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# Walden University

College of Social and Behavioral Sciences

This is to certify that the doctoral dissertation by

Denise Ford Brown

has been found to be complete and satisfactory in all respects,
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Walden University
2019

Abstract

Social Workers'/Case Manager's Knowledge Deficits of Adults with Precomorbid

Attention Disorders

by

Denise Ford Brown

MA, Indiana University of Pennsylvania, 2001

BA, Cheyney University, 1998

Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

Human Services

Walden University

August 2019

Abstract

There is a lack of knowledge about how to provide services for adults with attention deficit hyperactivity disorders (ADHD) among healthcare professionals, particularly for adults with precomorbid ADHD. The purpose of this qualitative, multiple case study was to explore the knowledge deficits of social workers and case managers regarding adults with precomorbid ADHD and their perception of obstacles in providing medication and counseling referrals. Participants' perceptions of obstacles was assessed through the framework of social problem-solving theory. The sample included 10 participants: 6 case managers and 4 social workers. There were three codes that represented participants' perceptions of knowledge deficits regarding adults with precomorbid ADHD, training, precomorbidity, and comorbidity. The theme knowledge deficits emerged from participants' responses of needing more training about adults with precomorbid ADHD. There were also three codes that represented participants' perceptions of obstacles providing referrals which included medication and counseling, referrals, and challenges. The theme perceptions of obstacles emerged from participant responses regarding clients' resistance to services as a significant challenge. According to study results, knowledge deficits in participants were less likely to be detected when participants were asked questions about adults with ADHD and comorbidity. Participants found it easier to identify and provide referrals for adults with ADHD with cooccurring (comorbid) disorders. Social workers and case managers can use the results of this study to increase their knowledge about how to provide referrals for adults with ADHD as the only disorder.

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# Dedication

I thank God for giving me the strength to continue pushing through the process. To my husband, Michael Brown, who allowed me to use family time to work, research, and progress through the dissertation process. A special dedication also to my children, Justus and Krin, for understanding when it was school time for mommy. To my mother Dr. Vivian B. Ford for her continued support and encouragement.

## Acknowledgments

A significant acknowledgement goes to my colleagues who offered me continued assistance and support and time to work on this manuscript. With a special acknowledgement to Dr. Virginia Smith.

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# Chapter 1: Introduction to the Study

## Introduction

The *Journal of Attention Disorders* (2017) includes research on the functions of children, adolescents, and adults who are struggling with various forms of issues relating to attention. The symptoms experienced by adults with attention deficit hyperactivity disorder (ADHD) are not easy to identify, and adults with attention disorders are generally undertreated and underserviced (Bushe, Wilson, Televantou, Belger, & Watson, 2015). According to the American Psychological Association (2018), the diagnoses of attention disorders have been modified to assess adults with ADHD symptoms because ADHD begins in childhood and will follow many children into adulthood (Camilleri & Makhoul, 2013). The purpose of this study was to explore social workers' obstacles towards providing medication and counseling referral resources. I explored social workers' knowledge deficits regarding adults with precomorbid (without another known disorder) ADHD.

This chapter begins with the background of the problem. The background problem provides an overview of adult ADHD and precomorbidity. The problem statement section includes the research. The theoretical framework for this study was the social problem-solving theory (D'Zurilla & Olivares-Maydeu, 1995). The definitions section provides a description of the terminologies used in this study. The assumptions section includes assumptions made about the research problem. Limitations is the next section of Chapter 1 that is followed by the significance section and the summary. Finally, Chapter 1 ends with the summary highlighting the main points of the chapter.

## Background of the Problem

The purpose of this study was to explore whether social workers/case managers serving adults with ADHD perceive knowledge deficits (lack of knowledge or limited knowledge) regarding precomorbid (without cooccurring disorders) as a significant obstacle towards providing referrals for medication and counseling. Erk (2000) examined healthcare professionals' knowledge deficits about adults with precomorbid ADHD and the lack of knowledge counselors had about adults with and without comorbid disorders. Erks claimed that there is a need for clinicians to increase their knowledge about diagnosing and treating adults with ADHD. Additional scholars have suggested a gap in the existing literature regarding healthcare professionals' limited knowledge about adults with ADHD (Andersen, 2016; Ayyash et al., 2013; Bushe et al., 2015; Fredrichs, Larsson, & Larsson, 2012; Hall, Newell, Taylor, Sayal, & Swift, 2013; Kooij et al., 2012; Matheson et al., 2013; Ogundele, 2013; Pehlivanidis, Papanikolaou, Spyropoulou, & Papadimitriou, 2014; Singh, 2011). According to Matheson et al. (2013), psychologists, clinicians, and primary care physicians lack knowledge about the symptoms of adult ADHD, which presents obstacles in providing treatment such as medication and counseling services. Adults without comorbidity are adults who are being treated for ADHD symptoms only (Duran, Nurhan, Ali, Bilici, & Caliskan, 2014). Understanding the specifics about healthcare professionals' lack of knowledge when mapping out services for adults with ADHD is critical to removing barriers to ADHD treatment (Hall et al., 2013). Adults with ADHD and coexisting or comorbid disorders have been the focal point of previous research (Ginsberg, Beusterien, Amos, Jousselin, & Asherson,

2014; Kirino, Imagawa, Goto, & Montgomery, 2015). Adults with ADHD may have a comorbid disorder; however, scholars have not examined social workers'/case managers' knowledge deficits surrounding adults with ADHD without a cooccurring disorder. This study filled a gap in the existing literature on social workers'/case managers' perceived knowledge deficits regarding adults with precomorbid ADHD and the perception of obstacles towards providing referrals for medication and counseling.

## Problem Statement

Scholars have documented that healthcare professionals lack of knowledge (such as doctors, nurses, therapist, and social workers) regarding adults with ADHD (Bushe et al., 2015; Hall et al., 2013). The purpose this study was to explore social workers'/case managers' perceptions of knowledge deficits and perceptions of obstacles towards providing referrals for medication and counseling resources to adults with precomorbid ADHD. According to Hall et al. (2013), adults with ADHD need services that include counseling and medication; therefore, in this study, I explored social workers'/case managers' obstacles towards providing medication and counseling referrals from their perceived knowledge deficits. Many experts in the field struggle with diagnosing adults with ADHD and reported that services were poor due to a lack of understanding about ADHD diagnosing and symptoms in adulthood (Ginsberg et al., 2014). According to Asherson, Huss, and Iris (2014), insufficient services for adults with ADHD are a result of limited knowledge about the disorder by healthcare professionals; however, services can improve as more mental health professionals are in the practice of treating adults with ADHD, such as identifying symptoms, understanding treatment options, and referring

adults with ADHD to the appropriate places for treatment. According to Bushe et al. (2015), there are a lack of clinical practices explaining the rates of referrals to secondary care (therapy) for adults with ADHD and the specifics on why the referral process exhibited barriers was not determined. According to Kirino et al. (2015), services and treatment for adults with ADHD were poor, and the high comorbidity rates were linked to poor overall health and lack of treatment of adults with ADHD. More information regarding the topic of adults with ADHD and treatment will be provided in Chapter 2.

There are a lack of data on social workers' perceptions of knowledge deficits about adults with precomorbid ADHD. Social workers and case managers are primary agents for providing clients with referrals to psychiatrists and counselors for medication and counseling treatment; therefore, it is helpful to explore any obstacles encountered when attempting to provide medication and counseling referral resources (Andersen, 2016; National Association of Social Work, 2017). Data relating to adults with ADHD without comorbidity are limited. Understanding precomorbidity is important because adults with ADHD are at a higher risk for comorbid disorders without early treatment (Pehlivanidis et al., 2014). The phenomena of social workers'/case managers' knowledge deficits about precomorbidity and obstacles towards providing referrals for medication and counseling was explored by interviewing social workers and case managers. The other process of collecting data included document analysis of training models about mental health used in agencies where participants worked. Document analysis will be further explained in Chapter 3.

