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# Early Interventionists' Perspectives of Self-Efficacy With Neonatal Abstinence Syndrome

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*Walden University*

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# Walden University

College of Education

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Adrienne Anderson

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Walden University

2018

Abstract

Early Interventionists' Perspectives of Self-Efficacy With Neonatal Abstinence

Syndrome

by

Adrienne Anderson

MEd, University of Massachusetts Boston, 2010

BS, University of Massachusetts Amherst, 2005

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

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## Abstract

An increasing number of infants are diagnosed with neonatal abstinence syndrome (NAS) as a result of prenatal opioid exposure. Early intervention services are recommended for this population of children and families to mitigate developmental delays associated with NAS. The effectiveness of early intervention is dependent on the ability of interventionists who deliver these services. The purpose of this qualitative case study was to explore early interventionists' perspectives of self-efficacy when working with infants diagnosed with NAS and their families. Bandura's self-efficacy theory and Rotter's concept of locus of control provided the conceptual framework for this study. The study's guiding research questions focused on early interventionists' self-efficacy beliefs and factors that may affect those beliefs in their work with infants diagnosed with NAS and their families. Data were collected via semistructured interviews with 8 interventionists. Themes emerged from both in vivo and a priori coding pertaining to interventionists' self-efficacy beliefs working with the NAS population. Most interventionists in this study reported feeling highly efficacious in their work with infants with NAS and their families despite a lack of applicable educational and professional preparation. Interventionists attributed their professional efficacy to their own self-study, experience, and motivation to learn. Interventionists agreed that training specific to their work with NAS may improve their ability and self-efficacy in their work with infants with NAS and their families. Targeted training to increase interventionists' self-efficacy in their work with infants diagnosed with NAS and their families may result in increased effectiveness of intervention services and lead to lifelong positive outcomes for these vulnerable children.

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## Table of Contents

|   |    |
|---|----|
| List of Tables .....                                      | v  |
| Chapter 1: Introduction to the Study.....                 | 1  |
| Background.....   | 3  |
| Problem Statement.....                                    | 8  |
| Purpose of the Study.....                                 | 9  |
| Research Questions.....                                   | 10 |
| Conceptual Framework.....                                 | 10 |
| Nature of the Study.....                                  | 12 |
| Definitions.....  | 13 |
| Assumptions.....  | 14 |
| Scope and Delimitations .....                             | 14 |
| Limitations .....   | 15 |
| Significance.....   | 16 |
| Summary.....  | 17 |
| Chapter 2: Literature Review.....                         | 18 |
| Literature Search Strategy.....                           | 19 |
| Conceptual Framework.....                                 | 19 |
| Neonatal Abstinence Syndrome.....                         | 26 |
| Early Intervention and Neonatal Abstinence Syndrome ..... | 30 |
| Issues of Interventionist Preparation and Retention ..... | 34 |
| Training Effectiveness .....                              | 39 |

|   |    |
|---|----|
| Summary and Conclusions .....                                       | 41 |
| Chapter 3: Research Method.....                                     | 44 |
| Research Design and Rationale .....                                 | 44 |
| Role of the Researcher .....  | 46 |
| Methodology.....  | 47 |
| Participant Selection .....   | 47 |
| Instrumentation .....   | 49 |
| Procedures for Recruitment, Participation, and Data Collection..... | 52 |
| Data Analysis Plan.....   | 54 |
| Trustworthiness.....  | 55 |
| Ethical Procedures .....  | 57 |
| Summary.....  | 58 |
| Chapter 4: Results.....   | 59 |
| Participants.....   | 60 |
| Data Collection and Setting .....                                   | 60 |
| Data Analysis .....   | 61 |
| Results .....   | 63 |
| Additional Findings .....   | 78 |
| Evidence of Trustworthiness.....                                    | 81 |
| Summary.....  | 83 |
| Chapter 5: Discussion, Conclusions, and Recommendations.....        | 84 |
| Interpretation of the Findings.....                                 | 85 |

|  |     |
|--|-----|
| Self-Efficacy and Locus of Control .....               | 85  |
| Turnover and Training .....                            | 91  |
| Limitations of the Study.....                          | 94  |
| Recommendations.....                                   | 95  |
| Implications.....                                      | 96  |
| Conclusion .....                                       | 97  |
| References.....  | 99  |
| Appendix A: Invitation to Participate.....             | 114 |
| Appendix B: Interview Questions .....                  | 115 |
| Appendix C: Permission to Use Interview Questions..... | 116 |
| Appendix D: Interview Protocol .....                   | 118 |



List of Tables

Table 1. Alignment of Research Questions With Interview Questions ..... 51

Table 2. Participant Demographics.....61

## Chapter 1: Introduction to the Study

Neonatal abstinence syndrome (NAS) refers to the group of symptoms present in a newborn after exposure to opioids in the womb. In the last decade, the rate of infants diagnosed with NAS has risen throughout the United States (Patrick et al., 2012) as a direct result of the national opioid epidemic. According to Patrick, Davis, Lehman, and Cooper (2015), in the United States, five times more infants were diagnosed with NAS after birth in 2012 than in 2000. In 2013, six newborns per 1,000 were diagnosed with NAS after birth (Ko et al., 2016). The incidence of NAS is higher in the New England states than the national average. For example, in 2012, the reported number of infants diagnosed with NAS was 12.5, 30.4, and 30.5 per 1,000 hospital births in Massachusetts, Maine, and Vermont, respectively (Ko et al., 2016). NAS characteristics commonly include low birth weight, feeding difficulties, seizures, tremors, and extreme irritability (Kocherlakota, 2014). Research has also linked NAS to cognitive and regulatory developmental delays (Behnke & Smith, 2013; Logan, Brown, & Hayes, 2013; Nygaard, Slinning, Moe, & Walhovd, 2015; Nygaard, Slinning, Moe, & Walhovd, 2016). Early childhood intervention services are recommended for the population of children and families affected by NAS (Beckwith & Burke, 2015).

Part C of the Individuals with Disabilities Education Improvement Act of 2004 included provisions for early intervention services for drug-exposed infants (S. Res. 446, 2004), including infants diagnosed with NAS. Primary goals of early intervention include mitigating developmental delays and supporting family units (Bruder, 2010; Khetani, Cohn, Orsmond, Law, & Coster, 2013). After review of the literature and

current practice in the study state, it appears there may be a gap in practice that could affect the quality of intervention services that infants with NAS and their families receive. Specifically, that gap in practice appears to be an absence of training for early interventionists focused on understanding and meeting the needs of infants and families affected by NAS ([Redacted] Early Intervention Training Center, 2017), as described more fully in the next paragraphs.

In this study, I explored early interventionists' perspectives of self-efficacy when working with infants diagnosed with NAS and their families. This study was needed because theory suggests self-efficacy beliefs are predictors of work performance (Bandura, 1997). Exploring interventionists' perspectives provided information that may aid in the delivery of high-quality early intervention services as outlined in Part C of the Individuals with Disabilities Education Act (IDEA).

In the remainder of this chapter, I will provide background information pertaining to early intervention, including information specific to one state in the northeastern United States. I will offer a brief overview of the opioid epidemic in the state that is the focus of this study and I will discuss and define NAS. I will present an overview of the conceptual framework of this study, which includes Bandura's theory of self-efficacy and Rotter's concept of locus of control. I will describe the problem and purpose of the study along with the research questions and nature of the study. This chapter will also include important key terms, assumptions, scope, delimitations, and limitations. Finally, I will discuss the possible significance of the study.

## **Background of the Study**

The IDEA is a set of federal laws and regulations that ensures equal access to public education for children with disabilities (U.S. Department of Education, 2017). The Program for Infants and Toddlers with Disabilities, commonly referred to as Part C, was added to IDEA in 1986 with final regulations released by the U.S. Department of Education in 2011 (U.S. Department of Education, 2016). Congress established Part C of IDEA to enrich the development of infants and toddlers with developmental delays and disabilities, support and educate families of young children with disabilities, and reduce future costs to society by lessening the need for special education and other social services (Individuals with Disabilities Education Improvement Act, P.L. 108-446).

### **Literature Summary**

Although Part C is included in the federal regulations of IDEA, the program is administered and governed on a state level. Each state must designate a lead agency responsible for Part C oversight. The lead agency is responsible for adhering to all federal guidelines, providing documentation of the state's comprehensive early intervention system, and managing funds (Individuals with Disabilities Education Improvement Act, P.L. 108-446). The lead agency responsible for Part C of IDEA in the state that is the location of this study is the state's Department of Public Health. Part C implementation includes funding from local, state, and federal agencies. Many private insurance providers cover costs associated with early intervention services. Early intervention services in the target state are provided at no cost to families regardless of health insurance status ([Redacted] Department of Public Health, 2016). Most recent

reports indicate that more than 436 million dollars in federal funds are allocated to states to assist in the operation and implementation of early intervention services (U.S. Department of Education, 2016).

Part C of IDEA creates access to early intervention services for eligible infants and toddlers from birth to age 3 years. Eligibility for early intervention is determined based on existing disabilities or established developmental delays. According to Part C of IDEA, states may elect to identify infants and toddlers as eligible for early intervention services if deemed at-risk for experiencing future developmental delays based on environmental risk factors (Individuals with Disabilities Education Improvement Act, P.L. 108-446). Infants and toddlers in many states, including the state that is the focus of this study, are eligible for early intervention services based solely on birth or environmental risk factors ([Redacted] Department of Public Health, 2016). Part C of IDEA and the Child Abuse Prevention and Treatment Act (CAPTA) also mandates early intervention referrals for infants and toddlers involved in child welfare systems (Herman-Smith, 2011). Finally, and important to note for this study, Part C includes infants prenatally exposed to drugs and infants experiencing withdrawal symptoms from prenatal drug exposure (Individuals with Disabilities Education Improvement Act, P.L. 108-446). Derrington (2013) found that more than 89% of drug-exposed infants referred to early intervention in the target state qualified for services after a comprehensive developmental evaluation.

NAS is the diagnosis used to describe the group of symptoms displayed in newborns after abrupt cessation of opioids after birth (Hudak & Tan, 2012; Kocherlakota,

2014; MacMullen, Dulski, & Blobaum, 2014). Symptoms typically present within 24 to 72 hours of birth but can emerge up to seven days after birth (Kocherlakota, 2014; MacMullen et al., 2014). Some visible symptoms associated with NAS include difficulty eating and sleeping, inconsolable crying, environmental stimuli sensitivity, seizures, and increased muscle tone (Kocherlakota, 2014; MacMullen et al., 2014). I will provide a more detailed explanation of NAS in Chapter 2.

Consistent with the most recent national findings as reported by Patrick et al. (2012), most infants diagnosed with NAS in the study state were born to Caucasian women insured by Medicaid (Franca et al., 2016). In 2012, approximately 80% of infants diagnosed with NAS nationally were Medicaid recipients and that Medicaid spent 1.5 billion dollars on NAS related expenses (Patrick et al., 2012). The NAS financial burden also affects state and local government agencies. Franca et al. (2016) reported that the study state's Department of Children and Families spent 4.3 million dollars on personnel costs directly related to NAS case management during the 2013 fiscal year. These numbers are expected to continue to grow in direct relation to the opioid epidemic in the state and throughout the nation.

Infants diagnosed with NAS are at risk for lasting effects such as regulatory, cognitive, and motor developmental delays (Beckwith & Burke, 2015; Behnke & Smith, 2013.) Because opioid use during pregnancy varies to include illicit drug activity and doctor prescribed pain management, environmental factors may also affect the development of this population of infants and families. These risk factors may include inadequate prenatal care, low socioeconomic status (Logan et al., 2013), and unstable

housing, as well as maternal addiction, chronic pain, and depression. Regardless of legal or illegal exposure to opioids in the womb, federal law mandates referrals to child welfare services for infants exposed to or addicted to opioids at birth, as well as access to early intervention services.

### **Gap in Practice and Need for Study**

The body of research centered on NAS is growing. Common research topics include statistical trends (Ko et al., 2016), treatment options (Logan et al., 2013), and infant outcomes (Jones et al., 2014). Similarly, a growing body of research is focused on early interventionists' perspectives working with a variety of populations including caregivers (Boyer, 2014; Sawyer & Campbell, 2012) and children affected by maltreatment (Allen, Hyde, & Leslie, 2012; Herman-Smith, 2011; Herman-Smith, 2013). There appears to be a lack of research pertaining to NAS and early intervention combined, specifically early interventionists' perceptions of self-efficacy when providing services to this population of children and families.

In addition to the lack of literature on the topic, there appears to be a gap in practice in the study state that may affect interventionists' feelings of self-efficacy. That gap specifically is an apparent absence of training for interventionists pertaining to their work with infants with NAS and their families. The lead agency responsible for early intervention in the study state offers training for interventionists and supervisors. The majority of training opportunities (22 of 36 trainings in the year prior to this study) appeared to focus on processes such as creating Individualized Family Service Plans (IFSP), using assessment materials, and making transitions to public schools. The

remaining 14 training opportunities (eight online modules and six face-to-face sessions) included topics such as overviews of Part C services in the study state, home visiting, and overviews of child development ([Redacted] Early Intervention Training Center website, 2017). After a review of the face-to-face and online training opportunities offered by the lead agency, there appears to be an absence of training related to interventionists' actual interactions with families affected by NAS, infants with prenatal drug exposure, or families involved with child welfare agencies ([Redacted] Early Intervention Training Center website, 2017).

The absence of workplace training pertaining to the providing of services for infants diagnosed with NAS and their families may be problematic because research suggests that interventionists' educational backgrounds and college degree programs also fail to provide guidance on day-to-day interactions with infants and families (Chu, 2016). The diversity of interventionists' past experience and education, detailed in Chapter 2, further indicates that individual interventionists may not have been provided, previous to their hiring as an interventionist, the knowledge or skill needed to interact effectively with clients or to feel efficacious in doing so. Research also suggests that retention and interventionist turnover are ongoing issues in the early intervention profession (Chu, 2016). This issue, which I discuss further in Chapter 2, may indicate interventionists' varying self-efficacy beliefs that encompass feelings of competence and confidence and are associated with both persistence and avoidance of an assigned task (Bandura, 1977).

The absence of training for interventionists in actual interactions with clients may affect the quality of early intervention services received by infants diagnosed with NAS



and their families, because the quality of services is heavily dependent on interventionists' competence (Lee et al., 2013). This study was needed to understand the current situation in the field and identify areas of strength, weakness, interventionists' concern, and potential factors that may affect interventionists' ability to provide high-quality intervention services to these children and families. Information learned in this study has the potential to aid in the implementation and mission of Part C of IDEA as well as work towards providing positive outcomes for infants diagnosed with NAS and their families.

### **Problem Statement**

Hospital births in the study state reflect the national increase in prenatal exposure to opioids and NAS diagnoses. In 2013, the number of infants diagnosed with NAS in the study state was six times higher than in 2004, with the state's southern region reporting the highest number of diagnoses (Franca, Mustafa, & McManus, 2016). In 2004, the Individuals with Disabilities Education Improvement Act created access to early intervention services for drug-exposed infants. The northeastern state where this study took place has a comprehensive early intervention system. However, there appears to be a gap in practice within the system. Although the lead agency responsible for early intervention services in the study state offers training on other topics, there appears to be an absence of training focused on interventionists' actual interactions with drug-exposed infants or families affected by NAS ([Redacted] Early Intervention Training Center website, 2017). This absence of training, and its possible negative effect on interventionists' self-efficacy beliefs with regard to their work and resultant negative

effects on quality outcomes for infants affected by NAS, is the problem that formed the basis of this study.

Currently, research examines early interventionists' perspectives on a variety of topics such as autism screening (Pizur-Barnekow, Muusz McKenna, O'Connor, & Cutler, 2012), teaching caregivers (Sawyer & Campbell, 2012), and the Child Abuse Treatment and Prevention Act (Herman-Smith, 2013). However, little is known about early interventionists' perceptions of self-efficacy when working with children and families affected by NAS. Research also suggests a high incidence of staff turnover in the field of early care and education which is similar to the turnover rate of other social service professions (Chu, 2016; Porter, 2012). The absence of training in day-to-day work with infants and families may affect interventionists' feelings of efficaciousness and therefore also influence the quality of their early intervention practices (Yildirim, 2015). NAS has been linked to developmental delays (Beckwith & Burke, 2015) and interventionists' lack of training and self-efficacy could impede efforts meant to mitigate those delays.

