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A Phenomenological Study of Barriers and Needs Related to Opioid Prevention, Treatment, and Recovery in Rural Alabama

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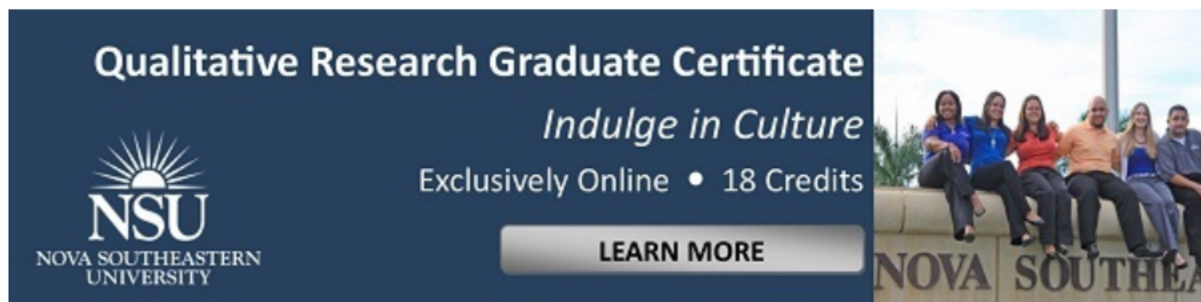

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Abstract

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Keywords

phenomenology, rural, opioids, opioid crisis, challenges, needs, Alabama, directed content analysis, community-engaged research, focus groups, prevention, treatment, recovery

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TQR WHERE THE WORLD COMES TO LEARN QUALITATIVE RESEARCH

A Phenomenological Study of Barriers and Needs Related to Opioid Prevention, Treatment, and Recovery in Rural Alabama

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Rural areas with limited access to preventive care, treatment, and recovery services are particularly affected by the opioid crisis. This study identified four rural areas in Alabama that had higher opioid prescription rates than the state and national average. This study explores the views of three groups [healthcare service providers, persons who use/used opioids (PWUO), and community stakeholders] on the barriers to and needs for opioid prevention, treatment, and recovery services using a phenomenological qualitative design. Purposeful and snowball sampling was used to recruit 95 participants across 12 focus groups which were audio-recorded and transcribed verbatim. A seven-member analysis team conducted a directed content analysis using a semi-structured script and seeded themes with a rigorous plan to promote trustworthiness. Regardless of group type, commonly identified barriers and needs related to rural locality, financial factors, cultural norms, and stigma among others. Prominent needs included education and healthcare coordination. Findings suggest recommendations for community and provider interventions to address the knowledge gaps and recovery needs. They also supported the suitability of the Telehealth Extension for Community Healthcare Outcomes, a videoconferencing tool that networks multidisciplinary experts and professionals around specialty topics, as a promising intervention to increase training among providers.

Keywords: phenomenology, rural, opioids, opioid crisis, challenges, needs, Alabama, directed content analysis, community-engaged research, focus groups, prevention, treatment, recovery

Introduction

According to the most recent data reported by the Centers for Disease Control and Prevention (CDC), about 75% (80,411) of 106,699 drug overdose deaths in the US in 2021 involved opioids (NIDA, 2023). Opioid medications are a class of drugs prescribed for chronic or acute pain treatment that block pain pathways and produce a sense of relaxation and happiness (NIDA, 2021). They can be highly addictive, and misuse can occur easily, resulting in overdoses and death (NIDA, 2021). In 2013, a third wave of widespread opioid use began, characterized by synthetic opioids such as fentanyl, leading to a continuous and growing rise

in opioid-involved deaths—a 281% increase since 2010 (21,089; NIDA, 2023). However, the impact of this epidemic varies significantly across the regions in the United States.

In 2021, 1,408 people in Alabama died from a drug overdose (CDC, 2023a). Provisional estimates indicate that the number rose to 1,484 in 2022, with about 75% (1,100) attributed to opioids (CDC, 2023b). Although the rate of opioid prescribing is decreasing, the most current data in 2020 showed that Alabama dispensed 80.4 prescriptions for every 100 people (CDC, 2021). This was almost double the country's rate of 43.3, and Alabama continues to have the highest national opioid prescription rate since 2006 (CDC, 2021; Lee et al., 2020).

At the foot of the mountain chains running along the Eastern Seaboard, northwest Alabama falls at the intersection of two historically under-resourced areas: the Black Belt and the Appalachian region. The Black Belt name arises from its fertile, dark soil. Now, its main characteristics are its high poverty rate and greater proportion of African American residents compared to other Southern states (Webster & Bowman, 2008). Similarly, the Appalachian region is known for its high poverty rate and cultural and economic isolation (Oliver & Thomas, 2014). This study focused on counties at the intersection of the Black Belt and Appalachian regions, an area at high-risk for poor health care outcomes with low access to health care (Lee et al., 2020). These communities are heavily impacted by the opioid crisis with limited resources to respond, according to a recent report analyzing opioid-related prevention, treatment, and recovery services in the counties of Franklin, Marion, Winston, and three rural census tracts of Walker (Lee et al., 2020). Notably, out of 67 counties in Alabama, these have some of the highest opioid prescription rates per 100 people, poverty rates, uninsured rates, and limited access to healthcare (CDC, 2020a; Lee et al., 2020). In addition, limited access to substance use disorder/opioid use disorder (SUD/OUD) treatment facilities has increased this region's disparities. These counties have extremely few opioid addiction prevention, treatment, and recovery facilities (Lee et al., 2020). In this focal area of 177,567 (2020 population), there are only four substance use facilities, one mental health facility, one rural health center, and 12 healthcare providers who have received a waiver from the Drug Enforcement Administration (DEA) to prescribe buprenorphine, a drug used in medication-assisted treatment for opioid use disorder (Lee et al., 2020).