## Purpose

The purpose of this research was to explore perceived knowledge deficits regarding the obstacles of providing adults with precomorbid ADHD referral resources for medication and counseling. According to Hall et al. (2013), it is necessary to understand healthcare professionals' lack of knowledge about adults with ADHD because barriers exist when lack of knowledge is present during service provision planning. Some caregivers are unaware of how to provide avenues for treatment (Adamou et al., 2016). In this study, I explored participants' perceived knowledge deficits and perceptions of obstacles with providing medication and counseling referral resources to their clients with ADHD.

## Research Questions

The two research questions that guided this study were

RQ1. How do social workers describe and assess their knowledge about precomorbid ADHD in adults?

RQ2. How do social workers describe and assess obstacles towards providing medication and counseling referral resources to the population of adults with precomorbid ADHD?

## Theoretical Framework

The theoretical proposition for this study was social problem-solving, which emerged from the discipline of cognitive psychology (D'Zurilla & Goldfried, 1971). The theory of social-problem-solving includes how and why problems are solved, particularly problems that have obstacles that are identified as difficult (Chang, D'Zurilla, & Sanna,

2004). The social problem-solving theory revolves around how people solve problems as they are occurring and the emotional and cognitive reasons on why they are solving them (D’Zurilla & Goldfried, 1971). D’Zurilla and Goldfried (1971) presented a case for what are considered positive and negative ways of solving problems. The positive and negative problem-solving techniques are models of how people first see problems before solving them (Morera et al., 2006). The attitude about the problem influences how a problem is worked out (D’Zurilla & Goldfried, 1971). Applying social problem-solving theory for this study consisted of exploring how social workers attempt to provide referral resources for adults with precomorbid ADHD as a result of knowledge deficits about precomorbid adult ADHD.

## Nature of Study

The key phenomenon investigated in this study was social workers' perceived knowledge deficits regarding adults with precomorbid ADHD. When exploring a phenomenon being observed in a real-life context, exploratory case studies are an appropriate research design (Yin, 2013). The data collected came from interviewing social workers and case managers as they provided their perceptions of knowledge deficits regarding precomorbid ADHD in adults. Audio recordings were used to collect interview data. Thematic analysis was used to interpret the data collected, which will be further discussed in Chapter 3.

## Definition of Terms

*Attention deficit hyperactivity disorder (ADHD):* Individuals who exhibit dysfunction in attention, focus, organization, impulse control, and judgement. Adults

with ADHD are those individuals who are 18 years and older exhibiting attention disorder symptoms either detected or undetected stemming from childhood (Hall et al., 2013; Knecht, de Alvaro, Martinez-Raga, & Balanza-Martinez, 2015; Kooij et al., 2012; Miranda, Berenguer, Colomer, & Rosello, 2014; Pehlivanidis et al., 2014).

*Comorbidity:* When ADHD in adulthood and a cooccurring disorder such as substance abuse, depression, or anxiety exist (Bushe et al., 2015; Duran et al., 2014).

*Knowledge deficits:* The lack of knowledge social workers have about adults with precomorbid ADHD symptoms, diagnoses, and treatment.

*Medication and counseling referral resources:* The types of services that social workers and case managers would provide by gathering information from collaborating with other agencies and passing that information to their clients with ADHD. These services would include where to get medication and counseling treatment (National Association of Social Workers, 2016).

*Precomorbid:* A terminology used to explain ADHD as the only disorder being treated with no other cooccurring disorders detected.

*Social workers:* Those healthcare professionals with the title of a social worker or case manager. These are professionals who provide social work services to the adult population dealing with behavioral health issues as defined by the National Association of Social Workers and Community Behavioral Health case management.

## Assumptions

ADHD without a cooccurring disorder is not a popular label in the healthcare profession in terms of treatment. Individuals are primarily treated for ADHD and

cooccurring disorders (Duran et al., 2014; Scully, Young, & Bramham, 2014). When ADHD is the primary disorder, other comorbidities are likely to develop at some point (Pehlivanidis et al., 2014). Individuals who do not receive early treatment for ADHD are more likely to develop a comorbid disorder; therefore, I assumed that adults with ADHD can be treated for ADHD without a comorbid disorder (Bushe et al., 2015; Pehlivanidis et al., 2014). Authors have used other words to describe precomorbidity. These words include ADHD without a comorbid disorder or adults with ADHD without coexisting disorders (Miranda et al., 2014). The concept of precomorbidity was meaningful for this study, which focused on the perceived knowledge deficits of social workers/case managers regarding adults with ADHD without a coexisting disorder. The collected data regarding social workers' perceptions of knowledge deficits about precomorbid ADHD revealed issues in referral service provisions for adults with precomorbid ADHD. I assumed that there would be issues as a result of participants' knowledge deficits regarding adults with precomorbid ADHD.

## Scope and Delimitations

Exploring the knowledge deficits of social workers filled a gap in the literature regarding the perceived knowledge deficits of social workers and case managers regarding adults with precomorbid ADHD and how those perceived knowledge deficits present as obstacles towards providing medication and counseling referral resources. The population excluded from this study included doctors, psychiatrists, nurses, and any other healthcare professional involved in mental health other than social workers and case managers. The population for this study included social workers/case managers as a part

of the healthcare profession. In this study, I focused on social workers and case managers because social workers/case managers are a primary source of service referral agents (National Association of Social Work, 2018). Case managers, according to Community Behavioral Health (CBH; the stakeholder agency for this study), provide key services as those with the title of social worker such as intake, referrals, problem identification, treatment plans, and discharges. CBH employees holding the title of a case manager or social worker must obtain a minimum of a bachelor's degree in social work or a related field that usually means psychology, human services, sociology, or criminal justice (CBH, 2018). Sometimes the titles are more specific to what the employees do such as community umbrella (CUA) case managers, but still case management is the main title of the job (CBH, 2018).

## Limitations

Purposive sampling was used for this study. The sample population was small and specific. Participant responses were not generalized to other populations other than social workers/case managers working under the same requirements of providing referral resources to clients with mental illnesses. The participants also worked primarily with adults residing in one city. The study was also conducted in two locations, which limited the sampling pool.

## Significance

This study broadened the awareness of knowledge deficits about adults with ADHD and precomorbidity through the lens of what social workers and case managers perceive as knowledge deficits and obstacles towards providing referrals for medication

and counseling. I explored social workers'/case managers' knowledge deficits about adults with precomorbid ADHD. Researchers can use the results of this study to continue exploring the effects of knowledge deficits about precomorbid ADHD within communities. The social implications of this study involve the need for more awareness about precomorbid ADHD in adulthood. Positive changes can be made regarding the adult, ADHD, precomorbid population with improved referral initiatives. The most significant positive social change would be the effort by social workers/case managers and other healthcare professionals to improve their knowledge of how to provide resources and referrals to adults with precomorbid ADHD. More empirical research on preventing comorbidity before it has a chance to develop in adults with ADHD needs to be conducted (Bushe et al., 2015; Hall et al., 2013; The National Association of Social Workers, 2016).

## Summary

In Chapter 1, I introduced the research problem, the purpose, and significance of the research problem. The definition of terms section included the concept of precomorbidity as well as the meaning of ADHD, comorbidity, social workers as participants, and medication and counseling referral sources. The theoretical foundation was social problem-solving theory following the explanation of the research questions. The nature of the study included the methodological process that will be explained in further detail in Chapter 3. The limitations and assumptions section were included. The significance section included the potential this study has in contributing to the existing literature on knowledge deficits regarding adults with precomorbid ADHD.

Chapter 2 will be a review of the existing literature that supports this study's research problem.

