

ORIGINAL RESEARCH

Rural women's first-person perspectives on the role of mental health in substance use

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ABSTRACT:

Introduction: Some evidence suggests that co-occurring conditions may be more prevalent among rural populations. Rural women face limited behavioral health care, social barriers, and structural vulnerability that heighten their risk for co-occurring conditions. This qualitative study examines the first-person narratives of rural women to identify their perspectives on the co-occurrence of substance use and mental health symptoms. **Methods:** Investigators performed secondary analysis of

transcripts from intervention sessions (n=87) from incarcerated, rural women who were using drugs (n=24) who took part in an intervention based on motivational interviewing using a thematic analysis approach.

Results: In this sample of low-income Appalachian women in the rural USA, many described their substance use as emerging from a desire to escape mental health symptoms emerging from life stress and trauma. Although many remarked on their desire to

'deal with' the issues at the root of their mental health symptoms, they possessed limited options for formal treatment, let alone resources for coping. Instead, they encountered stigmatizing discourses about addiction that inadvertently reinforced their poor self-worth, only furthering substance use and confusing their sense of themselves. **Conclusion:** These findings demonstrate the importance of creating pragmatic strategies to make behavioral health treatment available to rural women, in combination with larger programs that address the social conditions putting women at risk for poor mental health and substance use.

co-morbid, mental health, people who use drugs, qualitative, stigma, substance use, women, USA.

FULL ARTICLE:

Introduction

Keywords:

Mental health disorders commonly co-occur with substance use disorders and substance use¹, with mental disorders typically occurring before substance use². While epidemiological research has emphasized the heterogeneous etiologies of co-occurring conditions among patients with different mental health disorders³, there is wide consensus on the structural factors that make people more vulnerable to co-occurring conditions⁴ and that limit their access to treatment⁵.

Some evidence suggests that co-occurring conditions may be more prevalent in rural areas^{6,7}. Biases within medical data collection⁸ and a lack of attention to gradations of rurality may have led to an underreporting of co-occurring disorders in rural populations^{6,7}. In rural areas, the prevalence of mental disorders such as depression is also elevated – estimated at more than twice the USA average among rural women^{9,10}.

Certain factors place rural people at heightened risk for behavioral health conditions. Economic shifts over the past few decades have impacted rural communities severely¹¹, deepening poverty in certain rural communities already vulnerable from persistent poverty¹². Disparities in available treatment options lead to lack of recognition and of timely treatment¹³. Shortages of mental health providers remain endemic in rural areas^{14,15}, resulting at times in improper treatment¹⁶, and less treatment overall^{17,18}. Likewise, rural substance abuse treatment facilities are underfunded, their counselors face extensive bureaucratic hurdles to delivering treatment, and their patients confront immense social challenges in transportation to treatment sites¹⁹.

Rural help- and treatment-seeking are further impeded by the stigma involved in mental health labels and service engagement^{13,20}. In rural contexts characterized by persistent economic exclusion, the stress of shared hardship may make it difficult to recognize co-occurring disorders among family members²¹. Low-income rural women are particularly vulnerable due to scarcities in services¹³, and structural conditions that further their vulnerability to violence and abuse, which exacerbate their poor mental health²². When barriers to care seem insurmountable, treatment may no longer be considered an option^{20,23}. Taken together, this research indicates that rural women face immense barriers to behavioral health treatment and adverse social conditions that increase their risk for mental health and substance

use disorders.

This study examines how rural women describe the interaction between their co-occurring conditions in an environment with limited behavioral health services. More specifically, this study asks how women with co-occurring conditions who may not identify with a clinical mental diagnosis describe their experience of mental health, and how they relate their social context to their cooccurring conditions. With rural populations facing high rates of polysubstance use, opioid misuse, and death²⁴, these questions address the need scholars have asserted to better understand the social and environmental context of the rural communities at risk¹¹. This secondary analysis focuses on qualitative data from a larger intervention study in rural Appalachian jails that enabled sustained interaction with a hard-to-reach population. All incarcerated participants were women from rural central Appalachia, a subregion including counties in Kentucky, West Virginia, Tennessee, and Virginia with the highest rates of serious psychological distress and major depressive episodes, high rates of opiate abuse, and growing use of heroin⁸.

Methods

Participants

As part of a larger study, data were collected from December 2012 to August 2015 from rural women recruited from three jails located in Appalachian Kentucky. Jails were located in counties classified as non-metro, with small urban populations or completely rural (rural-urban continuum codes 5, 7, and 9), serving local residents from counties with similar rural designations. Inclusion for the larger study, described in more detail elsewhere²⁵, included moderate risk for substance use disorder, self-reported sexual risk behavior in the 3 months prior to incarceration, Appalachian residence, and consent to participate. To enable secondary analysis, a purposive sample of active participants at the time qualitative data analysis began was generated from the broader sample. Participant demographics and behavioral health are included in Tables 1 and 2, respectively. Inclusion criteria consisted of completing four or more sessions, agreeing to have at least three sessions audio-taped (n=24participants, n=87 transcripts) to facilitate qualitative data analysis, self-reported drug use, and endorsing co-occurring mental health symptoms (depression, anxiety, or post-traumatic stress disorder) as measured by Global Appraisal of Individual Needs criteria²⁶.

