

AN EXPLORATORY APPROACH TO UNDERSTANDING  
OPIOID TREATMENT OF MOTHERS

by

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A DISSERTATION

Presented to the Department of Special Education and Clinical Sciences  
and the Graduate School of the University of Oregon  
in partial fulfillment of the requirements  
for the degree of  
Doctor of Philosophy

June 2019

DISSERTATION APPROVAL PAGE

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Title: An Exploratory Approach to Understanding Opioid Treatment of Mothers

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Degree awarded June 2019.

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## DISSERTATION ABSTRACT

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Doctor of Philosophy

Special Education and Clinical Sciences

June 2019

Title: An Exploratory Approach to Understanding Opioid Treatment of Mothers

A strength-based approach was used to explore how mothers with opioid use disorder have overcome barriers to access supports and services within the community. To understand this issue, an exploratory qualitative study using a phenomenological approach that investigated the path to success of mothers in recovery from opioid use disorder within a rural community. This study used a pragmatic research lens within a rural community to understand the context of the problem. The voices and lived experiences of mothers in recovery and treatment providers were sought to add valuable perspectives on barriers and potential improvements to current practices and processes. Results from this research study have the potential to (a) provide a new understanding of mothers' experiences accessing treatment, (b) unveil the community's perceptions of mothers accessing treatment, and (c) share strategies for prevention and intervention focused on family-centered practices. Implications and future directions are discussed.

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## ACKNOWLEDGMENTS

A special thanks to my dissertation committee for their assistance in the proposal, implementation, and evaluation of the current investigation, Dr. Jane Squires, Dr. John Seeley, Dr. Kent McIntosh, and Dr. Elizabeth Budd. I wish to extend my sincerest thank you to Dr. Jane Squires for her unwavering support throughout all my years at the University of Oregon. In addition, I would like to thank Dr. John Seeley for the numerous opportunities he provided around implementation science and growth as a scholar. The mentorship and guidance in all facets of life have been unmatched.

Furthermore, I would like to thank all my friends and family that have been a part of the process. From those that encouraged me to apply to the University of Oregon Doctoral program, to everyone who helped me stay on track the last three years. A special thank you to Sondra Stegenga and Tracy Blue for their interest in the current topic and support in coding transcripts. To my husband, Tim O'Malley, who made sure I had some fun along the way.

Finally, I extend my deepest gratitude to Kate Frame and the entire Coos County LADPC for collaborating with me on this co-learning journey. This project would not have been possible without the support of the community. The collaboration, communication, and commitment to improve the community they love is inspiring.

The investigation was supported in part by an Institute of Education Sciences leadership grant, H325D150082 from the United States Department of Education, Office of Special Education to Dr. Wendy Machalicek at the University of Oregon.



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## CHAPTER I

### INTRODUCTION

It is estimated that 90 people die each day from an opioid related overdose in the United States (Center for Behavioral Health Statistics and Quality, 2016). The Center for Disease Control and Prevention (CDC) reported 70,237 drug overdoses in 2017; of those, 47,600 were caused by opioids (CDC, 2019; Scholl, Seth, Kariisa, Wilson, & Baldwin, 2018). Death by drug overdose has surpassed all other causes of injury death in the United States by 50% (Harris, 2016; Rudd, Aleshire, Zibbell, & Gladden, 2016), making overdose the leading cause of preventable death (Rudd et al., 2016; Vashishtha, Mittal, & Werb, 2017). Due to rising death tolls from opioid misuse, the United States Department of Health and Human Services determined there was a public health emergency in 2017 (Curtin, Tejada-Vera, & Warner, 2017; U.S. Department of Health and Human Services).

Unsurprisingly, the impact of the opioid crisis on individual states varies. Between 2016 and 2017, the National Survey on Drug Use and Health (NSDUH) reported that Oregon had a 3.4% increase in rate of drug overdoses related to heroin and synthetic opioids (Curtin et. al, 2017). Furthermore, this same report showed a 90.9% increase in rate of drug overdoses caused by synthetic opioids (excluding methadone), raising death counts from 43 to 85 (Curtin et. al, 2017). Previous reports from the NSDUH indicated that in 2012, Oregon led the nation in the use of nonmedical opioid analgesics with an estimated 6.4% of the Oregon population 12 years and older using prescription pain relievers for non-medical reasons (Substance Abuse and Mental Health Services Administration [SAMHSA], 2013). At that time, the national mean hovered

around 4.6% (McCarty et al., 2015; SAMHSA, 2013). Oregon has an opioid problem. Individual states play a crucial role in protecting the public health of their people (Franklin et al., 2015); public health, medical, educational, and other policymakers in Oregon have identified this problem as critical.

Contributing factors to the opioid crisis are described below. Literature is highlighted that focuses on maternal substance use and its effect on children. First, the impact of the opioid crisis on mothers is introduced. Second, a summary is offered on adverse childhood experiences (ACEs) and the development of intergenerational trauma. Third, literature is presented on the contributing supports and barriers to this crisis is presented. Finally, the purpose of this investigation is explained.

### **Statement of the Problem**

The rise in opioid use disorder (OUD) has not discriminated against any population, including pregnant women, mothers, and their exposed children. Previous research was focused on general substance use disorder (SUD), but the significant increases in opioid-related deaths in the last decade require a targeted approach to understand the crisis at hand (Wright, Dallas, Moldenhauer, & Carlson, 2018). Since 2010, Caucasian women from rural areas have been the most representative sample of individuals entering treatment programs, as compared to previous reports of men residing in urban areas (Rodriguez & Smith, 2018). From 1992 to 2012, pregnant women admitted to treatment centers who reported use of opioids during pregnancy increased from 2 to 28% (Krans & Patrick, 2016; Suchman & DeCoste, 2018). This information provides positive implications in that mothers are receiving help, but also highlights that this is a critical group to support because of the impact their behavior has on their children.

Maternal drug and alcohol use during pregnancy has substantial impacts on the development of the child, both proximally (premature birth and low birth weight) and distally (emotional, behavioral, and cognitive development) (Hopping-Winn, 2012). When mothers use opioids (prescribed or illicit) during pregnancy, they put their fetus in danger of Neonatal Abstinence Syndrome/Neonatal Opioid Withdrawal Syndrome (NAS/NOWS), the result of maternal addiction to opioids during pregnancy with severe impacts on the development of the central nervous system in the newborn (Allocco et. al, 2016). The prevalence of children born with NAS/NOWS has increased 300%, from 1.5 per 1,000 hospital births in 1999, to 6.0 per 1,000 hospital births in 2013 (Ko et al., 2016). Although the treatment of NAS/NOWS in newborns is typically manageable with a longer stay at the hospital, including recovery time in the Neonatal Intensive Care Unit (NICU; Miriyala, 2018), these babies often go home to an environment that includes substance abuse, increasing their risk of ACEs (Rodriguez & Smith, 2018). These statistics highlight the importance of intervening as early as possible in hopes of preventing or reducing the risks associated with mental health and substance use disorders (Center for Behavioral Health Statistics and Quality, 2016).

Children residing in a home with parents who misuse drugs or alcohol are at a much higher jeopardy of short- and long-term risk factors (Rodriguez & Smith, 2018). More ACEs result in increased toxic stress, which has short- and long-term physical and mental health risks that can span across the lifetime (Oral et al., 2015). Prevention and intervention strategies should be focused on the intergenerational issue at hand, including maternal recovery, mental health issues, and the impact of OUD on the young child (Wright et al., 2018).

## **Barriers to Treatment**

Women, particularly mothers, are a vulnerable population, especially when it comes to the desire to access treatment (Fragassi & Bora, 2018). Social stigma is one of the biggest barriers that mothers face in accessing treatment (Suchman & DeCoste, 2018). Additionally, there are many efforts to penalize mothers when accessing treatment, which are counterproductive and prevent mothers from receiving the care and support they need (Krans & Patrick, 2016; Rodriguez & Smith, 2018). State policy varies regarding the use of substances during pregnancy, but 28 states consider it child abuse (Dailard & Nash, 2000). Due to mandatory reporting laws, it is difficult to utilize health care professionals to provide mothers with a supportive care environment (Fragassi & Bora, 2018).

To further complicate the problem, mothers battling addiction are often accompanied by additional challenges such as mental illness, lack of social support, domestic violence and instability of finances, unemployment, and housing (Fragassi & Bora, 2018). Additionally, mothers experiencing SUD often struggle to provide the proper care and consistent attention a child needs (Wright et al., 2018). In turn, this deficiency often results in mothers losing custody of their child(ren) (Schuman, DeCoste, Leigh, & Borelli, 2010; Wright et al., 2018). It is critical to examine the pathways in which mothers have been both successful and hindered in accessing treatment and sustaining recovery practices. Additionally, exploring the perceived and actual experiences of stigma within a community may help promote strategies that break the chain in this process.

## **Contribution of this Study**

The voices and lived experiences of mothers and treatment providers add valuable perspectives that may influence policy and practice. The significance of this study includes the possibility of gaining a better understanding of how mothers in a rural community who are living in recovery have successfully accessed treatment. Findings from the current investigation have the potential to (a) provide a new understanding of mothers' experiences accessing treatment, (b) unveil the community's perceptions of mothers accessing treatment, and (c) share strategies for prevention and intervention focused on family-centered practices. Implications and future directions are discussed.



## CHAPTER II

### LITERATURE REVIEW

This chapter provides a rationale for the use of SAMHSA’s Strategic Prevention Framework (SPF) to inform on the gaps of the opioid crisis in an Oregon rural community. Empirical literature is presented on the use of community academic partnerships (CAPs) and how community-based participatory research (CBPR) can be used to advance the implementation and sustainability of evidence-based and promising practices.

First, theoretical frameworks are introduced that set the stage for informing this investigation. Second, a brief overview is offered on literature that focuses on implementation science, including CAPs and CBPR. Third, literature is presented on the need for collaboration among research teams and rural communities that are geared toward participatory action research and possible influencers on the key factors that sustain these partnerships. Fourth, recent studies are described that have focused on behavioral health disparities, specifically research on mothers and the impact they have on their children’s development. Finally, a rationale is presented for evaluating new partnerships.

#### **Theoretical Frameworks**

Two theoretical frameworks are central to understanding the multifaceted needs of working across and within various stakeholder groups: theory of planned behavior and ecological systems theory. These frameworks informed the current investigation by capturing separate mechanisms hypothesized to influence change in rural communities that either create barriers or promote facilitators to positive outcomes. Although these

theories conceptualize human relationships differently, they both posit the behavioral and environmental factors contributing to human development and action.

### **Theory of Planned Behavior**

The theory of planned behavior was developed by Ajzen (1985, 1991) to provide predication and explanation of human behavior within specific contexts and was developed based on the theory of reasoned action (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975) by extending our understanding that humans do not have complete control over all behavior. The theory of planned behavior, then, accounts for an individual's perceived behavioral control. The construct of perceived behavioral control is comparable to the work of Bandura (1977, 1982, 1991) in that self-efficacy plays a role in an individual's choice, preparation, and effort expended on activities. Conversely, Ajzen's (1991) work conceptualized self-efficacy and perceived behavioral control more broadly as it relates to general beliefs, attitudes, intentions, and behaviors. The theory of planned behavior hypothesizes that the combination of perceived behavioral control and behavioral intention can directly predict behavioral change (Ajzen, 1991).

The theory of planned behavior is a necessary framework to consider regarding an individual's beliefs that can create change. More specifically, it is important to consider whether individuals within a community are ready for change. Research has demonstrated that readiness for change is one of the most important factors when implementing a change initiative (Holt, Armenakis, Field, & Harris, 2007). It is important, therefore, to understand the normative beliefs of a community to gain an understanding of the perception of the problem at hand and the level of readiness for change (Holt et al., 2007).

## **Ecological Systems Theory**

The original conceptualization of ecological systems theory was derived from Bronfenbrenner (1976, 1979) and is still regarded as one of the most influential frameworks in the field of education. Within this theory, there are five dynamic systems nested within one another: the microsystem (the individual), mesosystem (contact between the individual and another individual within the microsystem), exosystem (indirect effects on the microsystem), macrosystem (cultural norms and expectations), and chronosystem (an important event occurring within the lifespan). The ecological systems theory accounts for some of the limitations of the theory of planned behavior in that it considers the multifaceted complexities within community environments and cultural considerations that are nested within the system.

The need for an ecological systems approach is critical when an endeavor includes creating change within a rural environment. Many family systems have been developed over generations. An ecological systems approach to understanding individuals and their relationships with their communities is critical because of the effect the environment has by influencing peers and others across a macrosystem. Consideration of all social contexts within these systems, both within the immediate microsystem and larger macrosystem, may help address needs within a community. All nested systems play a role in influencing each individual within a community.

