varying professional healthcare backgrounds endorsed the critical role of CHWs in engaging rural women with depression in treatment. Even as the Affordable Care Act has dramatically increased insurance coverage in rural Appalachia (Alcalde 2016) and integrated physical and mental health services in rural areas have expanded access to mental health specialty care (Fortney et al. 2013; Luptak et al. 2008), our participants affirmed the need for additional culturally acceptable, sustainable approaches to meet the deep needs of rural women with depression. Our findings build on others' recommendations that, in an era of healthcare reform with growing emphasis on preventative health, supportive care for those living with chronic illness, and expanded roles for CHWs, CHWs have much to contribute to mental health promotion (Cook and Mueser 2015; Katzen and Morgan 2014; Kessler 2012). We have explored mechanisms through which CHWs can improve the engagement of depressed rural women in treatment even for women with complex health and social needs, significant challenges to accessing care, and living in regions with personnel shortages. Our participants stressed the essential role that CHWs could play in improving the recognition and assessment of depression among rural women, strengthening women's engagement in existing treatment options, and providing peer support.

While depression stigma has figured prominently in other accounts of barriers to accessing rural mental health care (Cadigan and Skinner 2014; Fuller et al. 2000; Zhang et al. 2008), in our findings, CHWs emphasized how barriers common to rural disadvantaged women restricted recognition of depression and access to treatment—including extensive social responsibilities (Drew and Schoenberg 2011; Schoenberg et al. 2003), the challenges of managing multiple chronic conditions (Bardach et al. 2011; Schoenberg et al. 2011), and the hesitation to draw attention to one's own needs (Snell-Rood et al. 2017). Drawing on their culturally grounded, whole health-centered perspective of women's depression, CHWs emphasized that these burdens made it difficult to prioritize seeking and sustain treatment for their depression. Such perspectives were well understood by CHWs, many of whom are uniquely capable of the persistence required to recognize risk of depression in this

vulnerable group because they have the time and local acumen to identify people who are in need of mental health care yet too vulnerable to obtain it (Wennerstrom et al. 2011). In addition to other researchers' recommendations to assess rural depression in the primary care setting through attention to somatic complaints (Browning et al. 2000; Simmons et al. 2007), our participants emphasized further "alternative approaches" to identifying depression—including scrutiny of patients' appointment time preferences, recall of medications, and hesitation, particularly among older adults, to report mentally unhealthy days.

Significant challenges remain for delivering care in rural settings (Semansky et al. 2012) even as behavioral health is increasingly integrated into primary care in rural and other traditionally underserved community settings (Alakeson et al. 2010; Hogan et al. 2010). Our paper illuminates how CHWs can enhance mental health treatment in primary care and integrated care settings through improving medication adherence, decreasing barriers to accessing appointments, and improving communication between providers and patients, thus drawing a blueprint that can complement existing toolkits for integrating CHWs into physical disease care (Brooks et al. 2014; Centers for Disease Control and Prevention 2016). Because CHWs play a vital role in the process of care coordination, integral to healthcare reform (Brooks et al. 2014), their involvement is sustainable—continuing beyond individual interventions, and building on their relationships within communities. For rural and underserved people more broadly for whom "treatment as usual" remains sporadic, CHWs can provide a continued bridge back into clinical treatment (see also Stacciarini et al. 2012). By strengthening rural women's engagement in integrated care, CHWs' approach to addressing mental health in the context of overall wellness may be more culturally congruent with diverse populations among whom mental health treatment may be difficult to prioritize, particularly as they deal with not only one debilitating condition, but multiple chronic conditions (Barnett et al. 2012; Marengoni et al. 2011).

Our findings contribute to the emerging evidence that shows how CHWs can serve as peer providers (Willging et al. 2016). Though CHWs may not share diagnostic labels with their patients like peer specialists, their familiarity with their patients' rural culture establishes trust and makes them more likely to empathize with the experience of rural barriers to care (Bird et al. 2001; O'Neill 2010). With many studies of rural women's depression underscoring the need for increased community and family based social support (Jesse et al. 2014; Seiling et al. 2011; Snell-Rood et al. 2017), participants widely endorsed CHWs as an avenue for offering such peer support—either as a continued point of contact, or as a facilitator for peer support groups. Though other studies have shown how the hierarchical nature of doctor-patient relationships can obstruct the creation of therapeutic

alliances (Rugkåsa et al. 2014), our participants affirmed the role of a CHW as a peer who does not judge, extremely important in a context where depression is stigmatized.