Table 1: Sample demographics (n=24)

Characteristic	Mean/%
Age (years)	33.30
Race	
White	100.0%
Housing status	
Housed in rented or owned place	79.2%
Marital status	
Married	45.8%
Highest grade completed	11.83
Employment in past 6 months	
Unemployed and not looking for job	37.5%
Have children	97.1%
Average number of children	2.32
Income sources	
Family/friends	33.3%
Job	16.7%
Illegal activities	25.0%
Other	25.0%
Income in 6 months prior to incarceration	US\$7118.00
Average number of days incarcerated	132.50

Table 2: Drug use and mental health in sample (n=24)

Drug used	Ever used (%)
Marijuana	100.0
Lortab/hydrocodone	97.1
Oxycontin	87.5
Cocaine	91.7
Methamphetamines	70.8
Heroin	41.7
Average number of days using multiple substances in past 6 months	127.4
Average number of days being high on any substance in past 6 months	136.6
GAIN criteria [†] (mental health)	Endorsed (%)
Major depression	87.5
Generalized anxiety	70.8
Post-traumatic stress	75.0

¹ GAIN criteria (ref 29) were assessed by research staff, not trained mental health professionals. The percentages here reflect endorsement of symptoms consistent with these disorders, but diagnoses should not be inferred. GAIN, Global Appraisal of Individual Needs.

Procedure

Participants in the larger study provided informed consent, were screened for substance use, interviewed, and randomized to a brief intervention in which they worked with a study interventionist who engaged in four motivational interviewing sessions to reduce HIV/HCV risk through decreasing high-risk drug use and risky sexual behaviors²⁷. Motivational interviewing, an evidence-based practice, facilitates empathetic communication and mutual respect, while identifying resistance to change²⁸. With permission from participants, intervention sessions were audio-recorded and transcribed verbatim.

Analysis

This interdisciplinary team of researchers employed directed content analysis techniques²⁹, generating codes that encompassed women's understanding of the relationship between their cooccurring disorders, concentrating on women's colloquial language about symptoms, and the trajectory of the co-occurring conditions (eq substance use to deal with mental health, perceptions of substance use as mental health 'failure'). The team applied initial codes to a subset of transcripts to identify exemplars and exceptions and finalize code definitions. The team continued reading transcripts until concept saturation was reached, when no new themes emerged. Employing inter-coder reliability tests with Cohen's kappa, all codes were discussed and revised, with each tested until agreement reached 0.80³⁰. One team member applied codes line by line to transcripts, and the lead author checked the coding to further reliability. The lead author summarized the content generated in the first coding cycle and generated a second set of themes, which were attached line-by-line in a second coding cycle to capture patterns, extend theories, and test models about the co-occurring conditions³¹. For ease of reading, quotes presented in the text were lightly edited to remove false starts and filler words.

Ethics approval

This study was approved by the Institutional Review Board, which conducted a prisoner review (#12-0372-F6A).

Results

Several key themes were identified: (1) the social and structural conditions of women's lives that made them vulnerable to poor mental health and substance use; (2) women's experience of feelings as dangerous and desire to escape them through substance use; (3) the struggles that women identified in understanding themselves in the wake of substance use; and (4) the challenges of navigating stigma exerted by medical and justice systems, community members, and themselves. Because few women in this setting identify with a clinical mental health diagnosis, mental health is described through 'emotions' or 'feelings' in place of symptoms, while acknowledging the deep pain – and clinical relevance – in women's experiences.

Structural vulnerability

Women described how drugs enabled escape from prolonged mental distress emerging from stressful life conditions resulting from poverty, including unstable home environments, violence, and repeated grief. Drug use offered women an avenue to soothe negative emotions that felt otherwise unmanageable. One woman mentioned a traumatic event from childhood that she had never disclosed to anyone. When she first became high, she realized that 'I found something that numbed the inside pain ... and learned how to not hurt. But it helped me deal with things and so I stuck with that.' Poverty forced some women into abusive relationships that left lasting emotional impacts. One woman, describing how she had always been forced to rely on men for income, commented:

When [you] gotta be with somebody that you don't want touching you, you know, it makes you want to get high.

Many women described how drug use helped them navigate difficult social situations arising from poverty – such as having to share accommodations because of limited income or relying financially on emotionally abusive family members. Drugs allowed women to silence their frustration in these situations, explained one woman:

If I have a buzz I'll just let it go, but being straight I have an open mouth.

Without substance use, women's 'open mouths' might voice critiques within their social relationships that could threaten their access to housing and critical livelihood resources.