The combination of these two theoretical frameworks helps conceptualize the multifaceted complexity of individual and community change. Due to the multilayered nature of substance abuse and mental health in the United States, there is a documented need to focus on both environmental and individual change within a community (Piper,

Stein-Seroussi, Flewelling, Orwin, & Buchanon, 2012). Although there has been a push for the use of evidence-based strategies in practice since the 1990s, communities struggle to implement these strategies as intended (Crowley, Yu, & Kaftarian, 2000). The use of comprehensive preventative strategies to reduce the risk of mental illness and SUD is critical to the improvement of behavioral health of individuals across the United States (Center for Behavioral Health Statistics and Quality, 2016). Community systems models are one way to target both the individuals within a community and their interactions with the dynamic community system (Holder, 2002).

### **Research Paradigms**

This section provides a rationale for the lens of the researcher and how the following frameworks align with the current investigation. Empirical literature is provided to support the use of each framework presented. First, the strategic prevention framework (SPF) is described with a rationale for its use. Second, an overview of implementation science is provided. Third, an implementation science framework—the Exploration, Preparation, Implementation, and Sustainment (EPIS) framework—is described. Fourth, the need for CAPs are introduced. Fifth, the implementation of CBPR is outlined. Finally, the context of the current problem is discussed.

### **Strategic Prevention Framework**

The strategic prevention framework (SPF) is a community systems model developed through a federally funded program through the Center of Substance Abuse and Prevention (CSAP) and was unveiled in 2004 as an approach to mobilize stakeholders and build capacity within communities focused on the use of preventative strategies. This model builds upon the idea of the risk and protective factors model

conceptualized by Collins, Johnson, and Becker (2007). A comprehensive model that emphasizes the reduction of risk factors and promotion of protective factors is a promising approach to the improvement of individual and community-wide behavioral health promotion (Durlak, 1998).

Using preventative strategies to reduce the risk of mental disorders and SUD in youth and young adults across the United States is critical to the improvement of the behavioral health of those individuals (Center for Behavioral Health Statistics and Quality, 2016). The SPF model includes a 5-step approach that focuses on outcomes-based prevention and data-driven decision making. Within this model, there are two guiding principles: (a) cultural competence (interacting with diverse populations effectively), and (b) sustainability (maintaining long-term results). Within the context of this study, the SPF was used as a guide to understand the current context of the problem and to build community capacity. Broadly speaking, the aim of this approach is to decrease substance abuse and improve the behavioral health of the community. The five steps of the SPF framework are the following:

1. Assess community prevention needs based on epidemiological data;
2. Build community prevention capacity;
3. Develop a strategic plan;
4. Implement effective community prevention programs, policies, and practices; and
5. Evaluate their efforts for outcomes.

Although the SPF model reads as a linear process, it is understood that many of the steps may overlap and occur simultaneously within the community. For purposes of this current investigation, the focus was on Step 2: Build community prevention capacity.

Within this step, the goal was to increase individual and organizational readiness for change related to the problems identified in Step 1. Specifically, this study sought to understand the risk and protective factors that may be present within the community to understand the intersection within the mesosystem. Additionally, this study focused on ways to embed prevention and intervention strategies throughout the developmental lifespan to improve behavioral health and unfold the interworks of the exosystem.

### **Implementation Science**

One way to improve behavioral health outcomes is through the dissemination and implementation of evidence-based practices (EBPs) and programs that connect resources to identified needs. Implementation science is a process that allows practitioners to implement specific programs into the appropriate practice setting (Fixsen, Naoom, Blasé, Friedman, & Wallace, 2005). Although implementation science was developed with the intention of addressing the challenges associated with implementing EBPs (Nilsen, 2015), the effective implementation of EBPs remains problematic (Moullin, Dickson, Stadnick, Rabin, & Aarons, 2019).

### **Exploration, Preparation, Implementation, Sustainment (EPIS) Framework**

The EPIS framework is comprised of four specific phases that directly align with the implementation process (see Figure 1; Moullin et al., 2019). Although there are dozens of models and frameworks to work within implementation science, the EPIS framework is comprehensive, and encapsulates several components of implementation science that can be used throughout the research process. Additionally, the EPIS framework aligns with the underlying theories introduced previously that take behavioral and environmental factors into consideration. The four key components within the EPIS

framework include: (a) phases of implementation, (b) contextual levels of the outer and inner contexts, (c) the innovation as it relates the identified EBP, and (d) relationships between the outer and inner contexts (Moullin et al., 2019).

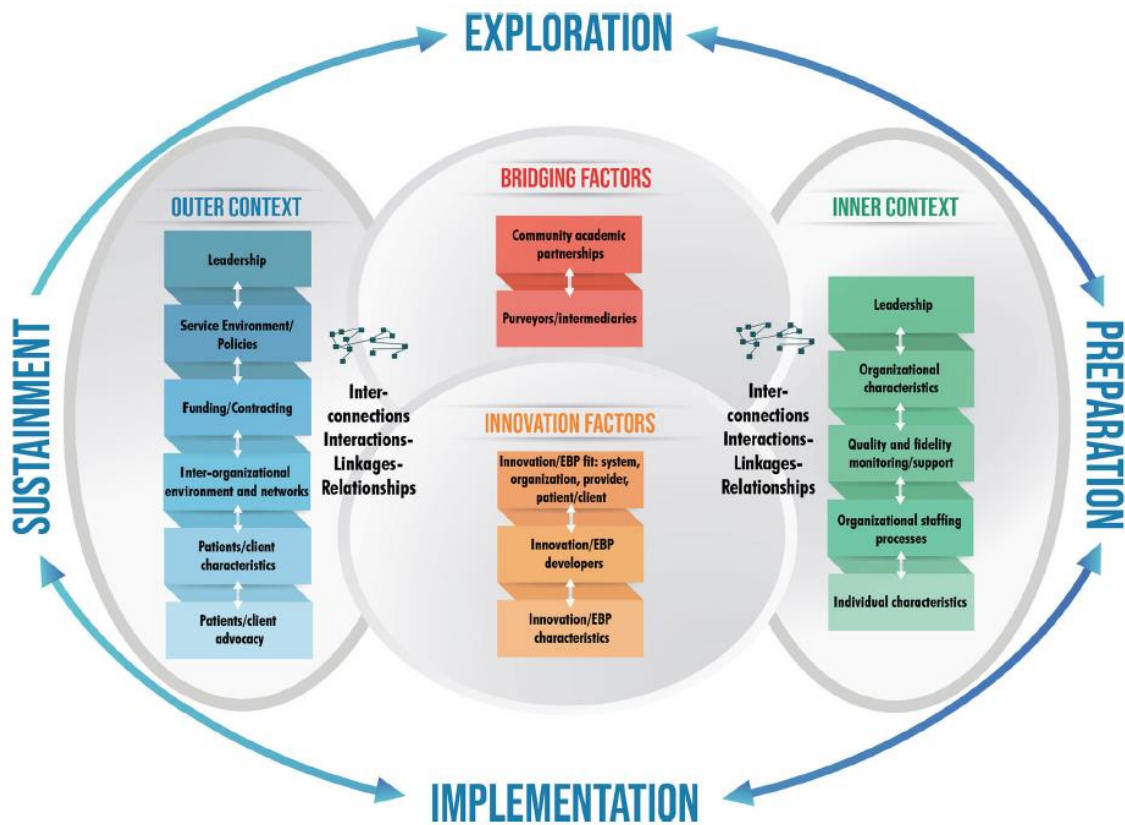


Figure 1. The exploration, preparation, implementation, sustainment (EPIS) framework (Moullin et. al, 2019).

**Implementation phases.** The four phases of the implementation process include the following: (a) exploration (communities determine an existing or emerging health concern and begin to look for EBPs to address the issue); (b) preparation (examination of barriers to implementation and a focus on the needs of the community); (c) implementation (guided supports required to implement the EBP as intended by the

implementers); and (d) sustainability (guarantee that supports for the EBP and the implementers are ongoing). For purposes of this investigation, the focus was on the first phase, exploration. This phase plays a critical role in predicting the sustainability of the EBPs to be implemented (Moullin et al., 2019). In particular, the perception of behavioral control of the EBP as well as the intent to implement the EBP highlights the need to focus on the theory of planned behavior as a contributing factor to the successful implementation and sustainment of EBPs. Before an organization or group of stakeholders is ready to select EBPs, it is critical to understand the needs (i.e., innovation factors) of the intended audience and the resources (i.e., inner context) currently available. Following the community-based model of the SPF, a clear understanding of the contextual needs is required. Additionally, the exploration phase is an ideal time to learn more about the normed beliefs (i.e., macrosystem) of supervisors, providers, and administrators (Moullin et al., 2019). This knowledge provides community context around the perceived challenges and understanding of the problem as well as the appropriate EBPs to evaluate.

**Contextual levels.** Throughout the phases of implementation, the outer and inner contextual factors are taken into consideration. The outer context focuses on the environmental factors outside of the organization that play a role in the implementation process. Specifically, the outer context includes (a) leadership; (b) service environment/policy; (c) funding/contracting; (d) inter-organizational environment and networks; (e) patient/client characteristics; and (f) patient/client advocacy. The inner context focuses on factors within the organization. The inner context includes (a) leadership; (b) organizational characteristics (e.g., organizational resources, staffing); (c)



quality and fidelity monitoring/support; (d) organizational staffing processes; and (e) individual characteristics. Both the outer and inner contexts have multiple layers that take the complexity of the ecological system into consideration.

**Innovation factors.** The third component of the EPIS model focuses on the EBP or usable innovation itself. Due to the complexity of the outer and inner contextual factors, researchers need to adapt a strategy to meet the needs of the problem or population of interest. The aim of this component is to ensure that the EBP continues to be implemented as intended. Specifically, the innovation factors include (a) innovation/EBP fit (e.g., system organization, provider, patient/client); (b) innovation/EBP developers; and (c) innovation/EBP characteristics.

**Contextual relationships.** The final component of the EPIS framework emphasizes the need to support the interconnectedness between the outer and inner contextual layers, referred to as bridging factors. Many of the influences on the inner contexts are created through the operation of the outer contexts and vice versa. These interconnected ties highlight the need to leverage supportive partnerships across and within contextual levels. It is critical to involve key stakeholders throughout each stage of this process to ensure that the solutions offered are acceptable, feasible, and sustainable (Aarons et al., 2012). The two bridging factors include connectedness between purveyors/intermediaries and community academic partnerships.

### **Community Academic Partnerships (CAPs)**

Research-practice partnerships are relatively new phenomena (Coburn, Penuel, & Geil, 2013) that focus on the co-creation of infrastructure across multiple stakeholders or community groups and a research or academic partner. The growing need to address gaps

between research investigations and implementation on the ground requires participatory approaches (Minkler, Salvatore, & Chang, 2018). CAPs are one example of partnerships that can be used to build relationships within a community and to collaborate with key stakeholders to increase the likelihood of readiness for change. To keep sustainability of practices in mind (Moullin et al., 2019), the current investigation is focused on CAPs with key stakeholders in the community to learn new skills and to evaluate efforts within their practices.

**Community-based participatory research (CBPR).** Research has shown that public health improvements are most successful with community involvement (Baker, Homan, Schonhoff, & Kreuter, 1999; O’Toole, Aaron, Chin, Horowitz, & Tyson, 2003; Gwede et al., 2010). One way to increase engagement and generate outcomes that are most meaningful to community members is the use of CBPR (Lucero et al., 2016), especially when health-related issues are involved (Minkler et al., 2018). CBPR is a participatory approach focused on collaboration across all partners (i.e., bridging factors) that emphasizes equity (Minkler et al., 2018); however, the level of collaboration across communities and researchers varies. According to Balazs and Morello-Frosch (2013), there is a continuum on which engagement can occur throughout the process. This continuum depicts the range of engagement that occurs throughout the partnership process from “helicopter science” (where participants have no influence on research design, implementation or evaluation) to true CBPR (partners are involved throughout the full spectrum of the process) (Balazs & Morello-Frosch, 2013). Increased engagement from community members and key stakeholders (i.e., target population) helps improve the relevance and reach of the intended research (Balazs & Morello-Frosch, 2013). This

collaborative approach also helps with community buy-in as stakeholders and recipients of the possible program can provide input throughout the process (Minkler et al., 2018). For more detail on the integrated approach a CBPR model was created, see Figure 2 below.