Previous studies have identified common barriers to opioid prevention, treatment, and recovery. For example, stigma, a lack of understanding of addiction and naloxone (a rescue medication for opioid overdose reversal), legal and regulatory restrictions, inadequate health professional training, a limited number of health professionals, and insufficient funding for public agencies appear frequently (Gale et al., 2017; Mackey et al., 2019; Madras et al., 2020; National Academies of Sciences et al., 2019; Winstanley et al., 2016). Specifically, regarding medication-assisted treatment, key barriers are the fragmentation of the care system, limited insurance coverage, and financial barriers (Gale et al., 2017; Mackey et al., 2019; Madras et al., 2020; National Academies of Sciences et al., 2019; United States Government Accountability Office, 2020). In addition, particularly in rural areas, access to care services is often limited by stigma, low income, limited capacity and number of health facilities and providers, a lack of public funding, and inadequate transportation alongside long distances to facilities (Bunting et al., 2018; Corso & Townley, 2016; Gale et al., 2017).

In rural areas in northwest Alabama that are notably under-resourced and vulnerable to the opioid epidemic, these problems are particularly acute (Lee et al., 2020). Yet, there is limited accompanying evidence on the perspectives of community members who are directly and indirectly impacted by the opioid crisis, particularly as it relates to their self-identified needs and perceived barriers. As part of a national initiative by the Health Resources and Services Administration through the Rural Communities Opioid Response Program, this study aimed to use a qualitative focus group approach to identify barriers and needs related to opioid prevention, treatment, and recovery services among community members, providers, and

people who use/used opioids (PWUO) in an area heavily affected by the opioid crisis. The findings will provide an understanding of the impact of opioids on this region and provide informed, focused community intervention recommendations tailored to the needs of the rural community. A discrete goal was to explore the perceived suitability and acceptability of the TeleECHO model as a potential intervention to enhance professional competency related to opioid care.

Methods

Research Design

This qualitative study utilized a phenomenological approach with directed content analysis of focus group transcripts that were part of a concurrent mixed methods needs analysis of opioid knowledge and needs among people living and working in rural northwest Alabama. This approach allows description of the "what" and "how" of the lived experience of participants (van Manen, 1997). It employs bracketing of researcher's judgement to explain the phenomenon from the participant's viewpoint (Moustakas, 1994). Hence, the philosophical assumption of reality comprises the subjective and objective description representing both the experiences and interpretations that people make of phenomena (van Manen, 2014). This approach was chosen as it supports a description of the essence of the community experiences related to opioids through the perspectives of community members who are directly and indirectly impacted. The directed content analysis (described below) will allow the focus groups to be guided by existing knowledge and theory. The community issues that this study addressed were the opioid crisis and barriers and needs related to opioid services in the rural regions. The participants were community members, PWUO, and key informants who were providers of professional health services including medical and behavioral health providers who either lived or worked in a four-county area of northwest Alabama.

Data Collection

Approval from the Institutional Review Board of the research team's university was obtained prior to the initiation of all study activities. This study is a part of the Greater Rural Opioid Wellness (GROW) Project (see https://grow.ua.edu for more information), funded by the U.S. Health Resources & Services Administration Rural Communities Opioid Response Program (HRSA RCORP) Planning Grant (#G25RH33020). The project is a community-engaged effort to conduct a multi-county needs assessment and build a collaborative community response to the opioid crisis, including improved access to opioid treatment expertise. It featured the provision of behavioral health professional education through the GROW ECHO, a Telehealth Extension for Community Healthcare Outcomes program (Arora et al., 2011). To ground this work in the community, the research team established a multi-sector consortium with relevant professional and community organizations in the state, including public health agencies, hospitals, mental health agencies, departments of human resource, substance use treatment programs, substance use education groups, and others to guide and assist in all study activities.

Semi-structured focus groups were conducted with residents of four counties in northwest Alabama. Each focus group consisted of six to eight participants, facilitated by one person (75% by JE; 25% by HL) with one assistant. The groups were conducted at the consortium member facilities and lasted 90 minutes. The research team members either participated as facilitators and/or assistants and were licensed practitioners (i.e., social worker, nurse) and/or trained researchers. Participants received a written and oral description of the

study with opportunities to ask questions. They then provided written consent and completed a short survey before the start of the discussion. Approved interview guides presented questions tailored to each group type (i.e., professional, PWUO, or general community). Guided by knowledge and theory (described below), topics were all related to opioids, organized by prevention, treatment, and recovery, and included knowledge, attitudes, and perceptions of opioids; opioid overdose, treatment and barriers, community needs or gaps in services, and community strengths; and education and training. After the focus group, the facilitator provided a summary of the session, including observations and impressions based on group participation, and requested feedback on the accuracy of these reflections. Each session was audio-recorded anonymously to protect identities, and participants received a gift card and refreshments for their participation. Focus groups were transcribed verbatim, identified where necessary and reviewed by the investigative team for errors. Participant identities were never linked with data or recordings.

Participants

The focus groups consisted of three general types of participants: (1) professionals who provide direct or indirect services related to SUD/OUD, (2) PWUO engaged in recovery for OUD, and (3) community stakeholders, including educators, law enforcement, business leaders, political leadership, and administrators. Data was collected from these three diverse groups as they could provide the information necessary for later development of comprehensive intervention strategies to enhance service and program gaps in the community. Participants were 88 people recruited through a direct invitation by consortium members in contact with individuals knowledgeable about opioids, service provision, and substance use treatment and recovery services in these areas, and through emails and phone calls. Snowball sampling from people who had participated in the study yielded some additional participants. Eligibility criteria included: age > 18 years old; ability to speak, read, and write in English; ability to provide voluntary written informed consent; identification with one of the participant populations, and residence or employment in the study area. Twelve focus groups were conducted with a total of 88 participants. To protect participant privacy, information was not recorded about past or present opioid use in the provider and community member groups, so these focus groups may have included participants of more than one type.