In a region where shortages in services and extensive poverty only furthered the importance of family relationships, many women felt responsible for managing intense family responsibilities that left no option for expressing vulnerability. In their families and communities, one woman explained, 'you don't feel like you can cry'. Prolonged, unresolved mental distress, women described, erupted into acute mental health crisis. One participant recalled:

I can be strong for a long time and then I break down all at once ... it seems like everything falls on me at one time and then I just want to run to drugs.

Participants perceived mental health as poles of strength or total breakdown. In a context where women face immense social responsibilities and pressure to be strong for others, women elaborated how drug use offered social freedom:

It's always been my comfort zone ... It's always been the one that makes me feel better.

In this freedom, women neither had to respond to social demands, nor demonstrated their strength for others.

Substance use to avoid feeling

Most participants described the immense, constant burden of their negative emotions, including being overwhelmed, angry, distant, worried, worthless, down, fearful of the future, or burdened with bad memories. Thus, many women associated 'feeling' with only these negative emotions and sought to escape or control feeling. Although women hoped to control these feelings, almost none described services or treatment that could help them – unsurprising in a region with extensive barriers to care. Given this

challenge, women described how substance use seemed the only way to resolve emotional escalation. As one participant summarized:

I can't find a way to calm down. Whenever I feel like I get to the point where it's building and building I just wanted to go away.

Most women described how they sought to escape or avoid negative feelings that they wanted to 'forget' or did not know how to 'deal with'.

Although most participants explained that drug use did not enable emotional recovery, it enabled women to avoid the pain involved in 'feeling'. Gradually, drug use perpetuated a cycle in which 'the reason you stay high is the stuff you hold inside'. Many women reported relief that, when using drugs, 'I don't have to feel nothing on them. Like anything, no pain, I don't hurt or nothing'. Over time, some women did not trust their emotions without drug use. As one woman put it:

You can't deal with nothing sober. It is not so much I want a Xanax.

Rather than pursuing a high, she sought Xanax because it enabled her to socially and emotionally function; the alternative was not being able to 'deal' with anything. Although women were frank about the emotional roots of their drug use, some morally censured it:

I just don't like dealing with reality, plain and simple. That might sound like a wimp's way out ... but I just always got high so I didn't have to deal with emotions.

In this moral framing, women advocated for 'dealing with' emotions but avoided naming how – perhaps due to limited social support and limited mental health services. After sustained drug use, many were ambivalent about the potential for exposing dangerous feelings. One participant explained:

That's where I feel a lot of rehabs are wrong. They say focus on yourself. That's not good for me. I just don't know what else is hidden there that might open up.

Self-dislocation

Many women described actions related to their addictions that were distinct from 'who they really were'. Although almost all women attributed their drug use initiation to the desire for relief from negative emotions, at the time of the interviews many were confused about how to emotionally engage in their lives. After long periods of drug use, many women were eager to pursue treatment and resolve the mental health challenges they thought sustained their drug use. As women acknowledged long-term drug use, many reflected on the difficulty of knowing who they were in the present. Their former drug-using selves, recalled nearly all participants, were unruly, unmotivated, or existentially absent:

I stayed strung out so long I don't know if I'm still recovering from it or not.

Women's narratives made clear the long-term process of selfdislocation that followed them even as many sought to end their drug use.

Many women had turned to drug use to escape the painful mental health effects of trauma, only to incur further trauma during their drug use that had its own mental health effects. One woman, recalling how she engaged in sex work to support her drug habit, reflected:

I used drugs to forget but I got so addicted that I become someone that I know I wouldn't be.

The trauma she had experienced from rape and the drug use that followed made her feel that 'It's like I'm two, three different people in one body'. Many women mourned the fact that although now, without drug use, they might be different than who they were while using drugs, they still had changed. Describing her mother's reflections on her transformation, one woman commented:

I wasn't who I used to be and she [my mother] would always say, 'I want the old you back'.

Some reflected with ambivalence on changes in their personalities after they no longer used drugs. Having become accustomed to the gregarious personality that drugs engendered, one participant reflected:

I would like to find that happy medium, the social butterfly that doesn't get into all this trouble, and still keep my head about it.

Some women were frustrated with the social reactions they received after ending substance use:

You take me as I am. Maybe on drugs I was more mellow. I mean I was me. But maybe I wasn't as apt to knock the crap out of my family.

With their minds 'clear', women described full emotions and aspects of their personalities they struggled to negotiate.

Navigating stigma

Women reflected on how their social class and sense of respectability shifted after drug use. One woman explained:

I was raised good, that's how I was brought up. I don't think anyone growing up says 'I wanna get high' or 'I wanna be a drug addict'.

Some responded with disgust and disorientation to the physical manifestations of their drug use:

You have track marks everywhere, I mean it's just dirty. And you feel so nasty and I'm not that type of person originally.