# Chapter 2: Literature Review

## Introduction

The research problem for this study was social workers'/case managers' perceived knowledge deficits and perceived obstacles towards providing referrals for medication and counseling to adults with precomorbid ADHD. The purpose of this study was to explore those knowledge deficits and obstacles by conducting a qualitative, multiple case study. According to Pehlivanidis et al. (2014), most adults with ADHD are at a higher risk for developing a comorbid disorder, as a result of not having early treatment interventions. In this study, I explored the knowledge deficits of social workers'/case managers' perceived obstacles of providing medication and counseling referral resources to adults with precomorbid ADHD. Healthcare professionals' knowledge deficits regarding adults with ADHD is a current issue (Bushe et al., 2015; Hall et al., 2013). There are ongoing issues of healthcare professionals' struggle with providing services for adults with ADHD (Asherson et al., 2014; Bushe et al., 2015; Ginsberg et al., 2014; Hall et al., 2013; Kirino et al., 2015; National Association of Social Workers, 2016). Treatment options and services are limited for adults who have not been diagnosed with a comorbid disorder because healthcare professionals' question what ADHD is in adulthood without comorbidity (Dubovsky, 2016). With all that is known about adults with ADHD, there are inconsistencies in treatment and diagnosing; therefore, researchers continue to explore why knowledge deficits about ADHD in adulthood remain a problem (Rostain, Jensen, Connor, Miele, & Forgone, 2015). There is a lack of knowledge regarding diagnosing adults with ADHD symptoms because symptoms are interpreted

and calculated differently among healthcare professionals (Asherson et al., 2014; Bushe et al., 2015; Ginsberg et al., 2014). Diagnosing becomes more inconsistent in adults without a comorbid disorder (Bushe et al., 2015; Duran et al., 2014). Although I focused on precomorbid ADHD, the previous literature is more expansive in exploring adults with ADHD and comorbid disorders.

In the review of literature, I explored previous studies on healthcare professionals' treatment of adults with ADHD. Following the review of literature is the list of search strategies used to explore the topics of ADHD, knowledge deficits, treatment, and diagnosing. In Chapter 2, the theoretical foundation is explained by assessing how problem solving can be applied in exploring the issues that social workers/case managers face when attempting to provide referral resources. The review of literature includes topics surrounding the service delivery process for adults with precomorbid ADHD topics such as knowledge of ADHD treatment, ADHD and comorbidity, quality of life, the impact of stigmas on adults with ADHD, and the policies for providing treatment and services.

## Literature Search Strategy

The literature search began with exploring topics such as adults with ADHD and treatment in ProQuest. Academic searches were included under social work and psychology to further explore topics related to adult ADHD symptoms and symptom criteria. Multidisciplinary databases were selected as search engines to explore ADHD in terms of knowledge deficits under psych-articles. Issues of healthcare professionals and policies regarding adult ADHD were also searched through all the databases to get a

varied understanding of how policy affects treatment of adults with ADHD. Precomorbidity in adults with ADHD was searched in psych-articles and psychology articles. Other articles in ProQuest included the topic of adults with comorbid disorders. Social work journals were explored for articles relating to the topic of social workers' knowledge deficits and service provision of adults with ADHD. Healthcare professionals' understanding of adults with ADHD and precomorbid ADHD were discovered in sociology, psychology, and social work journals. There was limited research on social workers' knowledge deficits about adults with ADHD within the databases explored for this study; however, there was significant research about the knowledge deficits of other healthcare professionals, such as doctors, nurses, counselors, and psychologists.

## Theoretical Foundation

Social problem-solving theory was developed by D'Zurilla and Goldfriend in 1971 (as cited in Tras, 2013). The theory of social problem solving, as explained by D'Zurilla and Goldfriend, centers around positive and negative problem solving through obstacles that arise when helping others (as cited in Yetter & Foutch, 2014). According to social problem solving, problems can be resolved more effectively once the perception of the problem has been assessed while working through the problem (Yetter & Foutch, 2014). Social problem-solving theory includes the process of solving daily problems when there are obstacles towards resolving those problems that are difficult to overcome (Yetter & Foutch, 2014). In terms of problem-solving, interviewing social workers and case managers on their perceptions of obstacles providing referral resources can reveal how those obstacles were resolved. Problems occurring can be approached negatively or

positively. The positive approaches require openness to creating solutions, and the negative approach involves more pessimistic ideas about solving problems (Yetter & Foutch, 2014). I explored social workers' and case managers' problem-solving techniques to understand their knowledge deficits about precomorbid ADHD and the obstacles to referring medication and counseling resources from those knowledge deficits.

Tras (2013) investigated the social problem-solving abilities of university students in terms of perceived social support. Tras explained the role that social problem-solving played in how perceptions of social support might have influenced how student's problem-solve. Tras emphasized that when students perceived their social support as negative meaning low-level, they were less likely to work on resolving the problem or had careless/impulsive problem-solving skills. If the perception of social support was positive, the students were more likely to resolve the problem with more openness to finding solutions (Tras, 2013). Exploring social workers' problem-solving methods begins with understanding how social workers articulate the obstacles in providing medication and counseling referral resources. To resolve problems, there must be an understanding of the obstacles and the issues that need to be resolved (Tras, 2013). The way problems are perceived is the focal point of social problem-solving theory, and this concept was important when exploring how participants defined their knowledge deficits and obstacles towards providing medication and counseling referral resources (Tras, 2013).

According to Tras (2013), perceptions about a problem requires acknowledgement of the existing problem. In the theory of social problem-solving, once a problem has been identified, then the attitude about that problem will influence how the problem is dealt with (Tras, 2013). Social problem-solving starts out with how a problem is perceived (Tras, 2013). In this study, I examined how social workers/case managers perceived the problem of knowledge deficits through their descriptions of knowledge deficits regarding adults with precomorbid ADHD.

Defining social problem-solving can be accomplished by breaking down two concepts. First, obstacles need to be viewed as possible to overcome. Second, the consequence of believing that obstacles are too difficult and cannot be overcome are outlined (Tras, 2013). According to D’Zurilla and Goldfried (1971), openness to solving a problem can lead to effective solutions or outcomes; however, negative perceptions of a problem can lead to less effective solutions to problems or no solutions at all. The challenges towards providing medication and counseling referral resources as perceived by social workers/case managers was explored to understand the degree of those challenges based on how those challenges were described. The description of those challenges from the participants in this study provided insight on whether the challenges were resolved with openness or limitations.

The social workers’ or case managers’ job is to use problem-solving skills to handle situations when obstacles arise (National Association of Social Workers, 2017). Problem-solving skills may vary; however, there are some general steps that social workers follow to make sure that clients’ needs are met (Pasos, 2015). Major problem-

solving steps social workers use include assessing the needs of the clients to provide a treatment plan, planning goals for clients whose needs are not being met, intervening when clients are having difficulty accomplishing goals, and evaluating any issues preventing progress for a client (National Association of Social Workers, 2017). Social workers/case managers also collaborate with other agencies to help clients who are not making progress in treatment goals (Pasos, 2015). Social workers and case managers are also responsible for doing the necessary paperwork and contacting the appropriate professionals when a crisis arises such as filling out a 302 form when involuntary hospitalization is required (National Association of Social Work, 2017). Problem-solving is the centerpiece of social work (Pasos, 2015).