Analysis

Focus group transcripts were analyzed using directed content analysis (Hsieh & Shannon, 2005). This method allows existing theory and knowledge to guide data collection and analysis in the identification and interpretation of emergent themes and patterns (Hsieh & Shannon, 2005). Knowledge that informed the approach included domain-specific information about opioids (particularly focusing on prevention, treatment, and recovery separately) and a theory-based framework of public health (the Meikirch Model, a complex adaptive system approach to understanding individual health embedded within scoping social contexts; Bircher & Hanh, 2016). Seven members of the investigative team reviewed and coded the transcripts for themes using NVivo software. Each analyst separately coded the transcripts both inductively and then deductively. Each focus group resulted in one transcript for a total of 12 transcripts.

First, all transcripts were treated as one group and read from beginning to end to gain an understanding of the content. Afterwards, an orientation meeting was held (led by HL and JE) to provide guidance to coders about the methodological approach and software. Then, all transcripts were read again, using an initial basic structural coding to identify content related

to the research question (e.g., What are the barriers to/needs for prevention/treatment/recovery service?) and in-vivo coding that utilizes the words of participants instead of words and phrases developed by the researchers (Saldaña, 2016). The team met to compare and discuss preliminary themes, explain how each analyst operationalized each theme, and refine them. Opioid information and the Meikirch model were discussed to inform the themes selected and identify additional potential themes that had not yet emerged. Then, each transcript was read again and coded using the generated themes. At the second consensus meeting, the themes were further refined by combining, splitting into subcategories, or adding newly derived themes. Then, all transcripts were analyzed again using the refined themes. A final consensus meeting was held to finalize the themes, and three distinctive exemplars of each theme were carefully chosen by each analyst. The exemplars were compared to assess whether the views of each type (provider, PWUO, and community members) were similar or different. Consistency was found, and exemplary quotes that best represented the views of all three types were selected.

Trustworthiness

The research team implemented multiple strategies to bolster the rigor of the qualitative study. First, credibility was promoted through triangulation, peer briefing with the investigative team, simple member checking at the end of the focus groups and checking of results with the consortium and community partners (Devers, 1999; Mabuza et al., 2014). Triangulation included using more than two analysts to promote unbiased conclusion, collection of rich information about the regional context, elicitation of community expertise to inform interpretation, and review of the qualitative results for consistency with quantitative data collection reported elsewhere (Lee et al., n.d.). Second, transferability was promoted through a detailed description of the study setting (provided above) and purposive recruitment in collaboration with community partners to ensure participants knowledgeable about the phenomena (Devers, 1999; Mabuza et al., 2014). Third, dependability was promoted through adherence to a pre-determined semi-structured script and focus group protocol and an audit trail of the data collection, analysis process, and peer briefing with the team (Devers, 1999; Mabuza et al., 2014). Lastly, confirmability was promoted through triangulation using the seven-member analysis team, group reflexivity processing, consensus agreement on representative exemplars, and implementation of feedback on research presentations (Devers, 1999).

Results

A directed content analysis of the 12 focus groups (8 groups with health care providers, one group with PWUO, and three groups with community members) revealed themes related to barriers and needs within the three domains of prevention, treatment, and recovery. Below is a description of the characteristics of each group (see also Tables 1-3) and overarching themes of intertwined barriers and needs.

Healthcare Professionals

A total of 62 healthcare and health-related professionals participated in the focus group, and all completed the demographic intake survey (Table 1). The majority were younger than 60 years old (88.7%), female (90.3%), and White (82.3%). Their professions consisted of social workers (24.2%), financial support worker/administrative assistants (19.3%), counselor/therapists (16.1%), prevention workers (14.5%), case managers (6.5%), and others.

Almost half of the participants have been working for more than 19 years (45.2%). About one-fourth worked in the fields of protective services/social services (29%) or substance use (25.5%). In general, they reported good financial security.

Table 1

Characteristics of Healthcare Professional Groups (N=62)

		N	%
Age	18-39	25	40.3
	40-59	30	48.4
	60 and above	6	9.7
Gender	Female	56	90.3
	Male	6	9.7
Race	White	51	82.3
	Black	10	16.1
	Multiracial	1	1.6
Education	Below Bachelor's degree	19	30.6
	Bachelor's degree or above	43	69.4
Location where professional practices	Franklin	31	50
	Marion	15	24.2
	Walker	12	19.4
	Winston	4	6.5
Profession	Social Worker/Services	15	24.2
	Financial Support Worker	12	19.3
	Counselor/Therapist	10	16.1
	Prevention	9	14.5
	Case Management	4	6.5
	Nurse	3	4.8
	Peer Support	2	3.2
Subspecialty	Protective or Social Services	18	29
	Substance Use	16	25.8
	Prevention	10	16.1
	Mental Health	8	12.9

PWUO

A total of one focus group was conducted with 11 participants who reported current or past opioid use, but only 8 chose to complete the demographic intake (Table 2). More than half were younger than 60 years old (62.5%). More than three-quarters of the participants were White (75.0%). Half were female (50.0%), and half reported residing with family or friends (50.0%). Five had an annual household income of between $10,000-$24,999 (62.5%).

Table 2

Sociodemographic Characteristics of PWUO Groups (N=8)

		N	%
Age	30-49	2	25
	40-59	3	37.5
	60 and above	3	37.5
Gender	Female	4	50
	Male	4	50
Race	White/Caucasian	6	75
	Black/ African American	2	25
Education	Below high school	3	37.5
	High school or above	5	62.5
Location	Walker	9	50
Current living situation	I rent a room	2	25
	I rent a house or apt	1	12.5
	I own a house or apt	1	12.5
	I stay with family or friends	4	50
Health insurance	No	3	37.5
	Yes	4	50
Employment	No	4	50
	Yes	3	37.5
Household income	$10,000-$24,999	5	62.5

Community Members

A total of three focus groups with total of 22 members were included in the analysis, but only 18 participants completed the demographic intake (Table 3). The majority were younger than 60 years old (72.2%), White (77.8%), owners of a house or an apartment (94.4%), and female (66.7%). All the participants had health insurance and were employed. More than half of them had an annual household income of more than $100,000 (61.1%).