### **Purpose of the Study**

The purpose of this study was to explore early interventionists' perspectives of self-efficacy, and factors that may affect self-efficacy, such as training in day-to-day client interactions, when working with infants with NAS and their families. In this study, I was ultimately concerned with the quality of early intervention services this population of children and families receive; I attempted to understand these services through interventionists' perspectives of self-efficacy and locus of control. I used a qualitative approach to explore interventionists' self-efficacy beliefs.

## **Research Questions**

Three questions guided this study:

1. How do early interventionists describe their perceptions of self-efficacy when working with infants diagnosed with NAS and their families?
2. How do perceived internal and external factors affect early interventionists' self-efficacy beliefs when working with infants diagnosed with NAS and their families?
3. How do early interventionists feel their self-efficacy could be improved in their work with infants diagnosed with NAS and their families?

Pursuit of answers to these questions was based in a conceptual framework including ideas of Bandura and Rotter.

## **Conceptual Framework**

The conceptual framework for this study included Bandura's theory of self-efficacy and Rotter's concept of locus of control. Bandura (1977) described self-efficacy as, "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments" (p. 3). Self-efficacy refers to not only the belief that one has the skills needed in given situations, but the belief in ability to use those skills to achieve a desired outcome (Bandura, 1977). In this study, I explored early interventionists' perspectives or beliefs that they possess the knowledge and skills needed (confidence) and can use those skills to perform successfully (competence) specifically when working with infants with NAS and their families.

According to Bandura (1977), individuals with low self-efficacy beliefs tend to withdraw and avoid perceived challenging situations, whereas those with high self-efficacy beliefs tend to persist in adverse situations. Therefore, interventionists' self-efficacy beliefs may affect the quality of early intervention services this population of children and families receive. Bandura (1977) also clarified that self-efficacy is not a fixed state, rather that efficacy beliefs can change over time and vary by situation. Ways in which perceived efficacy beliefs can be altered include performance accomplishment (exposure and experience), vicarious experience (modeling), verbal persuasion (coaching), and emotional arousal (avoiding stress) (Bandura, 1977).

Rotter (1990) defined *locus of control* as individuals' belief that they personally control the outcomes of their behavior or that outside influences control the outcomes of their behavior. Bandura (1977) cautioned that self-efficacy and locus of control are unrelated concepts. However, self-efficacy and locus of control have provided the framework for previous research (Fitzgerald & Clark, 2013; Senler, 2016; Strauser, Ketz, & Keim, 2002) dealing with perceptions of self in the work place.

The research questions in this study expanded beyond simply describing perceptions of self-efficacy and included factors such as potential supports and barriers that may affect interventionists' beliefs working with infants with NAS and their families. Including Rotter's concept of internal versus external locus of control in the study's framework aided in my goal of the study, which was to complete an in-depth exploration of early interventionists' perspectives of self-efficacy working with this

population. I include a detailed explanation of the conceptual framework for this study in Chapter 2.

### **Nature of the Study**

I used a qualitative research approach to address the study's research questions. A qualitative approach aligned with the problem statement since qualitative studies aim to understand the perspectives of participants (Lodico, Spaulding, & Voegtler, 2010). Case study was an appropriate design choice because the intended purpose of the study was to understand the perspectives of a similar group of individuals and the number of participants was finite (Lodico et al., 2010). This research design aided in the development of an understanding of early interventionists' perspectives of self-efficacy when working with infants with NAS and their families. I also sought to understand internal and external factors, including supports and barriers, that influence interventionists' perspectives of self-efficacy when working with this population.

The participants for this study were early interventionists employed at satellite offices of a large early intervention organization serving cities and towns across a northeastern state. I asked participants to partake in one-on-one semistructured interviews regarding their experiences and perspectives working with infants with NAS and their families. I coded interview transcripts to uncover emerging themes regarding interventionists' self-efficacy beliefs and factors that may affect those beliefs when working with this population of children and families. A more in-depth explanation of the research methodology can be found in Chapter 3.

## Definitions

The following is a list of acronyms and key terms that I used throughout the study.

*Developmental delay:* A delay in a child's development, compared with typically developing children, in one or more developmental domains including social emotional development, motor, cognition, adaptive, or communication skills (Rosenberg, Robinson, Shaw, & Ellison, 2013).

*Early interventionist:* A qualified provider of early intervention services as outlined in IDEA Part C including special educators, occupational and physical therapists, speech-language pathologists, nurses, social workers, and mental health clinicians (S. Res. 446, 2004).

*Locus of control:* The extent to which a person believes the outcome of behavior is caused by internal or external factors (Rotter, 1990).

*NAS:* Acronym for neonatal abstinence syndrome that presents in infants after birth and is a result of opioid withdrawal (Kocherlakota, 2014).

*Opioid maintenance treatment program:* Pharmacological and psychological treatment for opioid addiction provided by health care professionals (Harvey, Schmied, Nicholls, & Dahlen, 2015).

*Perinatal:* The period between conception and 1 year after birth (Harvey et al., 2015).

*Self-competence:* Perceived knowledge and skill to perform a task proficiently (Delfin & Roberts, 1980).

*Self-confidence*: One's feeling of ability to, "handle the situation and comfortable with their level of functioning within the role" (Delfin & Roberts, 1980, p. 169).

*Self-efficacy belief*: One's situational belief or judgement in ability to produce desired outcomes (Bandura, 1977).

### **Assumptions**

In this study, I assumed that participants' responses were truthful and made in good faith so that the data accurately represents these early interventionists' perspectives. Furthermore, I assumed that interventionists' experiences with this population of children and families at the study site resembles interventionists' experiences at other early intervention sites, and so might reflect the general circumstances of working with children and families affected by NAS. These assumptions were necessary given my reliance on interview data to answer the research questions.

### **Scope and Delimitations**

I designed this study to explore early interventionists' self-efficacy beliefs, and potential factors that affect those beliefs, in working with infants with NAS and their families. I chose this focus because there appears to be an absence of training on the topic. In addition, research pertaining to early intervention services for this population appears to be limited and interventionists' self-efficacy beliefs may affect the quality of services this population of children and families receive. I included eight interventionists employed at four sites of a large early intervention organization in one northeastern state. The scope of this study included interventionists who filled the role of service coordinators and were employed by the organization for 6 weeks or more. Service

coordinators are the primary interventionists responsible for working with clients in their home environments, including infants with NAS and their families. Therefore, I chose to exclude other employees such as supervisors, site directors, and assistant teachers from the study because their role in the organization is less relevant to meeting the needs of infants with NAS and their families. In addition to those serving as service coordinator, I chose to include only interventionists who were employed by the organization for 6 weeks or more. I chose this criterion to ensure that interventionists have had enough time with the organization to be assigned clients and fulfill the role of service coordinator. This criterion also presented the opportunity to explore the perspectives of both new and more experienced interventionists who are expected to work with this population of children and families.

Although my goal in this qualitative study was not to generalize findings, the potential for transferability exists. In Chapter 4, I provide thick descriptions and in-depth details of the study setting and participants. The inclusion of these details will allow the reader to determine whether the findings from my study may be transferable to additional settings such as other early intervention sites. I present a more detailed discussion on transferability and the target population for the study in Chapter 3.

### **Limitations**

Although I thoughtfully planned this study, it is not without limitations. Yin (2014) described interviews as “one of the most important sources of case study evidence” (p.110) but also suggested that multiple forms of evidence should be examined, if resources allow. Due to resource constraints, I relied heavily on data



collected from interviews with participants. I chose the data collection method with the goal of eliciting insightful descriptions of interventionists' perspectives of self-efficacy in their work with infants with NAS and their families. It is possible that the face-to-face nature of the interview process, combined with the personal topic of self-efficacy, may have led to reflexivity. Chapter 3 contains a discussion on ways reflexivity was minimized in this study.

Researcher bias was another limitation that may have affected the results of my study, given my previous professional experience in the field of early intervention and interest in NAS. To address this bias, I practiced self-reflection exercises throughout the study to ensure that the information reported accurately depicted the participants' perspectives (Lodico et al., 2010). I also kept a journal to document my assumptions, thoughts, and potential biases throughout the study.

### **Significance**

Although the study state has a comprehensive early intervention system, there is a gap in practice pertaining to the preparation of interventionists to work with infants with NAS and their families. Findings from this study may begin to describe the effects of this gap by providing insight into interventionists' perspectives of self-efficacy and personal agency in working with this population, as well as the potential factors that affect interventionists' self-efficacy and locus of control. Results from this study could be meaningful to a variety of stakeholders including program administration at the study site as well as the state agency responsible for early intervention implementation. This study may bring awareness to the understudied topic of NAS and early intervention and

may contribute to future improvement in the quality of intervention provided to infants affected by NAS.

### **Summary**

The study state and other New England states are contending with a rapid increase in the number of infants born exposed or addicted to opioids (Ko et al., 2016). Federal law mandates referrals to child welfare and early intervention services for this population of children. Links have been made between NAS and developmental delays (Behnke & Smith, 2013; Logan et al., 2013; Nygaard, Slinning, Moe, & Walhovd, 2015; Nygaard, Slinning, Moe, & Walhovd, 2016). The purpose of early intervention, as outlined in Part C of IDEA, is to support and strengthen the development of infants and toddlers, as well as to improve family capacity (S. Res. 446, 2004). It is possible that interventionists' self-efficacy beliefs and perspectives of factors that affect those beliefs could affect the effectiveness of early intervention services for this population of children and families. In this qualitative study, I describe the effects of the absence of NAS-specific training and begins to fill a gap in the literature with regard to early intervention and NAS by presenting an in-depth, rich description of early interventionists' perspectives of self-efficacy in their work with infants with NAS and the infants' families.

In the following chapter, I will provide an extensive review and synthesis of current research related to the study's topic. Chapter 2 will also include a discussion of self-efficacy and locus of control, including a synthesis of prior research studies sharing similar conceptual frameworks.

## Chapter 2: Literature Review

Early intervention is recommended for infants with NAS and their families (Beckwith & Burke, 2015; Konijnenberg & Melinder, 2015). Ongoing early intervention services may provide this population of children and caregivers with social support, parenting education (McDonald, Kehler, Bayrampour, Fraser-Lee, & Tough, 2016; Patrick et al., 2015), and necessary therapies that may assist in overall healthy development for children affected by NAS. Although early intervention is recommended, there appears to be a lack of research regarding early interventionists' perspectives of self-efficacy working with this population of children and families, compounded by a lack of training offered to interventionists that might enhance their self-efficacy in day-to-day interactions with infants and their families. The purpose of this study was to explore early interventionists' perceptions of self-efficacy working with infants with NAS and their families and identify potential factors that may affect self-efficacy beliefs.

The remainder of this chapter contains a review and synthesis of current literature on the study topic. This review includes information regarding the developmental issues associated with NAS, characteristics of the population affected by NAS, potential challenges working with this population of families, early interventionists' perceptions of self-efficacy, and a discussion of potential organizational challenges in the early intervention field such as issues of retention and training. I include a description of research strategies and a detailed description of the conceptual framework for the study.

### **Literature Search Strategy**

I used multiple search strategies to conduct a thorough examination of the literature on the study topic. I searched databases such as ERIC, Education Source, PsycInfo, and SocIndex. Because the topic of study had potential to span fields such as education, social services, and medicine I included multidisciplinary databases in my search such as Academic Search Complete, ProQuest Central, and Thoreau Multi-Database Search. I located relevant information in these databases using combinations of key terms and phrases including *neonatal abstinence syndrome*, *early intervention*, *service coordinator*, *confidence*, *competence*, *self-efficacy*, *parenting*, *work performance*, *perceptions*, *locus of control*, and *developmental delays*. I also consulted with a Walden University librarian to ensure my choice of key terms, combinations, and databases yielded the most useful information for my study. I used the results from these searches and citation chaining to locate other related and relevant sources of information on the study topic. In addition to the previously mentioned databases, I used seminal work from Rotter and Bandura, which informed the conceptual framework for the study.

### **Conceptual Framework**

The conceptual framework for this study included the concepts of locus of control and self-efficacy. These concepts are a part of seminal and current literature that suggest individuals' perceptions of self and ability can be predictors of human behavior (Bandura, 1977; Gray & Muramatsu, 2013; Rotter, 1966; Zimmerman, 2000). Locus of control, which I will discuss later in this section, stems from social learning theory, and refers to the extent to which an individual believes he or she can affect the outcomes of

his or her actions. The framework for this study also included the concept of self-efficacy. Based in social cognitive theory, self-efficacy refers to individuals' belief that they possess the skills required to not only perform a task but their belief that they can use those skills to perform successfully (Bandura, 1997). Together, the concepts of locus of control and self-efficacy served as a guide in this study of interventionists' perceptions of self-confidence and competence working with infants with NAS and their families.

Self-efficacy beliefs are multidimensional and refer specifically to a particular task rather than an overall judgment of one's ability or self (Bandura, 1997). Given the focus on confidence and competence to perform specific tasks, attention to self-efficacy beliefs in the workplace is common especially in human service professions such as education, social work, and nursing (Carpenter, Shardlow, Patsios, & Wood, 2015). In a recent study of preservice teachers (Lemon & Garvis, 2016), the task specificity of the self-efficacy concept was highlighted. Lemon and Garvis (2016) found wide variations in teachers' self-efficacy beliefs pertaining to competence using technology in the classroom. The multidimensionality of the self-efficacy concept served as a useful framework for this study. It is plausible, and expected (Bandura, 1997; Moriarty, 2014; Zimmerman, 2000), that interventionists' self-efficacy beliefs differ based on the population being served and on the specific work task being performed. For example, interventionists may feel competent and confident, therefore highly efficacious, working with children with autism and their families while feeling less efficacious working with other populations such as children with physical impairments or drug-exposed infants.

In addition to self-efficacy beliefs varying by situation or task, efficacy beliefs are not static and can be altered with time (Bandura, 1977, 1997). Bandura (1977) explained that there are four main “sources of information” (p. 195) that individuals use to create self-efficacy beliefs: mastery experiences, vicarious experiences, verbal persuasion, and emotional arousal. Mastery experiences, widely referred to as performance accomplishments or enactive experiences, are recognized as the most influential source of information in the construction of self-efficacy beliefs (Bandura, 1977, 1997; Zimmerman, 2000). Mastery experiences are hands-on authentic learning experiences (Banas, 2014; Bandura, 1977, 1997). These experiences, which rely on repeated task exposure, serve as practice as an individual works toward mastery. It is thought that repeated successes are likely to produce higher self-efficacy beliefs, whereas repeated failures are likely to result in lower self-efficacy beliefs (Bandura, 1997). Using the concept of mastery experiences to increase self-efficacy beliefs, Banas (2014) conducted a study of novice health education teachers. Results from the study suggested that systematic training that included authentic performance tasks increased teachers’ self-efficacy to perform bullying prevention activities with students. This type of exposure may be important in the study of early interventionists’ confidence and competence working with infants with NAS and their families. Based on the notion of mastery experiences, repeated exposure to this population that results in perceived successes or failures has the potential to either raise or reduce the interventionists’ self-efficacy beliefs and overall confidence at work.

Although mastery experiences are recognized as the most influential source of self-efficacy beliefs, vicarious experiences, verbal persuasion, and emotional arousal also play a role in the construction of these beliefs. Vicarious experiences include modeling by others such as peers or instructors. Confidence and self-efficacy can be increased by observing others successfully perform tasks that an individual is also expected to perform (Bandura, 1977; Moriarty, 2014). Likewise, self-efficacy can be changed by verbal persuasion which refers to actions like coaching, encouragement, suggestions, and praise by another individual (Bandura, 1977; Moriarty, 2014). Bandura (1977) suggested that verbal persuasion is most influential when it is combined with authentic performance tasks such as mastery experiences. Emotional or physiological arousal is the final influencer on the construction of beliefs in the self-efficacy concept. Emotional arousal such as stress can be physically debilitating and negatively affect performance, therefore lowering self-efficacy beliefs (Bandura, 1977, 1997). Attention to emotional arousal is particularly important in human service professions because work stress is associated with employee burnout (Torres, 2016).