Even as women faced stigma for using drugs, many described a continuum of substance use, in which some use was characterized by more extreme consequences. Several women recalled humiliating poses of people falling asleep in their food after using drugs. Others pointed to depths of use that they characterized as taboo:

It's like a junky, they will just jerk [drugs] out right with the kids there, they are so used to doing something. [But] no, my kids never seen me drink. I was actually a good mom.

This mockery of a supposed lack of self-control among people who use drugs (sometimes including themselves) was contrasted to emotions that were properly managed. At the same time, selfidentifying as a 'good mom' responded indirectly to stigma against women who use substances by asserting their continued ability to fulfill gendered care-giving obligations.

A few women described drug addiction as a disease, but the majority endorsed ideas about self-control more common to interventions based on abstinence, which remains the predominant form of treatment in the region. Women expressed disapproval of others who could not control addictions:

If you sit and tell yourself you can't [quit], you can't. You can do anything you tell your body, and your mind, to do.

Other women chastised themselves as they imagined themselves relapsing, arguing that they should 'know better'. Some participants judged these tendencies negatively:

I was weak with my emotions. I went back to the dope to handle the emotions I was going through.

Others articulated similar 'choices' with respect to how women dealt with their mental health:

Real life is, you learn how to deal with things and you don't have to go and get high to deal with them.

Yet, there were few options to learn to 'deal with things'. One woman differentiated between the positive work she accomplished in rehab and the difficulty of applying her mental health plan at home:

In rehab, it's kinda like your safe haven. You're in the bubble, you're not out with the real world. You got everything kinda like handed to you. Ain't gotta worry about nothing.

Women's narratives revealed how they wrestled with stigmatizing expectations about social class, gender, and the 'proper' management of co-occurring disorders. Although at times women named the structural constraints that furthered such stigma (eg the expectation to 'deal with things' outside of rehab without support), they also responded to stigma by differentiating themselves from the supposed real 'junkies' and censured themselves for not fulfilling the immensely challenging task of ending substance use and managing mental trauma without treatment, or economic or community supports.

Discussion

This study explored how rural women reported using drugs to deal with mental health issues. Similar to other studies on rural

women's substance use^{32,33} and other populations of incarcerated women³⁴, women in this study commented that, in the absence of emotional support or therapeutic tools, drug use enabled them to escape emotional pain. However, drug use introduced new mental health challenges: the guilt of lost opportunities, social disappointments, and a sense of dislocation. While affirming research on the gendered social determinants of co-occurring disorders for vulnerable women³⁵, this study offered several contributions. First, rural women's narratives were highlighted, a perspective under-emphasized in the literature on rural cooccurring disorders^{7,8}. Second, literature concerning rural women's 'self-alienation' in substance use^{32,33} was built upon. Finally, this study commented on the appropriateness of studying cooccurring conditions among rural women within an incarcerated population.

This study's findings are located within the larger research on rural health, as well as within Appalachia specifically. Study participants mostly did not comment overtly on their rurality in these interviews - either as an aspect of their identity or a characteristic shaping their behaviors. Central Appalachia has one of the lowest net migration rates in Appalachia, with low population change and less out-migration than previously³⁶. Studies with other central Appalachian populations show intensive interactions among kin in terms of social networks³⁷ and social support²¹, suggesting that participants might be likely to identify themselves within these relationships. In addition, with the interviewer as a therapist from the region, it makes sense that identity was not highlighted as an area to be explained, as can be the case when interviewerinterviewee identities do not concord. Despite the fact that rurality was not overtly discussed, there is not resonance between participants' perspectives and research on Appalachian and rural social dynamics. Interviews illustrated the tension between how women hoped to manage their emotions and how they actually did - through drug use. Echoing previous research in Appalachia describing the desire for independent endurance²⁰, a central theme was women's longing to 'control' their thinking: 'dealing with' their pain and 'knowing better'. Women's aspirations for control emerged in part from gendered expectations to be a strong family member without emotional vulnerability²¹. At the same time, women's emphasis on control echoed moral discourses communicated in justice and healthcare systems framing substance use as an individual choice - even as it clashed with their accounts of social conditions shaping their health. While other research has emphasized the 'erosion of the power of family and community networks to assist in personal coping skills' in rural areas⁸, there is a need to caution against pointing to diminishing social capital of families and communities without an equal emphasis on the high burden of care placed on rural families in the absence of more extensive services.

Previous research on rural women who use drugs or alcohol describes 'self-alienation'^{32,33} – the 'unarticulated, all-consuming, continuous, and escalating meaninglessness of the women's existence'³² – as a cause and result of substance use. This theme was developed further in research on rural women's limited self-esteem¹³. As with the participants in the original work on self-

alienation, many women in this study described extensive trauma and grief emerging from cumulative stress of poverty and demanding relationships that contributed to their emotional pain. The intense, unceasing emotional pain that women experienced made them hesitant to 'feel', leading them to 'run to nowhere'³³ through substance use. Before, during, and after drug use, women described being outside of their minds – trying to escape painful feelings, enduring the dissociation of trauma, looking at different versions of themselves, fearing their minds without the calming effects of drug use. In this way, participants seemed reticent to embrace their 'real selves', arguing that they needed to be controlled.