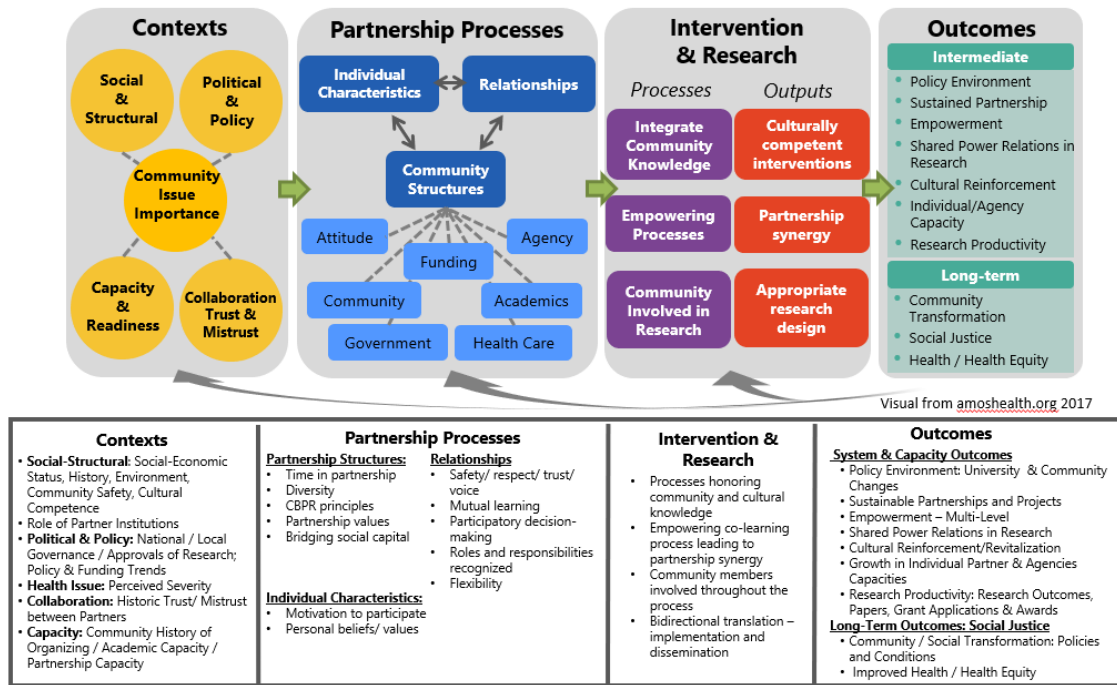


Figure 2. An integrated approach based on the CBPR model (adapted from: Wallerstein et. al, 2008; Wallerstein & Duran, 2010).

The use of CBPR approaches have continued to grow over the last 20 years, specifically focusing on interdisciplinary approaches that often include mixed-method research designs (Creswell & Plano-Clark, 2011). These approaches allow research teams and community partners to build knowledge collaboratively and increase understanding of the problem through basic research questions in an exploratory approach. Knowledge

of the problem is used as a guide to create, implement, and evaluate prevention and implementation interventions while promoting policy and social change (Gwede et al., 2010; Israel, Schulz, Parker, & Becker, 1998; Minkler, Blackwell, Thompson, & Tamir, 2003). Israel, Schulz, Parker, and Becker (2001) developed nine guiding principles to CBPR that highlight considerations that should be made throughout the process. Two additional principles have subsequently been added (Minkler, 2014; Wallerstein, Duran, Oetzel, & Minkler, 2017). Below is an abbreviated list of the 11 guiding principles:

1. Recognizes community as a unit of identity;
2. Builds on strengths and resources with the community;
3. Facilitates collaborative, equitable involvement of all partners in all phases of the research;
4. Integrates knowledge and action for mutual benefits of all partners;
5. Promotes a co-learning and empowering process that attends to social inequities;
6. Involves a cyclical and iterative process;
7. Addresses health from both positive and ecological perspectives;
8. Disseminates findings and knowledge gained to all partners;
9. Involves a long-term commitment by all partners;
10. Openly focuses on cultural competence of the community; and
11. Addresses valid research questions that are important to the community and research.

By following participatory approaches, community partners can be included through the process of (a) defining the problem to be addressed; (b) implementing usable innovations; and (c) evaluating (Gwede et. al, 2010). This collaboration empowers

community partners to build capacity and take ownership of data gathered in their community. Furthermore, the use of CBPR approaches helps improve the external validity of the research study (Glasgow, 2013).

### **Context of the Problem**

The use of a CBPR approach aligns with the SPF while keeping cultural competence and sustainability in mind. Additionally, it allows the CAP to focus on a collaborative learning process that is specific to community needs while informing practice, research, and policy that could be beneficial to other communities. For example, the use of a CAP allows the community partners to provide voice and knowledge of the culture of the community to be incorporated into the research study. Next, the collaborative process allowed the community partners to be trained in some of the aspects of research design and development to incorporate a transfer of skills into the community. Within the target community, there are several health concerns that have been outlined in the most recent community health assessment (CHA) as well as through an examination of the needs and gaps of the community during Step 1 of the SPF process. The CHA identified a need to address behavioral and mental health concerns. Specifically, there is a need to focus on the opioid crisis (Advanced Health, 2018).

The opioid crisis is apparent across the United States. Although this crisis has clearly impacted adults, the ecological systems theory establishes that anything affecting adults within a community also undoubtedly impacts children and youth as well (Miriayala, 2018). Specifically, individuals with OUD have often been exposed to environmental disadvantages (e.g., homelessness or home instability, mental illness, anxiety) and may struggle to create an attachment with a primary caregiver (Cerdá et al.,

2014; McManama O'Brien, Salas-Wright, Vaughn, & LeCloux, 2015). Furthermore, parents with OUD are more likely to expose their children to negative parenting (e.g., lack of supervision, exposure to unsafe environments; Powis, Gossop, Bury, Payne, & Griffiths, 2000). Not surprisingly, these patterns of instability, insecure attachment, and unsafe environments are repeated as parents expose their children to these adverse environments and experiences, continuing the process of intergenerational stress and trauma (Cohen, Hien, & Batchelder, 2008; Yehuda & Lehrner, 2018).

### **Intergenerational Trauma**

According to the SAMHSA (2014), individuals experience trauma as the result of either a single event or repeated circumstances that can be physically or emotionally damaging which result in lasting adverse effects that may impact an individual's daily functioning or well-being (i.e., physically, socially, emotionally, or spiritually). Without addressing trauma, there is a significant increase in the risk of experiencing mental health and SUDs (Felitti et al., 1998). When a child is repeatedly exposed to such adverse events, a child's ability to learn and form memory can be impaired (Oral et al., 2015), and the cycle repeats itself.

The concept of intergenerational trauma originated in the psychiatric literature where researchers described how children of Holocaust survivors displayed psychiatric symptomatology as if they too had experienced that level of suffering (Rakuff, 1996; Yehuda & Lehrner, 2018). Intergenerational trauma has been defined as generations continually exposed to an environment with cultural norms where individuals are frequently living in a state of survival, defense, and protection (SAMHSA, 2014). Ongoing experiences of stress and trauma result in toxic stress regardless of the exposed

event (e.g., poverty, abuse, neglect; Oral et al., 2015) as experiences of trauma will be determined at the individual level. In other words, a traumatic experience for one individual may look different from a traumatic experience of another individual, but that does not make either experience any less traumatic. As mentioned previously, the NAS/NOWS exposure does not have the biggest impact on children, but rather the ongoing adversity they face throughout their development (Miriayala, 2018). Research has demonstrated that the more adversity a child experiences, the more likely the risk of behavioral health problems (Oral et al., 2015). In particular, a longitudinal study demonstrated that children experiencing a home environment of substantial exposure to parental alcohol use or mental illness resulted in poor outcomes for the child throughout their lifespan (Werner, 2004). It is important to consider how children experience the home environment as they may already have access or exposure to drugs and alcohol.

Beyond the environmental risk factors that face these young children, there are additional risks due to the links between parents experiencing SUD or OUD and ongoing parenting skills. For example, approximately half of children with a parent experiencing OUD remain in the care of that parent (Taplin & Mattick, 2015). This statistic requires attention beyond the prevention of OUD in parents within a community; it is crucial to also consider the implementation of interventions within child welfare systems and early intervention programs to provide parenting support that emphasizes parent-child interactions and the whole family approach as well as treatment for parents with OUD.

Despite an absence of data on the number of children residing in homes of opioid-using adults (Peisch et al., 2018; Spehr et al., 2017), a child's environment that involves drug abuse rarely includes effective parenting (Black et al., 1994). It is documented,

however, that over 11 million adults are misusing opioids (illicit or prescribed) (SAMHSA, 2015). According to Newport and Wilke (2013), 74% of adults who are misusing drugs are also parents; of those parents, 70% are women (Niccols et al., 2012). Additionally, since 2010, Caucasian women from rural areas have been the most represented sample of those entering treatment programs (Rodriguez & Smith, 2018). These statistics support the need to focus on parenting interventions, particularly mothers in recovery as we know that abstinence alone does not result in improved parenting practices (Suchman, DeCoste, McMahon, Rounsaville, & Mayes, 2011). These findings demonstrate the need to provide family-centered interventions to disrupt these intergenerational trends.

### **Parenting Interventions**

The most effective intervention to treat OUD is medication-assisted therapy (MAT; i.e., methadone or buprenorphine; American College of Obstetricians and Gynecologists, 2016). Conversely, mothers experiencing OUD often experience co-occurring challenges including anxiety and depression (Wright et al., 2018). MAT alone is not a sufficient treatment for mothers (Wright et al., 2018): This therapy also neglects the impact of OUD on the family unit, especially interactions between mother and child.

Parents, specifically mothers, who experience addiction are typically worried about the impact they will have on their child(ren). This concern provides a critical window of opportunity to intervene as these mothers demonstrate increased motivation to change (Suchman & DeCoste, 2018). Although the literature indicates that parents in recovery struggle to provide responsive, consistent caregiving (Wright et al., 2018), several promising parenting interventions have been identified to ameliorate outcomes for



both mother and child. One of the best practices for mothers in treatment is the use of family-centered approaches, which incorporate the entire family (Rutherford, Barry, & Mayes, 2018). There is a dearth of information, however, regarding clear guidelines on best ways to support mothers. Understanding what mechanisms helped mothers access treatment and remain in recovery is critical for informing intervention approaches. Providing the voice of individual participants throughout this process allows for needed changes to treatment services. Understanding the risk and protective factors at a population level gives the community a chance to implement prevention and intervention strategies that will better meet the needs of this population.

### **Rationale for this Study**

This study is unique in its use of a pragmatic research approach to understand the context of the problem within a rural community (Glasgow, 2013). An exploratory design can illuminate depth in the lived experiences of mothers and providers within one rural community. The current study uses an exploratory approach that focuses on the use of phenomenology. A phenomenological approach is founded in the understanding that all human experiences are real and complex and should be heard through the individual processing the phenomenon (Bevan, 2014; Mason, 2002). Therefore, the purpose is to better understand from their own lived experiences how mothers in recovery from OUD have been successful in accessing treatment within a rural community. How mothers in recovery from OUD perceive the process, as described by the mothers as well as providers from the treatment and recovery programs, will also be examined.

### **Aims and Research Questions**

This investigation's two specific aims were the following:

***Aim 1: To characterize the experiences of mothers accessing treatment services.***

Semi-structured interviews were conducted with 11 mothers currently receiving treatment for OUD. Mothers who were actively in recovery and had at least one child who was less than 12 years old were included. The interviews focused on characterizing steps in which mothers took to access treatment (e.g., mandated versus voluntary), enforcement of treatment (i.e., mechanisms in place to sustain treatment), and stigma (i.e., perceptions of treatment received).

***Aim 2: To describe the perceptions of providers that work within the treatment and recovery centers and related organizations.*** Semi-structured interviews were conducted with seven treatment providers currently working with mothers in recovery from OUD. The interviews focused on describing the programs available to mothers (e.g., family-centered approaches versus individualized), the accessibility of programs (e.g., supports and barriers to access), and normative beliefs of providers (e.g., perception of mothers' ability to recover).

Research Question 1: What is the process mothers have taken to access treatment within their community?

Research Question 2: What is the process that providers used to interact with mothers accessing and receiving treatment?

## CHAPTER III

### METHOD

The purpose of this chapter is to describe the methodology associated with the current investigation. This study focused on the experiences of mothers in recovery from OUD and the roles of the providers working with mothers in recovery from OUD through treatment and recovery programs within the community. This study sought to understand how mothers have overcome barriers to access treatment while residing in a community experiencing intergenerational trauma due to the impact that adversity has on development (Miriyyala, 2018). To best understand the current issue, an exploratory phenomenological approach was used. A phenomenological framework was leveraged to develop semi-structured interview questions to guide the focus on lived experiences (Bevan, 2014). This chapter provides information about research design, data collection, participants, measures, and materials. Finally, the data analytic approach is reviewed.

#### **Research Design**

The current investigation was exploratory in nature and employed a phenomenological framework. Using a qualitative approach allowed the community voice to be heard, one of the main goals of the community partners. In this study, a CAP was created between the Local Alcohol and Drug Planning Committee (LADPC) and an academic researcher. Prior to the current investigation, the lead researcher followed the principles outlined in CBPR and the SPF to build rapport with key stakeholders, understand the context of the problem, incorporate community culture, and collaboratively determine the gaps in community knowledge. This CAP was developed to incorporate the cultural competence of the community from the experts themselves into

the development, implementation, and evaluation of the current research investigation. Additionally, this supports CBPR principles by implementing a co-learning process where community partners are actively involved throughout the research process to transfer the skills and knowledge of research into the community and improve the chances of sustainability of research. Upon approval of this research study by both my dissertation committee and the University of Oregon Institutional Review Board, participant recruitment and data collection began.