Self-efficacy beliefs fluctuate in response to the four constructs previously described of mastery and vicarious experiences, verbal persuasion, and emotional arousal. These beliefs can be predictors of an individual's behavior including the effort, persistence, and motivation exerted in given situations (Bandura, 1977, 1997). Individuals with positive self-efficacy beliefs tend to view challenging situations as tasks to be mastered, generally persist, and stay committed to achieving goals (Bandura, 1997). These individuals believe that they have the skill and ability to succeed. Ventura,

Salanova, and Llorens (2015) found that highly efficacious teachers tended to view challenging work demands as opportunities for professional and personal development. These teachers were more likely than their less efficacious counterparts to have higher levels of dedication, energy, and enthusiasm for their work as well as higher levels of self-reported concentration. In addition, self-efficacy beliefs have been found to be a strong predictor of teachers' educational practice in early childhood education, including the use of research-based strategies (Perren et al., 2017). These studies suggest that individuals with high levels of self-efficacy tend to be more confident and productive employees.

Unlike individuals with high perceptions of self-efficacy, individuals with low perceptions of self-efficacy tend to focus on their personal deficits and perceived inability to complete tasks successfully (Bandura, 1997). Individuals with low self-efficacy beliefs tend to lack motivation and persistence and are generally uncommitted to tasks perceived as threatening (Bandura, 1997). Acknowledging employees' perceptions of self in regard to work related tasks may be important because feelings of ineffectiveness lead to stress, depression, and often burnout (Bandura, 1997; Ventura et al., 2015; Wang, Hall, & Rahimi, 2015).

Role ambiguity frequently emerged as a common theme while conducting research on self-efficacy in the workplace. Role ambiguity in the workplace refers to the uncertainty of job-related tasks, standards, and procedures (Wang & Hsu, 2014). To construct self-efficacy beliefs, individuals must have knowledge of what is expected and required to perform tasks successfully (Bandura, 1997). Research suggests that



hindrance stressors such as role ambiguity lower self-efficacy, job performance, and satisfaction, especially for individuals with prior low self-efficacy beliefs (Lu, Du, & Xu, 2016), whereas role clarity is associated with higher level of self-efficacy, job satisfaction, and confidence at work (Carpenter et al., 2015). Attention to role ambiguity is relevant in the current study because early interventionists are expected to serve several roles when working with children and families. The family centeredness of early intervention services requires that interventionists have a great understanding of early child development, including knowledge of disabilities and developmental delays, as well as the skill set to work effectively with families. The variety of job tasks that interventionists are expected to perform may lead to a lack of role clarity.

Locus of control is another widely known concept that seeks to describe the workings of human behavior and may be useful in the study of factors that affect interventionists' perceptions of self-confidence and competence. Locus of control refers to the degree in which individuals believe that the outcome of their behavior is dependent upon their actions or upon outside influences such as fate, luck, chance, or pure unpredictability (Rotter, 1966). When individuals expect the outcome of their behavior to be a direct result of their actions they are said to have an internal locus of control, as opposed to individuals with an external locus of control who perceive little control over the outcomes of their actions. Like self-efficacy beliefs, internal-external expectancy beliefs are individualistic and vary by situation (Rotter, 1966). In addition, expectancy beliefs may be generalized and transfer to situations perceived as similar. For example, early interventionists' may have similar expectancy beliefs working with infants with

NAS and infants with fetal alcohol syndrome given the similarity in cases. Attention to interventionists' locus of control beliefs in this study was relevant considering the nature of early intervention services which requires both collaboration with colleagues and clients and independent practice.

Individuals with perceived internal locus of control are generally more motivated (Rotter, 1966) and persistent (Strauser et al., 2002) than those with external control expectancies. Several studies in the human service field, similar to early intervention, support this concept of differences. For example, in a study of child welfare workers, Fitzgerald and Clark (2013) found that workers with internal locus of control were more likely to believe they could positively affect clients' lives and reported themselves as more successful at work than their colleagues with external locus of control. In a similar study, Senler (2016) found that preservice science teachers with internal locus of control believed they were responsible for student achievement and had more positive attitudes towards teaching than preservice teachers with external locus of control. The results from this study and others suggest that workers with greater external locus of control experience more anxiety, job-related stress, and intentions to quit (Gray & Muramatsu, 2013). Information from these studies was relevant to the current study because if interventionists perceive the outcomes of their work to be dependent upon outside influences such as colleagues, supervisors, or clients they may persist less than those with an internal locus of control and may leave the profession. In contrast, if interventionists believe they are in control over the outcomes of their work and can positively affect the

lives of children and families they may feel less stress and have greater work satisfaction and longevity, resulting in more continuity of care for children and families.

The concepts of locus of control and self-efficacy have been found to be predictors of human behavior but Bandura (1997) cautioned they are distinct concepts. Clearly stated, self-efficacy refers to an individual's belief that they have the skill and ability to produce actions successfully whereas locus of control describes an individual's belief that outcomes are either a result of those actions or outside influences (Bandura, 1997). Because the quality of intervention services families receive is dependent upon the interventionist, examining interventionists' beliefs of self-efficacy and locus of control may elicit useful information regarding the services infants with NAS and their families receive.

These concepts guided the development of the three research questions and served as the conceptual lens I used to interpret the study's findings. In the sections that follow, I will present current literature on neonatal abstinence syndrome, early intervention and NAS, and factors that may affect interventionists self-efficacy working with this population.

### **Neonatal Abstinence Syndrome**

NAS is the diagnosis assigned to the group of symptoms present in a newborn after abrupt cessation of opioids after birth (Hudak & Tan, 2012; Kocherlakota, 2014; MacMullen et al., 2014). The research base on the topic has grown significantly over the past decade (McQueen & Murphy-Oikonen, 2016) with much of the focus given to NAS symptoms, management, and short-term effects on infants. NAS has also been linked to

long-term effects and developmental delays, which I will discuss later in this section.

Because of the potential for long-term effects, this population of children and families may benefit from early intervention services.

Research suggests that NAS-causing opioids are a combination of illegal drugs and legal prescriptions. One study found that 65% of infants diagnosed with NAS were exposed to at least one legally obtained opioid prescription (Patrick et al., 2015). Prescription opioids are routinely prescribed to pregnant women as relief for illnesses such as chronic pain, depression, and anxiety (Patrick et al., 2015). Long-acting opioids such as methadone and buprenorphine are also routinely prescribed to women participating in opioid maintenance treatment programs (Jones et al., 2014; Kocherlakota, 2014). Drugs used in opioid maintenance treatment programs and other opioids such as codeine, heroin, fentanyl (Hudak & Tan, 2012), OxyContin, and morphine cross the placenta (Hudak & Tan, 2012; Kocherlakota, 2014), which can lead to addiction for the unborn fetus. Research suggests that infants exposed to long-acting opioids from treatment programs like methadone and buprenorphine experience more intense NAS symptoms than infants exposed to other types of opioids (McQueen & Murphy-Oikonen, 2016). However, other research suggests buprenorphine does not have the same adverse effects as methadone on neonatal outcomes (Jones et al., 2014) and is beneficial to both mother and infant. The benefits of opioid maintenance treatment programs in pregnancy such as stable prenatal care, anticipation of infant drug withdrawal, greater maternal mental health (Jones et al., 2014; Kocherlakota, 2014), and reduction in drug seeking and

criminal behaviors may outweigh the risks of NAS (Jones et al., 2014; McQueen & Murphy-Oikonen, 2016).

Most NAS symptoms appear after birth. The onset, severity, and duration of symptoms differ for each infant and depend on a variety of factors such as the type and amount of opioid exposure and gestational weeks at delivery (Hudak & Tan, 2012; Kocherlakota, 2014; MacMullen et al., 2014). NAS is associated with dysfunction in infants' gastrointestinal tracts and central and autonomic nervous systems (Bier, Finger, Johnson, & Coyle, 2015). Common symptoms include respiratory distress (Bier et al., 2015; Patrick et al., 2015), tremors, seizures, difficulty feeding (Patrick et al., 2015), extreme irritability, inconsolable high-pitch crying, increased muscle-tone, and hypersensitivity to environmental stimuli (Kocherlakota, 2014; MacMullen et al., 2014). NAS has also been associated with birth defects such as congenital heart abnormalities (Broussard et al., 2011). Infants exposed to opioids are more likely than other infants to be born prematurely and at low birth weights (Patrick et al., 2015; Whiteman et al., 2014), which intensify the immediate health concerns after birth.

Toxicology testing is necessary to positively confirm NAS diagnosis. Scoring systems, such as the Finnegan scoring system, which assesses infants' symptoms every 4 hours, are used to determine the severity of the syndrome and appropriate courses of treatment (Finnegan, Kron, Connaughton, & Emich, 1975; Kocherlakota, 2014). Current NAS treatments include pharmacological and nonpharmacological care options. Common nonpharmacological treatment practices include breastfeeding (Welle-Strand et al., 2013), rooming-in, swaddling, cuddling, and non-nutritive sucking, as well as

creating quiet and dark environments for the newborn (MacMullen et al., 2014). In more severe cases, pharmacological treatments are necessary to help safely wean the newborn from opioids. Methadone, morphine, buprenorphine, and clonidine are the most commonly used medications in drug-assisted weaning (Tolia et al., 2015). Effects from opioid exposure such as developmental delays may persist even after infants have been successfully weaned and are no longer opioid dependent.

Research on the long-term effects of prenatal opioid exposure appears to be relatively new and many studies acknowledge the lack of literature on the topic. Viteri et al. (2015) claimed there was not enough literature on the topic to conclude that prenatal opioid exposure is related to delays in executive functioning, cognition, or future academic achievement, however, multiple studies have suggested otherwise. Since that claim, several studies have linked prenatal opioid exposure to decreased executive functioning (Konijnenberg & Melinder, 2015), language delays (Beckwith & Burke, 2015), vision problems, and eye disorders (Kivisto, Tupola, & Kivitie-Kallio, 2015; McGlone & Mactier, 2015; Wahlsten & Sarman, 2013) in affected toddlers and preschool age children. Prenatal opioid exposure has also been associated with aggression and with regulatory and attention problems in children as old as eight (Nygaard et al., 2016). Understanding the long-term effects of prenatal opioid exposure may be difficult because of the likelihood that infants exposed to opioids have been exposed to other substances potentially leading to polysubstance effects (McGlone & Mactier, 2015; McQueen & Murphy-Oikonen, 2016). In addition, there are a variety of environmental factors that may contribute to developmental delays in this population of children such as low

maternal education and employment (Konijnenberg & Melinder, 2015), maternal mental health disorders, low socioeconomic status (Nygaard et al., 2016), and child maltreatment (Kivisto et al., 2015). Ongoing social and developmental support such as early intervention is recommended for this population (Beckwith & Burke, 2015; Konijnenberg & Melinder, 2015). Early interventionists can provide families with parenting support, necessary therapies, and developmentally appropriate activities that may lessen the effects of NAS.

### **Early Intervention and the NAS Population**

Factors such as low socioeconomic status (McDonald et al., 2016; McManus, Robinson, & Rosenberg, 2016), unstable maternal mental health, and preterm birth (McDonald et al., 2016) are known predictors of developmental delays in young children. These factors are consistent with those present among infants born with NAS (Uebel et al., 2015). McDonald et al. (2016) found several protective factors that may reduce the risk of developmental delays in this population. These factors, such as social support for families, high-quality parent-child interactions, and use of community resources, encompass the intended goals of early intervention services.

Hospital readmission rates for infants with NAS are more than double than that of infants without NAS (Patrick et al., 2015; Uebel et al., 2015). Reasons for rehospitalization vary but include potentially preventable conditions such as injury, maltreatment, illness, and behavioral problems (Uebel et al., 2015). McDonald et al. (2016) and Patrick et al. (2015) suggested that this population may benefit from ongoing

supports like home visiting and service coordination. These types of services may result in fewer early life hospitalizations and better outcomes for infants and family units.

Although social supports such as early intervention are recommended for infants with NAS and their families, working with at-risk populations may present unique challenges. For example, in a study exploring barriers to early intervention services, Little, Kamholz, Corwin, Barrero-Castillero, and Wang (2015) interviewed parents receiving early intervention services and early intervention service providers. Results revealed that some parents were resistant to early intervention services because of fear and misunderstanding that early intervention is associated with child welfare agencies and the discomfort associated with ongoing home visits. In addition, results revealed that some parents were not receptive to services based on parents' denial that their child may have, or be at-risk of having, a developmental delay. Providers have also reported experiencing high drop-out rates for socially at-risk families after initial enrollment in early intervention programs (Sierau et al., 2016). Sierau et al. (2016) explained that building trusting relationships with mothers is associated with quality early intervention services and improved maternal mental health and parenting skills. Similarly, Popp and You (2016) found that building trusting relationships with families, especially the inclusion of families in planning at the onset of service delivery, resulted in more family involvement, greater satisfaction with early intervention services, and higher levels of parenting self-efficacy. This research related to the current study because the interventionist-caregiver relationship may be the foundation on which effective intervention services are built.



The importance of the interventionist-caregiver relationship proved to be a reoccurring theme during my research on opioid-dependent mothers' experiences during the perinatal period. Participants from two studies (Cleveland & Gill, 2013; Harvey et al., 2015), which attempted to describe substance-using mothers' experiences in the perinatal period, reported overwhelming feelings of judgment from healthcare professionals and society. Mothers in one study (Harvey et al., 2015) reported feeling 'belittled' (p.292) by healthcare providers and used words like 'bad mother' (p.292), 'junkie' (p.291), and 'methadone baby' (p.290) in their responses to interview questions. These studies suggest that in addition to reported self-judgement, there is a stigma associated with NAS and opioid-use during pregnancy, even if drug-use is part of an opioid maintenance treatment program (Harvey et al., 2015). Terplan, Kennedy-Hendricks, and Chisolm (2015) suggested that the stigma surrounding opioid use during pregnancy may lead to adverse effects on the infant and family since these mothers are less likely than nonsubstance-using mothers to seek medical care. Contrary to the negative effects of judgment and stigma faced by this population, Harvey et al. (2015) reported that when mothers felt respected, appreciated as a mother rather than seen as a drug-user, and had trusting relationships with providers, their confidence increased, they were open to more support, and were more hopeful for their infants' future. Again, these results highlighted the need for interventionists to build trusting and supportive relationships with caregivers as they work towards establishing and maintaining effective early intervention services for this populations of children and families.

Despite the potential barriers of establishing services, early intervention may be an effective method of lessening developmental delays and enhancing parenting skills for at-risk populations. For example, Barlow et al. (2013) conducted a study that examined the effectiveness of home visiting and early intervention services for American Indian new mothers, including a subsample of substance-using mothers. The authors found that babies of substance-using mothers receiving early intervention had fewer behavioral problems than babies in the control group. In addition, mothers receiving early intervention support had greater parenting self-efficacy, parenting knowledge, and knowledge of home safety than mothers in the control group. These results are meaningful since, as previously discussed, infants with NAS are more likely than other infants to be readmitted to the hospital for preventable conditions such as injury (Uebel et al., 2015). In another study that examined the effectiveness of early intervention for high-risk populations, Sierau et al. (2016) found similar maternal outcomes such as improved feelings of social support and greater parenting knowledge. In addition, high-risk mothers receiving early intervention reported lower levels of stress in the months after birth unlike mothers in the control group who reported increased levels of stress in the same time period. The authors proposed that early intervention may act as a protective factor for maternal stress which is important considering the known risk of maltreatment (Kivisto et al., 2015) for this population of infants. This research suggests that early interventionists must be prepared to contend with the potential social disadvantages, like unstable maternal mental health and low knowledge of child

development (Zand et al., 2015), as well as the potential effects of stigma when working with infants with NAS and their families.

Other studies like Barlow et al. (2013), Kivisto et al. (2015), and Sierau et al. (2016) have highlighted the effectiveness of family-centered practices in early intervention. Bagner et al. (2016) examined the effectiveness of a home-based parenting training program aimed at reducing infant behavior problems and increasing positive parent-child interactions. After the six-month intervention, findings showed a significant decrease in infant noncompliance as well as significant increases in positive parenting techniques used by caregivers. The effectiveness of parenting education and support in early intervention is echoed in a similar study (Stubbs & Achat, 2016) that described service providers' and caregivers' experiences in a home-visiting program designed to address the unique needs of at-risk families with infants with developmental delays. Results from this study showed that over 80% of caregivers reported feeling more confident in their parenting ability in addition to their ability to understand and cope with their family and life. The authors found that the emotional support provided by the home visitors during the study's duration proved to be more important than any types of intervention provided such as modeling or health care related interventions. Again, this research highlights the importance of the interventionist-caregiver relationship on the overall effectiveness of early intervention services for at-risk populations.