## Review of Literature

Although adults with ADHD as the only treated disorder has not been the primary focus of existing literature, scholars have identified healthcare professionals' lack of knowledge and obstacles towards providing services as it pertains to adults with ADHD in general (Adamou et al., 2016). Many primary care physicians (PCPs) are not fully aware of the symptoms of adults with ADHD (Adler, Shaw, Sitt, Maya, & Morrill, 2009). PCPs who were surveyed were unsure about how to diagnose or treat adults with ADHD (Adler et al., 2009). More data regarding the burden of illness relating to adults with ADHD pointed to issues of treatment problems and limited knowledge (Brod, Pohlman, Lasser, & Hodgkins, 2012). Adamou et al. (2016), Bushe et al. (2015), and Araten-bergman (2015) also assessed the issues of treatment inconsistencies and limited knowledge of ADHD symptoms in adulthood by healthcare professionals. ADHD

patients reported the need for services to be more consistent while barriers were partially related to healthcare professionals' inconsistent provision of services due to the lack of knowledge about adults with ADHD (Fleischmann & Miller, 2012; Hodgkins, Dittmann, Sorooshian, & Banaschewski, 2013; Matheson et al., 2013)

Other research about adults with ADHD include identifying ADHD symptoms, service provision limitations, and treating adults with ADHD (Bushe et al., 2015; Fleischmann & Miller 2012; Ginsberg et al., 2014). There is a lack of understanding about the limitations of ADHD treatment for adults within the healthcare industry (Children and Adults with Attention Deficit-Hyperactivity Disorder, 2016). Treatment options are available but not always used consistently by professionals, and symptoms are not fully recognized by some healthcare professionals (Bushe et al., 2015). Although the words knowledge deficits are not used by previous authors, a lack of knowledge or awareness of how ADHD symptoms manifest within adults is repeatedly included in previous literature. Ginsberg et al. used the term poor awareness of adults with ADHD, and this poor awareness had been identified as direct barriers to providing services for adults with ADHD. Matheson et al. (2013) discovered that adults who had been diagnosed later had a difficult time because the psychological burdens of ADHD were often overwhelming. The day-to-day burdens of adults with ADHD often led to the discovery of other behavioral issues, such as anxiety and low-self-esteem (Matheson et al., 2013). Those adults with early intervention were less likely to have coexisting psychological issues or better coping skills to deal with both ADHD and comorbidity (Matheson et al., 2013). In addition to early intervention, it was also discovered that

medication alone was not enough to stabilize adults with ADHD; psychotherapy was also needed to manage the emotional ramifications of living with ADHD (Matheson et al., 2013). Matheson et al. recognized that further studies should be conducted with larger participants as this study had a relatively low participant feedback rate due to the limitations of a small group. Limitations existed when researching adult ADHD treatment and knowledge deficits due to societal stigmas (Bushe et al., 2015; Ginsberg et al., 2014; Matheson et al., 2013; Rostain et al., 2015).

**Healthcare Professionals' Knowledge Deficits Regarding Adult ADHD Treatment**

Adults with precomorbid ADHD were terms used for this study to distinguish between adults with ADHD with comorbid disorders and adults with ADHD without comorbidity. Scholars have not emphasized the difference between those adults with or without comorbid disorders. According to Hall et al. (2013), healthcare professionals do experience knowledge deficits about adults with ADHD, and the general issues surrounding those deficits relate to a lack of understanding about symptom criteria and symptom diagnoses. When identifying knowledge deficits, there was no reference to how healthcare professionals perceived their own knowledge deficits as obstacles towards providing treatment for adults with ADHD (Bushe et al., 2015; Ginsberg et al., 2014; Matheson et al., 2013). Perceptions of knowledge limitations and unmet needs were all determined through the self-reports of ADHD patients themselves (Bushe et al., 2015; Ginsberg et al., 2014; Matheson et al., 2013). The problems identified were professionals' inability to meet the needs of adults with ADHD, and these problems were linked to uncertainty about ADHD symptoms. Doctors prescribing medication for adults

with ADHD, as well as providing access to medication, were often limited and inconsistent in knowledge of how to do so (Bushe et al., 2015; Ginsberg et al., 2014; Matheson et al., 2013). Differing concepts and definitions about what ADHD is or is not is one major reason why doctors lack knowledge about how to prescribe medication for adults (Bushe et al., 2015; Matheson et al., 2013).

Adler et al. (2009) requested information about experiences with diagnosing and treating adults with ADHD and found a significant pattern. Forty-eight percent of PCPs were uncomfortable treating and diagnosing adults with ADHD while over 70% felt that the diagnostic tools needed to be updated and modified as there were no clear diagnostic criteria (Adler et al., 2009). PCPs were more comfortable with referring ADHD patients to specialists in the field of ADHD (Adler et al., 2009). There were diagnosing issues related to low recognition of ADHD symptoms by both adults with ADHD and healthcare professionals (Asherson et al., 2012). Medical doctors had limitations in understanding and diagnosing adults with ADHD (Bushe et al., 2015). Ginsberg et al. (2014) uncovered that adults with ADHD were underdiagnosed and undertreated. The lack of diagnosing and treatment is a common problem that stems from healthcare professionals' difficulty identifying ADHD because the symptoms overlap with other disorders (Ginsberg et al., 2014).

Andersen (2016) documented through the reports of clients that services were inconsistent. Rostain et al. (2015) found growing improvements in treating ADHD symptoms; however, the knowledge of diagnosing based on symptom criteria was still a problem within the healthcare profession. The obstacles of ADHD treatment include

inconsistent use of diagnostic tools for assessing ADHD symptoms in adulthood (Rostain et al., 2015). Another issue related to diagnosing and treating adults with ADHD is in determining the type of diagnostic testing to use in evaluating whether an adult is suffering with ADHD (Toshinobu, Yui, Teruhisa, & Hiroshi, 2015). The interpretation of diagnostic testing, which is based on symptoms explained in the *DSM 5*, is done by experts such as psychiatrists, psychologists, mental health counselors, and clinical social workers (Toshinobu et al., 2015). The experts would have to agree on the most appropriate diagnostic test to use in diagnosing adults with ADHD, which is difficult because of comorbid disorders (Toshinobu et al., 2015). Comorbidity makes diagnosing difficult as symptoms of ADHD often overlap with other psychiatric symptoms, making the diagnosing process even more difficult to figure out for adults with ADHD (Rostain et al., 2015; Scully et al., 2014; Toshinobu et al., 2015). It is also difficult to diagnose adults with ADHD because adults may not consistently or accurately remember symptoms as children (Toshinobu et al., 2015). Past childhood symptoms are important to identify in adults because ADHD is a disorder that manifests in childhood (Toshinobu et al., 2015).

In many cases a psychiatrist will have an individual fill out a questionnaire asking a series of questions that can classify and group symptoms of attention disorders meanwhile separating it from other disorders (Matte et al., 2015). The questionnaires are also designed to identify whether the adult experienced symptoms before or after a certain age (Matte et al., 2015). The diagnostic test should more closely match the *DSM 5* to better accomplish accurate ADHD diagnoses (Toshinobu et al., 2015). According to

Toshinobu et al. (2015), the results from the newer diagnostic tool, Assessment Systems for Individuals with ADHD, more closely matched the criteria found in the *DSM 5*. There is more to learn about the treatment of adults with ADHD and the diagnostic process. Although researchers are working to understand treatment disparities better, there is still a challenge in understanding the limitations of ADHD treatment for adults (Rostain et al., 2015; Toshinobu et al., 2015).

**Targeting Adult ADHD Without Comorbid Disorders**

There are adults who have ADHD as a primary disorder, but it is rare for ADHD to be treated as the only disorder (Pehlivanidis et al., 2014). The precomorbid ADHD population has not been targeted because of its proposed rarity mentioned in previous literature (Pehlivanidis et al., 2014). Scholars have focused on the issues that revolved around ADHD and comorbidity (Miranda et al., 2014; Pehlivanidis et al., 2014). Evaluating the adult with ADHD as the only disorder is uncharted territory for many researchers; instead, researchers have been exploring symptoms and treatment of adult ADHD with comorbidity (Bushe et al., 2015; Duran et al., 2014; Pehlivanidis et al., 2014; Rostain et al., 2015; Scully et al., 2014; Toshinobu et al., 2015). Some authors have only mentioned ADHD without comorbidity as unusual or rare with no further research into that claim (Fredricks et al., 2012; Miranda et al., 2014; Pehlivanidis et al., 2014).