### **Improvement Cycles**

Improvement cycles are used to gather and analyze data frequently and intentionally (Sims & Melcher, 2017). The proposed investigation applied underlying principles of implementation science to maximize best fit with community needs and resources to provide sustainable efforts to improve community-wide health initiatives. This process required regular attention to ongoing improvement. The SPF encapsulates how ongoing community work is cyclical and aligns with stages of quality improvement through the Plan-Do-Study-Act (PDSA) cycles of implementation science.

Quality improvement has been embedded in business and health care models for years (Taylor et al., 2013). The “Plan” phase identifies objectives and a hypothesis for improvement; the “Do” phase involves implementing the plan and carrying out the process; the “Study” phase focuses on examining results and data from the “do” phase, identifying what was learned; the “Act” phase takes what was learned in the “Study” phase, making changes in the process and starting the cycle over again (Taylor et al., 2013). Throughout this study, improvement cycles were incorporated to rapidly resolve barriers related to design, data collection, and data analysis.

## **Data Collection**

Participants included 11 mothers in recovery from OUD and 7 treatment providers that worked directly with mothers in recovery from OUD. Participating mothers met the following criteria: (a) actively in recovery from OUD, (b) had a child(ren) 12 years old or younger, and (c) were between 18 and 60 years old. Due to the focus of this work on understanding prevention points within the community, the CAP wanted to focus on children before they reach an age where they are likely to start experimenting with substances. Inclusion criteria for providers included: (a) work in the rural community, (b) experience working with mothers in recovery from OUD, and (c) were between 18 and 60 (see Table 1).

Purposive sampling was used to select participants who met the focus of this investigation. This sampling technique was selected to purposefully inform the research study due to the importance that the participants within a phenomenological study selected have experience with the target phenomenon (Creswell, 2013). Interested participants contacted the primary researcher via phone and/or email, who then provided them with additional information and an overview of the study. During this information session, the primary researcher first checked with potential participants to ensure they met inclusion criteria and then gathered foundational study information. Signed consent forms were required prior to the collection of data, and participants were given an overview of the research study, procedures involved, and the primary researcher's contact information. Additionally, the consent process informed participants of any possible risks involved with this research study (e.g., participants may feel vulnerable sharing their experiences) and their rights as participants, including their right to withdraw at any point

Table 1

*Participant Biographic Information*

	Mothers <i>N</i> = 11	Providers <i>N</i> = 7
<b>Gender</b>		
Female	100% (11)	57% (4)
Male	0% (0)	43% (3)
<b>Age</b>		
18–25	8% (1)	0% (0)
26–35	55% (6)	14% (1)
36–45	28% (3)	43% (3)
46–60	8% (1)	43% (3)
Missing	0% (0)	0% (0)
<b>Race</b>		
Non-Hispanic White	92% (10)	100% (7)
Native American	8% (1)	0% (0)
<b>Education</b>		
High School or Less	45% (5)	0% (0)
Some College	18% (2)	14% (1)
College Degree	8% (1)	57% (4)
Graduate Degree	0% (0)	29% (2)
Missing	27% (3)	0% (0)
<b>Employment</b>		
Counselor	0% (0)	57% (4)
Program Director	0% (0)	29% (2)
Corrections Officer	0% (0)	14% (1)
Resident Manager	8% (1)	0% (0)
Classroom Assistant	8% (1)	0% (0)
Student	18% (2)	0% (0)
Unemployed	64% (7)	0% (0)
Seasonal Worker	8% (1)	0% (0)

during the study. Once a participant agreed to participate, the time and place for the interview were selected. Interviews were offered in person or via phone based on the preference and flexibility of the participant. Recruitment occurred through local treatment programs and centers housed in Coos Bay. Specifically, the LADPC (an interdisciplinary

team which provides detail into the various touchpoints mothers may have encountered throughout their treatment and recovery process), Adapt substance use and gambling services program (a program focused on addiction treatment, behavioral health care, and prevention), and Bay Area First Step (BAFS; an organization that is peer-run and peer-operated) were contacted. Stakeholders, providers, and local organizations that participated in regular LADPC meetings were provided recruitment flyers. All interviews were conducted during March and April 2019.

### **Ethical Considerations**

In working with sensitive populations, it is important to keep ethical considerations in mind. As a female who has not experienced motherhood, or SUD, it is imperative to be understanding of the vulnerabilities of these participants as well as the sensitivity of data collection from related stakeholders. In the interest of being respectful to participants as well as conducting ethical research, I followed the guidelines provided by Creswell (2013) for qualitative research:

1. Gained Institutional Review Board (IRB) approval and community stakeholder approval before collecting any data;
2. Broadly explained the current investigation and themes to prospective participants at initial contact and allowed time for participants to express questions or concerns;
3. Provided a clear understanding to prospective participants that the purpose of the study aims was to improve the process for others in their community and be sensitive to the vulnerable nature of these populations;
4. Allowed prospective participants time and space to determine whether they would like to participate in the current research study and provided them with my

- contact information, so they could contact me with further questions or concerns;
5. Guaranteed all participants that they could drop out of the study at any time without further question;
  6. Assured all participants that all information that collected would remain confidential; and
  7. Shared de-identified data at the end of the process to further inform research and practice.

### **Instruments**

Original interview guides (see Appendices A and B) were informed through a phenomenological lens and by both literature and input from community stakeholders through LADPC monthly planning meetings. In development of the guiding questions, community partners were asked for input. Improvement cycles were used to rapidly incorporate suggestions from community partners throughout the development process (Taylor et al., 2013). First, the researcher developed interview guides through theory and literature. Second, the researcher brought the interview guides to a strategic action planning meeting with the LADPC where the committee was able to ask for clarity and provide feedback on the interview guides. These changes were incorporated in-vivo during the meeting. Next, the researcher provided the interview guides for the dissertation committee where minor suggestions were provided to the structure of the question order. Final edits were incorporated and included within the IRB process. Interview questions were designed to be relatively broad and open-ended to allow participants the chance to answer each question based on their own experiences and personal viewpoints (Bevan, 2014). Hence, the focus of these interviews was on individual processes of accessing



supports and services related to treatment and recovery of OUD for mothers within their community and their lived experiences.

### **Procedures**

After participants provided consent (as required), dates and times for the semi-structured interviews were scheduled with the researcher at a time and place most convenient for the participant. Nine interviews were conducted face-to-face (conducted in a private, quiet setting, such as a conference room at the treatment center), and nine via phone. Interviews averaged 20 minutes (with a range of 15 to 42 minutes) and varied in duration depending on the amount of detail each participant provided. Prior to each interview, the researcher went through bracketing, a reflective exercise in setting aside one's own beliefs or understandings of the phenomenon to explore each interviewees experience with curiosity (Creswell, 2013). At the beginning of each interview, the researcher briefly reviewed the consent form, reminding the participant of the option to withdraw at any time or skip any question. Guiding questions focused on the supports and barriers to successfully accessing treatment within the community. After each interview, the researcher and participant conducted a short debriefing session to allow the participant a chance to ask any follow-up questions or provide additional detail. Finally, after each interview, the primary researcher engaged in memo-writing to categorize themes immediately following each interview. During this time, the researcher engaged in the rapid iteration improvement cycles to make any adjustments to the interview process (e.g., a question being offensive to a participant and needing changes). Minor changes to interview questions were made immediately following each interview as necessary (see Appendices C and D). For example, one change included adjusting how I

was asking mothers about their parenting experiences, from “tell me about how you learned to handle the aspects of parenting” to “tell me about any experiences you have had focused on parenting skills”. Finally, interview participants were sent a \$15 Amazon E-gift card after the completion of their interview with a follow-up email thanking them for their participation.

All interviews were audio-recorded with a portable recording device (Creswell, 2013). Following each interview, audio recordings were backed up by a password-protected portable computer. The primary researcher sent individual, de-identified recordings (i.e., no names were included) to a professional transcriptionist via Microsoft OneDrive, a HIPPA-compliant program. Transcriptions were analyzed with Atlas: TI, version 8.4.0, a qualitative web-based analytic software program.

## **Data Analysis**

### **Social Constructivism**

Social constructivism, or interpretivism, was used to understand the views of individuals as they have experienced the world (Creswell, 2013). This interpretivist lens determines that experiences are not solely that of the individual but rather are formed through interactions with others in their proximal and distal environments (within ecological systems). Within the social constructivist lens of phenomenology, there are two steps in analyzing data: textural (“what happened”) and structural (“how it happened”) descriptions (Creswell, 2013). This process allows for major themes based on the experiences of the participants to emerge throughout the coding process.

Qualitative content analysis was used for analyzing the data. Qualitative content analysis is used as a subjective interpretation throughout the coding and analysis process

to identify themes in a systematic process (Hsieh & Shannon, 2005). Both deductive (a priori themes) and inductive (themes that emerge) codes were used to highlight the lived experiences of mothers experiencing OUD and professionals working directly with them. Several steps were taking in the primary coding process to determine codes including: (a) organizing the data; (b) reading and memoing (reading through transcriptions and making notes); (c) describing data into codes/themes (describing essence of the phenomenon); (d) classifying data (developing significant statements, grouping statements into meanings); (e) interpreting data (developing the “what happened” and “how the phenomenon happened”); and (f) representing the data (presenting the narrative) (Creswell, 2013). Although there is flexibility in the primary and secondary coding of qualitative data, precautions were taking to increase the reliability of analysis and intercoder agreement (Creswell, 2013).

Two trained doctoral students assisted with double coding all transcripts. Each doctoral student completed all participant codes for one population (i.e., one student double coded for mothers, one for providers). Both doctoral students used the same analytic software as the lead researcher (Atlas: TI, version 8.4.0). Prior to the intercoder process, both doctoral students were trained in the use of the software platform. One-on-one meetings between the lead researcher and the coder were conducted to discuss the coding process and provide an overview and definition of themes (see Table 2).

Table 2

*Deductive and Inductive Themes Defined*

Code	Description	Example
Individual	Identification of skill building, self-efficacy, self-worth, or motivation to change.	
Transformation	This includes individual's personal experience throughout the recovery process.	"I'm growing at a rate that I just didn't think was possible, and I didn't really care if it was possible before."
Hope/Hopelessness	Expression of feeling hopeful for new opportunities or the impact of hopelessness and despair.	"When I'm sober I have things that I don't have when I'm not sober. I have those goals, those dreams, those ambitions."
Relationships	Connections with friends, family, and peers. This includes influences of previous relationships as well as newly formed relationships throughout the recovery process.	
Mother/Child	Mother/child interactions and the role children have played a role in the process.	"Well, I mean, my children are my biggest motivator, obviously."
Mother/Mother	Peer support identified through individuals that have shared experiences.	"What makes it so successful is that they're your cheerleading squad. They help you build that support system and make you feel like you're a person that's worth being sober."

Table 2 Continued

Code	Description	Example
Mother/Mentor	This includes relationships with treatment providers/community members involved in the process.	“The quicker you get into your services, the connection that you make with whoever your mentor may be or whoever your counselor may be or group that you’re involved in, and staying engaged . . . That’s really gonna build your foundation.”
Mother/Partner	Relationships that are described between the mother and either previous or current partners. Including romantic relationships and/or domestic violence.	“One of the barriers for them is the men. They actually will leave recovery for the man.”
Community	Sense of belonging and connection to culture and community. Cultural norms or expectations as portrayed by the larger community including stigma, fear of being judged by others, etc.	
Housing	Quotes related to an individual’s ability to sustain adequate housing; housing options available within the community.	“Honestly the number-one saving grace was being able to get into housing.”
Accessibility	Any quotes related to the ability to access/locate supports and services, or any specific supports that were provided. These could be specific to a treatment center or program, or anything related to physical location of services, etc.	“Finally getting a sober place to live with people around [who] will facilitate helping . . . I could have gone to Adapt but how would I have gotten there?”

Table 2 Continued

Code	Description	Example
Outreach/Advertising	Knowledge of existing supports/services. This will include quotes that talk about how someone learned about supports/services/programs.	“Usually what happens is they’re referred from the OBs. So I take a lot of my brochures over there and like I said, about every six months I have to go back in and remind them because they’re busy too. So it’s like you have to do outreach in order to keep this going.”
Policy/Systems	Formalized systems-level requirements (i.e., policies and procedures) supporting or inhibiting access to the treatment and recovery process.	“Even though there’s a legal pressure there, legal consequences once the infant is born, we work really hard to keep the mother and the baby together if possible along with DHS, and that’s where the addiction recovery team comes in.”
Transitions	Processes in place that focus on the transition from one step of the recovery process to the next. Physical transitions (e.g., transportation), plans in place (e.g., recognition of the next step in the process), or connections (e.g., connecting individual with support groups).	“I knew that when I got out of jail, if I went back to my only place I had to go, I was go[ing to be] using again and I didn’t want to do that.”
Advice for Mothers	Participant provided advice that could support mothers on how to be successful throughout this challenging time. Suggestions of what these participants wish they had known earlier in their process.	“Like I tell everybody . . . if you have to do it for your kids at first, do it for your kids. But that’s not going to keep you sober in the long run. You gotta do it for yourself.”