Table 3

Sociodemographic Characteristics of Community Member Groups (N =18)

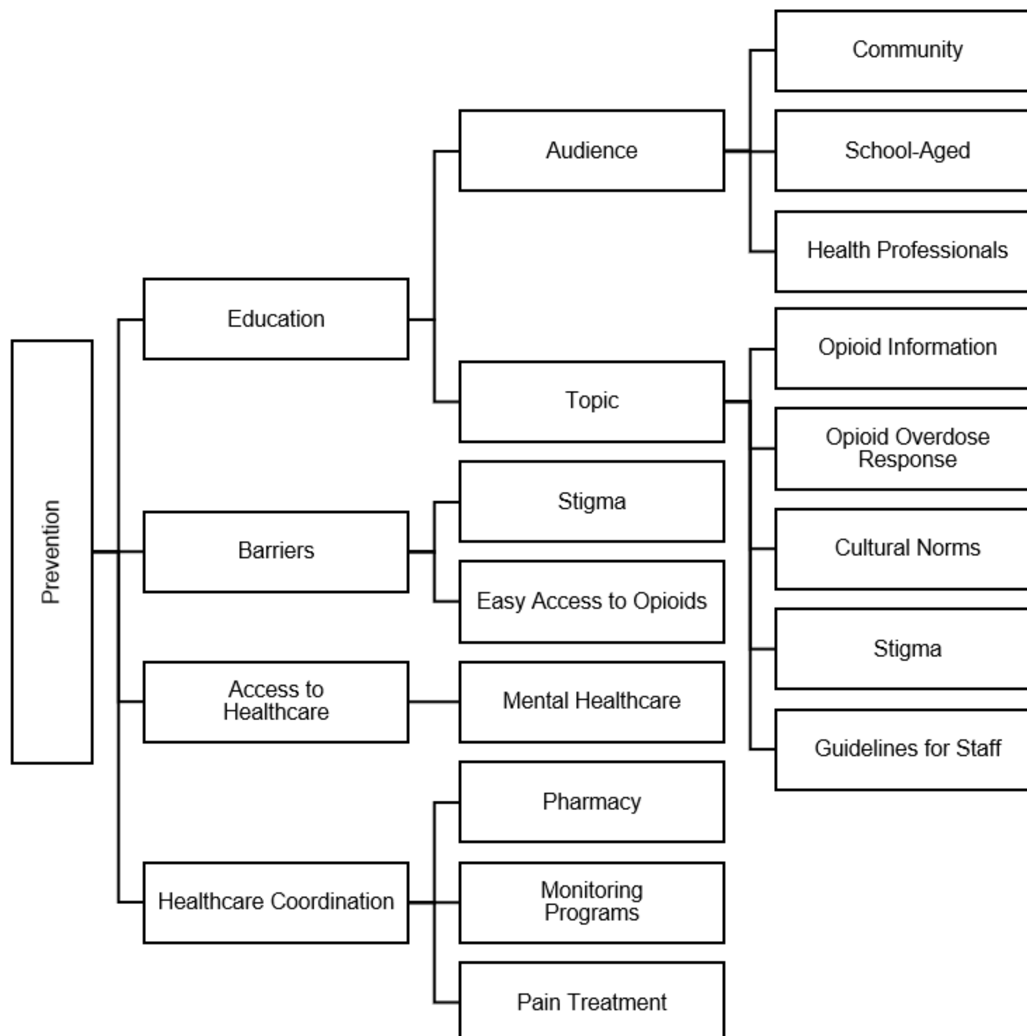
		N	%
Age	30-49	9	50
	50-59	4	22.2
	60 and above	5	27.8
Gender	Female	12	66.7
	Male	6	33.3
Race	White/Caucasian	14	77.8
	Black/ African American	2	11.1
	American Indian/Alaska native	2	11.1
Education	Below bachelor's degree	5	27.8
	Bachelor's degree or above	13	72.2
Location	Walker	9	50

	Franklin	1	5.6
	Winston	7	38.9
Current living situation	I rent a house or apt	1	5.6
	I own a house or apt	17	94.4
Health insurance	Yes	18	100
Employment	Yes	18	100
Household income	$25,000-$44,999	3	16.7
	$45,000-$74,000	1	5.6
	$75,000-$99,999	2	11.1
	$100,000 or more	11	61.1

Domain: Prevention

Figure 1 presents a visual depiction of the results for Prevention, from broader themes on the left to more circumscribed codes on the right. Four key themes emerged in the areas of Education, Barriers, Access to Healthcare, and Healthcare Coordination.

Figure 1
Prevention-Related Themes with Corresponding Codes Arising from Focus Groups Conducted with Healthcare Providers, Community Members, and People Who Used/Use Opioids



Note. Healthcare Providers, Community Members, and People Who Used/Use Opioids

Education

A prominent theme that pervaded the focus groups was the need for a broad-spectrum education approach that focused on communicating to three key audiences: community members; school-aged children, adolescents, and young adults; and professionals. Participants described a need for information about opioids and opioid toxicity, opioid overdose and the response to overdoses, cultural norms of northwest Alabama and ways they support the opioid crisis, stigma and its harms as well as ways to reduce it, and specific guidelines tailored for individuals in different community roles, especially professional roles. Focus group participants emphasized how a lack of knowledge or misinformation contributed to opioid misuse or overdose:

> I think that people should be more informed of the seriousness. A lot of people, they don't think that opiate addiction is real, including some clients. They just go through the motions and a lot of them don't accept it.