Despite the enthusiastic appraisal of expanding CHWs' role in rural mental health care, we also acknowledge the challenges of having CHWs provide such care. Even as health institutions have created diverse CHW programs, standards of conduct and procedures for supervisor oversight can vary substantially between programs (Brooks et al. 2014; Centers for Disease Control and Prevention 2016) and there remains need for consistent, thorough training of CHWs in mental health (Stacciarini et al. 2012). Future research should explore the implementation and sustainability factors making CHW-facilitated interventions capable of furthering evidence-based standards of care (Waitzkin et al. 2011; Willging et al. 2016).

### Limitations

This study is limited by the small sample size and limited number of physicians we were able to recruit due to health-care workforce scarcity so pervasive in the region. Because all participants work in the healthcare field, they may overestimate the prevalence of depression. With the study's goal to identify new roles for CHWs in rural mental healthcare, participants' responses may have over-emphasized the assets offered by CHWs and under-emphasized their reservations. Finally, although acknowledged as a national health priority population, rural—and Appalachian specifically—residents may experience different challenges from other populations, thereby limiting generalizability.

### Conclusion

This study underscores the need for creative approaches to rural depression care that draw on community-based expertise and human resources. We must reimagine depression care for rural women, whose ability to recognize their depression and seek treatment for it are challenged by their high rates of physical comorbidities, extensive family responsibilities, and gendered expectations of strength. In the absence of adequate rural healthcare professionals to meet the extensive needs of rural regions, CHWs can recognize both silent and articulated mental health needs; provide culturally appropriate, reliable support to women; and enhance their engagement within existing treatment options.

**Acknowledgements** The funding was supported by National Institutes of Health (Grant No. CTSA UL1TR000117), Office of Research on Women's Health (Grant No. K12 DA035150) and University of Kentucky Department of Behavioral Science. This research would

not have been possible without the valuable perspectives of all of the participants who made time to share their expertise with us. Wayne Noble's talents were critical for coordinating the study and other colleagues at the Center of Excellence in Rural Health offered vital feedback on interpreting the findings. We appreciate the insights of the editor and anonymous reviewers to strengthen the manuscript.