Table 2 Continued

Code	Description	Example
Ideas/Suggestions	Any thoughts or suggestions on how to improve the process for mothers to access supports and services related to opioid treatment within Coos County.	“My recommendation is to start with the babies.”

Throughout the coding process, rapid iteration cycles were used to quickly remediate any discrepancies and improve themes definitions for clarity and ease of coding. Two trained doctoral students used the coding guide developed by the primary coder and were trained in the definitions and examples. Secondary coders also helped to develop emergent themes as they reviewed transcripts. When there were disagreements, the process to come to consensus included the primary coder working with the secondary coder to review definitions of each theme, discuss perceptions on why they used a code differently, and came to a consensus on how to re-define the code for clarity. Two rounds of remediation were required for the secondary coder working on mother codes. Three rounds of remediation were used for the secondary coder working on provider codes. During this time, the primary and secondary coder would meet to discuss differences in the coding process, review any discrepancies on codes, and provide additional definitions or examples of what a code might represent. The primary goal of the inter-coder process used here was to have agreement on the code used in comparison to a text segment, a common process in qualitative coding (Creswell, 2013). Due to individual differences in coding process (e.g., some people code short text segments while others code longer passages), it was important to ensure codes were aligning with the content.

In other words, we did not all code the same text, but text that was coded was examined for similar meaning. After primary and secondary coding took place, the lead researcher compared findings and pulled out quotes that were most compelling to impact community change. Consensus was used for any discrepancies in the coding process. Coders were asked to read through the results section and determine whether they agreed with the selected quote under its given them. Following their review, remediation took place.

To follow CBPR principles and improve the validity of the findings here, expert and member checking was used (Creswell, 2013). Expert checking required the lead researcher to present findings from the study to community partners (LADPC). Their involvement in terms of providing feedback aligns with CBPR principles by engaging community partners throughout the process both pre- (development of guiding questions) and post- (expert checking of findings) data collection. Member checking involved the lead researcher contacting participants to confirm that the findings and interpretations of the investigation aligned with the views of these participants. Since some of the provider participants were also members of the LADPC, they represented both providers and the mother's perspective for member checking. Thus, these community partners represented both expert and member groups. Although participant mothers were contacted as a part of the member checking process, there were no mothers that responded to the request to review quotes.

Additional best practice methods were used throughout the primary and secondary coding. These included: (a) bias reduction prior to coding and interviews (e.g., reflecting on the question, "why are your thoughts about mothers in recovery from opioid use?); (b)



the creation of memos immediately following an interview or coding of a transcript (e.g., taking notes in the margins of each transcripts that interpret significant statements into meanings); and (c) an audit trail (e.g., keeping track of adjustments to interview questions).

## CHAPTER IV

### RESULTS

The results of the current investigation are presented. The study goal was to understand the supports and barriers that mothers in recovery face to access treatment, and the process in which providers interact with mothers throughout their recovery process, all while residing in a community experiencing intergenerational trauma. With 11 interviews of mothers in recovery from OUD, and 7 interviews of the providers working with mothers in recovery from OUD, thematic saturation was met. This chapter provides the results of this research study, including the presentation of deductive and inductive themes.

Themes are presented that include perspectives from both mothers and providers. A priori themes included: (a) the individual; (b) relationships; (c) community; (d) advice for mothers; and (d) ideas/suggestions. Additionally, grounded themes emerged from that data which were categorized with a priori themes including: (a) transformation; (b) hope/hopelessness; (c) interpersonal relationships (e.g., mother/child, mother/mother, mother/mentor); (d) housing; (e) transitions; (f) accessibility; (g) outreach/advertising; and (h) policy/systems. Supports and barriers to themes are included throughout the results section as highlighted by individual participants.

#### **The Individual**

The individual is described as the microsystem within ecological systems theory (Bronfenbrenner 1976, 1979). Supports and barriers were identified related to the perception of an individual's ability to be successful throughout the treatment and recovery process. These perceptions included any quotes related to skill building, self-

efficacy, self-worth, or motivation to change. Supports related to the individual highlighted growth through participants' realization that they were capable of change. One salient theme identified by mother's was the self-transformation that took place from entering the treatment and recovery process due to family or punitive reasons: They realized that to be successful, they needed to get sober for themselves.

I'm growing at a rate that I just didn't think was possible, and I didn't really care if it was possible before. (Mother 3)

When I first got in recovery it was more like a "I have to do this" because I don't want to face seven years in prison. But after the first three months I kind of got the mentality like, okay, I can start getting my kids back, like I could be a more productive member of society. (Mother 5)

Additionally, many mothers mentioned their own understanding of emotions throughout the process, which empowered feelings of hope, ambition, and excitement for the future.

It's been understanding emotions, not just mine but emotions, period, that have helped me be a good parent. (Mother 8)

I can do this but not being able to, I mean, my kid is my strength, my hope. I want this for myself, but before any of that self-care, self-love came in, I wanted it for my child. (Mother 9)

When I'm sober I have things that I don't have when I'm not sober. I have those goals, those dreams, those ambitions. (Mother 10)

Providers also alluded to the importance of building self-efficacy and self-esteem throughout the recovery process and that many supports are needed to empower individuals and overcome barriers.

It's just amazing to see people turn themselves around, not only for themselves, but for their kids. (Provider 1)

[They need] emotional support and . . . making them feel like they're humans, just like the rest of us. (Provider 4)

Barriers to individuals included descriptions of experiences that kept mothers from seeking services. Specifically, many mothers described struggles of fighting addiction and experiencing depression and melancholy as well as fear throughout their journeys. For example, many mothers did not enter recovery voluntarily and expressed feelings of hopelessness, melancholy, and fear that kept them from receiving the treatment they so badly wanted.

But there was just a melancholy that I set myself into where the only thing that felt right was to be incarcerated, the only thing that felt safe. (Mother 7)

I wish I'd gotten help so much sooner but I was so afraid. (Mother 9)

I'd moved from pills to heroin at one point a couple years before I quit. And, I mean, I was just really unhappy in my life. I wanted to be a good mom and be a good person and I didn't feel like I was. (Mother 11)

Additionally, providers have observed individual barriers that mother's face throughout their experiences, touching on the immense challenges for mothers and families in recovery. For example, many mothers lose custody of their children before entering recovery which resulted in mother's losing hope.

[They] lost custody because of their addiction and just gave up because of their addiction, figured there was no hope because of their addiction. (Provider 1)

## **Relationships**

Relationships between the individual and another individual within their microsystem are referred to as the mesosystem within ecological systems theory (Bronfenbrenner 1976, 1979). Supports and barriers were identified by all participants, including negative and positive relationships experienced throughout the treatment and recovery process. These relationships include connections with friends, family, and other peers. Factors that supported relationships included the creation of support networks.

Several mothers described the power of positive relationships that have improved the recovery process, including: (a) their child(ren); (b) mentors; (c) friendships; and (d) family. For example, many mothers described experiences of accountability and building support networks that supported their success throughout the recovery process.

What makes it so successful is that they're your cheerleading squad. They help you build that support system and make you feel like you're a person that's worth being sober. (Mother 4)

I got a hold of [the provider] and this guy was persistent. I would call him up and be like, oh, I'm gonna miss an appointment. And he would drive and come and find me and he'd be like, no you're not, we're gonna have an appointment right here in the parking lot, right where I found you. And [he] basically did that until I came into here. (Mother 7)

The most helpful thing that I've found in my recovery is knowing that there is a solid support system, knowing that it's not just services, it's knowing that there's people out there that actually care. (Mother 8)

Another salient theme was the relationship between mother and child and the impact the child(ren) had on a mother's process in treatment and recovery. Mothers noted that although their motive to access treatment or remain in recovery was often related to the love of their child, they recognized the importance of making sobriety about one's own growth to be successful in getting their child back. For example, mothers identified their child as motivation to continue working on their recovery process.

Well, I mean, my children are my biggest motivator, obviously. (Mother 11)

The part that she played in it was—at first her being taken away from me put me in despair. And then once I started getting more sober, she, my daughter, is the only think that kept me sober at first. (Mother 8)

Providers noted the benefits of being able to work with mothers early on during the pregnancy and recovery as a preventative strategy to keeping the family together.

After the baby's born—most of them if they start with me . . . their baby is born completely clean. (Provider 7)

We have a curriculum that actually I got from [redacted] at Public Health that was about substance-exposed infants and different ways to help the moms attach and bond and understand developmental milestones once the baby's born and prenatally. (Provider 7)

Providers noticed the positive impact that relationships can have on the recovery process as well. The connection two people can create through shared experiences from peers was a salient theme. They also recognized the importance of being an open-minded provider.

Shared experiences is a huge thing, huge benefit for that trust factor to begin. Because some of these people are broken, been hurt, been on the streets. (Provider 1)

The quicker you get into your services, the connection that you make with whoever your mentor may be or whoever your counselor may be or group that you're involved in, and staying engaged . . . That's really gonna build your foundation, [the] support network that you've got. (Provider 1)

Participants also defined negative relationships that hindered individuals from receiving the support they needed or led to relapsing. Mothers described the barriers they faced after accessing services when they realized they needed to break ties with many relationships that were familiar prior to treatment. For example, many mothers identified the need to cut ties with old friends, family members that were not sober, and previous partners.

Staying away from people, places, and things—you know? Once you get in the groove of recovery, you meet new friends and stuff, but during that process it's hard. (Mother 3)

My family's not sober so I can't hang out with my family. (Mother 6)

Providers mentioned several barriers for mothers, including the social-emotional connections with others, specifically, the men in their lives.

It's social-emotional connections that [mitigate] those feelings of not being accepted. (Provider 4)

One of the barriers for them is the men. They actually will leave recovery for the man. (Provider 7)

Additionally, the turmoil experienced when faced with the decision of sobriety or motherhood was expressed. Many mothers discussed the overwhelming fear of loss they experienced and why it was so challenging for them to seek out services because they were afraid of the repercussions of losing their child and the impact that would have on their recovery process.

Sometimes I look back and I go, yeah, in certain instances I caused more damage by having my kids. Through my addiction and then if they were taken away when they were little . . . I did everything I needed to do, got sober and then got them back. Because my kids had to witness, they didn't have somebody there stepping in for them. (Mother 4)

That's mainly the big concern right now because I mean, if I can't have them, what's the point of being in recovery. (Mother 5)

I really, I really wanted to get help before that point, very badly, because I recognized the road I was going down, and I recognized what future that would possibly bring me and my child. (Mother 9)

That was really hard for me to be there and not be able to see my kid. And then even when I got out and I was making progress, I still only had once-a-week, one-hour visits at DHS. (Mother 9)

Providers validated the fears that mothers endured and sympathized with the impact these fears have on mothers' beliefs that they could access supports and services.

We see a lot of this, that she/moms tend to hide that fact of pregnancy up until they can no longer hide it because they're scared to death [of] what's gonna happen. (Provider 4)

[That] really keeps them away from extra treatment, because they have that fear. And to me I would rather them say, hey, I found out I'm pregnant—you know, help me—than to hide it. I know why they're hiding it. They're hiding it out of fear. (Provider 4)

That's one of the things that's hard to get across to the moms, but once you get it going and you have a few in, then all of a sudden you get a bunch more. (Provider 7)

## Community

The theme of community was present, particularly the impact of the connection to the culture and community. These cultural norms and expectations are defined as the macrosystem within the ecological systems theory (Bronfenbrenner 1976, 1979).

Community supports that empowered individuals to remain in recovery were presented. Both mothers and providers discussed specific programs within the community that have been successful in getting mothers back on their feet. For example, many participants discussed the benefits of housing, transportation, accessibility, and knowledge of services as catalysts for change throughout their process.

My big changes were . . . seeing a home visitor . . . . It started during my pregnancy and they met with me regularly and were nonbiased and they had—my first pregnancy they had helped me . . . look for programs to get into. And this time around they were helping me get into housing. (Mother 2)

I think that Head Start is a great agency that helps mothers, from perinatal all the way through age 5. (Provider 2)

Some of the barriers many mothers discussed how difficult it was to overcome stigma, judgment of others, and the perceived negativity they experienced.

There's just shame and hate and just nastiness surrounding it, which I understand because there's a lot of crime and stuff that happens. But it doesn't help to have that kind of mindset about it, it doesn't do any good. (Mother 2)

Everywhere else that I went they were really judgy about everything. (Mother 7)

But I was absolutely terrified to access help because I believed as soon as I even went into [the] doctors and told them, I'm an addict and this is what's been happening, that I would lose my child. (Mother 9)



Providers also commented on the negative impact that the community has regarding intergenerational disparities and the mindset that these mothers should be able to stop using drugs at any time. One salient theme was stigma and the barriers that placed on mothers to access supports and services.