For community members, they noted a need for education about opioid addictiveness, dangers of use, overdose symptoms, and rescue medication. Participants described how prescription opioids can be a preferred coping mechanism to treat daily pain or mental health issues and how people overdose and become addicted without intending to due to insufficient knowledge. They suggested church- and community-based approaches to teaching general opioid information and that this method could also decrease the existing stigma while creating a supportive environment for those who use opioids to seek help. The importance of naloxone and gaps in community knowledge emerged in many of the discussions:

> I think there needs to be more education about it [Narcan] because personally, I mean, I've not seen any kind of meeting, you know about "Let me tell you all about Narcan." You know, if you have a loved one—because everybody that I know has a loved one that has a problem---and they're not doing that in the communities, but they're doing it in the fire departments, and when they're doing their research and their trainings---and the volunteer fire departments---it's that little group that knows about the Narcan.

For school-aged children, adolescents, and young adults, participants reported that community factors, such as opioid availability and normality of use, often influenced children to perceive opioids as not dangerous or addictive. They stressed the need for additional school-based education, improved methods, and outreach that starts at younger ages (i.e., kindergarten), also suggesting smaller group interventions and leveraging existing group leaders (e.g., athletes, club).

For healthcare and other professionals, participants from all three groups described a lack of opioid-specific knowledge among professionals. They expressed that patients receiving treatment for pain and injury may be at risk of dependency from trusting physicians, who may overprescribe opioids, such as giving 15-day supply instead of three days. They contextualized this concern, asserting that prescribers may feel the need to give opioids due to insufficient training on best practices, a desire to help, and an inability to follow-up patients after care. They recommended that providers receive more training on opioid prescribing; that patients should be given easy-to-understand instructions on appropriate opioid use and dangers related to addiction and side effects; and that law enforcement officers receive training about mental health aspects of addiction and the ways punishment can lead to poor treatment.

Barriers

In the second theme, participants highlighted key barriers to addressing opioid use related to rurality, focusing on easy access to opioids and the impact of stigma. They described "medication shopping" (collecting prescriptions from multiple providers to use or sell) and the challenges of rural life that promote it, such as the requirement to drive an hour to see a provider (impractical to do every three days while in pain or with limited transportation), the difficulty obtaining an appointment with one of the few providers available, and the cost and inaccessibility of alternative treatments (e.g., behavioral health, surgery) compared to the relative affordability and accessibility of opioids, particularly in a context of limited health insurance coverage. Participants often described stigma as pervasive and potent: "…it's just attacking the stigma attached to it because we are small town here and obviously the opioid--- any drug user has a negative stigma attached to them."

Public stigma against addiction influences reluctance to seek help, leading others not to notice the needs in this vulnerable population, which increases the challenges PWUO have in recovering from addiction. Many participants also mentioned easy accessibility of prescribed opioids in their or peer's homes and the need for drug take-back programs:

> …to raise awareness with family and friends. Lock your medicine cabinets. Put your medication up, because my ex-husband, the reason that he became an opiate addict is because he had knee surgery, and his mother gave him some of her prescription medication…

Access to Healthcare

The third theme highlighted significant challenges accessing health care, repeatedly noting the link between untreated mental health problems and opioid use. They saw increased access to physical and mental health services as the primary pathway to reduce people's reliance on opioids. However, they also noted failures of current treatment approaches in rural areas, particularly for opioid addiction, where patients may have to drive for hours to receive a two-day supply of medications, rending treatment unattainable for many, especially those without reliable transportation.

Healthcare Coordination

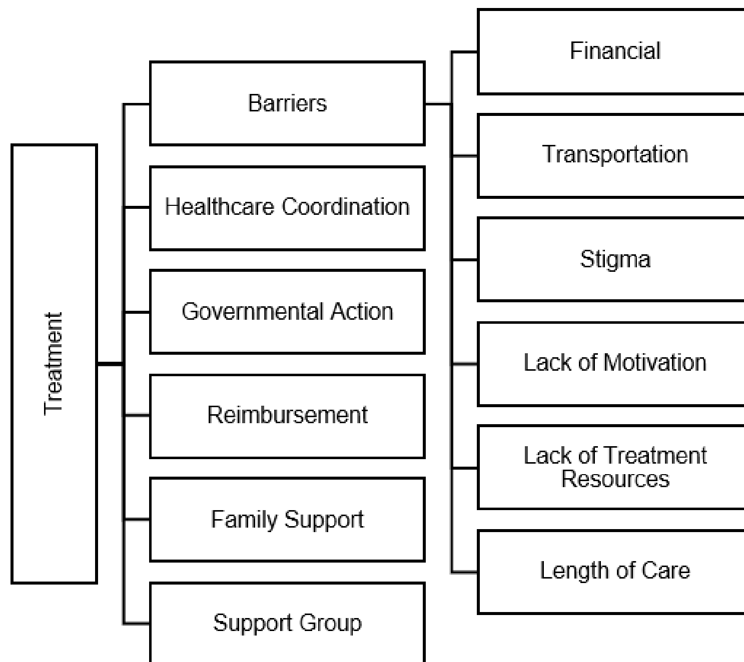
A final major theme was the need for greater healthcare coordination. Participants noted how coordination could reduce gaps in the system that allow some people who use opioids to fall through the cracks. They noted that detox facilities and jails often have no programs to send individuals to afterwards, which lands them back in the environment they were in before. Participants discussed how pharmacies are often relatively disconnected from the rest of the care system, which contributes to the problem, but they also noted that pharmacies could be a strong collaborator for helping identify people who have received a risky prescription, who need treatment, or who are at risk of developing a dependency before they become addicted.

Domain: Treatment

Figure 2 presents a visual depiction of the results for Treatment. Providers, community members, and people who use/used opioids (PWUO) all pointed to a lack of accessible and effective treatment options in their rural community. Although there are some treatment facilities in the region providing detoxification services, medication-assisted therapy (MAT),

and inpatient and outpatient treatment, these resources are extremely limited given the need, and there are many barriers to accessing treatment. Six key themes emerged for treatment, led by Barriers and reiterating some items identified in Prevention.