### References

- Alakeson, V., Frank, R. G., & Katz, R. E. (2010). Specialty care medical homes for people with severe, persistent mental disorders. *Health Affairs*, 29(5), 867–873. <https://doi.org/10.1377/hlthaff.2010.0080>.
- Alcalde, M. G. (2016). Tracking the impact of the Affordable Care Act in Kentucky. In *Health affairs blog* (Vol. 2016). Bethesda, MD: Health Affairs.
- Annan, S. L. (2008). Intimate partner violence in rural environments. *Annual Review of Nursing Research*, 26(1), 85–113.
- Appalachian Regional Commission. (2014). *Socioeconomic data by county*. Retrieved from <http://www.arc.gov/data>.
- Bardach, S. H., Tarasenko, Y. N., & Schoenberg, N. E. (2011). The role of social support in multiple morbidity: Self-management among rural residents. *Journal of Health Care for the Poor and Underserved*, 22(3), 756–771. <https://doi.org/10.1353/hpu.2011.0083>.
- Barnett, K., Mercer, S. W., Norbury, M., Watt, G., Wyke, S., & Guthrie, B. (2012). Epidemiology of multimorbidity and implications for health care, research, and medical education: A cross-sectional study. *The Lancet*, 380(9836), 37–43. [https://doi.org/10.1016/S0140-6736\(12\)60240-2](https://doi.org/10.1016/S0140-6736(12)60240-2).
- Belkin, G. S., Unützer, J., Kessler, R. C., Verdelli, H., Raviola, G. J., Sachs, K., et al. (2011). Scaling up for the “bottom billion”: “5 × 5” implementation of community mental health care in low-income regions. *Psychiatric Services*, 62(12), 1494–1502.
- Bird, D. C., Dempsey, P., & Hartley, D. (2001). *Addressing mental health workforce needs in underserved rural areas: Accomplishments and challenges*. Portland: Maine Rural Health Research Center, Edmund S. Muskie School of Public Services, University of Southern Maine.
- BRFSS. (2013). *Kentucky area development district (ADD) profiles*. Frankfort, KY: Kentucky Public Health.
- Brooks, B. A., Davis, S., Frank-Lightfoot, L., Kulbok, P., Poree, S., & Sgarlata, L. (2014). *Building a community health worker program: The key to better care, better outcomes, & lower costs*. Chicago: CommunityHealth Works.
- Brown, W. J., Ford, J. H., Burton, N. W., Marshall, A. L., & Dobson, A. J. (2005). Prospective study of physical activity and depressive symptoms in middle-aged women. *American Journal of Preventive Medicine*, 29(4), 265–272. <https://doi.org/10.1016/j.amepre.2005.06.009>.
- Browning, D., Andrews, C., & Niemczura, C. (2000). Cultural influences on care seeking by depressed women in rural Appalachia. *The American Journal for Nurse Practitioners*, 4, 24–32.
- Cadigan, R. J., & Skinner, D. (2014). Symptoms of depression and their management among low-income African-American and White mothers in the rural South. *Ethnicity & Health*, 20(3), 293–308. <https://doi.org/10.1080/13557858.2014.921889>.
- CDC. (2010). Current Depression among Adults: United States, 2006 and 2008. *Morbidity and Mortality Weekly Report*, 59(38), 1229–1235.
- Centers for Disease Control and Prevention. (2016). *Community health worker (CHW) toolkit*. Retrieved 2016 from <http://www.cdc.gov/dhdsp/pubs/chw-toolkit.htm>.