Distinguishing between comorbid and precomorbid ADHD is important because of the risk factors of developing comorbid disorders when ADHD is present (Duran et al., 2014). According to Hall et al. (2013), the need to treat ADHD before coexisting (comorbid) problems occur is essential to the overall treatment success for adults with

ADHD. According to Miranda et al. (2014), once a cooccurring disorder is noticeable in adults with ADHD, dysfunction is more likely to occur in their daily social, economic, career, and educational endeavors. Camilleri and Makhoul (2013) established that adults with ADHD and complex comorbidities can be understood through stages of comorbid development from childhood to adulthood. When assessing comorbidity in ADHD, ADHD is often the prominent disorder, and other psychiatric disorders can develop due to a lack of treatment and negative lifestyle experiences, such as not regularly completing tasks/goals (Bushe et al., 2015; Hall et al., 2013; Knecht et al., 2015; Pehlivanidis et al., 2014). ADHD has chronic symptoms, and an adult with ADHD commonly experiences daily life dysfunctions amounting to poor quality of life. According to Adamou et al. (2016), quality of life issues can be more prominent when symptoms of ADHD manifest in everyday life as the symptoms can be confusing to others unaware of ADHD in adults. A significant number of adults with ADHD suffer from some type of comorbid disorder; therefore, the proactive approach would be to treat ADHD prior to developing a comorbid disorder, which would require treating ADHD in childhood (Camilleri & Makhoul, 2013). Treating ADHD without comorbidity is difficult since many adults with ADHD have already developed a comorbid disorder because of little to no services when ADHD symptoms were not recognized however, there are adults who are being treated for ADHD only (Pehlivanidis et al., 2014). Camilleri and Makhoul (2013) and Pehlivanidis et al. (2014) reported that comorbidity is almost unavoidable but increased knowledge about treating adults with ADHD can help to reduce comorbid symptoms.

Adults with ADHD are more likely to have comorbid disorders when left untreated (Bushe et al., 2015; Duran et al., 2014; Pehlivanidis et al., 2014). Adults with ADHD and comorbid disorders tend to have more dysfunction and poorer quality of daily living (Adamou et al., 2016). According to Hall et al. (2013), ADHD clients have difficulty receiving services from healthcare professionals usually due to diagnosing issues and limited knowledge of ADHD as the only disorder (Hall et al., 2013). When assessing adults with ADHD, there are overlapping symptoms of other types of disorders (Duran et al., 2014). There are patients who are considered “newly diagnosed” who could fall into the category of precomorbid ADHD, but with further investigation, a comorbid diagnosis might be discovered (Bushe et al., 2015). It is possible for individuals to present with other mental health symptoms and ADHD be discovered (Bushe et al., 2015). Diagnostic tools should be adequate to determine the difference between adults with ADHD and adult precomorbid ADHD to improve the identification of ADHD with and without comorbidity (Toshinobu et al., 2015). If there is comorbidity, then there could be a point where precomorbidity was present, which could be essential for healthcare professionals to understand when providing services.

**Problem-Solving Skills and Adult ADHD Treatment**

Psychologists, social workers, psychiatrists, counselors, and nurses service and treat adults with ADHD (Hall et al., 2013). Social workers, however, have not been studied to understand their knowledge of adults with ADHD. Andersen (2016) explained that within the social work field, there are difficulties with providing services for clients because the complex issues of the disorder. The challenges from social workers’

perceptions of knowledge deficits was not explored by Anderson. According to Anderson, inconsistencies in providing services start from the top down from ADHD experts to how ADHD symptoms are insufficiently presented to social workers. According to Hall et al. (2013), healthcare professionals are included as a general term for all of those who work with adults with ADHD. Hall et al. reported that a lack of understanding about ADHD had been experienced by general healthcare professionals as well as known experts such as psychiatrists and psychologists.

Social workers will come into daily contact with adults suffering with attention disorders; however, they have been scarcely studied regarding their knowledge deficits (Andersen, 2016; Children and Adults with Attention disorders, 2016; National Association of Social Workers, 2016). Levine (2000) focused only on adolescents and how social workers recognized the intervention process during the assessment stage of treatment. Anderson (2016) documented service inconsistencies from social workers as they relate to young adults only and as reported by young adult clients. Social workers work primarily with disadvantaged populations; this would include the physically disabled, the poor, and the mentally disabled (Mendes, Curdy, Allen-Kelly, Charikar, & Incerti, 2014; National Association of Social Work, 2016). Adults with ADHD are a part of the population of those suffering with mental disorders; therefore, social workers are expected to provide services for the ADHD population (National Association of Social Workers, 2016). Not only do social workers service various groups of people and individuals in need, but social workers are responsible for being the front-line care of

providing referral resources for their clients (Mendes et al., 2014; National Association of Social Workers, 2016).

Social workers will most likely receive their knowledge of precomorbid ADHD from psychologists and psychiatrists who primarily diagnose and treat the disorder (Bushe et al., 2015). The continuity of care for mental health patients begins with the experts from the field of attention disorders (Duran et al., 2014). Medical experts face issues with diagnostic criteria and symptom identification when diagnosing and treating adults with ADHD (Rostain et al., 2015). Social workers provide referral resources for clients to see experts, such as referrals to see a psychiatrist, and it is unknown what social workers/case managers might be learning or understanding about ADHD through the guidance of the experts. Social workers and case managers are a part of the treatment team of servicing adults with ADHD as they provide referrals, crisis intervention, treatment plans, and goal implementation (National Association of Social Workers, 2016). For this study, adults with precomorbid ADHD are being serviced based on the intervention strategies participants used. Participants' perceptions of referring resources will be discussed in detail in Chapter 4.

Social work practice involves the ability to problem-solve. Social workers gain knowledge about problem solving from various academic sources and training techniques (Mendes et al., 2014). According to the National Association of Social Work (2016), social workers have a code of ethics to follow. These ethics usually involve how problems are solved daily when assisting clients. Social problem solving is a popular method of learning how to solve every day, real-life issues (Chang et al., 2004; Yetter &

Foutch, 2014). Social workers provide intervention through outreach, case management, referrals, and collaborations. These overall responsibilities are then broken down into actual day-to-day interventions. The interventions are as follows: outreach-increase awareness of human issues within the community and advocate for clients' rights in services, equal opportunities, and quality of life (National Association of Social Workers, 2017). Case management workers help clients by creating goals and treatment plans for individuals, groups, and communities struggling with mental, behavioral, medical, economic, physical, and developmental problems (National Association of Social Workers, 2017). Social workers providing clients with referrals to agencies that assist in treating mental and physical disabilities and challenges (National Association of Social Workers, 2017). Finally, social workers partner with other agencies to ensure and increase continuity of care (National Association of Social Workers, 2017).

Social workers provide these interrelated services through face-to-face, daily contact and by referring clients to agencies for care (Nationals Association of Social Work, 2016). Social workers must acquire the essential aspect of problem-solving strategies (Nationals Association of Social Work, 2016). Problem-solving strategies involve the development of treatment plans to create measurable goals (Nationals Association of Social Work, 2016). Social workers and case managers create interventions through providing resources universally practiced for transparency (Nationals Association of Social Work, 2016).

Healthcare professionals possibly have not used problem-solving skills to overcome the obstacles experienced servicing adults with precomorbid ADHD. Hall et al.