It's a little bit difficult sometimes to get the little pregnant moms in here because there's kind of a stigma. (Provider 7)

I think there's a huge stigma when it comes to moms in recovery—moms, dads, whoever. (Provider 7)

Housing availability within the community was another salient theme that emerged from both mothers and providers.

I think that is what helped me the most because being in the housing was a big thing for me. (Mother 2)

Honestly the number-one saving grace was being able to get into housing. (Mother 9)

Even with services in place to support the recovery process, participants were faced with the likelihood of relapse due to additional variables such as food, hygiene, unemployment, and finances. Participants acknowledged the benefits of having their basic needs met and the perceptions of being a member of society again.

I got my driver's license back, which I never thought I'd get, you know? And I finished—actually today was my last day of my first term of school. (Mother 4)

They've given me a job. I'm able to work. I'm able to come home and go to bed. I'm able to provide hygiene for myself, which is so important. (Mother 6)

Providers acknowledged the importance of providing housing for these mothers and families and the impact that supports and services can have on recovery when every mother and child is able to maintain a stable living environment.

Essentially we helped find her housing outside of where she lived, into more of the middle-class type community, and that helped her put up a barrier between her and those other people. (Provider 4)

Making sure that they have safe housing, that they have transportation, that they have their medical needs, anything that would be a deterrent to [recovery], other than they may not want to. (Provider 5)

Another theme was related to transitions throughout the recovery process. This included both physical transportation from one location to the next as well as transition plans that need to be in place to support mothers along the recovery journey.

Transportation. We have worked a lot [on] getting transportation. Daycare is another one where mom, she may have a newborn, but she also has other children, and she may be single. (Provider 5)

Many participants mentioned the impact that accessibility to services have on their progress throughout the recovery journey. Specifically, mothers mentioned the proximity, immediacy of supports, and availability of services.

The AA meetings right up the street makes it really easy. (Mother 4)

For me it was either go back to the same old thing that I had, or get out of there and come here. And so I was lucky I got in here. But I had filled out applications and whatnot when I was still in jail. (Mother 4; regarding access to transitional housing)

It's a scary thing, but I think it made a huge difference in my life, being able to go to inpatient. (Mother 11)

Providers mentioned some programs in place that are the "gold standard" and how they have had success in supporting mothers and families along the way.

We've put all those pieces into one place in terms of . . . a vertical integration process of mentoring, access to housing, access to a stable place to live, other peer support people and treatment providers in the community. (Provider 3)

The radar has not come up with DHS if they're just pregnant but they're using, and if the OB-GYN realizes that's what's happening, they will refer the client to us. And so at that point, because there's no real pressure for them to come to Adapt, we will go to the office and meet them at the OB-GYN. And so we do a

warm hand-off with the medical provider in situations like that. It's scary. They don't know what to expect. It's easier to hide. There's no legal consequences at that point. (Provider 5)

Many participants discussed the knowledge (or lack thereof) of existing supports and services in the community. This theme encompassed any provided information related to individuals learning which programs were available as well as any rationale that provided insight to why a mother may not choose to seek supports/services. Those individuals who had positive experiences finding supports often learned about them via word of mouth.

I was on probation. I had met another friend of mine that was in and out of jail with me that had gotten sober about the same time I did, and she was here and she had told me about the program here at Bay Area First Step. (Mother 4)

There's also through ORCCA monthly community meetings where it brings different agencies throughout the community together to get aware of what services are available. (Provider 2)

Usually what happens is they're referred from the OBs. So I take a lot of my brochures over there and like I said, about every six months I have to go back in and remind them because they're busy too. So it's like you have to do outreach in order to keep this going. (Provider 7)

Another theme that emerged was related to formalized systems-level requirements (i.e., policies and procedures) supporting or inhibiting access to the treatment and recovery process. Some participants experienced positive results due to policies and systems in place. These requirements might include mandates for classes, policies and processes for ensuring supports during transitions from jail to community, or formalized support teams (e.g., recovery team).

DHS mandates a parenting class and I was kind of skeptic about it at first, but I absolutely love it, and she does an amazing job. (Mother 9)

I was in jail and they sent me to the Oregon State Hospital. I was so grateful . . . because I thought they were just gonna let me back out on the streets. (Mother 6)

Creating a way of redemption, recognizing redemption's possible, and creating a system that has more dexterity around somebody that has turned it around, has embraced recovery, has built out support systems for their own life where they're functioning well, should be able to model for their kid how to be a whole individual in the world. (Provider 3)

Even though there's a legal pressure there, legal consequences once the infant is born, we work really hard to keep the mother and the baby together if possible along with DHS, and that's where the addiction recovery team comes in. (Provider 5)

On the contrary, several participants discussed the downfalls of not being able to meet their housing needs and the repercussions that had on the treatment and recovery process.

I had no other way to get out. I had no other income. I had no other place to stay. I couldn't just up and leave . . . nobody wants to go live under a bridge or be homeless, especially during the middle of the winter. (Mother 4)

I feel like the number one reason that people will go back is emotions and feelings of hopelessness. For me, if I felt like I had no resources, no options, I'm just gonna go straight back to being homeless or I won't be able to see my kid. (Mother 9)

They're homeless or have lost their kids to DHS or have all those issues going on, so that's a huge thing because when you—if you come out of treatment and you have to go back onto the streets, I would assume it's probably really hard to stay sober. (Mother 11)

Providers mentioned several barriers they have seen get in the way of mothers staying in recovery and the emotional devastation after an individual has worked so hard to get through treatment.

The employment is kind of lower. The housing really—is really hard. To help somebody find housing around here is hard. (Provider 1; regarding barriers in the community with few opportunities for employment and housing)

Taking them out of that addictive environment, that dangerous environment, and putting them in a safe residential facility can take some time. (Provider 5)

And then permanent housing afterwards, you know? We get them through this process and they recover and they get their children back legal, or whatever the issues are . . . . We're just limited on permanent housing for individuals that don't have a high income level. (Provider 5)

Participants also mentioned several barriers to that focused on the lack of transition options throughout the recovery process. This included difficult transition from jail and whether there was a safe option for mothers to get to their next location. This barrier was prevalent for mothers experiencing emotional or physical abuse from previous partners or drug dealers who knew their release date.

I knew that when I got out of jail, if I went back to my only place I had to go, I was go[ing to be] using again and I didn't want to do that. (Mother 4)

What I am running into—from getting them from jail to [the] POs office to Adapt—is a drug dealer waiting for them outside the door. That's a common theme, and they tell me that all the time. (Provider 6)

Mothers who experienced barriers to accessibility included those who live further away from the central location of many treatment programs. These challenges included the proximity/distance to physical locations of supports and services as well as wait times.

I really want to drink but I'd rather just go to a meeting, but, I mean, I can't just up and go and walk 15 miles to get up to North Bend. (Mother 1)

[That] is ironic because you figure we'll walk miles to get our drugs but we won't walk miles for recovery, at least in the beginning. (Mother 4)

Providers identified several barriers as well. These barriers included multifaceted issues that these women face, including the need for multiple types of services, the inability to access follow-up supports, and the struggles of making individuals wait even though they are seeking out services.

It's difficult getting services right away sometimes. (Provider 5)

[We need] more residential beds. Detox is fairly quick. That can happen within 24 hours at our detox facility because it's a quicker turnover, but [at] the 30-day residential services we have 28 beds and there's a waiting list. And with all residential facilities in Oregon there's a one-to-two month waiting list sometimes. (Provider 5)

[The challenge is] when they want services and trying to get those services immediately for them at the time that they're willing to go in, because that changes. And so that's the ultimate goal . . . at the time of need when the person realizes and is willing to go into treatment, that there is a treatment bed, a facility available. (Provider 5)

Additionally, many participants described the challenges they faced when trying to locate supports or services within their community. Mothers described how hard it was to learn about services while wanting to access supports, but not knowing where to start.

The availability of meetings needs to be posted a little bit more regularly. There needs to be more advertising and publicity. (Mother 10)

I knew it was time to go. I just didn't know the steps that I had to take. (Mother 10)

It was really hard to find women in recovery, which is where I'm at, and that's what I needed. You know, coming out of a domestic violence situation, being new to recovery, you'd look for the women in recovery . . . and it was hard to find. (Mother 10)

Many providers discussed their frustration in getting the word out about supports and services and ways to improve their community communications through collaboration.

To help the community as a whole, my recommendation would be to do more public service announcements over the radio and television. (Provider 2)

I just think [we need] more wraparound services with our community partners working together, more awareness of what services are available, and working together to the same goal. (Provider 5)

I think [we need] communication, collaboration, networking . . . . When I try to ask for help or services or something for a client, it feels like there's a competition out there for some reason. (Provider 6)

Other participants described the policy and/or systems-level barriers impacting the treatment and recovery process. These descriptions include quotes related to services suddenly ending or being “cut-off,” lack of access to particular medications because of policies mandating certain types of treatment due to funding, or procedures requiring shorter stays (i.e., quick in-and-out of treatment).

I just felt like I was cut off, pushed back into the house, and then my people out here, all we ever do out here is just drink and you know, do drugs, all this kind of stuff. (Mother 1)

Recently they’ve been asking me again a lot about it because I’ve been on Suboxone now for a long time, or what’s considered a long time, and OHP doesn’t really want to keep paying for it. So that’s I think a big barrier in society . . . because Suboxone costs three times the amount that methadone costs. Methadone costs \$6 a dose and I think Suboxone is around \$18 a dose. (Mother 11)

We move people in and out of our recovery quick because there’s such a big need, and I don’t think there’s that long-term support that’s needed to keep people from relapsing, to the point to where they’re gonna just have to repeat from the beginning again. (Provider 4)

### **Advice for Other Mothers**

Participants provided advice to other mothers on how to be successful throughout this challenging time. For example, one mother recommended seeking the support of friends, particularly sober ones.

You can’t change the past or what you’ve done, but holding onto that’s just gonna drag you down, and moving forward you can always do better, you can always try again. (Mother 2)

So you gotta pick one, pick what life you want. (Mother 3)

Like I tell everybody . . . if you have to do it for your kids at first, do it for your kids. But that’s not going to keep you sober in the long run. You gotta do it for yourself. (Mother 4)

It’s really hard, but once you get past that first little bit of it . . . you’ll do fine. (Mother 7)

Just remember that nothing worth waiting for came easy. (Mother 8)

Don't be afraid. You're not alone. Life is hard. We're here to help kind-of-thing. And just providing—breaking down the stigma and encouraging people to reach out for support. (Provider 2)

### **Ideas/Suggestions**

Finally, participants provided their thoughts and suggestions on how to improve the process of accessing supports and services related to opioid treatment and recovery within the community.

Maybe just getting this community more involved and more educated. (Mother 2)

Maybe having home visitors or caseworkers, maybe having them educated on the stuff as well so that they can introduce it to people that need it. (Mother 2)

If they had moms in [the] recovery setting, that would be really beneficial so that parents that are trying to get on the same page can rely on each other and help support each other. There's a lot of parents here but we're all on different programs, we're all on different—going [down] different paths on things. And it'd be nice to have, like, here's a course and if you're willing to do it, this will work. (Mother 5)

I really think that needs to be taken into account when parents are making a good stand at recovery, and to be able to strengthen them in that effort by having more communication with their children. (Mother 9)

[We need details] that are specific, that give phone numbers and website addresses to places that people can find help, like 211 or an information hotline or a Coos resource website that will guide people to get any of their problems resolved, whether it's Adapt or it's the ARK Project or it's Head Start . . . [or] child care needs, whatever services they're looking for, I think would be really helpful, and to break that stigma and be like, you know, a range of supports are available to you and you could find them through Googling them or going to 211. (Provider 2)

We have recovery housing, but what I've seen with a lot of the other resources and interventions is once they're done, they're done, and then people are on the street with no more support systems, and we need that next step for a year or two that somebody can go into and just strengthen, empower themselves, so they can better face the world because I think we lack that. (Provider 4)



We could actually use a detox center and a residential [center] and a sobering center in Coos county that would be available services more immediate to individuals that get lost in between. (Provider 5)

My recommendation is to start with the babies. (Provider 7)

Start with the pregnant moms because that's where it starts, and support them in making health[y] choices, so that this historical abuse and use doesn't continue, and to educate, educate, educate on that and start young. (Provider 7)

### **Summary**

The results presented here are from 18 transcribed semi-structured interviews exploring the experiences of mothers accessing treatment services and describing the perceptions of providers working with mothers throughout the treatment and recovery process. Specifically, 11 mothers were interviewed to gain a better understanding of the process they have taken to access treatment within their community. Additionally, seven providers were interviewed to learn more about their process of interacting with mothers in recovery who are accessing and receiving supports. Mothers identified key facilitators of their recovery including access to stable housing, building positive support networks, and personal transformation. However, there were several barriers (transition supports, funding, availability of long-term treatment) that were impeding the success of individuals within the community.