### **Issues of Interventionist Preparation and Retention**

Studies which examined early interventionists' perspectives working with populations such as children with autism (Pizur-Barnekow et al., 2012) and children with

early speech delays (Marshall & Lewis, 2014) can be found in the literature. Studies have also been published that examined interventionists' perspectives working with maltreated infants and toddlers (Allen et al., 2012; Herman-Smith, 2013). Findings suggest that interventionists are not only willing to work with these children (Herman-Smith, 2013) but that serving at-risk populations may be a motivator in job performance (Allen et al., 2012). However there appear to be organizational challenges that may affect job performance and ultimately the quality of early intervention services infants with NAS and their families receive.

### **Educational Backgrounds**

One of these challenges is the diversity of professionals attracted to this work. The early intervention field is made up of multidisciplinary teams of professionals with a variety of educational backgrounds and training (Popp & You, 2016). Variation in educational backgrounds of interventionists may result in significant differences in their ability (Popp & You, 2016) when working with certain populations such as medically involved infants or socially disadvantaged families. Based on current knowledge of the detrimental health effects of NAS and the family dynamics associated with this population, it is reasonable to suggest that this population would benefit from early intervention services from experienced providers such as social workers and nurses. However, in a study of 303 early interventionists, only 4.4% of participants were nurses and almost 55% of participants reported being employed by the agency for fewer than three years (Herman-Smith, 2013). Furthermore, in two distinct qualitative studies, early intervention providers described interventionists as "young" (Little et al., 2015, p. 1055)

and “inexperienced” (Allen et al., 2012, p. 435). Interventionists, who were participants in these studies, thought that the inexperienced workforce was a problem and that it resulted in lower quality services for families (Allen et al., 2012; Little et al., 2015). In addition to inexperience, participants described a problem with lack of training in the field, feelings of inadequacy conducting evaluations, and discomfort with expectations that interventionists work with children on a variety of goals outside of the interventionists’ discipline (Little et al., 2015). The importance of proper training or lack thereof frequently emerged throughout the literature review process (Allen et al., 2012; Francois, Coufal, & Subramanian, 2015; Popp & You, 2016). The participants’ perceptions in these studies may be the result of systemic organizational challenges in the field of early intervention.

Similar concerns regarding educational training for early interventionists was echoed in a study of professional preparation for speech and language pathologists (Francois, Coufal, & Subramanian, 2015). Findings from the study revealed a lack of training for interventionists in the areas of working with caregivers, providing services in natural environments and home settings, and working as part of a multidisciplinary team (Francois et al., 2015). The absence of training in these areas may be problematic since family-centeredness is the foundation of early intervention. In addition, infants born with NAS often have multiple health concerns and likely benefit from a team approach to intervention. Although Francois et al. focused on speech and language pathologists, the lack of training for professionals working with infants and toddlers appears to be a trend in current literature. In a study of 44 early childhood education undergraduate degree

programs, Chu (2016) found that 40 of the 44 programs required one course or less in infant and toddler development. In a similar study of 175 early childhood education degree programs, Buettner, Hur, Jeon, and Andrews (2016) found that bachelor-level programs focused heavily on prekindergarten through third grade teacher licensure and curricula, whereas associate programs focused more heavily on skill and practice in the classroom. These findings present a problem for the field of early intervention since previous research suggested most interventionists are bachelor-level professionals, many with educational, not medical or social service, backgrounds (Herman-Smith, 2013) and services are typically delivered in a home environment. Furthermore, in a study of mothers enrolled in opioid maintenance treatment programs Harvey et al. (2012) found that mothers' willingness to participate in early childhood services was dependent on the professional and personal qualities of the service provider. A lack of in-depth understanding of infant and toddler development in the home setting may jeopardize meaningful and effective intervention for infants with NAS and their families.

### **Retention and Turnover**

Like discrepancies in educational training for early interventionists, low wages emerged as a recurring theme during the literature review process. Studies by Little et al. (2015) and Chu (2016) both addressed the potential effects of low wages for early interventionists and early education professionals. Findings from both studies suggested that low wages and lack of educational preparation may be factors that lead to turnover in the field. One early intervention provider highlighted the issue of turnover by explaining that her organization has been understaffed for eight years (Little et al., 2015). Similarly,

in a focus group of early childhood education college faculty, participants suggested low wages and low educational requirements are reasons infant and toddler professionals may leave the early education field (Chu, 2016).

Sulek, Trembath, Paynter, Keen, and Simpson (2017) studied the potential effects of employee turnover in the early intervention profession. Two themes emerged from focus groups with early intervention professionals. First, participants discussed the difficulty and stress placed on existing staff when continually expected to work with new, inexperienced, and untrained colleagues. Some participants suggested that this stress perpetuated the high rates of turnover in the field. The second theme that emerged from the focus groups was the effect that turnover had on service delivery. Some participants reported the inability to deliver high-quality early intervention services with continuous employee turnover. The results from this study are consistent with previous research (Da Silva Pereira & Serrano, 2014) that suggested early intervention services, including family-centered practices, are affected by a lack of specified training as well as the length of experience by the provider.

The uniqueness of early intervention services, which encompass early education and characteristics of social services, may contribute to the difficulty of keeping experienced providers in the field as reported by early intervention organizations (Little et al., 2015). More specifically, building and sustaining relationships with the population of families affected by NAS may present stressors for interventionists. As previously discussed, this population of families is generally undereducated (Konijnenberg & Melinder, 2015), possibly battling substance-use or mental health disorders (Nygaard et

al., 2016), and often resistant to early intervention services (Little et al., 2015). These factors represent external barriers, beyond interventionists' control, that may affect locus of control beliefs as well as create stressors which have been previously associated with intentions to quit (Gray & Muramatsu, 2013). Other external factors such as caregivers' perceptions of intervention have also been shown to affect interventionists' feelings of internal locus of control, specifically self-confidence (Boyer, 2014). The combination of external barriers, reported low-levels of content-specific knowledge and educational backgrounds, and difficulty retaining professionals in the field may be indicators of interventionists' varying self-efficacy beliefs. Varying self-efficacy and locus of control beliefs may affect interventionists' ability to provide high-quality early intervention services meant to enhance development and strengthen family capacity.

### **Training Effectiveness**

Self-efficacy and locus of control beliefs have long been associated with individuals' persistence and work performance (Bandura, 1977; Rotter, 1966). In previous sections, I described research that supports this association. Findings from other studies on home visiting services and early childhood education have elaborated on these findings. In a study examining the association between self-efficacy and job burnout in a variety of professions, Shoji et al. (2016) found that high levels of self-efficacy appeared to act as a protective factor against job burnout. Findings from this study also showed that, of all the occupations included in the study, educators had the highest level of job burnout. The authors suggested that this population may benefit from training meant to enhance self-efficacy beliefs. This suggestion is like findings from Clark, Smith, and



Uota's (2013) study on organizational factors in social services that may affect retention. Results from this study revealed that access to training opportunities more than twice per year was positively associated with employee retention. In addition, Dunst and Bruder (2013) found that early interventionists' self-efficacy beliefs were more strongly associated with feelings of preparedness through training than with any other factor such as type of degree or completion of an advanced degree. These findings suggest that in-service training and professional development for interventionists may lead to increased efficacy beliefs, employee retention, and continuity of care for families receiving early intervention services.

Several studies have examined the effectiveness of professional development on workers' self-efficacy beliefs (Arthur-Kelly et al., 2017; Liou et al., 2017; Xie et al., 2017). Findings from these studies suggest that training is an effective method of increasing workers' self-efficacy beliefs. However, the research does not appear to support a single or most effective method of professional development. For example, Arthur-Kelly et al. (2017) used an action research approach to three professional development sessions for early childhood educators who worked with children with challenging behaviors. Findings showed that educators' knowledge, skill, confidence, and use of evidence-based strategies increased after the action research training period. In another study which examined educators' efficacy beliefs and performance, Liou et al. (2017) found that teachers' beliefs of self-efficacy were strongly related to teaching performance. Results also suggested that mastery experiences such as guided practice and hands-on experiences were the most useful methods of training used to enhance

participants' self-efficacy beliefs. The most recent study from my review of the literature on the topic examined the effectiveness of a training program meant to enhance early interventionists' self-efficacy beliefs using family-centered practices (Xie et al., 2017). In this study, interventionists participated in a variety of training formats including large group lectures, small group work and discussions, supervised practicum experiences, and online support sessions. Participants from this study rated their experiences in large group lectures as the most useful and effective training method in the program. Although participants rated large group lectures as the most effective training method, they also rated the entire training program as highly effective. The authors acknowledged that the program's high rating might mean that the overall combination of training methods (large group lectures, small group work, and in-home practica) may be the most efficient training method to increase interventionists' self-efficacy beliefs. This research supports Bandura's (1977) work that described a variety of approaches to altering self-efficacy beliefs including mastery and vicarious experiences, verbal persuasion, and emotional arousal. Results from the previously described studies may be promising to early intervention professionals and the families served in these programs. Although research has yet to agree on the single most effective method of in-service training for early interventionists, it appears a variety of methods may be successful in enhancing interventionists' content specific knowledge and self-efficacy beliefs.

### **Summary**

Infants born prenatally exposed or addicted to opioids are at risk for developing NAS after birth. Short-term symptoms of NAS include tremors, difficulty feeding

(Patrick et al., 2015), extreme irritability and high-pitch crying, increased muscle tone, and hypersensitivity to environmental stimuli (Kocherlakota, 2014; MacMullen et al., 2014). A variety of pharmacological and nonpharmacological care options are used to treat symptoms after birth. However, infants diagnosed with NAS are at-risk for long term developmental delays. Developmental delays associated with NAS include a range of vision issues (Kivisto, Tupola, & Kivitie-Kallio, 2015; McGlone & Mactier, 2015; Wahlsten & Sarman, 2013), delays in executive functioning (Konijnenberg & Melinder, 2015), and language impairments (Beckwith & Burke, 2015), as well as regulatory problems (Nygaard et al., 2016). This population of infants and their families may benefit from ongoing support, like early intervention, that focuses on building positive relationships with caregivers (Sierau et al., 2016), parenting education (Barlow et al., 2013), and assistance navigating social services.

Research has suggested that early interventionists are willing to work with at-risk populations (Herman-Smith, 2013). Other qualitative research, consistent with the gap in practice in the study state, has suggested that interventionists lack education and confidence to work with a variety of populations (Little et al., 2015). There appears to be a lack of literature pertaining specifically to early interventionists' self-efficacy beliefs working with infants diagnosed with NAS and their families, as well as factors that affect those beliefs. It is important to address the lack of literature on the topic since the quality of services infants and families receive is directly related to the interventionist providing services. Also, beliefs about control and self-efficacy are likely to affect interventionists' work performance (Bandura, 1997; Rotter, 1966). This study aimed to address the lack

of literature on the topic and the potential effects of the lack of training by examining early interventionists' self-efficacy beliefs working with infants with NAS and their families. Furthermore, this study attempted to examine perceived internal and external factors that may affect interventionists' locus of control. The following chapter provides a detailed explanation of the research methodology chosen to address the research questions.

### Chapter 3: Research Method

The purpose of this study was to explore early interventionists' beliefs of self-efficacy, and factors that may affect those beliefs, when working with infants with NAS and their families. In this chapter, I describe the qualitative research design that I chose for this study. This chapter also includes detailed descriptions of the study's methodology, including participant selection, instrumentation, and data analysis. I also address issues of trustworthiness and ethical procedures.

#### **Research Design and Rationale**

In this qualitative case study, I used semistructured interviews to explore early interventionists' perspectives of self-efficacy beliefs, along with internal and external factors that may affect those beliefs, when working with infants with NAS and their families. The purpose of qualitative research was to explore and gain an in-depth understanding of a central concept or phenomenon (Creswell, 2012). The research questions that served as a guide to the development of this study are:

1. How do early interventionists describe their perceptions of self-efficacy when working with infants diagnosed with NAS and their families?
2. How do perceived internal and external factors affect early interventionists' self-efficacy beliefs when working with infants diagnosed with NAS and their families?
3. How do early interventionists feel their self-efficacy could be improved in their work with infants diagnosed with NAS and their families?

I focused on a small number of participants to obtain a comprehensive understanding of the phenomenon of study, which is consistent with qualitative research approaches (Creswell, 2012). Furthermore, a qualitative case study was an appropriate design for this study given the nature of the research questions and central concept of study. According to Yin (2014), a case study “arises out of the desire to understand” (p. 4) a phenomenon and is most appropriate when the research questions are composed of “how” and “why” type questions. This description of case study research aligned with my study because little is known about early interventionists’ perceptions of self-efficacy working with this population. In this study, I attempted to explore these perceptions. In addition, case study research is appropriate when the topic of study is a contemporary phenomenon in which the researcher lacks control (Yin, 2014). Again, this description aligned with my study since the central phenomenon sought to understand interventionists’ perceptions of their authentic work with infants diagnosed with NAS and their families.

In case study research, data can be collected from a variety of sources including interviews with participants. My goal in this study was consistent with the goal of case study research, which is, “to capture the distinctive perspectives of the participants” (Yin, 2014, p. 102). Previously, qualitative researchers (Khetani et al., 2013; Marshall & Lewis, 2014; Swafford, Wingate, Zagumny, & Richey, 2015) have used semistructured one-on-one interviews to examine perceptions pertaining to topics in early intervention. Similarly, this was the chosen research approach for a 2007 study that specifically examined neonatal nurses’ experiences working with infants with NAS and their

caregivers (Fraser, Barnes, Biggs, & Kain, 2007). In this study, I attempted to capture early interventionists' perceptions of self-efficacy working with infants with NAS and their families using the same method.

### **Role of the Researcher**

I was previously employed as an early interventionist by the organization from which I recruited participants. This organization has several satellite offices that are responsible for serving children and families in different catchment areas throughout the study state. I collected data from four sites within the organization. I had no prior supervisory or personal relationship with the participants or gatekeepers in this study. My role in this qualitative case study was to recruit participants, collect and analyze data, and interpret and report findings.

The potential for bias in this study existed given my role as researcher and my previous employment within the organization. I managed potential biases by keeping a journal of my perceptions, feelings, and thoughts as they arose throughout the study. This tool gave me a space to acknowledge, record, and examine any personal biases that may have existed (Lodico et al., 2010). I was also mindful of my facial expressions, tone, and reactions to participants' responses during interviews. Similarly, I refrained from asking any leading questions that may have influenced participants' responses or willingness to share genuine feelings on the study topic. In addition to managing personal biases throughout the study, it was necessary to address potential ethical issues. I provided participants in this study with written consent forms and a verbal explanation

regarding study details such as purpose, voluntary participation, and confidentiality. I discuss further ethical precautions and procedures later in this chapter.

## **Methodology**

### **Participant Selection**

The population for this study was early interventionists employed by a private early intervention organization in one northeastern state who worked with a variety of infants and toddlers with developmental delays, including infants with NAS and their families. As stated in Chapter 1, the term early interventionist includes professionals from various specialties like occupational and physical therapists, nurses, social workers, mental health clinicians, and early educators. I used purposeful sampling to identify participants who met the study's criteria. Purposeful sampling was an appropriate sampling method for this study because I wanted to select participants who could provide the most information-rich perspectives on the study topic (Lodico et al., 2010). I selected participants based on three criteria. First, participants must have identified as service coordinators. This criterion excluded other employees from the organization like site directors and assistant teachers. Service coordinators are the primary interventionists working with families in their natural environments and were likely to have the most contact with infants with NAS and their families. Also, service coordinators often have different educational backgrounds which provided the opportunity to explore a variety of perspectives pertaining to the topic of study. Next, I selected participants who had been employed by the organization for 6 weeks or more. I chose 6 weeks of employment as part of the criteria to ensure that interventionists had been assigned cases and were



fulfilling the role of service coordinator. Also, this criterion presented the opportunity to explore the perspectives of both new and more experienced interventionists. Finally, participants were chosen based on their willingness to be interviewed and sign an informed consent form to participate in the study.