In contrast to Boyd and Mackey's work on self-alienation, which focused on alcohol use³³, women in this study confronted deeper stigma due to the nature of the substances they used: substances that were criminalized and resulted in incarceration, sometimes involved separate social networks to access, and posed greater immediate risk of overdose. Such stigma existed in spite of the fact that substances were sometimes used in women's immediate families or communities. Study findings indicate that, as a result of this stigma, women experienced what might be more appropriately described as self-dislocation into multiple selves. Such multiplicity is evident in the way that they struggled to recognize themselves at times, descriptions of themselves as distinct from their original selves, and in assertions that their current awareness morally demarcated them from other users. Women's portrayal of their drug-using and non-drug-using histories as actions of separate selves may respond to the pressure to distance themselves from drug use seen to defile their feminine identity³⁸. Their non-drug-using selves enabled women to fulfill idealized family roles. Their selves that used drugs responded to the inherent stress of their families but also inflicted damage on their families. Still, many described how their identities had become hybrid: shaped by continued struggles with addiction and haunted by the same unresolved mental health challenges that caused them to initiate drug use. Women's entrenchment in different social networks during periods of drug use and abstinence furthers this hybridity^{23,39}. In contrast to the selfmedication hypothesis that posited that individuals with mood disorders used substances to self-medicate⁴⁰, the complex trajectories participants described emphasized an overall sense of mental disorientation that could no longer be resolved by substance use.

Is there something to be learned about co-occurring conditions in rural populations from rural women who are incarcerated? Indeed, incarcerated women experience significantly higher prevalence of serious mental disorder and co-occurring substance use disorders than the general population³⁵, related in part to the disproportionate rates of interpersonal violence and poverty they face³⁴. However, community-based samples of rural people who use drugs in Appalachia have high rates of previous incarceration: 71% to 80%^{41,42}. In rural areas, particularly the US South, the rate of women's incarceration increased by 43% between 2004 and 2014 even as crime has declined, driven by the financial incentives of incarceration to local governments and limited diversion

alternatives⁴³. These systemic factors driving rural incarceration suggest that, as the rural incarcerated population grows, its composition may also be changing – including women who previously may not have been jailed.

Based on research on incarceration, it is anticipated that, compared to rural women with co-occurring disorders in the community, incarcerated women with co-occurring disorders would be harmed by incarceration's immediate impacts on mental health and long-term impacts on overall health through limiting access to housing and employment⁴⁴. However, high rates of incarceration among people who use drugs, particularly in regions such as Appalachia, indicate that the vast majority of women who have co-occurring substance use and mental health disorders are incarcerated at some point. Those who are not immediately incarcerated may bear the secondary impacts of incarceration on family or community members⁴⁵. In light of these increasing rates of rural incarceration and its community-wide impacts, there is much to be learned about rural co-occurring conditions even from an incarcerated subset of the population. Moreover, the overlaps between these findings in the rural context and the broader research on incarcerated women with co-occurring disorders indicates the importance of comparing across vulnerable populations, while drawing attention to the particularities of contexts that shape experience and access to treatment.

Limitations

This study may be limited by the secondary analysis of therapeutic sessions, rather than directed interviews. Data may have concentrated disproportionately on behavioral change, potentially restricting further discussion of women's understandings. Second, the sample was drawn from several jails in Appalachia and is entirely white; therefore, some aspects of study results may not be transferable to a broader sample of rural women. Third, while the motivational interviewing sessions encouraged participants to formulate strategies for managing their co-occurring conditions, questions did not engage directly with women's treatment-seeking behavior.

Conclusion

A wealth of research has demonstrated the effectiveness of cognitive behavioral therapy for low-income women similar to those in this study⁴⁶. Specific versions of cognitive behavioral

therapy may be most relevant for rural women with co-occurring conditions, such as those that are adapted for particular mental health disorders, in combination with substance use treatment⁴⁷ and trauma-informed approaches to address the long-term impacts of violence experienced by many women in this population⁴⁸. Yet reviews of research on behavioral healthcare for vulnerable women underscore the fact that treatment is not even an option for the vast majority of women, not due to individual attitudes but to immense social and structural barriers that prevent women from identifying their co-occurring conditions as capable of treatment, reaching treatment, and sustaining the course of treatment necessary to address their extensive challenges⁴⁹. Practitioners must both receive support for their work and be familiar with the cultural variable experiences of behavioral health among rural residents⁵⁰. Mental health technologies, such as smartphone applications, may reduce some of the barriers that rural vulnerable women face in seeking treatment; however, further research and community input must be used to understand remaining questions about accessibility, literacy, and clinical support⁵¹. Although the study's goal was not to examine women's experiences in treatment, it was found that few women described the option of treatment in their narratives about mental health - in spite of the fact that treatment can be court mandated for incarcerated women - confirming existing research on the need first and foremost to increase the capacity of rural behavioral systems and decrease structural barriers⁵. In an era of evidencebased behavioral healthcare, study results indicate that, in addition to the need to attend to the dimensions of effective treatment, the need to identify and test the implementation strategies best suited to engaging rural women with co-occurring conditions in treatment is perhaps the most urgent. Such investigation must encompass not only the logistics of getting women to treatment, but also how to keep women in treatment when the social and economic demands they face make prioritizing one's own care so difficult.