- Cook, J. A., Copeland, M. E., Corey, L., Buffington, E., Jonikas, J. A., Curtis, L. C., et al. (2010). Developing the evidence base for peer-led services: changes among participants following Wellness Recovery Action Planning (WRAP) education in two state-wide initiatives. *Psychiatric Rehabilitation Journal*, *34*(2), 113.
- Cook, J. A., Copeland, M. E., Floyd, C. B., Jonikas, J. A., Hamilton, M. M., Razzano, L., et al. (2014). A randomized controlled trial of effects of Wellness Recovery Action Planning on depression, anxiety, and recovery. *Psychiatric Services*, *63*(6), 541–547.
- Cook, J. A., Copeland, M. E., Jonikas, J. A., Hamilton, M. M., Razzano, L. A., Grey, D. D., et al. (2011). Results of a randomized controlled trial of mental illness self-management using Wellness Recovery Action Planning. *Schizophrenia Bulletin*, *38*, 881–891.
- Cook, J. A., & Mueser, K. T. (2015). *Community health workers: Potential allies for the field of psychiatric rehabilitation?* p. 207.
- Daniels, A., Grant, E., Filson, B., Powell, I., Fricks, L., & Goodale, L. (2010). *Pillars of peer support: Transforming mental health systems of care through peer support services*. Retrieved from <http://www.pillarsofpeersupport.org>.
- Drew, E. M., & Schoenberg, N. E. (2011). Deconstructing fatalism: Ethnographic perspectives on women's decision making about cancer prevention and treatment. *Medical Anthropology Quarterly*, *25*(2), 164–182. <https://doi.org/10.1111/j.1548-1387.2010.01136.x>.
- Duncan, C. M. (2000). *Worlds apart: Why poverty persists in rural America*. New Haven: Yale University Press.
- Fortney, J., Rost, K., Zhang, M., & Warren, J. (1999). The impact of geographic accessibility on the intensity and quality of depression treatment. *Medical Care*, *37*(9), 884–893.
- Fortney, J. C., Pyne, J. M., Mouden, S. B., Mittal, D., Hudson, T. J., Schroeder, G. W., et al. (2013). Practice-based versus telemedicine-based collaborative care for depression in rural federally qualified health centers: A pragmatic randomized comparative effectiveness trial. *American Journal of Psychiatry*, *170*(4), 414–425. <https://doi.org/10.1176/appi.ajp.2012.12050696>.
- Fox, J., Merwin, E., & Blank, M. (1995). De facto mental health services in the rural south. *Journal of Health Care for the Poor and Underserved*, *6*(4), 434–468.
- Fox, J. C., Blank, M., Berman, J., & Rovnyak, V. G. (1999). Mental disorders and help seeking in a rural impoverished population. *International Journal of Psychiatry in Medicine*, *29*(2), 181–195. <https://doi.org/10.2190/Y4KA-8XYC-KQWH-DUXN>.
- Fuller, J., Edwards, J., Procter, N., & Moss, J. (2000). How definition of mental health problems can influence help seeking in rural and remote communities. *Australian Journal of Rural Health*, *8*(3), 148–153. <https://doi.org/10.1046/j.1440-1584.2000.00303.x>.
- Greeno, C. G., Anderson, C. M., Shear, M. K., & Mike, G. (1999). Initial treatment engagement in a rural community mental health center. *Psychiatric Services*, *50*(12), 1634–1636.
- Hartley, D. (2004). Rural health disparities, population health, and rural culture. *American Journal of Public Health*, *94*(10), 1675–1678. <https://doi.org/10.2105/AJPH.94.10.1675>.
- Hauenstein, E., Petterson, S., Rovnyak, V., Merwin, E., Heise, B., & Wagner, D. (2007). Rurality and mental health treatment. *Administration and Policy in Mental Health and Mental Health Services Research*, *34*(3), 255–267. <https://doi.org/10.1007/s10488-006-0105-8>.
- Hauenstein, E. J. (2003). No comfort in the rural South: Women living depressed. *Archives of Psychiatric Nursing*, *17*(1), 3–11. <https://doi.org/10.1053/apnu.2003.6>.
- Hauenstein, E. J. (2008). Building the rural mental health system: From de facto system to quality care. *Annual Review of Nursing Research*, *26*(1), 143–173.
- Hauenstein, E. J., Glick, D. F., Kane, C., Kulbok, P., Barbero, E., & Cox, K. (2014). A model to develop nurse leaders for rural practice. *Journal of Professional Nursing*, *30*(6), 463–473. <https://doi.org/10.1016/j.profnurs.2014.04.001>.