(2013) claimed that transitional care for adults with ADHD who were once in the system as children experience service inconsistencies in adulthood. Healthcare professionals have made a case for transitional care to be fluid; however, there is no description of what obstacles were faced when healthcare professionals attempted to provide services (Hall et al., 2013). There is also no detailed explanation of what services are successful when services are provided to adults with ADHD transitioning out of childhood care (Hall et al., 2013). Bushe et al. (2015) and Duran et al. (2014) explained that treatment options for adults with ADHD must be individualized and diversely administered in terms of therapeutic approaches. The intervention process for adults with ADHD needs to be investigated in more depth to understand the obstacles of ADHD treatment processes by healthcare professionals (Anderson, 2016). Patterns of service models were identified in other research as well as the inconsistencies of services for adults with ADHD; however, there was no detailed description of what those inconsistences were (Ayyash et al., 2013). Although healthcare professionals experience difficulties with providing consistent services (medication, diagnosing, and counseling) for adults with ADHD, the nature of those difficulties was not documented (Ayyash et al., 2013). When identifying the transition of care from childhood ADHD to adulthood, there was a significant amount of data relating to service obstacles (Ogundele, 2013). The obstacles to providing services became the most critical problem when children with ADHD grew into adults with ADHD (Anderson, 2016; Ogundele, 2013).

**Problem-Solving through Knowledge Deficits about Adult ADHD**

Healthcare professionals' task of providing services for adults who are dealing with issues of ADHD is complex (Adamou et al., 2016; de Braek, Dijkstra, Ponds, & Jolles, 2017). The level of care is time consuming when there is a deficit in knowledge of how to provide services and not an adequate amount of research about the knowledge limitations of ADHD treatment and service provisions (Adamou et al., 2016). Although there are organizations that provide information on services, symptoms, and support, understanding how to work through the treatment process requires reducing the obstacles so that treatment plans for adults with ADHD can be effectively created (Bushe et al., 2015). If the degree of obstacles faced is significant enough, then an increase in the application of problem-solving techniques is appropriate (Adamou et al., 2016). A contributor to obstacles to treatment and service provision comes from underresearched medical and behavioral interpretation of how to define symptoms of attention disorders (Children and Adults with Attention Deficit-Hyperactivity Disorder, 2016).

**Adult ADHD and Quality of Life Effects on Service Limitations**

Some scholars have focused on adults with ADHD and quality of life. Araten-bergman (2015) examined 246 adults receiving residential support and found that psych-social resources helped the residents in improving quality of life. According to Knecht et al. (2015), ADHD symptoms tend to coexist with other disorders, such as depression, anxiety, and substance abuse, which adds to stressful life events for adults with ADHD. Daily unmet needs of adults with ADHD are directly affected by three issues: professionals' difficulty diagnosing adults with ADHD because they overlap with other

disorders, negative stigmas about adults with ADHD, and healthcare professionals' difficulties in recognizing ADHD symptoms as compared to other disorders (Ginsberg et al., 2014). Managing ADHD as an adult may be difficult due to the lack of knowledge about ADHD that exists among the healthcare community (Rostain et al., 2015). Adults with ADHD suffer significant social and personal issues as well as comorbid disorders with long-term limitations in counseling and medication provided by healthcare professionals (Miranda et al., 2014).

Whether treatment options are present or not for adults with ADHD, there will be some life hurdles to overcome (Ginsberg et al., 2014). Quality of life and treatment can be viewed from a cause and effect perspective. As treatment is inconsistent and limited for adults with ADHD, quality of life is often reduced. The term quality of life means high productivity where adults with ADHD can live day to day without experiencing high levels of dysfunction (Ginsberg et al., 2014). Another way to understand quality of life for adults with ADHD is when they can live reasonably comparable to non-ADHD individuals, such as the ability to complete tasks and the reduction of disorganization on a chronic level (Miranda et al., 2014). When adults with ADHD are provided treatment consistently and effectively, it allows for less dysfunction, such as relationship issues, job loss, substance abuse, criminal behavior, academic failures, comorbidity, and financial issues (Children and Adults with Attention Deficit-Hyperactivity Disorder, 2016; Ginsberg et al., 2014; Miranda et al., 2014). The list below provides a model to track how ADHD symptoms affect quality of life.

Adult ADHD symptoms (deficits in focus/memory and distractibility) can lead to deficits in learning, problems communicating with others, difficulty finishing tasks, and making appointments (Araten-bergman, 2015).

Adult ADHD symptoms include compulsiveness/hyperactivity/impulsivity, interrupting others frequently, difficulty remaining still without fidgeting, and making spontaneous decisions (Children and Adults with Attention Deficit-Hyperactivity Disorder, 2016).

Adult ADHD symptoms (poor concentration and lack of focus) can lead to difficulty following through, completing tasks, frequent daydreaming, disorganization, and procrastination (Children and Adults with Attention Deficit-Hyperactivity Disorder, 2016).

The above list of ADHD symptoms does not show how these symptoms influence quality of life for an adult with ADHD; however, it displays many of the issues that adults with ADHD face. Levels of symptoms can range from severe to mild depending on the nature or subtypes of the ADHD symptoms, the treatment or care received, and the amount of support the adult with ADHD has (Camilleri & Makhoul, 2013). Quality of life also depends on how the individual perceives the symptoms or even the disorder itself (Bushe et al., 2015; Ginsberg et al., 2014; Hall et al., 2013; Miranda et al., 2014). Some adults do not recognize that they have ADHD symptoms, and because there is a general lack of ADHD knowledge, adults exhibiting ADHD symptoms may never be treated or referred for services (Children and Adults with Attention disorders, 2016).

Many adults with ADHD have a poorer quality of life until they identify the symptoms and receive appropriate treatment (Children and Adults with Attention disorders, 2016).

Healthcare professionals struggle with providing care for adults with ADHD and that lack of care influences those adults and their overall quality of life (Bushe et al., 2015; Children and Adults with Attention disorders, 2016). The treatment limitations of adults with ADHD contribute to the poor quality of life. It is not be the sole responsibility of doctors and other healthcare professionals to improve the quality of life for adults with ADHD; however, healthcare professionals should have better understanding of ADHD in adulthood because treatment has been proven to lead to higher quality of life in day-to-day living (Bushe et al., 2015; Ginsberg et al., 2014; Hall et al., 2013; Miranda et al., 2014).

## The Effects that Stigmas have on Adult ADHD Treatment

Stigmatized ideas about adults with ADHD influences how ADHD individuals are treated and perceived within the community (Fuermaier, Tucha, Koerts, Mueller, & Lange, K, 2014). It is important for professionals to examine diagnoses aside from stigmas to treat adults with ADHD (Fuemaier et al., 2014). According to Camilleri and Makhoul (2013), psychiatrists need to be comfortable with treating adults with ADHD without being influenced by societal stigmas. Psychiatrists should realize that adults disclosing symptoms need to be taken seriously and provided with medication and counseling when appropriate (Bushe et al., 2015) It is, however, difficult to reduce the effects of stigma on adults with ADHD when the clients themselves fear that others close to them or within their environment have stigmas about ADHD such as employers,

family members, or friends (Ginsberg et al., 2014). An increase in knowledge about ADHD reduces the level of stigmatized ideas about ADHD symptoms (Fuemaier et al., 2014). The relationship between stigmas and knowledge of ADHD was also explored by Hall et al. (2013), who explained that those who specialize in ADHD and are responsible for diagnosing ADHD are less likely to develop stigmas about clients with ADHD.