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REFERENCES:

1 Conway KP, Compton W, Stinson FS, Grant BF. Lifetime comorbidity of DSM-IV mood and anxiety disorders and specific drug use disorders: results from the National Epidemiologic Survey on Alcohol and Related Conditions. *Journal of Clinical Psychiatry* 2006; **67(2):** 247-257. https://doi.org/10.4088/JCP.v67n0211 PMid:16566620

2 Kessler RC, Nelson CB, McGonagle KA, Edlund MJ, Frank RG, Leaf PJ. The epidemiology of co-occurring addictive and mental disorders: implications for prevention and service utilization.

American Journal of Orthopsychiatry 1996; **66(1):** 17-31. https://doi.org/10.1037/h0080151 PMid:8720638

3 Kessler RC. The epidemiology of dual diagnosis. *Biological Psychiatry* 2004; **56(10):** 730-737. https://doi.org/10.1016 /j.biopsych.2004.06.034 PMid:15556117

4 Drake RE, Wallach MA. Dual diagnosis: 15 years of progress. *Psychiatric Services* [Internet]. 2000; **51(9):** 1126-1129. Available: http://psychiatryonline.org/doi/abs/10.1176/appi.ps.51.9.1126 (Accessed 3 May 2018). https://doi.org/10.1176/appi.ps.51.9.1126

PMid:10970914

5 Priester MA, Browne T, Iachini A, Clone S, DeHart D, Seay KD. Treatment access barriers and disparities among individuals with co-occurring mental health and substance use disorders: an integrative literature review. *Journal of Substance Abuse Treatment* [Internet]. 2016; **61:** 47-59. https://doi.org/10.1016 /j.jsat.2015.09.006 PMid:26531892

6 McDonald TW, Curtis-Schaeffer AK, Theiler AA, Howard EKM. Providers' perceptions of prevalent mental and behavioral health problems: differences and similarities across urban, rural, and frontier areas. *Journal of Rural Mental Health* [Internet]. 2014; **38(1):** 36-49. Available: http://doi.apa.org/getdoi.cfm?doi=10.1037 /rmh0000009 (Accessed 4 January 2018). https://doi.org/10.1037 /rmh0000009

7 Simmons LA, Havens JR. Comorbid substance and mental disorders among rural Americans: results from the national comorbidity survey. *Journal of Affective Disorders* 2007; **99(1-3):** 265-271. https://doi.org/10.1016/j.jad.2006.08.016 PMid:16978706

8 Zhang Z, Infante A, Meit M, English N, Dunn M, Harper Bowers K. An analysis of mental health and substance abuse disparities & access to treatment services in the Appalachian region. 2008. Available: https://www.arc.gov/assets/research_reports /AnalysisofMentalHealthandSubstanceAbuseDisparities.pdf (Accessed 8 December 2017).

9 Hauenstein EJ, Das Peddada S. Prevalence of major depressive episodes in rural women using primary care. *Health Care for the Poor and Underserved* [Internet]. 2007; **18(1):** 185-202. Available: http://muse.jhu.edu/content/crossref/journals /journal_of_health_care_for_the_poor_and_underserved /v018/18.1hauenstein.html (Accessed 12 January 2018). https://doi.org/10.1353/hpu.2007.0010 PMid:17337807

10 Price SK, Proctor EK. A rural perspective on perinatal depression: prevalence, correlates, and implications for help-seeking among low-income women. *Journal of Rural Health* [Internet]. 2009; **25(2):** 158-166. https://doi.org/10.1111 /j.1748-0361.2009.00212.x PMid:19785581

11 Keyes KM, Cerdá M, Brady JE, Havens JR, Galea S. Understanding the rural-urban differences in nonmedical prescription opioid use and abuse in the United States. *American Journal of Public Health* 2014; **104(2):** e52-e59. https://doi.org /10.2105/AJPH.2013.301709 PMid:24328642

12 Burton LM, Lichter DT, Baker RS, Eason JM. Inequality, family processes, and health in the 'new' rural America. *American Behavioral Scientist* 2013; **57(8):** 1128-1151. https://doi.org /10.1177/0002764213487348

13 Hauenstein EJ. No comfort in the rural South: women living depressed. *Archives of Psychiatric Nursing* [Internet]. 2003; **17(1)**: 3-11. https://doi.org/10.1053/apnu.2003.6 PMid:12642882

14 Mohatt DF, Bradley MM, Adams SJ, Morris CD. *Mental health and rural America: 1994–2005.* Washington, DC: US Department of Health and Human Services, Health Resources and Services Administration, Office of Rural Health Policy, 2005.