I recruited participants from five sites within the organization. A total of eight interventionists participated in the study. According to Creswell (2012), a small number of cases may provide a more “in-depth understanding” (p. 465) of the study topic than a large number of cases. The criteria for participation and recruitment process was the same for all sites. The inclusion of participants from more than one site allowed me to explore perspectives of interventionists working with this population in different settings and provided a more thorough examination of interventionists’ perspectives.

I recruited participants for the study by first obtaining permission from the organization’s early childhood services director. I contacted the organization’s director, provided written and verbal information regarding my study, and asked for approval to contact site directors. At that time, I also asked the early childhood services director for recommendations of potential study sites. With approval, I contacted the recommended site directors who served as the gatekeepers in this study. I explained the purpose of my study, the intended participants, and the data collection method. I also shared a letter of invitation to participate in the study (Appendix A) with the gatekeepers that was later distributed to potential participants. I asked site directors to distribute the invitation to participate in the study to interventionists at their sites. The invitation contained an introduction of myself, the purpose of the study, criterion for participation, procedures,

and confidentiality information. The letter also contained my contact information and directions for participation. Interested interventionists were encouraged to contact me via email or phone for further details.

### **Instrumentation**

I used modified open-ended interview questions (Appendix B) to explore early interventionists' self-efficacy beliefs working with infants with NAS and their families. These open-ended questions were created by Wang, Tan, Li, Tan, and Lim (2017). Wang et al. (2017) used these questions to explore Singaporean secondary teachers' feelings and perceptions of their work with low-achieving students and how those perceptions were related to self-efficacy beliefs. These questions were based in part on the Teachers' Sense of Efficacy Scale (TSES), also known as the Ohio State Teacher Efficacy Scales, which has been validated in extensive research (Page, Pendergraft, & Wilson, 2014). Heneman, Kimball, and Milanowski (2006) called the TSES the ideal tool for measuring self-efficacy, for its consistency of results and predictive capacity. Statistics Solutions (2018) reports overall long- and short-form alphas for the TSES as .94 and .90, respectively.

I received permission from Wang et al. to use and modify the open-ended interview questions (Appendix C). The questions' focus on perceptions of work and self-efficacy were appropriate for my study, however I modified the original interview questions to reflect the purpose of my study, specifically the population and concept of interest. The following modified interview questions served as a guide to the one-on-one semistructured interviews with participants:

1. What are your experiences working with infants affected by NAS and their families?
2. How do you feel when you are working with infants affected by NAS and their families?
3. What factors make you feel that you can be successful in your work with infants affected by NAS and their families?
4. What factors make you sometimes doubt your chances of being successful in your work with infants with NAS and their families?
5. What performance feedback have you received from others (supervisors, colleagues, or families) on your work with infants affected by NAS and their families?
6. What assistance might be helpful to you in developing your feelings of confidence and competence in working with infants affected by NAS and their families?

These interview questions were appropriate for my study because they sought to explore interventionists' perceptions of self-efficacy and factors that may affect interventionists' self-efficacy beliefs in their work with infants with NAS and their families. The interview questions were aligned with the study's research questions, as shown in Table 1.

I audiotaped the interviews with participants so that I could focus on active listening and ask probing questions based on participants' responses to the interview questions. The purpose of probing questions was to elicit in-depth, accurate descriptions

(Creswell, 2012) of interventionists' perceptions of self-efficacy in their work with infants with NAS and their families. Same Day Transcriptions transcribed the audiotapes within 24 hours of each interview and provided accurate versions of the interview data (Yin, 2014).

Table 1

*Alignment of Research Questions With Interview Questions*

| Research Question   | Interview Question   |
|---|--|
| RQ1: How do early interventionists describe their perceptions of self-efficacy when working with infants diagnosed with NAS and their families?                           | IQ1: What are your experiences working with infants affected by NAS and their families?<br><br>IQ2: How do you feel when you are working with infants affected by NAS and their families?  |
| RQ2: How do perceived internal and external factors affect early interventionists' self-efficacy beliefs when working with infants diagnosed with NAS and their families? | IQ3: What factors make you feel that you can be successful in your work with infants affected by NAS and their families?<br><br>IQ4: What factors make you sometimes doubt your chances of being successful in your work with infants with NAS and their families?   |
| RQ3: How do early interventionists feel their self-efficacy could be improved in their work with infants diagnosed with NAS and their families?                           | IQ5: What performance feedback have you received from others (supervisors, colleagues, or families) on your work with infants affected by NAS and their families?<br><br>IQ6: What assistance might be helpful to you in developing your feelings of confidence and competence in working with infants affected by NAS and their families? |

*Note.* RQ, research question; IQ, interview question; neonatal abstinence syndrome.

I also used an interview protocol (Appendix D) as a tool in the data collection process. The interview protocol assisted me in the structure and administration of the interviews with participants. The protocol consisted of the interview questions and white space for note taking. I noted ideas for probing and follow-up questions as well as reoccurring words and concepts present in participants' responses. I also took notes on participants' body language and facial expressions, because active listening goes beyond receiving information from participants' oral responses (Yin, 2014). In addition to the interview questions and white space, the interview protocol contained space for basic information such as date, time, and location of the interview, my name and name of interviewee, interviewees role, and number of years with the organization. The interview protocol also contained reminders for me to introduce myself and the purpose of the study to the interviewee, explain how the data will be handled and how the interviewees' confidentiality will be protected, review and obtain signed consent, and test and begin the recording equipment. The protocol ended with a reminder to reiterate confidentiality of responses and to thank the interviewee for their cooperation.

### **Procedures for Recruitment, Participation, and Data Collection**

I began recruitment for this study after I received permission from Walden University's Institutional Review Board and the partnering organization. As previously described, I asked site directors to distribute an invitation to participate in the study to interventionists at their sites. Potential participants were asked to contact me via phone or email for more information. Upon contact, I orally reviewed the information contained in the invitation to participate and answered potential questions. I ensured

participants were aware of confidentiality procedures, that participation in the study was optional, and that they could withdraw at any time. After verbal agreement to participate in the study, I scheduled a mutually convenient time and location to conduct the single-session 60-minute interview.

On the day of the interview I reminded participants of the procedures in place to protect their privacy in the study. I reviewed the informed consent with each participant and asked that they signed and dated the form before we began the interview. The informed consent explained the purpose of the study, potential risks and benefits, measures in place to ensure confidentiality, the voluntary nature of the study, and permission for the interview to be audio recorded. Participants were made aware prior to the interview that their identity, nor the identity of the organization, will be revealed at any time during or after the study. Furthermore, I explained to participants that their participation, or lack of participation, in the study would have no adverse effects on their professional work (Yin, 2014) within the organization.

The interviews were recorded using the Apple iPhone application Voice Recorder. I started a new recording at the beginning of each interview. I used the interview protocol to ensure that the interviews remained focused on the study's topic (Yin, 2014). Each participant was asked the interview questions listed on the protocol, however, I let the conversation guide the order of questions asked and possible follow-up questions. Ideas for follow-up questions and probes were noted on the interview protocol. The voice recorder was stopped at the end of each interview. At the conclusion of each interview I informed participants that they would receive a copy of the interview

transcript via email. Participants were encouraged to review a summary of the transcript and to contact me with concerns or if they felt that changes were necessary.

### **Data Analysis Plan**

The audio recordings from each interview were transcribed verbatim by Same Day Transcriptions. After I received the transcriptions, I began the data analysis process by using strategies Yin (2014) suggested for “playing” (p.132) with data. I reviewed the interview protocols and transcripts several times and searched for repeated words and phrases. I created memos of my thoughts and first reactions to the data. In addition, I created preliminary graphic organizers to track my ideas and concepts of interest.

After preliminary review, I used an inductive approach to begin an organized analysis of the data to answer the research questions. I used a line-by-line coding process as I read each interview transcript. I underlined important words, phrases, and concepts and assigned codes to the underlined data which were handwritten in the margin of the transcripts. The codes were primarily in vivo or constructed based on the data, however, I also used a few a priori codes based on the study’s framework. The use of a priori codes helped me remain focused on creating a connection between the data and research questions. In addition to codes, I created memos as necessary to expand on coded concepts. Memos were handwritten on separate paper, immediately as the need arose. I followed this line-by-line coding process for each interview transcript and interview protocol.

After the data was coded, I reviewed the codes and began to create categories and subcategories as necessary. Codes were grouped by likeness, theme, and other common

elements that emerged during analysis. I grouped the codes into categories using a color-coding system directly on the transcripts and protocols. Then I transferred the lists of codes and categories onto separate paper. Next, I studied and reduced the list of categories into themes. The themes reflected major and minor concepts found in the study's data (Lodico et al., 2010). Given the purpose of my study was to explore interventionists' perspectives, it was plausible that interventionists' beliefs varied greatly. To create an accurate depiction of interventionists' perspectives working with infants with NAS and their families, all perspectives were included in the final report.

### **Trustworthiness**

Lodico et al. (2010) explained the importance of providing evidence to demonstrate that findings from qualitative research studies accurately describe the phenomenon being examined. In this study, I strived to accurately describe interventionists' perceptions of self-efficacy when working with infants with NAS and their families by exercising concepts frequently used to evaluate qualitative research: credibility, dependability, and confirmability (Yin, 2014).

Credibility refers to the level of accuracy in a study's findings (Creswell, 2012). I established credibility in this study by using several strategies. During the data collection process, I was mindful of the threat of reflexivity, and I used the interview protocol to ensure that the interview conversations remained focused on the topic of study. The interviews were transcribed by a professional transcription provider which reduced the risk of researcher bias and increased accuracy in the transcription process. In addition to attention to reflexivity and outside transcription, participants were provided with a copy



of the interview transcripts and my conclusions for review. These member checks assisted in the avoidance of bias and misinterpretation of participants' perspectives.

Dependability in qualitative research refers to the inclusion of detailed explanations of study procedures (Lodico et al., 2010). I minimized errors in this study by completing detailed documentation of the study's procedures which was kept in a case study database. Yin (2014) promoted the creation of databases to increase the dependability of case study research. I created a case study database that was a collection of hard copies and original pieces such as interview protocols, correspondence with gatekeepers and participants, memos, journals, complete copies of transcribed interviews, and unaltered audio recording. The case study database served as an organized collection of raw, uninterpreted data from the study accessible to me and interested readers. The information contained in the case study database also strengthened the study's confirmability, particularly the inclusion of my researcher's journal. Throughout the case study process, I kept a journal to document my self-reflections, opinions, reactions, and biases as they arise. The journal, along with the previously described triangulation process and attention to reflexivity, helped confirm that the findings presented in the study were accurate depictions of participants' perspectives and not my own.

In addition to credibility, dependability, and confirmability, Lodico (2010) discussed the role of transferability in qualitative research. Unlike quantitative research, the purpose of qualitative research is not to generalize findings. Transferability refers to the readers' judgment as to whether research settings are so similar that the findings from one study may be valuable to other settings (Lodico et al., 2010). I established

transferability in this study by providing readers with in-depth details of the both the setting and participants. I also included thick descriptions throughout the final report which will allow my reader to determine if the findings from the current study may be useful in other settings such as other early intervention sites or organizations.

### **Ethical Procedures**

This qualitative case study was designed with special consideration to ethical procedures, including Walden's Institutional Review Board's (IRB's) recommendations for research. I began data collection after I obtained a letter of cooperation from the partnering organization and approval from Walden's IRB (approval #11-07-17-0519387). Following approval, gatekeepers and participants were provided with an invitation to participate in the study. The purpose of the study, as well as, procedures for participation were included in the invitation and reviewed verbally upon contact. Participants were also provided with informed consent that detailed ethical concerns such as voluntary participation, confidentiality, right to withdraw from the study, and the potential risks and benefits of the study. Participants were asked to sign the informed consent prior to the interview process. Minimal risks were associated with this study. However, since the topic of study centered on feelings of self-efficacy and locus of control, there was potential for participant stress during the interview process. I minimized this risk by striving to create and maintain a positive relationship with participants, by ensuring confidentiality, and by acknowledging participants' right to withdraw from the study without consequence.

Data from this study was confidential. Pseudonyms replaced participants' names to protect identity. In addition to pseudonyms, identifying information such as the organization's name and study state do not appear in the final report. The audio recordings from interviews with participants were saved on a password protected device. All email correspondence with participants, interview transcripts, and drafts of the final report are housed on my password protected personal computer. Physical data from the study, including hard copies of interview transcripts, interview protocols, and my researcher's journal are kept in a locked safe in my home office. Data from this study is only be accessible to me and will be destroyed after 5 years.

### **Summary**

This chapter included a detailed description of the research method I chose for this study which explored early interventionists' perceptions of self-efficacy working with infants with NAS and their families. Procedures for recruitment, participation, data collection, and analysis were discussed. Considerations for trustworthiness and high ethical standards, including the treatment of participants, were also described in this chapter. In the following chapter, I present the findings from this study.

## Chapter 4: Results

The purpose of this qualitative case study was to explore early interventionists' perspectives of self-efficacy working with infants affected by NAS and their families. Bandura (1997) suggested that self-efficacy beliefs may affect work performance. Therefore, in this case, interventionists' perceptions of self-efficacy may influence the quality of intervention services this population of children and families receive. I will present findings in this chapter and have organized them by the study's guiding research questions:

1. How do early interventionists describe their perceptions of self-efficacy when working with infants diagnosed with NAS and their families?
2. How do perceived internal and external factors affect early interventionists' self-efficacy beliefs when working with infants diagnosed with NAS and their families?
3. How do early interventionists feel their self-efficacy could be improved in their work with infants diagnosed with NAS and their families?

In addition to findings, this chapter also explains specific details of the data collection process including participant demographics, frequency and duration of interviews, and recording procedures as well as variations to the procedures that I described in Chapter 3. I will also explain the data analysis process. Finally, I will discuss the practical implementation of issues of trustworthiness previously described in Chapter 3.

### **Data Collection and Setting**

The initial phase of participant recruitment took place at two sites and yielded four participants. After consultation with my full committee, we decided that more participants were needed to gain an in-depth understanding of interventionists' perspectives on the topic. I submitted a Change of Procedure to the University's institutional review board and was approved to extend recruitment to three additional sites within the same organization. The recruitment and data collection processes lasted 11 weeks and were the same for all sites. Four additional interventionists agreed to participate during the second phase of recruitment. All recruitment sites were satellite offices of a large early intervention organization in a northeastern state. Each site was located in a diverse metropolitan area and served children and families from that city and a surrounding catchment area.

All eight interventionists participated in a planned one-on-one semistructured interview. The single session interviews took place at mutually convenient times and locations. Seven of the interviews took place in private rooms at the participants' offices during the work week. One interview took place on a Saturday, in a quiet area of a local public library. I recorded the interviews using the iPhone application Voice Record. I used the interview protocol to guide each interview and to make notes during the process.

### **Participants**

I used purposeful sampling to identify participants who met the study's criteria. Eight early interventionists participated in the study: two nurses, one physical therapist, one occupational therapist, one social worker, one mental health clinician, and two early

educators. Participants' length of employment with the early intervention organization from which I recruited varied from 6 months to 2.5 years. Participants' education level also varied. Four participants held bachelor's degrees, three participants held master's degrees, and one participant held a doctorate. Table 2 provides a snapshot of participant demographics. Two additional interventionists showed interest in participation, but they did not meet the study's inclusion criteria for acting as a service coordinator and were excluded from the study.

Table 2

*Participant Demographics*

|               | Discipline             | Employment length | Educational degree |
|---------------|------------------------|-------------------|--------------------|
| Participant 1 | Mental health          | 1.75 years        | Master's           |
| Participant 2 | Nurse                  | 11 months         | Bachelor's         |
| Participant 3 | Occupational therapist | 2.5 years         | Bachelor's         |
| Participant 4 | Nurse                  | 2 years           | Bachelor's         |
| Participant 5 | Social worker          | 2.5 years         | Master's           |
| Participant 6 | Physical therapist     | 2.5 years         | Doctorate          |
| Participant 7 | Early educator         | 6 months          | Bachelor's         |
| Participant 8 | Early educator         | 6 months          | Master's           |

### **Data Analysis**

Same Day Transcriptions transcribed the interview audio recordings within 24 hours of interview completion. The interview transcripts were sent to me electronically. I printed copies of each transcript and began the analysis process using an inductive approach. I kept the research questions written in several visible places throughout the

data analysis process to ensure my focus remained on creating a connection between the data and research questions.