Figure 2
Treatment-Related Themes with Corresponding Codes Arising from Focus Groups Conducted with Healthcare Providers, Community Members, and People Who Used/Use Opioids



Barriers

Participants described six important barriers to obtaining treatment, dedicating most of their discussion to these factors. The most prominent was a lack of financial resources, both to access and provide services, also linked to uninsured or underinsured status, which impacted regular access to care. Providers expressed frustration that a lack of funding and difficulty in receiving reimbursement often limits the care that they can provide. One participant summed it up by saying, “If they don’t have money, they won’t take them. So, what are you supposed to do?” Transportation often emerged as a barrier to treatment. Many clients mentioned that they do not possess a means of transportation to access services and have no alternative because there is no public transportation in their rural communities. Many rely on the willingness of individuals to donate time and effort individually to get to their appointments. One provider described this barrier by saying:

> Barriers or a lack of medical care here all together. Lack of transportation to medical care and then you don’t have the money to pay for it when you get there…in a lot of these counties, there is no hospital at all to get help. So, when somebody overdoses and their buddies throw them out in the front yard, they’re going to die.

A second major barrier is the stigma toward OUD/SUD services. PWUO stated that they faced stigma when accessing services as many in the community are resistant to MAT programs and believe that medication assistance perpetuates addiction. Providers face stigma

within the community when trying to implement services (intervention stigma) because some community members fear their town being turned into a "hub" for people who use drugs:

> So, it's like if you could change the way that the culture looks at drug addicts, and realize that it can happen to anybody, they want help, you need to give them help instead of just kind of "Okay, well go away."

A personal treatment barrier was motivation to enter treatment. Participants noted that, although opioid use presents many problems, it provides individuals with coping factors that can undermine their will to seek treatment when confronted by the access barriers and significant personal costs. Participants also pointed out that it was even more problematic given existing gaps in transitional care and wraparound services for those leaving treatment.

A final set of barriers described the pronounced insufficiency of current treatment resources and the limitations that are set on the length of care. Although participants readily described services that are currently available, they reported that they were far from enough in sad tones that highlighted the depth of need in this area:

> I think there's nothing. If we have anyone that is interested in the MAT treatment or they're an opioid addict and they're looking for some way out, there's nothing. They have to come to Walker County. That's the closest thing they have, and that's an hour drive. So, I mean, for somebody that's trying to drive to go see the doctor, they do all of this stuff, and they don't have transportation to even get a job or go where they're supposed to be going. They're just stuck in opioid addiction. There's no way out.

> Well, I think for all of us that live here it's that. For example, in a lot of these counties, there is no hospital at all to get help. So, when somebody overdoses and their buddies throw them out in the front yard, they're going to die--- because there's nowhere to go to get them there and there's a fear [of personal liability] there. It's just a bigger problem than you could probably even imagine.

Throughout the groups, participants described challenges associated with limited provider training for managing opioid treatment and with hesitance in providers who could provide opioid care (e.g., MAT). They called for additional education for providers and support to help them feel less isolated. Alongside statements about the need for more services, participants also reported the need for longer stays, asserting that four weeks was insufficient to produce meaningful change in PWUO.

Other Treatment Needs

Additional themes emerged that highlighted a diverse set of needs. Participants described needs for enhanced coordination between providers and the negative impacts of poor coordination; additional action by governing bodies and the value of recent changes, such as the Good Samaritan law and standing order for Narcan at pharmacies statewide; improved reimbursement for all types of treatment-related services; and professional support and social services for PWUO and their families. Two needs that produced particularly compelling discussions were care coordination and support services.

Participants described clearly how opioid care and services lacked coordination between first responders, law enforcement agencies, and providers of mental health, medical, and social service providers. Providers stated that there was a greater need for coordination

with communities and between counties to pool resources. They explained how gaps in services cause major delays in treatment for clients and increased effort for both clients and providers. Participants believed that the only solution to coordination gaps is to bring together all the people engaged in providing the services so that they could get to know each other and collaboratively solve problems in coordination:

> No one pro can be everything. And so increased collaboration. … [a client may] fit better there, and so I think collaborating with other professionals and other entities is huge because what may work for me may not work for either of you.

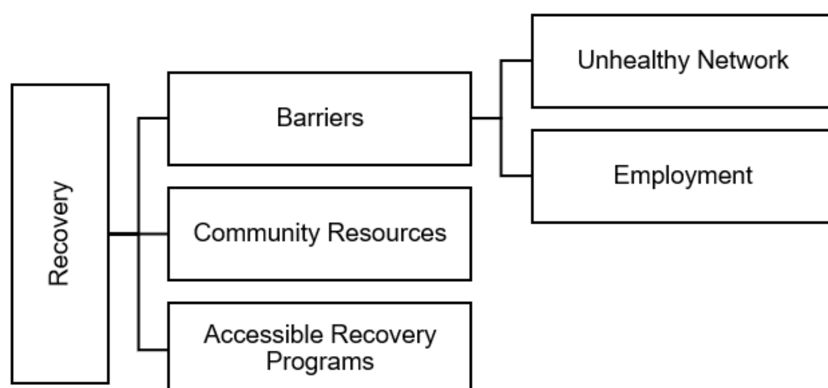
Another key need identified by participants is the facilitation of access to a variety of wraparound support and family services. Clients, providers, and community members all stated that the process for accessing services felt complicated and overwhelming and expressed a desire for a more streamlined method for finding services and effective treatment options. Many providers suggested that there should be more wraparound services in the community to ease the transition into and between care services and to increase the likelihood that clients will be able to successfully complete treatment and recovery programs. Participants repeatedly wished for a centralized opioid resource center, staffed by peers in recovery and offering a nonjudgmental access point to treatment, that could coordinate scattered opioid-related prevention, treatment, recovery, and social support services, resources, and programs:

> …you wrap the knowledge and resources along with collaborating with all of the other entities that are involved---might be the judge, the DHR, whatever--- to provide that person with the biggest, most stability, and a team of people that say we really want to see you succeed. And try to help them and give them all those resources right out the gate.