15 Thomas D, Macdowell M, Glasser M. Rural mental health workforce needs assessment – a national survey. *Rural and Remote Health* 2012; **12:** 2176. Available: http://www.rrh.org.au/journal /article/2176 (Accessed 18 October 2019).

16 Rost K, Fortney J, Fischer E, Smith J. Use, quality, and outcomes of care for mental health: the rural perspective. *Medical Care Research and Review* 2002; **59(3):** 231-265. https://doi.org/10.1177 /1077558702059003001 PMid:12205828

17 Hauenstein EJ, Petterson S, Rovnyak V, Merwin E, Heise B, Wagner D. Rurality and mental health treatment. *Administration and Policy in Mental Health and Mental Health Services Research* 2007; **34(3):** 255-267. https://doi.org/10.1007/s10488-006-0105-8 PMid:17165139

18 Staton-Tindall M, Duvall JL, Leukefeld C, Oser CB. Health, mental health, substance use, and service utilization among rural and urban incarcerated women. *Women's Health Issues* 2007;
17(4): 183-192. https://doi.org/10.1016/j.whi.2007.02.004
PMid:17560124

19 Pullen E, Oser C. Barriers to substance abuse treatment in rural and urban communities: counselor perspectives. *Substance Use and Misuse* 2014; **49(7):** 891-901. https://doi.org/10.3109 /10826084.2014.891615 PMid:24611820

20 Snell-Rood C, Hauenstein E, Leukefeld C, Feltner F, Marcum A, Schoenberg N. Mental health treatment seeking patterns and preferences of Appalachian women with depression. *American Journal of Orthopsychiatry* 2017; **87(3):** 233-241. https://doi.org /10.1037/ort0000193 PMid:27322157

21 Snell-Rood C, Merkel R, Schoenberg N. Negotiating the interpretation of depression shared among kin. *Medical Anthropology* 2018; **37(7):** 538-552. https://doi.org/10.1080 /01459740.2018.1424151 PMid:29333879

22 Nehls N, Sallmann J. Women living with a history of physical and/or sexual abuse, substance use, and mental health problems. *Qualitative Health Research* 2005; **15(3):** 365-381. https://doi.org /10.1177/1049732304272917 PMid:15761105

23 Buer L-M, Leukefeld CG, Havens JR. 'I'm stuck': women's navigations of social networks and prescription drug misuse in central Appalachia. *North American Dialogue* 2016; **19(2):** 70-84. https://doi.org/10.1111/nad.12044 PMid:28736509

24 Paulozzi LJ, Xi Y. Recent changes in drug poisoning mortality in the United States by urban-rural status and by drug type. *Pharmacoepidemiology and Drug Safety* 2008; **17(10):** 997-1005. https://doi.org/10.1002/pds.1626 PMid:18512264

25 Staton M, Ciciurkaite G, Havens J, Tillson M, Leukefeld C, Webster M, et al. Correlates of injection drug use among rural Appalachian women. *Journal of Rural Health* 2018; **34(1):** 31-41. https://doi.org/10.1111/jrh.12256 PMid:28685884

26 Dennis ML. *Global Appraisal of Individual Needs (GAIN)*. Bloomington, IN: Chestnut Health Systems, 1998.

27 Weir BW, O'Brien K, Bard RS, Casciato CJ, Maher JE, Dent CW, et al. Reducing HIV and partner violence risk among women with criminal justice system involvement: a randomized controlled trial

of two motivational interviewing-based interventions. *AIDS Behavior* 2009; **13(3):** 509-522. https://doi.org/10.1007 /s10461-008-9422-0 PMid:18636325

28 Miller WR, Rollnick S. *Motivational interviewing: preparing people to change. 2nd ed.* New York, NY: Guilford Press, 2002. https://doi.org/10.1097/01445442-200305000-00013

29 Hsieh H-F, Shannon SE. Three approaches to qualitative content analysis. *Qualitative Health Research* 2005; **15(9):** 1277-1288. https://doi.org/10.1177/1049732305276687 PMid:16204405

30 Bernard HR. *Research methods in anthropology*. Lanham, MD: AltaMira Press, 2006.

31 Saldaña J. *The coding manual for qualitative researchers*. Los Angeles, CA: Sage, 2012.

32 Boyd MR, Mackey MC. Running away to nowhere: rural women's experiences of becoming alcohol dependent. *Archives of Psychiatric Nursing* 2000; **14(3):** 142-149. https://doi.org/10.1053 /py.2000.6385 PMid:10870252

33 Boyd MR, Mackey MC. Alienation from self and others: the psychosocial problem of rural alcoholic women. *Archives of Psychiatric Nursing* 2000; **14(3):** 134-141. https://doi.org/10.1053 /py.2000.6383 PMid:10870251