I read each interview transcript while simultaneously listening to the interviews' audio. I filled in any missing words in the transcripts and made notes of any long pauses or inflections made by participants. I also compared the transcripts to the interview protocols for any notes written during the interviews. Once this process was complete for each transcript, I began the line-by-line coding process by hand. I read each transcript and underlined repeated words and phrases and wrote them, along with notes, in the margins. InVivo codes written in the margins were surrounded by quotations. I also included priori codes in the margins where applicable based on the study's framework and research questions. At a later date, I reviewed each transcript again, line-by-line, looking for any relevant data I may have missed initially. During this review, I highlighted direct quotes from participants that I thought may be used as evidence and strengthen credibility in my narrative. I color coded the direct quotes by research question. I began to transfer my notes and codes from the margins onto a separate paper organized by interview questions, under a larger heading of research question.

After the codes and notes from the transcripts' margins were transferred to separate paper, I was able to analyze the data further. I grouped codes and notes from all transcripts together by likeness and began to condense the codes. For example, InVivo codes from the data included the words and phrases *drug use*, *relapse*, *where they're at in their journey*, *sobriety*, and *treatment*. I grouped these codes together and then condensed to the single code *sobriety*. I repeated this step for all interview questions.

The next step in the analysis process was transferring the condensed codes to poster board. I created three poster boards (one for each research question.) The research questions were written at the top of the board and corresponding interview questions were written below, creating columns. The condensed codes were then written under the interview questions. Themes began to emerge from the condensed codes. For example, Research Question 2 addressed factors participants felt affected their self-efficacy working with infants with NAS and their families. *Learning opportunities* emerged as a theme. This theme (*learning opportunities*) emerged from the codes *mentoring, lack of training, self-study, and multidisciplinary team approach*. I repeated this process for each research question and it resulted in four themes for Research Question 1, four themes for Research Question 2, and two themes for Research Question 3. I discuss these themes in detail in the following section.

Participant 8 is considered a discrepant case in this study. Participant 8 fit the study's inclusion criteria, but she indicated that she has not yet had experience working with infants with NAS and their families. Although she was unable to answer the interview questions in as much detail as other participants, I included her responses in the results section. As an early intervention service coordinator, Participant 8 is expected to work with all populations, including the population that is the focus of this study; therefore, her perspective on the topic is valuable.

## **Results**

The purpose of this study was to understand early interventionists' perceptions of self-efficacy, and factors that may affect those beliefs, in their work with infants with



NAS and their families. I used six questions to address the study's research questions and guide the interviews with participants. In this section, which is organized by research question, I will discuss findings including themes that emerged from the analysis process.

**Research Question 1: How do early interventionists describe their perceptions of self-efficacy when working with infants diagnosed with NAS and their families?**

I used two interview questions in my attempt to explore interventionists' perspectives of self-efficacy in their work with this population. Four themes (absent or limited previous experience, current experiences, confidence in work, and feelings of frustration and doubt) emerged during the data analysis process related to the two interview questions below, which I will discuss in detail.

Interview Question 1: What are your experiences working with infants affected by NAS and their families?

Interview Question 2: How do you feel when working with infants affected by NAS and their families?

**Absent or limited previous experience with the NAS population.** All participants expressed an absence of or limited training and experience working with infants with NAS and their families prior to their work at the study site. Participant 2 and Participant 4, both nurses, discussed their previous exposure to infants born with NAS during pediatric clinical rotations in nursing school. Participant 2 said she "did not get a lot of exposure because the rotation was short." Participant 4 echoed the limited exposure to the NAS population by saying, "There wasn't too much, there were a couple of cases." Participant 1, Participant 5, Participant 6, and Participant 7 described the

expectation to work with this population with lack of experience or training on the topic as “challenging.” Participant 7 indicated that she “never worked in an environment where that [NAS] is something she had to know.” Similarly, Participant 1 indicated that when she began working as an early interventionist she “didn’t know what to expect, didn’t know symptoms or anything developmentally” regarding NAS, despite having previous professional experience working with adults with substance abuse and addiction. At the time of the study, Participant 8 reported no experience working with infants and families affected by NAS. Participant 8 asked me to define and explain NAS during the interview.

**Current experience/learning through experience.** Seven of the participants currently work as service coordinators for infants diagnosed with NAS and their families. These participants referred to and discussed their ongoing work experiences with these families in the interview sessions. Each participant talked about family dynamics and more specifically about the types of caregiving situations they encounter. Participant 6 described her experience:

I have worked with the diagnosis of NAS in foster home placements with kinship, families, and traditional foster homes. I have also worked with moms who had a baby born addicted, but currently have custody of their child. Then, I have also worked with those who are at like a recovery shelter.

Participant 1, Participant 4, Participant 5, and Participant 6 described providing family support and education as a large piece of their current work experience with these families. Participant 4 described herself as a “good support for these families” and

Participant 5 said “I’m here to advocate and make sure these babies get the care they need.” In addition to their own caseloads, Participant 3, Participant 4, and Participant 5 indicated that providing consultations was a big part of their current work experience with this population of children and families. Participant 3, an occupational therapist, described consulting on cases and “working with a number of families around sensory, irritability, self-soothing – teaching the parents and kiddos.” Participant 4 (a nurse) and Participant 5 (a physical therapist) also discussed the specifics of their work with families and being consulted by less experienced interventionists.

**Confidence in the work.** Most interventionists indicated feeling comfortable in their ability and work with infants with NAS and their families at the time of the interviews. Participant 5 explained:

When I first started here, when I got assigned a case it was like I need to look into what their diagnosis is. I think I need to look at all their medical forms and get as much information as possible, so I can be prepared for the visit. I think now with experience, I have become more confident in my own knowledge. I have really put in the work to be comfortable going into a situation where I have no idea what is going on. I am prepared for anything.

Participant 6 also explained that her confidence has increased over time by stating, “since I have more experience, I’m more comfortable working with this population. I’ve become more comfortable by doing my own research.” Participant 1, Participant 3, Participant 4, and Participant 5 also discussed conducting their own research and self-study on the topic. Participant 4 explained:

I love to do research, so I always feel like I'm prepared for whatever is coming my way. If it's an NAS consult I'm going to be meeting or service coordinating for – I like to freshen my memory, research more about it before hand so I feel like I'm always prepared.

Participant 1, Participant 3, and Participant 4 explicitly discussed the satisfaction and enjoyment they feel when working with this population using phrases such as “favorite population,” “good fit for me,” “loving it,” and “really enjoying this population.”

Participant 8 indicated that although she has no experience with the population of children and families affected by NAS, she feels comfortable and confident in her ability to work with this population in the future based on her experiences with other infants and families.

**Feelings of frustration and doubt.** As I indicated in the previous section, Participant 1, Participant 3, Participant 4, Participant 5, and Participant 6 discussed feeling confident in their work with infants with NAS and their families and the ways in which they believed their confidence had developed in the course of their work.

Participant 2 and Participant 7 did not express feeling confident in their work with this population and instead described their work with this population as “frustrating.” Both participants discussed their lack of knowledge on the topic and neither had conducted their own research or self-study, even though they both described their inexperience working with this population of children and families. Participant 7 said “this [NAS] and the development piece is so new to me.” Participant 2 said,

I've had families ask about it, you know, what are the facts and what happens and things. And, I do not have the answers. I only know the basic symptoms. I just feel like anything beyond that is hard. I don't know what they're supposed to expect.

Participant 7 described her experiences with this population as “frustrating” and used phrases such as “I’m finding it challenging,” and “I struggle,” throughout the interview. Similarly, Participant 2 described her work with this population as “hard.” Participant 2 also indicated that she avoids discussing a child’s NAS diagnosis with caregivers and does not “address it as long as everything else is fine.” During the interviews both participants mentioned a desire and “wish” to learn more about NAS. Both participants also indicated a desire to work with this population of children and families despite their current lack of knowledge and experience.

**Summary of results for RQ1.** After a detailed review of the data, it appears most participants reported feeling efficacious in their current work with infants and families affected by NAS, despite their reported absent or limited previous experience and training on the topic. Two participants reported feeling challenged in their work with this population of children and families. The following research question addresses perceived factors participants feel affect their self-efficacy working with this population of children and families.

**Research Question 2: How do perceived internal and external factors affect early interventionists’ self-efficacy beliefs when working with infants diagnosed with NAS and their families?**

The following two interview questions were used to address this research question:

Interview Question 3: What factors make you feel that you can be successful in your work with infants affect by NAS and their families?

Interview Question 4: What factors make you sometimes doubt your chances of being successful in your work with infants with NAS and their families?

After the data analysis process, four categories or themes emerged: relationships, social issues, consistency, and learning opportunities. I will discuss each of these factors one at a time.

**Relationships.** All participants in this study who work with infants diagnosed with NAS and their families indicated that their relationship with the infants' caregiver was an important factor in their work with this population. Participant 2 and Participant 6 used words like "trust," "relationship," "support," and "understanding" in their responses to the interview questions. Participant 7 said that, "the most important part of any of this is building that relationship with mom and dad." Participant 1 explained her relationship with one family by saying, "because I built that relationship with them, because we worked so hard, and I've supported them through tough times...they look forward to it [home visits] and they like it when you come to support them." Participant 3 referred to relationships with caregivers as "absolutely" important and believes that many of the families she works with continue services because she has a "connection" with them and their "relationship is good."

Participant 3, Participant 4, Participant 5, and Participant 6 went beyond talking about the importance of relationships and discussed strategies they use to build connections and relationships with families. Participant 4 talked about “meeting families where they’re at and not being judgmental.” Participant 5 explained:

It takes time to build that trust... You kind of focus it around the child and how am I going to support them while supporting you... Let them know that you are confident in their ability and you are confident in what you know to kind of get them to push forward.

Participant 5 also highlighted the importance of building relationships with families by sharing that she has been in situations where families will “cancel and cancel and cancel” on other interventionists but she “will be the only one they let in... because we built that relationship.” Participant 2 also stated that relationships with families and caregivers are important and explained she likes to focus on, “what the family is doing right, and stuff; and then eventually when they start talking about that with me, I can talk about, you know, other things.” Participant 2 frequently paused and used utterances like “um” and “you know” in her responses to the interview questions. Participant 7 was the only participant who described having difficulty building a relationship with a family she is currently working with. However, she discussed her desire and determination to create a relationship by saying, “If I’m not there, then who is going to be there? I need to be there for this baby. What do I need to do to build this relationship with these parents so that they understand?” Participant 5 also discussed her determination to build relationships with families and shared, “I want the best for my families. I am willing to put in the

work to build that relationship.” Although Participant 8 did not have experience working with infants with NAS and their families, she also discussed the importance of building relationships with the families she works with.

**Social factors.** All participants with reported work experience with infants and families affected by NAS described social factors they believe affect their work with this population. The most repeated factors included parents’ sobriety, the families’ involvement with the Department of Children and Families (DCF), and the biological parents’ mental health status. Participants felt that the success of their work with this population was heavily dependent on whether the custodial parent was an active substance user. Participant 1 said, “it depends on where they’re at in their sobriety and if they have enough supports.” Participant 3 described her concern as, “where the parent is on their journey with substance abuse” and Participant 4 stated her biggest worry was, “that the parents stay on track and do what they need to do to be good parents.” Participant 3 and Participant 7 discussed their experiences working with mothers currently in methadone maintenance treatment at local clinics. Participant 4 shared her experiences of working with parents who have relapsed and another who died from overdose. Participant 6 described mothers who are still active drug users as “very disconnected.”

Another factor that frequently emerged from the data was caregivers’ confusion over the relationship between early intervention and DCF (the study state’s child welfare agency). Participant 5 said that because many families are referred to early intervention



from DCF, “they think you are going to take their kid away.” Participant 5 also used the phrase, “white coat fear” and explained:

I come in with my bag and dressed nicely with a name tag on. I think that is scary for families...This doctor is coming in and they are going to judge me. They are going to think they know more than I do...when I come into a house I have to be very careful about how I talk to families and how I ask questions.

Participant 1, Participant 3, and Participant 4 also discussed families’ initial confusion between early intervention and DCF and their fear of “losing their kids.” Participant 1 said she explains to families, “I’m not working for DCF. I’m working for you. You are my client. Your child is my client. I’m here to help and support you.” Participant 4 discussed a similar conversation she “repeatedly” has with families, “we are a voluntary service, we’re here to support you.” She went on to explain that because, “we work so closely with DCF we kind of have that stigma that it’s a negative service.” Six participants (1, 2, 3, 4, 5, and 6) mentioned a common scenario as described by Participant 6 and Participant 4 where families “stay in our program because they know DCF likes that they’re in our program” but “they’ll go through the motions just to say they did it, but then they cancel when DCF closes their case.”

Participant 1, Participant 2, Participant 5, and Participant 6 also discussed the mental health status of the caregiver as a factor they feel may affect their work with this population. Participant 6 explained in detail:

It’s not just NAS. You’re highly likely going to work with families who have mental health issues, and not just depression and anxiety, but bipolar, or

schizophrenia, or all of those. Hepatitis C, and they might have a history of harmful intimate relationships.

She described her work with this population using a metaphor, “I think of it as an onion. You have to kind of peel layers away from the onion. It can deter from doing actual therapeutic work with the baby.” In our discussion, Participant 5 also referred to her experience addressing the social issues associated with this population by saying, “You have to go in and see what you see. Assess what you can assess and get as much information as possible. It is not going to be the same for every kid at all.”

**Consistency.** Another theme that emerged related to research question 2 was families’ commitment to consistency in services including visit “cancellations,” “no-shows,” and “follow through.” Participant 5 described the importance of consistency and explained that, “EI [early intervention] is very reliant on compliance, follow-through, and education” since she only sees the child and family for one hour per week. Participant 7 described a family she is currently working with that frequently cancels home visits. Participant 2 said that it’s “tough when they cancel” and sometimes thinks, “well, they must not want these services.” Participant 1, Participant 3, and Participant 4 reported not taking it “personally” when families cancel visits. When discussing consistency, Participant 6 explained, “they’re not always consistent. It’s either because of a lack of investment or because they’re already plugged into so many other social services. That its hard for them to juggle all of the appointments.” Similarly, Participant 1 said, “I understand they have so much going on in their life. I understand the cycle of addiction. I’m like okay, what does this behavior mean?” Participant 6 discussed trying to

“problem solve” ways to “reconnect with the family” in the wake of cancelled visits.

Participant 4 also explained her understanding of the apparent inconsistency with this population. She said, “I know they need services so I’m going to try to work with them.” She said that she knows of other interventionists who are not as patient and “discharge” clients who are inconsistent with visits. She referenced her relationship with the family as a tool she uses to discuss the inconsistency saying:

I can tell them, just tell me the truth. And a lot of times me just saying that, families are like ‘oh my god, thank you so much for saying that because it is overwhelming, and I need a break.’ I feel like it’s important to have someone that will give you a little bit of understanding and leeway.

Participant 5 mentioned knowing that other clinicians become “frustrated” or “hurt” when their families cancel or no-show scheduled visits. Like Participant 4, she discussed ways in which she minimizes inconsistency with her families by talking to them honestly and contacting families the night before and morning of scheduled visits – reiterating the importance of each session.

**Learning opportunities.** All participants discussed forms of learning opportunities such as learning through consultations and mentoring from colleagues, self-study, and training, as factors that affect their ability to work with infants with NAS and their families. Participant 1 and Participant 7 discussed gaining confidence in their ability to work with this population by learning from more experienced colleagues. Participant 1 discussed her experience learning from a colleague when she first started working in early intervention. She stated, “I learned a lot from that. Having a mentor out

in the field really helped.” Participant 8 explained that if she were to begin working with infants with NAS and their families, she would rely on a team approach and bring in more knowledgeable colleagues to help. Participant 1, Participant 3, Participant 4, and Participant 5 referred to their own research and reading as factors that contribute to their successful work with this population. Participant 1 sought out literature on the topic and stated, “I like reading.” Similarly, when discussing conducting her own research, Participant 4 said, “it’s the type of person I am.” Participant 4 also felt that self-study was necessary and explained:

You come to EI and you’re like making it your own and just figuring out what to do step by step. There is no one - even for nursing, there’s no nursing supervisor or anything. So, there’s really no one that I can go to for that type of support.