Another issue regarding ADHD and treatment inconsistencies involves how treatment is financially covered or subsidized. ADHD coverage for adults in terms of insurance is essential to understanding service inconsistencies, stigmas, and the data on ADHD and comorbidity (Center for Disease Control, 2017). Although ADHD stigmas are underresearched, there has been some data regarding the stigmatization of adults with ADHD (Fuemaier et al., 2014). According to Fuemaier et al. (2014), stigmas were measured from the perspective of different people within the adult ADHD world such as doctors, teachers, and controlled participants. Scholars identified key factors such as the varying levels of stigmas coming from non-ADHD individuals. Teachers and doctors varied on how stigmas were practiced (ie., teachers might have been more likely to describe the behavior of an individual or child as undisciplined or exhibiting bad behavior; Fuemaier et al., 2014). Doctors might have viewed a client with ADHD as having less severe or less problematic symptoms than someone with depression (Fuemaier et al., 2014). Stigmas will most likely affect how and why adults with ADHD are treated (Fuemaier et al., 2014). Stigmas can play a role in not only how adults with ADHD are treated in the community but also how much of that treatment could come from stigmatized attitudes about adults with ADHD (Fuemaier et al., 2014). Camilleri

and Makhoul (2013) reported that both adults and children tend not to seek treatment because they do not view ADHD as an authentic disorder. Stigmas about adults with ADHD were discovered among doctors, teachers, and adults with ADHD (Fuermaier et al., 2014). Stigmas include misuse of medication and negative labels on behavior once a diagnosis is confirmed ((Fuemaier et al., 2014). Stigmas are defined as a negative, incorrect, or stereotypical perspective that can alter the service provision process offered to individuals with ADHD (Fuermaier et al., 2014).

Those who view adult ADHD from a medical/biological perspective might not stigmatize those with ADHD, mainly because they would have acquired necessary knowledge, such as biological evidence of attention disorders, as compared to other healthcare professionals (Fuermaier et al., 2014). Healthcare professionals who provide resources for adults with ADHD, such as social workers, as well as those who practice diagnosing adults with ADHD should have acquired ADHD training to provide the right resources (Quintero, Balanzá-Martínez, Correas, & Begoña, 2013). Medication and counseling are the main methods of treatment for adults with ADHD whether it is ADHD with or without comorbidity (de Braek et al., 2017). Treatment is critical for adults with ADHD, and the consequences of untreated ADHD can be measured in the cost as mentioned in the next section below.

**The Financial Impact of Adult ADHD**

Pharmaceutical companies are working towards creating more options for cheaper ADHD medication due to the high cost of ADHD treatment (Zimovetz, Bischof, & Mauskopf, 2015). Because the cost of ADHD treatment is expensive, researchers are

attempting to understand how treatment can be improved for cost-effective care (Zimovertz et al., 2015). Scholars who focused on various utility models for measuring cost-effective treatment discovered cost-effective utility options for adults with ADHD (Matza et al., 2014). Cost-effective options are essential for adults with ADHD as more awareness about ADHD is increasing and as policy makers are reducing cost (Matza et al., 2014). Bolea et al. (2012) explained that ADHD is costly due to high rates of unemployment, psychiatric care, and substance abuse treatment. Some issues surrounding ADHD treatment relates to the sluggishness of services and limited understanding of how to treat and provide services for adults with ADHD (Bolea et al., 2012). Scholars are looking at cost-effective methods to reduce the expense of ADHD treatment with pharmaceutical treatments (Tockhorn, Televantou, & Dillia, 2014). Alternative drugs, such as Atomoxetine, can reduce symptoms in adults with ADHD even more than nonmedicated treatments used without Atomoxetine (Tockhorn et al., 2014). Advocates in the field such as Children and Adults with Attention Deficits Hyperactivity Disorder organization (CHADD) have put more emphases on awareness and policy changes (CHADD, 2017). Other researchers lean more towards the development of better medication to treat adults with ADHD (CHADD, 2017; Tockhorn et al., 2014).

Scholars have examined the distribution of cost, such as how the treatment of ADHD will be funded (Center of Disease Control, 2017). Treatment for ADHD is covered under behavioral health coverage, and like other illnesses, the coverage depends on the type of insurance (The Department of Health and Human Services, 2017). There are also some indirect, cost-related issues of ADHD in adulthood (Kirino et al., 2015).

Indirect costs are known as the burden of ADHD that exists and continues to rise from untreated ADHD (Kirino et al., 2015). Untreated ADHD is a burden across different cultures and countries (Kirino et al., 2015). The indirect costs are influenced by those behaviors that eventually lead to more critical interventions, such as cognitive behavioral therapy, as a result of not being effectively treated or not treated at all (CHADD, 2017). Untreated ADHD can result in substance abuse; incarceration; depression; anxiety; and difficulty retaining jobs, getting along with others, and incompletion of educational goals (Center for Disease Control, 2017; CHADD 2017; Matheson et al., 2013). Adults with ADHD can have high levels of incidents of offending behavior compared to the general incarcerated population (Knecht et al., 2015). Adults with ADHD who have criminal offenses have complex psychiatric disorders, drug abuse, early hyperactivity, and conduct disorder in childhood (Knecht et al., 2015). Patterns of criminal behavior also contributes to the cost of ADHD, such as the cost of treatment for psychological or cooccurring disorders in and out of prison as compared to non-ADHD offenders (Knecht et al., 2015). Policies are made to determine whether adults with ADHD will be able to receive resources for treatment, and these policies are influenced by the knowledge of experts in ADHD in adulthood (U.S. Department of Health and Human Services, 2017). Adults with ADHD may not receive treatment because it is a type of disorder that overlaps with other illnesses (Miranda et al., 2014).Without adequate support such as therapy, medication, life skills and a correct ADHD diagnosis, adults are at a high risk for developing comorbidities that lead to social, emotional, financial, educational, and criminal problems (Center for Disease Control, 2017). The cost of ADHD-related

struggles is actualized in the financial aftermath of not treating ADHD symptoms, which includes billions of dollars spent each year on ADHD-related issues (The Center for Disease Control, 2017).

**Policies for Treating Adult ADHD**

The Department of Health and Human Services provides information regarding the Affordable Care Act that includes the expansion of coverage for mental health problems and falls under preexisting conditions (U.S. Department of Health and Human Services, 2017). The expansion does include ADHD, but the capacity is still unclear (Center for Disease Control, 2017). Policies surrounding coverage for treatment of ADHD differs from state to state and depends on the type and level of insurance (U.S. Department of Health and Human Services, 2017). In many cases, ADHD in adulthood is an underresearched mental disorder and its impact on society is underresearched (Center for Disease Control, 2016). More funding has been provided for medication treatment due to increased research about the genetic components of ADHD (Matte et al., 2015).

The cost of dealing with ADHD-associated issues is widespread; therefore, policies surrounding ADHD are essential to reduce costs (Adamou et al., 2016). Policies for servicing individuals with ADHD can be unclear due to the ambiguous descriptions of what constitutes ADHD symptoms; however, adults with ADHD are included in the American Disabilities Act (ADA; Patton, 2009). There has not been enough consistent research about the policies that guide and define ADHD service and treatment (Adamou et al., 2016; Patton, 2009). ADHD is still a difficult disorder to clarify in policy because of its overlapping nature with other disorders and the diagnostic issues among

professionals on how to diagnose adults (Adamou et al., 2016). Another issue that could influence policies towards or against funding are the perceptions or stigmas that employers, families, and healthcare professionals have about adults with ADHD (Adamou et al., 2016; Fuermaier et al., 2014).

The ADA is a policy regarding the protection of those suffering with mental, physical, and intellectual deficiencies (United States Department of Labor, 2016). The purpose of the ADA is to protect individuals who are dealing with a mental or physical issue within the workforce as well as academic settings (United States Department of Labor, 2016). Without this type of protection, those with mental and physical disabilities can be discriminated against and be prevented from getting a job or even maintaining a job (United States Department of Labor, 2016). Because ADHD is recognized as a mental health disorder, it fits the requirements for being protected under the ADA. However, employers still are unsure about what constitutes ADHD, particularly in adulthood (Adamou et al., 2016). There is a lack of awareness about this disorder, and knowledge deficits are occurring on micro, mezzo, and macro levels throughout society (Adamou et al., 2016)

In terms of the micro level, family, friends, and coworkers may be unaware of ADHD (Matheson et al., 2013). On a mezzo level, perceptions of ADHD affect adults within the community, at jobs, in schools, and during doctors' visits, which leads to inconsistencies in treatment and service provisions (Ginsberg et al., 2014; Matheson et al., 2013). On a macro level, ADHD treatment is influenced by policies that guide nation-wide treatment and services (Adamou et al., 2016). The diagnostic coding and criteria

process structured by the professionals in the field, such as psychiatrists and psychologists, also influence policies (Adamou et al., 2016). Experts on attention disorders play a role in how polices are created to aid those suffering with the disorder (i.e., the ADA explains that ADHD in adulthood is a mental disorder and people suffering from it should be allowed certain types of assistance and support; Center for Disease Control, 2016; CHADD, 2017; United States Department of Labor, 2016).