34 DeHart DD. Pathways to prison. *Violence Against Women* 2008; **14(12):** 1362-1381. https://doi.org/10.1177/1077801208327018 PMid:19008544

35 Lynch SM, DeHart DD, Belknap JE, Green BL, Dass-Brailsford P, Johnson KA, et al. A multisite study of the prevalence of serious mental illness, PTSD, and substance use disorders of women in jail. *Psychiatric Services* 2014; **65(5):** 670-674. https://doi.org/10.1176 /appi.ps.201300172 PMid:24487481

36 Pollard K, Jacobsen LA. *The Appalachian region: a data overview from the 2011-2015 American Community Survey Chartbook.* Washington, DC: Appalachian Regional Commission, 2017.

37 Young AM, Rudolph AE, Havens JR. Network-based research on rural opioid use: an overview of methods and lessons learned. *Current HIV/AIDS Reports* 2018 Apr; **15(2):** 113-119. https://doi.org /10.1007/s11904-018-0391-2 PMid:29457200

38 Andersen D. Stories of change in drug treatment: a narrative analysis of 'whats' and 'hows' in institutional storytelling. *Sociology of Health and Illness* 2015; **37(5):** 668-682. https://doi.org/10.1111 /1467-9566.12228 PMid:25664499

39 Schlosser AV, Hoffer LD. The psychotropic self/imaginary: subjectivity and psychopharmaceutical use among heroin users with co-occurring mental illness. *Culture, Medicine, and Psychiatry* 2012; **36(1):** 26-50. https://doi.org/10.1007/s11013-011-9244-9 PMid:22246852

40 Harris KM, Edlund MJ. Self-medication of mental health problems: new evidence from a national survey. *Health Services Research* 2005; **40(1):** 117-134. https://doi.org/10.1111

/j.1475-6773.2005.00345.x PMid:15663705

41 Oser CB, Leukefeld CG, Staton Tindall M, Garrity TF, Carlson RG, Falck R, et al. Rural drug users: factors associated with substance abuse treatment utilization. *International Journal of Offender Therapy and Comparative Criminology* [Internet]. 2011; **55(4):** 567-586. https://doi.org/10.1177/0306624X10366012 PMid:20463206

42 Young AM, Havens JR, Leukefeld CG. A comparison of rural and urban nonmedical prescription opioid users' lifetime and recent drug use. *American Journal of Drug and Alcohol Abuse* 2012; **38(3)**: 220-227. https://doi.org/10.3109/00952990.2011.643971 PMid:22211586

43 Kang-Brown J, Subramanian R. *Out of sight: the growth of jails in rural America*. New York, NY: Vera Institute for Justice, 2017.

44 Massoglia M, Pridemore WA. Incarceration and health. *Annual Review of Sociology* 2015; **41:** 291-310. https://doi.org/10.1146 /annurev-soc-073014-112326 PMid:30197467

45 Turney K. Stress proliferation across generations? Examining the relationship between parental incarceration and childhood health. *Journal of Health and Social Behavior* 2014; **55(3):** 302-319. https://doi.org/10.1177/0022146514544173 PMid:25138199

46 van der Waerden JEB, Hoefnagels C, Hosman CMH. Psychosocial preventive interventions to reduce depressive symptoms in low-SES women at risk: a meta-analysis. *Journal of Affective Disorders* 2011; **128(1-2):** 10-23. https://doi.org/10.1016 /j.jad.2010.02.137 PMid:20346517

47 McGovern MP, Lambert-Harris C, Acquilano S, Xie H, Alterman AI, Weiss RD. A cognitive behavioral therapy for co-occurring substance use and posttraumatic stress disorders. *Addictive Behaviors* 2009; **34(10):** 892-897. https://doi.org/10.1016 /j.addbeh.2009.03.009 PMid:19395179

48 Mason R, O'Rinn SE. Co-occurring intimate partner violence, mental health, and substance use problems: a scoping review. *Global Health Action* 2014; **7:** 24815. https://doi.org/10.3402 /gha.v7.24815 PMid:25416321

49 Levy LB, O'Hara MW. Psychotherapeutic interventions for depressed, low-income women: a review of the literature. *Clinical Psychology Review* 2010; **30(8):** 934-950. https://doi.org/10.1016 /j.cpr.2010.06.006 PMid:20678834

50 O'Neill LK. Mental health support in northern communities: reviewing issues on isolated practice and secondary trauma. *Rural and Remote Health* 2010; **10(2):** 1369. Available: http://www.rrh.org.au/journal/article/1369 (Accessed 18 October 2019).

51 Ralston AL, Andrews III AR, Hope DA. Fulfilling the promise of mental health technology to reduce public health disparities: review and research agenda. *Clinical Psychology: Science and Practice* 2019; **26(1):** e12277. https://doi.org/10.1111/cpsp.12277

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