Participant 2 and Participant 6 also talked about how they feel that they have no one to go to for support on the topic. Participant 2 was the only participant who responded to interview question 4 stating that the “lack of training” makes her doubt her chances of being successful in her work with infants diagnosed with NAS and their families.

**Summary of results for RQ2.** Interventionists shared several perceived factors that affect their work with this population. Based on descriptions of these factors it appears that they either strengthen or have no effect on self-efficacy beliefs for Participant 1, Participant 3, Participant 4, Participant 5, and Participant 6. The perceived factors appear to either decrease or have no effect on Participant 2’s and Participant 7’s current self-efficacy beliefs. Participant 8 had no experience working with this population.

**Research Question 3: How do early interventionists feel their self-efficacy could be improved in their work with infants with NAS and their families?**

Data from the two interview questions below were analyzed and training emerged as a theme. A second theme emerged regarding the types of feedback participants have received in their work with this population of children and families. The following two questions were used in the interview to address research question 3:

Interview question 5: What performance feedback have you received from others on your work with infants with NAS and their families?

Interview question 6: What assistance might be helpful to you in developing your feelings of confidence and competence in working with infants with NAS and their families?

Two themes emerged in answer to research question 3, including performance feedback and training.

**Performance feedback.** None of the participants in this study reported receiving direct or specific feedback from supervisors regarding their work with infants with NAS and their families. Participant 3, Participant 4, Participant 5, and Participant 6 indicated receiving various forms of indirect performance feedback from supervisors and colleagues. For example, Participant 5 said, “I have just had supervisors reach out for me to take clinicians who have kind of voiced their concern about not having experience with NAS...I do not think anyone has ever directly said good job.” Participant 4 mentioned that she has had colleagues tell her, “I always learn a lot from you” when she is brought in to consult on cases. Participant 3 also discussed being asked to mentor less

experienced colleagues. Participant 3, Participant 4, Participant 5, Participant 6, and Participant 7 also reported receiving feedback on their work from caregivers and community partners (daycare centers and women's shelter staff.) Participant 6 stated that foster families often tell her "they appreciate [the] help and guidance" that she provides. Participant 4 said, "getting feedback from families, like how helpful I am, feels good."

**Training.** Two participants (Participant 7 and Participant 6) described their work in early intervention as "being in the fast lane" and being "expected to hit the ground running." Participant 6 stated, "it would be nice if the company did more to prepare staff to work with this type of population." All participants in this study suggested that training on the topic would help to increase their confidence and competence, and that such training is needed. Participant 1 explained that new interventionists need to be told what NAS is, including what the acronym stands for, the definition of NAS, and "what it looks like." The need for such basic information was evident in my interview with Participant 8, who asked me to define NAS. Participant 2 said that training was "definitely" necessary and that it is "hard to go about it [working with this population] without training." Participant 6 seemed passionate on the topic of training and explained, "I think it [training] would be a great way to help us feel more competent and confident in what we do, as opposed to leaving it up to our own devices." Participant 5 mentioned attending a training provided by the organization but referred to it as, "not even specific to early intervention." She talked about the training as being "about the symptoms they have and not the care they need." Two other participants mentioned the same NAS specific training. Although they did not attend, they heard similar feedback regarding the

training's irrelevance to the work interventionists do with infants with NAS and their families.

Six participants talked at length about the types of training they believe would be helpful in increasing their confidence and competence in their work with this population. Participant 7 said, "I think it would be beneficial to know how to work with the babies, and like, the things to look for. But also, the parents." Participant 1 and Participant 5 also suggested providing interventionists with a "guideline," "literature," or a "protocol" to guide their work with this population. Participant 6 ended our discussion on training by stating, "People are eager. They're sincerely wanting it."

**Summary of results for RQ3.** All participants in this study felt that their self-efficacy could be improved in their work with infants with NAS and their families. Effective training and professional development on the topic emerged as a definitive theme from the data and will be discussed further in Chapter 5.

### **Additional Findings**

In addition to the results addressing the study's research questions discussed above, additional findings presented themselves in the data that I feel are relevant to the study and this discussion of its results. Seven of the eight interventionists interviewed spoke of the issue of retention and turnover in their experiences working in the early intervention profession. Participant 3 discussed her experiences with interventionist turnover and explained that two years ago, "I think more people left than joined. It was so terrible." I followed up on her comment and asked why she believed interventionists were leaving the field. She responded:

I think EI (early intervention) is hard. EI is really hard. I think it is a stepping stone for a lot of young people. This is what I was told when I started, and I saw it based on the people who left the summer after I started.

Participant 3 explained her use of the phrase “stepping stone” and said that it is common for early educators to work in early intervention to gain professional experience while they pursue state teacher credentials with the hope of being hired by a school system as a classroom teacher. Participant 5 and Participant 6 also used the phrase “stepping stone” when describing issues of retention. Participant 6 said she, “has never seen so much turnover” and that in her experience interventionists are, “not only new to the working world, but new to EI. They don’t have a lot of experience. I mean, working with at-risk NAS populations is just complicated in so many ways. They just don’t have the skill set.”

Participant 5 shared a similar perspective on turnover:

I think that what is tough about EI in general is that it is usually younger individuals who are just out of college, grad school, or whatever. It is tedious. It is physical. It is an exhausting kind of job. You get burnt out for sure. You often don’t see individuals who have been in the field for a lot of years.

Participant 3, Participant 4, Participant 5, and Participant 6 described reasons they feel interventionists leave the profession. Participant 4 believes the organization’s status as a for-profit agency “has to do with it” and commented on the emphasis to “bill.”

Participant 4, Participant 5, and Participant 6 also talked about “productivity expectations.” Participant 4 said that she feels, “one of the major flaws of EI is the push to bill so many hours. There’s a lot of stress around it” and believes that stress leads to



turnover. She also shared, “the majority of people that I’ve known here that have left, it’s been due to the hours.” Further, Participant 6 stated:

It’s really hard for staff to work with such high-risk populations. Just the model [productivity expectations] isn’t really conducive to the population that we work with. It almost sets up our clinicians for failure. They get burnt out. They leave.

Participants who discussed turnover also believe the issue affects the quality of services children and families receive. Participant 2 said that it is common for families to have a new service coordinator “every few months.” Participant 7 mentioned that she feels the transition process to a new service coordinator “isn’t great.” Participant 3 talked about families’ awareness of retention issues and said, “some [families] say they don’t want me to go. They’re very vocal about it, like ‘are you going to leave too?’” Similarly, Participant 6 said that turnover “absolutely” affects the quality of services and “our families have experienced so much turnover. We have lost some families who have gone to competing programs...or who have just ended services altogether.” When talking about NAS and turnover combined, Participant 3 said she feels that it affects this population because “the addicted population needs stability.”

Participants also shared how incessant turnover affects their own work as interventionists. Specifically speaking about NAS, Participant 6 said she is knowledgeable about NAS and wants to share her knowledge with others but admits “there is just no time.” She continued, “with staff coming and going as often as they do” the focus is on administrative tasks and training and called it “frustrating.” Participant 5 also called the issue of retention “absolutely frustrating” and seemed passionate about the

topic during our interview. She talked about communication and said, “It is hard. You have to rebuild a relationship with the new clinician.” She also said that because there is a push to bill so many hours, that new interventionists, “end up getting thrown onto cases and thrown into assessments and thrown into IFSP’s and that kind of stuff without getting that one-on-one attention to learn.” Participant 5 also said that she strongly dislikes the fact that weekly team meetings that are meant for training are generally spent teaching and reteaching administrative tasks to new interventionists. Participant 2 also discussed the difficulty of working with new interventionists in the field, “re-teaching everything to someone who cannot comprehend it all because they’re just trying to get the hang of their job.” Finally, Participant 4 said that she doesn’t believe the agency is, “really offering families as much as we can because of the stress.”

Although issues of retention and turnover were not the intended focus of this study, I believe these findings are meaningful in the context of my study. Participants in this study viewed turnover as a factor that may not only affect their work but also the quality of services for infants with NAS and their families. I will interpret these findings in Chapter 5.

### **Evidence of Trustworthiness**

My goal in this study was to accurately describe interventionists’ perceptions of self-efficacy in their work with infants with NAS and their families. I intentionally designed and conducted this study exercising concepts widely used to evaluate qualitative research: credibility, confirmability, dependability, and transferability (Yin, 2014).

I implemented several strategies in my attempt to increase the study's credibility. I used the interview protocol to ensure that all participants were asked the planned interview questions and the conversations remained focused on the topic. During the interviews, I was mindful of the threat of reflexivity and monitored my reactions, facial expressions, and tone. A professional transcription service transcribed the recorded interviews to increase accuracy and reduce the risk of researcher bias. Further, participants were provided with my preliminary interpretations and a copy of their own interview transcript to review. In addition to reflexivity, I created and maintained a journal to strengthen the study's confirmability and accuracy. The journal contains self-reflections, thoughts, and opinions pertaining to the study. The journal is included in the case study database, which I created to increase the study's dependability as suggested by Yin (2014). The database contains all pieces described in Chapter 3 such as hard copies of the interview protocols, correspondence with gatekeepers and participants, and interview transcripts. Although the goal of my qualitative study was not to generalize findings, I strived to provide an element of transferability for my reader by providing thick descriptions of the study site and participant demographics. The inclusion of these details will allow the reader to decide if the findings from this study may be useful in other settings or organizations.

### **Summary**

This chapter contained the findings for the study's guiding research questions. That data revealed that although interventionists reported limited or absent previous experience with infants with NAS and their families, most interventionists feel highly efficacious in their work with this population. Two participants did not report feeling highly efficacious and one participant had no experience working with infants with NAS and their families. In response to research question 2, participants felt that relationships, social factors, consistency, and learning opportunities were factors that potentially affected their work with this population. These factors either strengthened or had no effect on five participants' self-efficacy beliefs and either lessened or had no effect on two participants' self-efficacy beliefs in their work with infants with NAS and their families. Participant 8 was considered a discrepant case in this study since she reported no work experience with this population of children and families. All participants in this study felt that their self-efficacy in their work with infants with NAS and their families could be improved through training on the topic. In the following chapter, I will interpret these findings and discuss implications and recommendations for future research.

## Chapter 5: Discussion, Conclusions, and Recommendations

Early intervention is recommended for the increasing population of infants diagnosed with NAS to mitigate the risk and severity of developmental delays associated with prenatal opioid exposure (Beckwith & Burke, 2015). The purpose of this qualitative case study was to explore early interventionists' perspectives of self-efficacy working with infants diagnosed with NAS and their families. In this study, I also explored perceived factors that participating interventionists believed may affect and improve their self-efficacy beliefs in their work with this population. Bandura's theory of self-efficacy and Rotter's concept of locus of control provided the framework for this study and the contextual lens through which I interpret the study's findings in this chapter.

I conducted this study within a large early intervention organization located in a northeastern state of the United States. I recruited participants from five satellite offices within this organization. After 11 weeks of recruitment, eight interventionists agreed to participate in the study which included a semistructured, face-to-face interview with me. I followed an interview protocol, asking six predetermined interview questions, as well as follow-up and probing questions when appropriate during each interview. Findings from the study revealed that most of these participants felt efficacious in their work with infants and families affected by NAS despite their lack of previous experience. Two interventionists reported feeling challenged in their work with this population and one interventionist reported having no experience with this population of children and families at the time of the study. Participants described relationships, social factors, consistency, and learning opportunities as factors they believed might affect their beliefs

in their work with infants with NAS and their families. Finally, all participants believed that their self-efficacy could be improved through specific training on the topic. In the following sections, I will refer to the group of interventionists who reported feelings of confidence and competence in their work as “highly efficacious” and the two interventionists who did not indicate feelings of confidence in their work as “less efficacious.”

The remainder of this chapter contains my interpretation of the study’s findings and a discussion of the study’s limitations. I will also describe recommendations for future research and practice and discuss implications for positive social change.

### **Interpretation of the Findings**

The concepts of self-efficacy and locus of control are suggested predictors of human behavior (Bandura, 1997; Rotter, 1966) and work performance (Bandura, 1997). Individuals’ perceptions of self-efficacy and locus of control are not considered fixed states, rather that these beliefs can change with time. The concept of change in beliefs was evidenced in this study.

### **Self-Efficacy and Locus of Control**

Most interventionists described their perceptions of self-efficacy working with infants diagnosed with NAS and their families as evolving. Findings from this study are consistent with previous research (Chu, 2016) and revealed that interventionists are not academically prepared to work with infants and families and in this case the subset affected by NAS. Despite the absence of or limited previous experience, six of the eight

participating interventionists reported feeling confident and competent in their work with this population.

Interventionists attributed their evolving beliefs to their repeated and ongoing experiences with the population affected by NAS, as well as mentoring and guidance from more experienced colleagues. These methods align with Bandura's (1977) well-established constructs for improving self-efficacy: performance accomplishment (hands-on exposure and experience), vicarious experiences (modeling), verbal persuasion (coaching), and emotional arousal (avoiding stress). Performance accomplishments and vicarious experiences are considered the most effective methods used to alter self-efficacy beliefs (Bandura, 1977; Bandura, 1997; Zimmerman, 2000) and were also the most referenced by interventionists when discussing their efficaciousness in their work with the population affected by NAS.

Participants in this study directly attributed their confidence in their work to performance accomplishments and vicarious experiences. For example, Participant 5 said, "Now with experience, I have become more confident in my knowledge. I have really put in the work to be comfortable." Participant 6 also explicitly stated that, "Since I have more experience, I am more comfortable working with this population." Participant 1 attributed her increased self-efficacy beliefs to vicarious experiences and explained that she "learned a lot from having a mentor out in the field." Participant 8, who indicated no experience with this population and even asked me to define NAS, appeared confident in her ability to work with this population in the future. She described methods she would use to increase her self-efficacy in her future work with this

population. Like other interventionists and consistent with Bandura's constructs, Participant 8 discussed the necessity of vicarious experiences and performance accomplishments. These findings are consistent with findings from previously described studies (Banas, 2014; Moriarty, 2014) that found individuals' self-efficacy beliefs can be increased through performance accomplishments such as repeated exposure and through vicarious experiences and verbal persuasion like coaching, suggestions, and mentoring.

Interventionists believed other factors affected their self-efficacy beliefs in working with this population. During the data analysis process, I coded these factors, and four themes emerged: relationships, social issues, consistency, and learning opportunities. Although many of these factors can be considered external and beyond participants' control, it appears that these factors either strengthened or had no effect on interventionists' self-efficacy beliefs for interventionists who reported feeling confident and competent in their work with this population. This group of interventionists (highly efficacious interventionists) also appeared to internalize these otherwise external factors. For example, when discussing families' lack of consistency (cancelled visits and no-show appointments), which is characteristic of this population, participants with high perceptions of self-efficacy talked about strategies they used to overcome these challenges and increase consistency. These participants also discussed not taking families' inconsistency personally and demonstrated a deep understanding of the behavior. These findings are consistent with Bandura's (1977, 1997) description of individuals with positive self-efficacy beliefs. According to Bandura, these individuals



tend to remain committed and persistent when faced with challenges, just as these interventionists described when dealing with issues of consistency.

Highly efficacious interventionists also appeared to internalize other factors, as evidenced in our discussion on learning opportunities related to NAS. All interventionists in this study discussed their lack of previous and current training or professional development related to their work with infants diagnosed with NAS and their families. The interventionists who described themselves as confident and competent in their work also described learning opportunities that they had created for themselves such as learning from colleagues, attending training outside of work, and reading and doing research on the topic. These findings are similar to previous findings by Ventura et al. (2015) who found that highly efficacious teachers also tended to view challenges and barriers as opportunities for personal and professional development. Based on the combination of Rotter's (1966) description of locus of control and interventionists' description of persistence and motivation, it appears that the group of highly efficacious interventionists also share internal loci of control.