### **Theoretical Findings**

This investigation was developed based on two theoretical frameworks: theory of planned behavior and ecological systems theory. These frameworks were selected because their combined conceptualization incorporates behavioral and environmental factors contributing to human development and action, much like behavioral and environmental factors were described by participants as either supports or barriers to their

recovery process. As mothers, the participants also experience unique ecological systems including their children and the proximal and distal effects of being a parent of a young children in recovery.

**Theory of Planned Behavior.** As previously noted, the theory of planned behavior has explained that humans do not have complete control over their behaviors (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 1975). This idea is supported by the findings from this study, including the participants' perceived behavioral control over their addiction. Like the ideals of Ajzen's work (1991) mothers described their own beliefs, attitudes, intentions, subjective norms, and behaviors shifted from the times they were abusing opioids well into their recovery process. This resulted in sub-themes described as self-actualization, including forming positive relationships and mothers' secured support networks. As we have learned from the implementation science literature, readiness for change is a critical component for implementing a change initiative in hopes of improving outcomes (Holt et al., 2007). As mothers demonstrate their readiness to access supports and services including during their reunification process with their child, it is crucial that there are EBPs readily available to meet their needs.

**Ecological Systems Theory.** The ecological systems theory adds to the depth of understanding from the theory of planned behavior by considering the multifaceted complexities found in the target community including environmental factors and cultural considerations. Themes from all participants emerged surrounding the impact that the dynamic systems around an individual have on their lives. The findings from these interviews using these theoretical lenses may help to determine the individual and environmental factors that should be targeted for change (Piper et al., 2012). With many

of these mothers and providers residing in this community over generations, there has been a demonstration of influences across microsystems. These interactions impact the overall social context and culture making it more difficult to break the chain. However, the findings here may help the CAP to determine what supports will best meet the needs of the community, which may improve the implementation of an identified EBP (Crowley et al., 2000) such as evidence-informed parenting programs that work on parent-child bonding and skill-building. A comprehensive approach to improve behavioral health combined with a CBPR focus is a recommended way to focus on individual- and community-level change (Holder, 2002).

## CHAPTER V

### DISCUSSION

A discussion and interpretation of the findings from this investigation are provided. Empirical literature is used to provide context for the conclusions drawn and to provide support for future directions. First, a summary of findings is detailed. Second, interpretations related to the theory of planned behavior and ecological systems theory are presented. Third, supports and barriers focused on the accessibility and knowledge of available services are described. Fourth, guidance for future community improvements as described by the participants is provided. Fifth, future directions and recommendations for this work are posited. Sixth, strengths and limitations of this study are reported. Finally, concluding remarks are summarized.

Research has identified the importance of the exploration phase within implementation science as an ideal time to learn more about the normed beliefs (i.e., macrosystem) of supervisors, providers, and administrators within a community (Moullin et al., 2019). This is an ideal time for communities to examine an existing or emerging health concern and to begin to look for EBPs to address the issue (Moullin et al., 2019). Gathering information about lived experiences from individuals who are the “givers” and “receivers” of programs in the community builds the context of the problem and highlights strengths and weaknesses within and across systems. There are numerous programs, mentors, and services in place within this target community that are making a positive impact on mothers in recovery from OUD, as described in semi-structured interviews. However, without a shared approach among providers, or a consistent line of communication, the community will continue to face challenges throughout the

dissemination and implementation process. The barriers described here will continue to interfere with the effectiveness of proposed interventions as well as allow the possibility of continued substance abuse and SUD within the community.

This study was unique in that mothers and providers identified shared supports and barriers regarding access to services specific to OUD. Specifically, this study highlighted potential opportunities to improve the access and availability of supports in the community by determining the needs of the participants. Several key factors were identified related to the inner and outer contexts of the EPIS framework (Moullin et al., 2019). For example, inner contexts included the availability of organizational resources whereas outer contexts included the impact of community environment and policies in place. When interpreting these findings, it is important to keep in mind the contextual impact of this rural community as these findings may vary widely among communities. Despite the experiential differences between providers and mothers in recovery from OUD, participants shared several common supports and barriers to the access of services across the treatment and recovery process.

### **Supports and Barriers Within the Ecological System**

#### **The Individual**

The current investigation confirmed that many mothers in recovery from OUD have been exposed to environmental disadvantages such as homelessness or home instability, mental illness, and anxiety (Cerdá et al., 2014; McManama O'Brien et al., 2015). Both mothers and providers indicated the importance of the individual (microsystem) building autonomy and the need for client-centered practices for self-actualization before focusing on mother-child interactions or the family as a unit. Despite

many mothers reporting their desire to get sober for their child, a process of self-improvement had to occur to improve self-efficacy, and to facilitate their perceived behavioral control over the situation. As mothers grew in confidence, they were able to demonstrate behavioral changes as predicted via the theory of planned behavior (Ajzen, 1991). Each mother's ability to change her beliefs, attitudes, intentions, and behaviors with assistance from positive relationships and support from the larger community reinforced her ability to remain sober. This suggests there is a need to focus on the social and emotional well-being of individuals in the community, particularly those that have experienced extensive adversity.

### **Relationships**

Equally important to the individual's belief in themselves, ample information was gleaned from both the negative and positive relationships (mesosystems) mothers experienced before and after they entered recovery for OUD. Mothers and providers expressed the possible detrimental effect of negative relationships on mothers, which had either led them to start using or played a role in relapse. Through positive peer relationships, mothers were able to build support networks that both encouraged sobriety and helped them see themselves as a whole person who can contribute to society. With the powerful impact that relationships have on an individual (both positive and negative), these findings highlight a need for the availability of safe touch points within the community that may allow an individual to make connections earlier in their addiction (e.g., home visiting programs, safe needle exchange programs) and the possibility of implementing peer-to-peer supports.

The lead researcher assumed children would play a greater role in mothers' motivation to access treatment. Although all mothers spoke about their love for their child and their excitement to be reunified, one major finding was that mothers needed to focus on themselves before they could make their sobriety about their child(ren):

Corroborating the supporting literature, it was verified that mothers needed to untangle their inner battles before they were able to make their child(ren) a priority (Suchman & DeCoste, 2018). Additionally, there were not strong findings regarding the role of parenting within this process. Findings suggest that within this population, the current circumstances of each mother (including custody and reunification) impacted the focus on the individual rather than the mother/child theme. Mothers differed in their experiences of the role that their child(ren) played during the treatment and recovery process. Some mothers first had a child taken away, which led to time in either a jail or treatment center—both resulting in sobriety. Others were able to keep their child(ren) in their own custody or their partner's custody and self-select the treatment and recovery process. Many providers mentioned some of the services available that focused on mother/child interactions and the importance of understanding the impact drugs can have on a child's development. One of the biggest barriers shared by mothers and providers alike was the fear that kept mothers from accessing help sooner. The literature has validated this obstacle through the explication of individual state policies, as well as the impact of mandatory reporting laws (Fragassi & Bora, 2018) that require health care providers to report these patients to the state. These counterproductive policies often prevent mothers from initially accessing services (Krans & Patrick, 2016; Rodriguez & Smith, 2018). Yet, we found that there are services available to help mothers access

treatment while pregnant that often ensure the baby is born clean allowing the mother to remain in custody.

## **Community**

Additionally, there were many cultural norms and expectations (macrosystem) identified that played a role in the larger community. Literature has demonstrated that stigma and fear of judgment are two of the greatest barriers to an individual's decision to seek supports and services, especially for mothers attempting to access treatment (Suchman & DeCoste, 2018). Women, specifically mothers, are a particularly vulnerable population when it comes to accessing treatment (Fragassi & Bora, 2018). This study confirmed the impact of stigma as many mothers reported they chose not to seek treatment for fear of losing their child. Like previous studies, many mothers expressed that they experienced social isolation in their community (Suchman, Pajulo, DeCoste, & Mayes, 2006). Additionally, providers addressed the deep-rooted perceptions within the community that negatively impact their ability to provide the best care to the end-users who need it the most. However, providers appeared to have open minds and open hearts regarding the need to overcome community-wide barriers and to help mothers in recovery, but worry about the judgments mothers face outside the recovery community.

**Housing.** One salient theme that emerged was housing, with additional undertones related to the ability (or lack thereof) to meet the basic needs of individuals. Literature has demonstrated the multifaceted complexities facing mothers battling addiction, including mental illness, lack of social support, domestic violence, instability of finances, unemployment, and housing (Fragrassi & Bora, 2018). These findings were verified in the current study: mothers and providers reported the number-one barrier to



long-term success in recovery was housing. Many of these mothers were previously homeless and reflected on the barriers facing them when they would go through treatment, get sober, and then return to the streets in the same neighborhoods where they were previously partaking in opioid use, making sobriety an impossible feat. Conversely, the number one support for these mothers that remained successful (including the ability to reunite with their child) revolved around stable housing.

**Accessibility.** All participants shared experiences of their inability to access services, whether due to physical barriers (transportation or location) or availability (immediacy of access, financial/insurance means). Mothers who were able to access long-term, stable housing within BAFS were extremely successful. This model incorporates peer mentors (individuals in recovery), stable housing where children are allowed, and was free of rent for many mothers due to a recent measure that covered the cost for them if eligible. This housing unit allowed mothers to reside within walking distance of treatment centers and local support meetings and their children were housed with them. On the contrary, others who live on the outskirts of town faced additional barriers due to their inability to access transportation. These contextual barriers highlight the need to increase the availability and accessibility of high-quality supports including housing and treatment in the outer regions of the physical community. This concern has been verified through the CAP and ongoing meetings indicating there is a need to improve the supports available to mothers in recovery that are residing in neighborhoods that are further away from supports and services.

**Outreach/Advertising.** One of the greatest barriers for mothers and providers was the lack of knowledge of services or programs within the community. These inter-

organizational factors are defined as the collaboration, commitment, and competition among professional relationships within and across organizations (Moullin et al., 2019). Providers reported a lack of communication across programs and providers, making it challenging to provide the highest quality supports to mothers in recovery from OUD. For mothers, the most effective means of learning about supports and services was through word of mouth from other mothers in recovery or through positive relationships formed within the community. The literature has consistently demonstrated the numerous barriers mothers with addictive disorders must face, further highlighting the necessity of outreach and advertising (Suchman & DeCoste, 2018). Additionally, several providers mentioned barriers around the collaboration and communication across different agencies within the community. This finding demonstrates a need for improved communication systems that allow providers to connect mothers to the appropriate resources and to increase the number of mothers accessing supports and services.

**Policy/Systems.** The formalized system-level supports and barriers (policies/procedures) have a large impact on the treatment and recovery process, especially for mothers. Not only does state policy determine the rules and regulations around a mother's right to retain custody of her child(ren) (Dailard & Nash, 2000; Fragassi & Bora, 2018), additional regulations within the community can help or hinder the recovery process for mothers. For example, some mothers experienced benefits from having positive encounters with the law, including parole officers who were now going out of their way to help them access supports and services. Additionally, many mothers in recovery reported having positive experiences attending mandated parenting classes as one of the steps toward reunification with their child(ren). On the contrary, some barriers

in place prevented mothers from experiencing long-term success. For example, mothers could access treatment that helps them get sober, but without long-term supports in place or a transition plan into secure housing, they often relapse and are forced to start the recovery process again from the beginning. One recommendation is improving the transportation systems in place to allow mothers safe transport from jail into their “next steps” whether that is a state hospital, long-term housing, or an in-patient treatment facility.

### **Participant-Developed Guidance**

Participant-developed guidance includes the voices from participants and their thoughts on what may be helpful in improving outcomes for mothers in recovery. At the end of each interview, mothers were asked if they had any advice to give other mothers either seeking supports and services or working on their recovery. Similarly, providers were asked what recommendations they had to leadership within the community to improve overall health and wellness of the community. These opinions are a great starting point for future directions based on those impacted by the phenomenon and have been courageous enough to share their lived experiences.

The purpose of asking mothers for advice for other mothers was to reflect on what they had experienced and what might have motivated them to seek services earlier, or what might have broken down stigma for them, or identify what strategies had been successful. These findings should be considered when incorporating ways to improve the outreach and advertising in place within the community. Learning from mothers’ experiences may be a promising solution to improve the supports and services available and to encourage mothers in recovery to seek services sooner.

An overwhelming recommendation was the need to improve the education and understanding of the whole community. As Suchman and DeCoste (2018) point out, “Addiction is a disease, not a moral weakness” (p. 18). When community members, leaders, and decision makers recognize that it takes more than human willpower and readiness-to-change to overcome these obstacles, there is great room for improvement. This guidance supports the need to involve key stakeholders and relevant participants throughout each stage of this process to ensure that the solutions offered are acceptable, feasible, and sustainable (Aarons et al., 2012).