Domain: Recovery

Figure 3 presents a visual depiction of the results for Recovery. Three key themes emerged describing barriers to recovery and needs for accessible recovery programs and community-based resources.

Figure 3
Recovery-Related Themes with Corresponding Codes Arising from Focus Groups Conducted with Healthcare Providers, Community Members, and People Who Used/Use Opioids



Barriers

Participants described an array of recovery challenges, but two emerged as critical barriers: Unhealthy networks and employment. The first describes the difficulty PWUO faces when attempting to maintain sobriety following inpatient treatment. Participants described the futility of watching individuals go through treatment successfully only to return to the same situation that promoted their opioid use in the first place. They highlighted the value of long-term residential recovery programs and peer-driven services to engage PWUO in their recovery with knowledge and sensitivity, bypassing the stigma. The second barrier described the impossible situations many PWUO face after completing intensive treatment, when they return to families with insufficient financial resources and employment opportunities to pay the costs of living. The challenge of finding work while in recovery, especially if they have a felony drug charge on their record, can compound these needs and increase the stress and pressure on the family and the individual in recovery.

Community Support Resources

An important need articulated by the participants was for a comprehensive set of community services that focus on providing the PWUO and their families with wraparound support, particularly during the transition from treatment into recovery. Many clients described this need and stated that they often felt unsupported during their transitions, especially when returning from incarceration. Despite wanting to maintain their recovery, they reported feeling helpless in the same places and social circles where they had struggled with addiction. Professionals also believed that clients carry a heavy burden when faced with the transition from treatment to recovery and believed that the community could be a valuable support system for these individuals. All described the value of a centralized support network for people in recovery that could connect them with assistance for housing, food, utilities, and employment, linking friendly employers with potential employees in recovery. One professional described the need for services, including employment assistance, saying:

> So if you look at it on the side after they've gone through detox, and where they go after that, on the rehab side, if there's a way that we could somehow help industry feel better about hiring those patients who are in recovery and give them an opportunity to earn a living, to somehow get them back into the social aspects, because the life that they've had is probably all they've known for quite some time, and they have to be resocialized back into the lives we live I guess. And if there was a way that we could set them up to succeed, and not just put them back out into the culture they left, that would help I think.

Accessible Recovery Programs

Participants also identified OUD-specific peer recovery groups and centers as important and effective tools for maintaining recovery. The inclusion of peers who have experience with addiction and recovery featured prominently in discussions. Suggestions included OUD-specific support groups, peer recovery programs, and recovery resource centers. Clients stated that peer recovery groups were one of their primary resources for maintaining their sobriety, affirming the need for secular programs since the few programs that are available are largely church based. Providers identified a need for long-term, organized recovery services in the community that can help maintain and monitor progress after treatment: "They definitely, like

I said, they definitely need a community open group, like a free, come sit down and support each other. Similar to an AA/NA, I think would be good."

All identified a need for an interconnected recovery community that connects through a centralized community-based location to provide access to a comprehensive collection of recovery resources and support. With the focus of most leaders on treatment due to the need being so high, they said the recovery community has been under resourced to meet the needs for recovery resources: "My wish would be that and I know that this is huge, this was has always been a dream of mine to have a recovery resource center in every county."

Discussion

Many communities in northwest Alabama find themselves amid a historic opioid crisis. This study gathered community-based knowledge about their barriers and needs in prevention, treatment, and recovery from opioid use disorders. The focus group data described the intertwined challenges due to rurality of these communities impacting limited access to services (i.e., transportation), availability of facilities, and affordability of services. According to the National Rural Health Association, 92% of substance use treatment facilities and 90% of qualified physicians who prescribe buprenorphine practice in an urban location (American Addiction Center, 2020). Exacerbating the issues was a lack of funding for providing and maintaining the opioid services and limited insurance coverage (American Addiction Center, 2020).

Moreover, several previous studies found that affordability was intertwined with accessibility in rural areas (American Addiction Center, 2020; Bunting et al., 2018; Corso & Townley, 2016; Fogger & McGuinness, 2015; Gale et al., 2017; Mackey et al., 2019). For example, although naloxone and Opioid Replacement Therapy (ORT, with methadone or buprenorphine) are effective for opioid overdose or withdrawal treatment, rural communities often do not have local access to these clinics, requiring frequent long-distance drives to an urban location (Fogger & McGuinness, 2015). Hence, affordability including transportation costs and the need for daily clinic visits worsen poor accessibility (Bunting et al., 2018; Fogger & McGuinness, 2015; Madras et al., 2020; United States Government Accountability Office, 2020).

Affordability in terms of insufficient financial resources and availability in relation to gaps in transitions from treatment to recovery facilities were also related issues. Problems arising due to transition emphasized the need for coordinated care and an increased number of facilities. Many studies underline the importance of comprehensive care management and coordination of physical, mental, behavioral, and substance use-specific services (American Addiction Center, 2020; Madras et al., 2020; O'Brien et al., 2019; Raney et al., 2018). Patients receiving coordinated care may remain in care longer than those who did not (Schaefer et al., 2011). However, rurality exacerbates these problems when a single mental health facility and detox center serves multiple counties (American Addiction Center, 2020).

The focus group data revealed that limited opioid literacy including knowledge about opioids, opioid overdoses, opioid resources, and evidence-based treatments for opioids and behavioral health for prevention, treatment, and recovery services are also barriers to services. There was a need for educational programs and access to naloxone for all community members (i.e., families, children, professionals). Similarly, professionals experienced isolation and limitations in knowledge and resources in all three types of services. These are consistent with previous studies that showed how inadequate training of professionals and lack of knowledge on opioid addiction, pain management, and naloxone were common barriers (Gale et al., 2017; Mackey et al., 2019; Madras et al., 2020; Winstanley et al., 2016). Thus, it is critically important to increase general knowledge on opioids and preventive measures for overdose.