- Hauenstein, E. J., & Peddada, S. D. (2007). Prevalence of major depressive episodes in rural women using primary care. *Journal of Health Care for the Poor and Underserved*, *18*(1), 185–202.
- Healthcare, T. (2007). *Ranking America's Mental Health: An analysis of depression across the states*. Washington, D.C.: Mental Health America.
- Hillemeier, M. M., Weisman, C. S., Chase, G. A., & Dyer, A.-M. (2008). Mental health status among rural women of reproductive age: findings from the Central Pennsylvania Women's Health Study. *American Journal of Public Health*, *98*(7), 1271–1279. <https://doi.org/10.2105/AJPH.2006.107771>.
- Ho, C. S., Feng, L., Fam, J., Mahendran, R., Kua, E. H., & Ng, T. P. (2014). Coexisting medical comorbidity and depression: Multiplicative effects on health outcomes in older adults. *International Psychogeriatrics*, *26*(07), 1221–1229. <https://doi.org/10.1017/S1041610214000611>.
- Hogan, M. F., Sederer, L. I., Smith, T. E., & Nossel, I. R. (2010). Making room for mental health in the medical home. *Preventing Chronic Disease*, *7*(6), A132.
- Hsieh, H.-F., & Shannon, S. E. (2005). Three approaches to qualitative content analysis. *Qualitative Health Research*, *15*(9), 1277–1288.
- Jesse, D. E., Kim, H., & Herndon, C. (2014). Social support and self-esteem as mediators between stress and antepartum depressive symptoms in rural pregnant women. *Research in Nursing & Health*, *37*(3), 241–252. <https://doi.org/10.1002/nur.21600>.
- Jesse, D. E., & Swanson, M. S. (2007). Risks and resources associated with antepartum risk for depression among rural southern women. *Nursing Research*, *56*(6), 378–386. <https://doi.org/10.1097/01.nnr.0000299856.98170.19>.
- Katzen, A., & Morgan, M. (2014). *Affordable Care Act opportunities for community health workers*. Cambridge, MA: Harvard Law School Center for Health Law and Policy Innovation.
- Kentucky Health Facts. (2015). *Mentally unhealthy days (per month), 2008–2010—county group*. Retrieved January 26, 2015 from <http://www.kentuckyhealthfacts.org/data/topic/map.aspx?ind=52>.
- Kessler, R. (2012). Mental health care treatment initiation when mental health services are incorporated into primary care practice. *The Journal of the American Board of Family Medicine*, *25*(2), 255–259. <https://doi.org/10.3122/jabfm.2012.02.100125>.
- Kilbourne, A. M., Neumann, M. S., Pincus, H. A., Bauer, M. S., & Stall, R. (2007). Implementing evidence-based interventions in health care: Application of the replicating effective programs framework. *Implementation Science*, *2*(1), 42.
- Logan, T., Evans, L., Stevenson, E., & Jordan, C. E. (2005). Barriers to services for rural and urban survivors of rape. *Journal of Interpersonal Violence*, *20*(5), 591–616. <https://doi.org/10.1177/0886260504272899>.
- Luptak, M., Kaas, M. J., Artz, M., & McCarthy, T. (2008). Project ADAPT: A program to assess depression and provide proactive treatment in rural areas. *Gerontologist*, *48*(4), 542–548.
- Marengoni, A., Angleman, S., Melis, R., Mangialasche, F., Karp, A., Garmen, A., et al. (2011). Aging with multimorbidity: A systematic review of the literature. *Ageing Research Reviews*, *10*(4), 430–439. <https://doi.org/10.1016/j.arr.2011.03.003>.
- Minkoff, K. (2015). Rebranding “community mental health”. *Community Mental Health Journal*, *51*(4), 383–384. <https://doi.org/10.1007/s10597-015-9878-0>.
- Mutamba, B. B., van Ginneken, N., Paintain, L. S., Wandiembe, S., & Schellenberg, D. (2013). Roles and effectiveness of lay community health workers in the prevention of mental, neurological and substance use disorders in low and middle income countries: A systematic review. *BMC Health Services Research*, *13*(1), 412.
- O'Neill, L. K. (2010). Mental health support in northern communities: Reviewing issues on isolated practice and secondary trauma. *Rural and Remote Health*, *10*, 1369.