### **Limitations**

This study is one of the first qualitative explorations that investigated the protective and risk factors surrounding mothers in recovery from OUD using an implementation science lens. This research provides insight into the determinants that could impact the ability to successfully implement usable innovations to address the opioid crisis within one rural community. However, there are limitations that need to be addressed.

First, there was the possibility of selection bias within the recruitment process. There could be differences between participants who chose to partake in this investigation versus those who did not. Second, there could be differences between data gathered from interviews conducted face-to-face (nine interviews) versus interviews conducted over the phone (nine interviews). Although both mechanisms have positives and negatives, phone interviews did not allow the researcher to read body language, and face-to-face interviews did not allow participants to stay anonymous.

Third, there were fewer providers who were able to participate in interviews compared to mothers. There were several possible barriers to participation of providers related to time constraints (interviews were too long), anonymity (fears of having the interview tied to them), and conducting one-on-one interviews rather than focus groups (ability to interview several providers at once). Fourth, this sample was representative of a predominantly White, Non-Hispanic rural community. This limited sample makes it difficult to generalize findings into another community with different populations and contexts. Fifth, this investigation used a qualitative approach to understand the lived experiences within one community. There may have been more generalizable information found through different means of investigation (e.g., survey distribution) with a larger sample size or. In addition to surveys, quantitative information (e.g., local data) might be able to add to, or confirm themes presented here.

Sixth, there were not any participants representing the population of mothers that had not been successful in recovery. The community may benefit from learning more about the experiences of mothers that are not accessing supports and services or have not remained in recovery to better understanding the supports needed to further help these mothers. Seventh, there was a lack of representation from the local tribal communities from mothers and providers. This population may provide additional insight into the lived experiences within the community.

Eighth, there was a limitation in the member checking process. Only three of the seven providers were included in member checking without any of the mothers being represented. To ensure that participant voices were accurately captured, the methodology

could be strengthened to include additional incentives to encourage member checking participation.

Finally, the methodological approach to this study could be strengthened using a more systematic approach to inter-coder agreement. For this study, consensus inter-coder reliability was used. A more rigorous approach to reliability would be to measure inter-coder agreement. Scoring the percentages of inter-coder agreement and/or calculating Kappa scores may better assure the validity of the codes. However, the process of consensus coding is widely used in qualitative research (Creswell, 2013) and focuses on the agreement of the code used.

### **Future Directions and Recommendations**

The environmental factors impacting mothers prior to accessing services undoubtedly influence their children (Miriayala, 2018). There are also additional life stressors that can influence a mother's ability to protect her child(ren) through adequate supervision, providing safe environments, and creating stability in housing, and finances (Powis et al., 2000). Reoccurring exposure to adversity is one of the many contributing factors to intergenerational stress and trauma (Cohen et al., 2008; Yehuda & Lehrner, 2018). These findings support the literature that identifies a need to focus on parent-child interventions as the next steps in the treatment and recovery process (Peisch et al., 2018). However, there is little research exploring mothers in recovery from OUD and the impact that recovery has on parenting and child outcomes (Peisch et al., 2018). There should be greater focus in future research on (a) improved relationships between mothers in recovery and their children; (b) the intergenerational transmission of stress, addiction,

and adversity; and (c) a concentration on the transfer of parenting knowledge (e.g., parenting classes) to in vivo parent-child interaction practice.

Specifically, research has demonstrated the positive impacts and effectiveness of targeting parenting skills that enhance parental sensitivity, use of positive reinforcement and attention during parent-child interactions, and active involvement with the child(ren) (Kaminski & Claussen, 2017; Peisch et al., 2018). It is critical for parenting interventions to take an interdisciplinary approach that is well-integrated in the community, focused on the complex and often multifaceted needs of the mother, child, and family (Suchman & DeCoste, 2018). For example, video-taping parent child interactions/interventions might be helpful so that multiple providers from different fields can observe the interactions, whether they attend a session or not. Even more important is the need for these interventions to be individualized to meet the unique needs of each family unit. To be consistent with an implementation science focus, there needs to be intentionality when considering what EBP or intervention to implement based on an understanding of the needs of the target population, which we begin to uncover through this investigation. One suggestion is to use an attachment-based parenting intervention that focus on engagement between mother and child and the understanding of emotions (Suchman et al., 2006). This aligns with the needs of mothers in recovery from OUD in this community as several mothers mentioned the most impactful lesson learned during their mandated parenting classes included the identification and understanding of one's own emotions. This is critical when considering the impact that understanding and expressing emotions has on the mother's growth, the social/emotional well-being of the child, and the attachment between the mother and child.

To move forward with these findings and continue to develop capacity within the community, it is important to build upon the frameworks developed here as a foundation. To better understand the attitudes and knowledge of the administrators and leaders around implementing EBPs, more information should be gathered (Moullin et al., 2019). For example, one suggestion would be to develop a brief survey based on the findings from this qualitative study that could be disseminated to the greater community. The survey could include questions that gather information from the community on their perceptions of mothers in recovery. For example, this survey could collect information on ACE scores to connect the links between intergenerational trauma and the impact on SUD within the community.

The best way to overcome many of these barriers is through bridging factors (Moullin et al., 2019), including the ongoing use of CAPs (Minkler et al., 2018). These partnerships can help facilitate successful dissemination and implementation of usable innovations (Moullin et al., 2019). Dissemination is a principle of CBPR and a key outcome of interest for the CAP. The use of CBPR was supportive in the recruitment and retention of key stakeholders to be interviewed for this investigation; the continued use of the CBPR framework will assist in keeping key participants engaged in the implementation and sustainability of usable innovations selected over time (Balazs & Morello-Frosch, 2013). Future work with this community should evaluate the efficacy and effectiveness of the CAPs with the LADPC and academic partners. Additionally, there is a need to consider opportunities for future CAPs that may increase the reach and breadth of the work to support this community. One result of this CAP was the widespread dissemination of the “how-to” component of developing this CAP and the findings



from the current investigation. This included presenting with community partners at local meetings (Coos County Summit and LADPC meetings) as well as presenting at larger conferences (Opioids and other drugs, Pain and Addiction Treatment conference and the Division for Early Childhood conference).

The information gathered here will help guide the creation, implementation, and evaluation of prevention and implementation efforts while promoting policy and social change (Gwede et al., 2010; Israel et al., 1998, Minkler et al., 2003). Specifically, there needs to be a focus on the ineffective policies in place that deter mothers from initially accessing services (Krans & Patrick, 2016; Rodriguez & Smith, 2018). Further, there is a need to focus on the current practices in place that are not supported by research (alcoholics and narcotics anonymous meetings). Policy and decision makers should utilize the findings from this investigation to improve the availability of supports and services in hopes of improving the overall behavioral health for the community. There should be a greater emphasis on the services in the community that are available to help mothers access treatment while pregnant that often ensure the baby is born clean allowing the mother to remain in custody. Using mixed methods approaches may better capture the relationships with and among available services.

Additionally, a greater focus should be placed on meeting the housing needs of individuals seeking treatment and recovery services, including affordable housing options that allow children. One strategy to consider is the Housing First Model (National Alliance to End Homelessness, 2019) which promotes assistance to people experiencing homelessness to provide them the opportunity for housing stability to then focus on meeting their basic needs (e.g., jobs, hygiene, finances). It is our hope that this CAP can

utilize the information from this investigation to support the needs of the community through grant writing, advocacy, and the ongoing strategic action planning process. Providing the voice of the community and the affected participants is one way to create change.

### **Conclusion**

With the current status of opioid abuse reaching epidemic proportions across the United States, and many users being adults and parents, it is critical to get a better understanding of how opioid abuse and OUD affects the well-being of children .We know that children residing in a home with parent(s) who misuse drugs or alcohol are at an increased risk of short- and long-term issues (Rodriguez & Smith, 2018) that can impact physical and mental health and span across the lifetime (Oral et al., 2015). Further, more intervention research is needed to examine the impact of parental skills and the proximal and distal outcomes on their children. Including the use of prevention and intervention strategies focused on the intergenerational transmission of stress and adversity is critical, including maternal recovery, mental health issues, and the impact of OUD on the child(ren) (Wright et al., 2018).

This is one of the first studies to focus on multifaceted issues around OUD for mothers and a community, specifically by identifying the needs of the community, with the intentions of connecting mothers with the appropriate resources. Future work should aim to improve behavioral health outcomes by implementing EBPs that align with the needs of the target populations within the community. Continuing to use implementation science as a foundation and involving key stakeholders throughout each phase of the EPIS framework will result in an increased chance that change will occur.

The current study sheds light on what the greatest needs of the community are specific to mothers in recovery from OUD as well as for the providers interacting with this population. With new information on the needs (i.e., innovation factors) of the target population as well as on effective resources (inner context) that are in place, the CAP can move forward with the preparation phase (Moullin et al., 2019). This information will inform selection of a useable innovation that will meet the cultural context of the community and be sustainable. The continued use of participatory approaches, including the CAP developed here, will help to keep practices acceptable, feasible, and sustainable (Minkler et al., 2018; Moullin et al., 2019).

## APPENDIX A

### PARENT INTERVIEW QUESTIONS

#### Phenomenological Approach to Understanding the Process in Which Mothers Have Accessed Treatment

##### **Opener**

I am interested in learning more about the process you experienced through accessing treatment services. Today, I would like to hear your story and gain an understanding of how you navigated the systems within your community.

##### **Initial Questions**

Tell me a little bit about your experience in accessing recovery and treatment services. How did this process unfold?

When, if at all, did you first notice that you wanted to seek services?

What role did your child play in this process?

##### **Intermediate Questions**

What happened next?

Tell me about how you learned to handle the aspects of parenting.

What positive changes occurred in your life throughout the treatment process?

What negative changes occurred throughout this process?

Could you tell me what has been most helpful to your recovery?

Has any organization been helpful?

##### **Ending Questions**

After your experience, what advice would you give to another mother?

Is there anything else you would like to share?

## APPENDIX B

### PROVIDER INTERVIEW QUESTIONS

#### Phenomenological Approach to Understanding the Experiences of Providers Working Directly with Mothers Seeking Supports and Services for Opioid Recovery

##### **Opener**

I am interested in learning more about the processes you use when supporting mothers recovering from opioid use. Today, I would like to hear your story and gain an understanding of how the systems within your community work.

##### **Initial Questions**

Tell me a little bit about yourself, including why you are interested in participating in this interview. What populations do you serve?

Tell me about the available supports and services for mothers accessing opioid treatment and recovery within your community.

##### **Intermediate Questions**

Tell me a little about the supports or systems that have helped to improve mothers' experiences in seeking recovery services and supports.

Tell me about some of the barriers that have impacted or continue to impact mothers' abilities to receive the supports and services necessary.

What types of supports and/or services do you need in your position to be able to help mothers interested in seeking services?

##### **Ending Questions**

What recommendations would you provide to decision makers related to supports and services that could improve the health of your community as a whole?

Is there anything else you would like to share?

## APPENDIX C

### ADAPTED PARENT INTERVIEW QUESTIONS

#### Phenomenological Approach to Understanding the Process in Which Mothers Have Accessed Treatment

##### **Opener**

I am interested in learning more about the process you experienced through accessing treatment services. Today, I would like to hear your story and gain an understanding of how you navigated the systems within your community.

##### **Initial Questions**

Tell me a little bit about your experience in accessing recovery and treatment services. How did this process unfold?

When, if at all, did you first notice that you wanted to seek services?

What role did your child play in this process?

##### **Intermediate Questions**

~~What happened next?~~

Tell me about any experiences you have had focused on parenting skills.

Could you tell me what has been most helpful to your recovery?

Could you tell me what has been most challenging to your recovery?

Has any organization been helpful?

##### **Ending Questions**

After your experience, what advice would you give to another mother?

Is there anything else you would like to share?

## APPENDIX D

### ADAPTED PROVIDER INTERVIEW QUESTIONS

#### Phenomenological Approach to Understanding the Experiences of Providers Working Directly with Mothers Seeking Supports and Services for Opioid Recovery

##### **Opener**

I am interested in learning more about the processes you use when supporting mothers recovering from opioid use. Today, I would like to hear your story and gain an understanding of how the systems within your community work.

##### **Initial Questions**

Tell me a little bit about yourself, including why you are interested in participating in this interview. What populations do you serve?

Tell me about the available supports and services for mothers accessing opioid treatment and recovery within your community.

##### **Intermediate Questions**

What, if at all, has been your experience with mothers and OUD during the perinatal period?

Tell me a little about the supports or systems that have helped to improve mothers' experiences in seeking recovery services and supports.

Tell me about some of the barriers that have impacted or continue to impact mothers' abilities to receive the supports and services necessary.

What types of supports and/or services do you need in your position to be able to help mothers interested in seeking services?

##### **Ending Questions**

What recommendations would you provide to decision makers related to supports and services that could improve the health of your community as a whole?

Is there anything else you would like to share?

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