Indeed, communities with higher access to naloxone and overdose training had significantly lower opioid overdose death rates than communities that did not (Davis & Carr, 2015), suggesting that similar initiatives should be implemented in the rural areas of Alabama.

Furthermore, the stigma from both PWUO and the community were described. These included users not wanting others to find out they are in recovery, concerns about negative opinions from others, and professionals or communities holding stigmatizing attitudes toward users (Madras et al., 2020; Wu et al., 2011).

Implications for Future Research and Interventions

The findings of this qualitative study demonstrate the value of past research and theory to inform future research. Our study used established knowledge about opioids and rural care with a public health lens and theoretical framework to guide the collection and interpretation of information about the opioid lived experiences of these communities. The Meikirch Model of Health conceptualizes health as a complex adaptive system needing balance between an individual's demand of life and potential (biological and personally acquired), and environmental and social determinants (Bircher & Hahn, 2016). This model provides a useful view of individual, social, and environmental barriers that contribute to an individual's underutilization of prevention, treatment, and recovery services. This study also reaffirmed the need for wraparound care in addressing all three determinants, especially rurality-specific needs, basic human needs, and personal motivation. Researchers should consider the value of integrating established knowledge with an advanced theory such as the Meikirch model to enhance the impact of their qualitative research.

A key need in rural areas that was also identified in this study is increased access to provider expertise. An intervention that responds directly to this need is the TeleECHO model, which provides continuing education and enhanced care coordination through video conferencing to providers (Komaromy et al., 2016). It also allows multidisciplinary networking, expert consultation, education, and peer consultation related to de-identified cases submitted by network providers (Komaromy et al., 2016). Access to coordinated care can be expanded as new medical knowledge is shared from university medical centers and other specialty care sites to the front lines of community care. Rather than work to add new providers---an effort that often shows limited success due to low interest and rapid provider departures---the GROW ECHO works with existing care providers to expand their capacity and ability to provide quality integrated SUD/OUD care within their current practice. When prompted by topics, the focus groups received and discussed information about elements of the ECHO program and reported that the program held promise for overcoming important barriers to promoting opioid competency and quality of care in a way that rural providers would see as acceptable. Preliminary efforts by the GROW Project indicate that the program is feasible and timely.

Another intervention with potential is the use of community health workers, community-based paraprofessionals, and lay persons to enhance care coordination by promoting connections between clinics, providers, and others throughout the project region. In the domain of harm reduction, there are 225+ registered overdose prevention programs in the U.S. with more than 75,000 trained overdose responders, including PWUO, their families and friends, law enforcement officers, first responders, treatment providers, and others who may be likely to witness overdoses. In many cases, these workers are peers in recovery, a growing class of health-related specialists. Studies reveal the feasibility and effectiveness of these workers in various settings, from emergency departments to healthcare settings, homeless shelters, prisons, and communities with people at risk of overdose (Chronister et al., 2018; Dahlem et al., 2016; Espelt et al., 2017; Haegerich et al., 2019; Houry et al., 2018; Jones et al.,

2014; Lewis et al., 2016; Madah-Amiri et al., 2016; McDonald & Strang, 2016; Petterson & Madah-Amiri, 2017; Zucker et al., 2015). In addition, they can facilitate the distribution of take-home naloxone kits and/or education to PWUO or their friends and family. Many studies report significant improvements in knowledge on overdose prevention, response to overdose, confidence in using naloxone, and increased usage of naloxone for overdose reversal. Community health groups are also associated with reduced overdose mortality and adverse events among participants in the community (Chronister et al., 2018; Espelt et al., 2017; Jones et al., 2014; Lewis et al., 2016; Madah-Amiri et al., 2016; McDonald & Strang, 2016; Petterson & Madah-Amiri, 2017).

Limitations and Strengths

This study presents several limitations worth noting. First, a combination of a purposive-plus-convenience nonprobability sampling strategy suggests limits to the transferability of these experiences to this region more broadly or to other people affected by the opioid crisis. The nature of the qualitative design is to identify and describe the unique experiences of the participants (Creswell & Poth, 2018). In this case, the focus was the unique experiences of participants residing in rural regions where healthcare resources are limited. The majority of our sample were providers, with few community members and PWUO. Hence, although the findings relate rich and knowledgeable information about the opioid crisis in this rural setting, they likely underrepresent information from community members and PWUO. However, given the widespread and covert nature of opioid use and misuse, it is likely that our sample included more people with direct opioid experience than indicated. Additional limitations arise from the use of a focus group methodology (Acocella, 2012). First, the facilitators may have influenced the discussion, or some participants may have dominated or sidetracked it. Second, social conformity and potential risks to confidentiality may have affected some participants' ability to speak candidly. Instructions during the groups aimed to minimize these limitations.

However, the strengths of this study demonstrate the value of this information beyond these limitations. First, the interaction among the participants in a focus group setting provided extensive insights into the diverse group's perspectives on the barriers and needs to opioid prevention, treatment, and recovery services (Acocella, 2012). Also, facilitators familiar with the topic, while not directly affiliated with the participants, reduced the risk of influence. Similarly, the focus groups provided an opportunity to present and discuss the suitability of a potential intervention, a TeleECHO series, to improve community provider competency, demonstrating how qualitative research can help evaluate whether an existing intervention is appropriate for a specific population, region, or context. Lastly and most importantly, this was the first study to explore the impact, barriers, and needs related to opioid problems in rural northwest Alabama, and in fact, one of the first studies of its kind in the rural areas of a state where the impact of the opioid crisis has been devastating.

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