Participant 8, who is considered a discrepant case in this study due to her lack of experience with NAS infants and their families, also appeared to internalize factors that could otherwise be considered barriers. She spoke confidently about building and sustaining relationships with the children and families in her caseload. Although she reported no experience working with infants diagnosed with NAS, she said she was willing and would feel comfortable working with this population. During our conversation, Participant 8 discussed infants with whom she currently works, specifically

an infant whose mother is an alcoholic, as well as premature infants in her caseload.

Participant 8's connection between the infants in her current caseload and infants with NAS in a possible future caseload is a clear example of generalized expectancy beliefs. Rotter (1966) explained that an individual's internal or external expectancy beliefs may transfer to situations perceived as similar. Participant 8's apparent internal locus of control and self-efficacy beliefs may be valuable in her future work with the population of families affected by NAS.

Two interventionists in this study appeared to be less efficacious in their work with infants and families affected by NAS than the previously described highly efficacious interventionists. At the time of the study, these interventionists had a shorter length of employment in early intervention (6 and 11 months) than the highly efficacious interventionists, who had all been employed for two years or more (excluding the discrepant case). Neither of these less efficacious interventionists directly or indirectly described methods used to develop their confidence and competence working with this population of children and families. They used words like "challenged," "hard," and "avoid" in our discussion of their work with families affected by NAS. Bandura (1977) explained that avoidance of perceived challenging situations may be an indicator of low self-efficacy beliefs. In fact, these interventionists' descriptions of their experiences working with the population of children and families affected by NAS indicated what Bandura (1977) referred to as emotional arousal or stress, which he cautioned can be debilitating, can negatively affect performance, and can lower self-efficacy beliefs. Other

researchers have also associated low self-efficacy and feelings of ineffectiveness with depression, stress, and burnout (Bandura, 1997; Ventura et al., 2015; Wang et al., 2015).

Unlike the highly efficacious interventionists, factors such as relationships, social issues, consistency, and learning opportunities appeared to either decrease or do not affect the less efficacious interventionists self-efficacy beliefs. These interventionists shared a lack of previous educational and professional preparation to work with this population of infants and families. However, unlike the highly efficacious interventionists, the two less efficacious interventionists did not describe ways in which they were working to gain knowledge and confidence in their work. Instead, when discussing factors such as learning opportunities, both interventionists said that they wished they knew more about NAS yet had not conducted their own research on the topic and did not indicate future intentions of doing so. Participant 2 even explained that her lack of training on the topic makes her doubt her chance of being successful in her work. Their apparent lack of motivation to pursue learning opportunities related to their work with NAS is characteristic of individuals with external locus of control (Rotter, 1966) and was also evidenced in our conversations when these interventionists reported their lack of interest in following up with parents who cancelled visits or did not appear for scheduled appointments.

Both less efficacious participants reported feeling frustrated by families' inconsistency but neither participant described strategies that they used to increase consistency and ultimately the quality of services for these families. Participant 2 said that families who are inconsistent, "must not want these services." These interventionists

appeared to perceive these factors as external barriers beyond their control, which Rotter (1966) described as another characteristic of individuals with an external locus of control. Like low self-efficacy beliefs, these interventionists' external locus of control should cause concern because previous research has suggested that external locus of control is associated with anxiety, job-related stress, and intentions to quit (Gray & Muramatsu, 2013).

### **Turnover and Training**

Strong feelings of self-efficacy and internal locus of control are associated with persistence, motivation, and effort (Bandura, 1977, 1997; Rotter, 1966). As described in Chapter 2, these may be important qualities of human service professionals like early interventionists. These characteristics may contribute to interventionists' longevity in the early intervention profession which could result in more continuity of care and quality of service for infants with NAS and their families. Excluding the discrepant case, the interventionists in this study with apparent strong self-efficacy beliefs and internal locus of control have been working as early intervention professionals for two years or more. Table 2 in Chapter 4 illustrates participants' length of employment. Because of the well-established high turnover and retention issues in the early intervention profession (Allen et al., 2012; Herman-Smith, 2013; Little et al. 2015), two years of employment is noteworthy. Although the topic of turnover was not the focus of this study, several participants spoke freely about the issue and its effects on their work performance and quality of services for children and families.

Interventionists in this study confirmed findings from previous studies that suggested a high rate of turnover in the field (Allen et al., 2012; Herman-Smith, 2013; Little et al., 2015) and also referred to interventionists as “young” and “inexperienced.” It appears that the perpetual cycle of turnover may cause stress and frustration for existing staff. For example, Participant 6 explained her frustration and inability to share her knowledge of NAS with colleagues because her time is spent teaching administrative tasks and paperwork to newly hired interventionists. Similarly, other participants discussed the difficulty associated with the expectation to teach new staff while working in the field during home visits, assessments, or IFSP meetings with families. Participant 5 referred to the topic of turnover as “absolutely frustrating” and talked about the difficulty of constantly needing to build new relationships with colleagues in a field that relies heavily on a team approach. Finally, and perhaps most importantly, Participant 4 admitted that she believes the quality of services provided to children and families suffers as a result of interventionists’ stress. These findings are strikingly similar to Sulek et al.’s (2017) findings that continuous employee turnover resulted in low-quality services for children and families. These authors also found that employee turnover in early intervention causes stress on existing staff expected to work with inexperienced and untrained colleagues.

According to participants in this study, stress was one factor that contributed to the high rate of turnover in their profession. Participants described stressors caused by perceived organizational challenges such as productivity expectations, and by their ongoing work with high-risk populations such as families affected by NAS. As

previously described, stress is commonly associated with low levels of self-efficacy beliefs and external locus of control and has also been related to employee burnout (Torres, 2016). Interventionists also indicated that their lack of educational and professional preparation to work with infants diagnosed with NAS and their families is a factor that affects their confidence and competence in their work. Chu (2016) and Little et al. (2015) suggested that a lack of educational preparation may be a factor related to interventionist turnover. These authors also found low wages to be a factor related issues of turnover and retention; however, participants in this study did not discuss wages during the interviews. The findings from this study combined with previous research suggest that interventionists' self-efficacy and locus of control beliefs may be indicative of their potential for stress, burnout and ultimately departure from the profession.

Research question 3 addressed ways in which interventionists believed their self-efficacy could be improved in their work with infants diagnosed with NAS and their families. Participants in this study unanimously agreed that training on the topic would likely increase their confidence and competence in their work with this population and therefore improve the quality of services for children and families. Interventionists' beliefs regarding the potential effectiveness of professional development have been supported by previous research (Arthur-Kelly et al., 2017; Liou et al., 2017; Xie et al., 2017). These studies suggested that content specific training is an effective method for increasing workers' self-efficacy beliefs. In addition, research has suggested that high levels of self-efficacy may act as a protective factor against job burnout (Shoji et al., 2016), which is important considering the previously described issues of stress and

retention in the profession. Clark et al. (2013) found that as little as two professional development opportunities per year were positively associated with employee retention. Participant 8's complete lack of unfamiliarity with NAS highlights the importance of available professional development for early interventionists.

Findings from this study together with literature on the topic suggest that interventionists self-efficacy beliefs working with infants diagnosed with NAS and their families can be improved through targeted training. Furthermore, increased self-efficacy beliefs may result in increased employee retention. It is reasonable to suggest that experienced and highly-efficacious employees will result in meaningful and effective early intervention services for infants and families affected by NAS.

### **Limitations of the Study**

I described potential limitations of this study in Chapter 1. These limitations included the reliance on interview data, researcher bias, and reflexivity. I managed these limitations as planned through measures such as using an interview protocol, practicing self-reflections exercises, and keeping a journal. Another potential limitation arose during the execution of this study that may affect the study's transferability.

Most participants in the study (six out of eight) identified themselves as discipline specialists – that is, as interventionists with an educational background other than education, in fields of medicine and social work. The sample in this study may not accurately represent a typical early interventionist population considering in a study of 303 interventionists, only 18% of participants shared the same specialist roles as participants in this study (Herman-Smith, 2013). Like early childhood educators, these

interventionists actively fill the role of service coordinators and therefore fit the study's criteria. Of these six interventionists (two nurses, one occupational therapist, one physical therapist, one mental health clinician, and one social worker), five reported feeling confident and competent in their work with infants with NAS and their families. It is possible that the discipline specialists in this study felt efficacious in their work because their prior educational and professional backgrounds prepared them to work with medically fragile populations like the population affected by NAS. Whereas the same level of medical training and preparation to work with infants and families is missing from many early childhood education degree programs (Herman-Smith, 2013; Chu, 2016).

### **Recommendations**

Findings from this study revealed that interventionists believe training may be a way to improve self-efficacy beliefs in their work with infants diagnosed with NAS and their families. Given that previous research has confirmed that training is indeed an effective method for improving self-efficacy beliefs, it would be advantageous for future researchers to explore the types of training opportunities interventionists believe they would benefit from most regarding their work with NAS. Effective training that improves workers' self-efficacy beliefs has also been linked to increased retention (Clark et al., 2013; Shoji et al., 2016). Retention was a theme that emerged from the interviews as an organizational challenge that interventionists felt affected their work with children and families.



I recommend a different methodological approach to future research given the difficulty recruiting participants for the current study and necessity to extend recruitment beyond the original plan. I suggest a survey approach to future studies exploring training opportunities related to NAS. A web-based questionnaire that includes both open-ended and closed-ended questions would be a useful way to explore interventionists' thoughts on the topic. This design would potentially be a time effective method for future researchers to collect information from a large group of interventionists. A study like the one I am recommending may result in the identification of training opportunities interventionists believe would assist them in their work with infants diagnosed with NAS and their families.

### **Implications**

The exploration of interventionists' perceptions of their work with infants diagnosed with NAS and their families has potential to create positive social change. Based on the data from my interviews with participants, I strongly recommend that organization administration provide interventionists with mentoring and training opportunities, specific to their practical work with population affected by NAS. A better prepared and efficacious workforce may result in increased staff retention, continuity of care for families, effective intervention services, and ultimately better developmental outcomes for infants and families affected by NAS.

## Conclusion

Prenatal opioid exposure and the resultant NAS diagnosis has been associated with developmental delays in affected infants and children (Behnke & Smith, 2013; Logan et al., 2013; Nygaard et al., 2015). Part C of IDEA includes provisions for drug-exposed infants, and early intervention enrollment is recommended for this population of children and families (Beckwith & Burke, 2015). As previously noted, the lead agency responsible for early intervention implementation in the study state does not currently provide interventionists with training related to their day-to-day work with the population affected by NAS. In this study, I explored early interventionists' perceptions of self-efficacy in their work with infants diagnosed with NAS and their families. I also explored perceived internal and external factors that interventionists believe affect their efficacy beliefs in their work, as well as ways in which they feel their beliefs could be improved in their work with this population of children and families.

Findings from this study revealed that interventionists believe practical training opportunities related to their work with infants diagnosed with NAS and their families are needed to improve their overall ability and efficacy in their work. Most interventionists in this study reported feeling confident and competent in their work with this population, however; they attributed their efficaciousness to their own personal agency, experience, and motivation to learn. Also, the group of interventionists who reported feeling highly-efficacious in their work with this population had been working in the early intervention profession for over two years which, per my discussions with interventionists and review of the literature (Herman-Smith, 2013; Little et al., 2015), is significant. Because of the

turnover and retention issues in the early intervention profession that I previously discussed, less experienced interventionists may not reach the same level of efficaciousness as their more experienced colleagues. Less time working as an interventionist may result in less exposure to infants with NAS and their families, or what Bandura (1977) referred to as performance accomplishments – the most effective way to improve self-efficacy. Therefore, other methods for improving self-efficacy, like targeted training, appear to be necessary. Training on the topic may aid in the improvement of interventionists' self-efficacy beliefs in their work with this population. Self-efficacy beliefs, as previously discussed, are associated with dedication, enthusiasm for work (Ventura et al., 2015), and persistence (Bandura, 1997). A well-trained and more confident and competent workforce is likely to enhance the quality and effectiveness of early intervention services for infants born addicted to opioids and their families.

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## Appendix A: Invitation to Participate

Project: Early Interventionists' Perspectives of Self-Efficacy with Neonatal Abstinence Syndrome

Date

Site Address

Dear Early Intervention Professional,

My name is Adrienne Anderson and I am a doctoral candidate at Walden University and former Developmental Specialist at South Bay. Soon, I will be conducting interviews as I work towards completion of my doctoral dissertation. The purpose of my study is to examine early interventionists' perspectives on working with infants with neonatal abstinence syndrome (NAS) and their families. As a service coordinator, you are in a unique position in your work with children and families in the community and I'd love the opportunity to hear your perspectives. In our conversation, I will try to understand your perspectives of self-efficacy and any factors that may affect your work with this population of children and families.

The interviews will be no longer than 60 minutes and will be kept confidential. Although there is no compensation provided for participation, the findings from my study have potential to inform policy and practice so that children and families affected by NAS receive meaningful and effective early intervention services. In addition to the interview, you will be provided with a copy of the interview transcript and my draft conclusions to review for accuracy, which should also take no longer than 60 minutes.

I will begin conducting interviews on ENTER DATE. If you are willing to participate, please suggest a day and time and I will work to accommodate your schedule. To schedule your interview or to learn more about my study, please contact me at [adrienne.anderson2@waldenu.edu](mailto:adrienne.anderson2@waldenu.edu) or 617-538-9905. I look forward to hearing from you!

Sincerely,

Adrienne Anderson

## Appendix B: Interview Questions

1. What are your experiences working with infants affected by NAS and their families?
2. How do you feel when you are working with infants affected by NAS and their families?
3. What factors make you feel that you can be successful in your work with infants affected by NAS and their families?
4. What factors make you sometimes doubt your chances of being successful in your work with infants with NAS and their families?
5. What performance feedback have you received from others (supervisors, colleagues, or families) on your work with infants affected by NAS and their families?
6. What assistance might be helpful to you in developing your feelings of confidence and competence in working with infants affected by NAS and their families?

## Appendix C: Permission to Use Interview Questions

From: WANG Li-Yi (OER, CRPP) <liyi.wang@nie.edu.sg>  
Sent: Tuesday, June 27, 2017 6:04 PM  
To: Adrienne Anderson  
Subject: RE: Permission to Use Teacher Efficacy Interview Questions

Dear Adrienne,

You are more than welcome to use the questions for your research.

Cheers,  
Li-Yi

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從: Adrienne Anderson [adrienne.anderson2@waldenu.edu]  
寄件日期: 2017年6月24日 下午 11:21  
至: WANG Li-Yi (OER, CRPP)  
主旨: Permission to Use Teacher Efficacy Interview Questions

Dr. Wang,

I enjoyed reading the work that you and your colleagues conducted regarding teacher efficacy in low-achieving students. I am a doctoral candidate at Walden University and in the process of solidifying my research methodology for my dissertation. My dissertation topic focuses on early interventionists' self-efficacy beliefs working with infants diagnosed with neonatal abstinence syndrome and their families. I plan to conduct one-on-one semi structured interviews with interventionists. With your permission, I'd like to adapt the interview questions found in the Appendix of:

Li-Yi Wang, Liang-See Tan, Jen-Yi Li, Irene Tan & Xue-Fang Lim (2017) A qualitative inquiry on sources of teacher efficacy in teaching low-achieving students, *The Journal of Educational Research*, 110:2, 140-150, DOI: 10.1080/00220671.2015.1052953

The questions that you and your colleagues have created capture the essence of the inquiry of my study. The only adaptation I anticipate is substituting "working with infants with neonatal abstinence syndrome and their families" for "teaching low-achieving students."

Again, I believe the interview questions you have created would work perfectly in my study and with your permission I'd love to use them in my data collection. I am happy to supply more information regarding my study or complete any necessary forms to do so.

Thank you for your consideration,

Adrienne Anderson

National Institute of Education (Singapore) <http://www.nie.edu.sg>

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5. What performance feedback have you received from others (supervisors, colleagues, or families) on your work with infants affected by NAS and their families?
  
6. What assistance might be helpful to you in developing your feelings of confidence and competence in working with infants affected by NAS and their families?

*Ask interviewee if there is anything else they would like to add. Thank interviewee for their participation in the interview. Remind interviewee of confidentiality and treatment of data and explain that they will not be contacted for future interviews but will be provided with copy of transcripts for review.*