- Paudel, S., Gilles, N., Hahn, S., Hexom, B., Premkumar, R., Arole, S., et al. (2014). Impact of mental health training on village health workers regarding clinical depression in rural India. *Community Mental Health Journal*, 50(4), 480–486. <https://doi.org/10.1007/s10597-013-9630-6>.
- Petersen, I., Bhana, A., & Baillie, K. (2012). The feasibility of adapted group-based interpersonal therapy (IPT) for the treatment of depression by community health workers within the context of task shifting in South Africa. *Community Mental Health Journal*, 48(3), 336–341. <https://doi.org/10.1007/s10597-011-9429-2>.
- Price, S. K., & Proctor, E. K. (2009). A rural perspective on perinatal depression: Prevalence, correlates, and implications for help-seeking among low-income women. *The Journal of Rural Health*, 25(2), 158–166. <https://doi.org/10.1111/j.1748-0361.2009.00212.x>.
- Rugkåsa, J., Canvin, K., Sinclair, J., Sulman, A., & Burns, T. (2014). Trust, deals and authority: Community mental health professionals' experiences of influencing reluctant patients. *Community Mental Health Journal*, 50(8), 886–895. <https://doi.org/10.1007/s10597-014-9720-0>.
- Schoenberg, N. E., Bardach, S. H., Manchikanti, K. N., & Goodenow, A. C. (2011). Appalachian residents' experiences with and management of multiple morbidity. *Qualitative Health Research*.
- Schoenberg, N. E., Campbell, K. A., Garrity, J. E., Snider, L. B., & Main, K. (2001). The Kentucky homeplace project: Family health care advisers in underserved rural communities. *The Journal of Rural Health*, 17(3), 179–186. <https://doi.org/10.1111/j.1748-0361.2001.tb00955.x>.
- Schoenberg, N. E., Peters, J. C., & Drew, E. M. (2003). Unraveling the mysteries of timing: Women's perceptions about time to treatment for cardiac symptoms. *Social Science & Medicine*, 56(2), 271–284. [https://doi.org/10.1016/S0277-9536\(02\)00026-6](https://doi.org/10.1016/S0277-9536(02)00026-6).
- Seiling, S. B., Manoogian, M. M., & Son, S. (2011). "I don't know how we would make it": Social support in rural low-income families. In J. W. Bauer & E. M. Dolan (Eds.), *Rural families and work* (Vol. 1, pp. 157–183). New York: Springer.
- Semansky, R., Willging, C., Ley, D. J., & Rylko-Bauer, B. (2012). Lost in the rush to national reform: Recommendations to improve impact on behavioral health providers in rural areas. *Journal of Health Care for the Poor and Underserved*, 23(2), 842–856. <https://doi.org/10.1353/hpu.2012.0059>.
- Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, 22(2), 63–75.
- Simmons, L. A., Huddleston-Casas, C., & Berry, A. A. (2007). Low-income rural women and depression: Factors associated with self-reporting. *American Journal of Health Behavior*, 31(6), 657–666. <https://doi.org/10.5993/AJHB.31.6.10>.
- Snell-Rood, C., Hauenstein, E. J., Leukefeld, C., Feltner, F., & Schoenberg, N. E. (2017). Mental health treatment-seeking patterns and preferences of Appalachian women with depression. *American Journal of Orthopsychiatry*. <https://doi.org/10.1037/ort0000193>.
- Stacciarini, J.-M. R., Rosa, A., Ortiz, M., Munari, D. B., Uicab, G., & Balam, M. (2012). Promotoras in mental health: A review of English, Spanish, and Portuguese literature. *Family & Community Health*, 35(2), 92–102.
- Staton-Tindall, M., Duvall, J. L., Leukefeld, C., & Oser, C. B. (2007). Health, mental health, substance use, and service utilization among rural and urban incarcerated women. *Women's Health Issues*, 17(4), 183–192. <https://doi.org/10.1016/j.whi.2007.02.004>.
- Tickamyer, A. R., & Duncan, C. M. (1990). Poverty and opportunity structure in rural America. *Annual Review of Sociology*, 16, 67–86.
- U.S. Department of Health and Human Services. (2012). *Designated health professional shortage areas (HPSA) statistics*. Washington, DC: U.S. Department of Health and Human Services
- Viswanathan, M., Kraschewski, J. L., Nishikawa, B., Morgan, L. C., Honeycutt, A. A., Thieda, P., et al. (2010). Outcomes and costs of community health worker interventions: A systematic review. *Medical Care*, 48(9), 792–808.
- Waitzkin, H., Getrich, C., Heying, S., Rodríguez, L., Parmar, A., Willging, C., et al. (2011). Promotoras as mental health practitioners in primary care: A multi-method study of an intervention to address contextual sources of depression. *Journal of Community Health*, 36(2), 316–331.
- Wang, P. S., Lane, M., Olfson, M., Pincus, H. A., Wells, K. B., & Kessler, R. C. (2005). Twelve-month use of mental health services in the united states: Results from the national comorbidity survey replication. *Archives of General Psychiatry*, 62(6), 629–640. <https://doi.org/10.1001/archpsyc.62.6.629>.
- Wennerstrom, A., Vannoy, S. D., Allen, C. E., Meyers, D., O'Toole, E., Wells, K. B., et al. (2011). Community-based participatory development of a community health worker mental health outreach role to extend collaborative care in Post-Katrina New Orleans. *Ethnicity & Disease*, 21(3 0 1), 45–51.
- Willging, C. E., Israel, T., Ley, D., Trott, E. M., DeMaria, C., Joplin, A., et al. (2016). Coaching mental health peer advocates for rural LGBTQ people. *Journal of Gay & Lesbian Mental Health*, 20(3), 214–236. <https://doi.org/10.1080/19359705.2016.1166469>.
- Zhang, Z., Infante, A., Meit, M., English, N., Dunn, M., & Bowers, K. H. (2008). *An analysis of mental health and substance abuse disparities & access to treatment services in the Appalachian region*. Washington, D.C.: Appalachian Regional Commission.