## Summary

The lack of ADHD knowledge affects many different social, economic, and healthcare agents. In this literature review, I provided a comprehensive overview of the topics that are prevalent in the issue of ADHD both with and without comorbidity. I examined each agent that influences ADHD treatment, service provisions, and knowledge of ADHD symptoms in adulthood. I also highlighted how these topics fall into certain patterns as it pertains to ADHD and knowledge deficits. In terms of knowledge deficits experienced by healthcare professionals, three issues have been identified: deficits exist in understanding symptoms, identifying symptom criteria, and developing diagnostic criteria. Stigmas, quality of life, and policy are other factors related to the knowledge deficits experienced by healthcare professionals. Knowledge deficits do exist within the healthcare profession in general (Bushe et al., 2015). It was important to clarify and define knowledge deficits to establish its authentic existence. Much of knowledge deficits continue because experts continued to reevaluate the diagnostic tools used to examine whether someone has ADHD or not (Bushe et al., 2015). Social workers and case managers have the mission to provide referral sources for their clients (National

Association of Social workers, 2017). The purpose of this study was to explore the perceptions of social workers/case managers providing referrals for their clients who are diagnosed with precomorbid ADHD.

The obstacles and knowledge deficits social workers/case managers experience are key issues and will be further explained in Chapter 3. In Chapter 3, I will present the methodological process of collecting data regarding social workers'/case managers' perceived knowledge deficits and obstacles when providing medication and counseling referral resources to adults with precomorbid ADHD.

# Chapter 3: Research Method

## Introduction

The purpose of this qualitative, multiple case study was to explore social workers' perceived knowledge deficits about precomorbid ADHD and their obstacles towards providing medication and counseling referral resources. In the exploration of social workers' and case managers' knowledge deficits, I found obstacles towards providing medication and counseling referral resources for adults with ADHD. Within Chapter 3, there will be an explanation of the role of the researcher, how the researcher was involved in the study, and what goals the researcher had in conducting the study. The concept of saturation is introduced. I also establish a basis for participant selection and define how many participants were needed. Purposive sampling was used to guide the selection process. The explanation of ethical procedures, methodology, and instrumentation design is also covered in Chapter 3. The structure of the data analysis for thematic coding is defined and where the data will be stored and eliminated to protect participant privacy.

## Research Design and Rationale

The research questions are as follows:

RQ1. How do social workers describe and assess their knowledge about precomorbid adult ADHD?

RQ2. How do social workers describe and assess obstacles towards providing medication and counseling referral sources to the population of adults with precomorbid ADHD?

The research tradition for this study was an exploratory, multiple case study design. There are two factors to consider when determining the research tradition: the exploratory nature of the design and the type of case studies used. In the quest to explore social workers'/case managers' knowledge deficits and obstacles, multiple case studies were chosen for semistructured interviews. The exploration of social workers' and case managers' perceptions of knowledge deficits required interviewing participants who fit the criteria. The participants were interviewed individually. The interviews were conducted at the participants' work site, which is appropriate for a multiple case study design (Yin, 2013b).

## The Role of the Researcher

I interviewed the participants using audio recording. I also analyzed the documentation of the mental health training offered under the Department of Behavioral Health and Intellectual Disabilities (DBHIDS) and CBH, which is further explained in Chapter 4. The recording device was used to reduce personal interpretation of participants' data by me. I periodically repeated participant responses back to the participants to ensure that both the participants and I were clear about what was being recorded. The participant had the right to either confirm or deny my interpretation. Because this was an exploratory case study design, I was mindful of recording and reviewing participants' responses correctly during and after the interviewing process, as suggested by Yazan (2015). The participants were asked questions related to perceived knowledge deficits of precomorbid adult ADHD and obstacles towards providing medication and counseling referral resources. My role was to help the participants feel

comfortable while recording their feedback to have accurate data that were analyzed after the interviewing process was over, as suggested by Yazan (2015).

My affiliations with the participating agencies was based on third-party connections (i.e., adult mental health referrals). The organization contacted for participant recruitment was Community Behavioral Health (CBH). CBH was chosen as the main contact source because it is a major referral agent for agencies that provide social work services for individuals and families in a large city. The objective of connecting with CBH was to obtain information about the population of social workers and case managers working with adults with ADHD. I narrowed the list by only contacting the agencies that provided adult mental health services under CBH.

I e-mailed agency directors who supervised agencies under CBH, and willing supervisors signed a letter of cooperation form. It was important for me to consider that, although biases in qualitative research is never eliminated completely, the goal was to reduce biases as much as possible, as noted by Yin (2013a). The researcher's biases are managed in three stages: awareness, purpose, and practice (Roulston & Shelton, 2015). In this study, I self-checked personal beliefs and perceptions. This monitoring included managing beliefs and perceptions that might have triggered biases within the observation of participant responses and the interpretation of data (Roulston & Shelton, 2015). Therefore, I was careful to not include any extra questions or comments during the interview process. The process of keeping the purpose clear also helped to reduce my attempt to observe, perceive, ask questions, or interpret the data towards a biased agenda, as suggested by Roulston and Shelton, (2015). The practice of making sure that data were

being interpreted without agendas required me to be quick to listen and slow to make comments, as outlined by Roulston and Shelton (2015).

## Methodology

### Population and Sampling Strategy

The population came from the healthcare profession of social workers/case managers. Social workers/case managers who worked with the adult population were targeted and identified. Once identified, I reached out by email to get a sample of those social workers and case managers working with the adult ADHD population. The sampling strategy included the process of recruiting only social workers/case managers who worked with adults with ADHD. For qualitative case study designs, purposive sampling is appropriate in exploratory studies involving a small group of participants (Yin, 2014a). Through the recruiting process, the sample was extracted from the broader population of social workers working with adults under CBH. Although I was aware that social workers will have various types of clients, adults with ADHD was a population that had to be regularly serviced by social workers and case managers as a part of the criteria for selected participants.

### Criteria for Participant Selection

The selected participants had direct contact with adults experiencing attention disorders as reported by the participants. The participants had to have the title and duties of a social worker or case manager employed under an agency that follows the guidelines of social work according to The National Association of Social Work and CBH under targeted case management (CBH, 2017; National Association of Social Work, 2017).

According to McKitterick (2012), social workers provide key services that are shared among other social workers practicing in social work. For interviewing, recording, and transcribing data, the participants had to be fluent in English because I am only fluent in English. Participants met the criteria based on practicing social work intervention services, such as intakes, problem identification, treatment plans (which usually included a referral process), and termination. These intervention services are also practiced by employees with the title of case managers working under CBH (2017). Case managers practice social work intervention strategies just as targeted case managers are types of case managers providing social services to clients (CBH, 2017). See Appendix C for a table of how participant selection was conducted.

The criteria for participants included social workers/case managers with the primary job of providing referral resources to clients where social work problem-solving strategies are practiced. Social problem-solving is the lens for understanding social workers' perception of obstacles towards providing medication and counseling referral resources (Artistico et al., 2013). How participants provided referral resources was important in understanding the obstacles faced when attempting to provide medication and counseling referrals for adults with precomorbid ADHD. Below is a closer look at the seven steps of social work problem-solving strategies,

Engagement: Where the social worker gets to know the client, establishes trust, and interacts to identify the problem(s).

Assessment: This is where the interview or intake process occurs, and the social worker gathers necessary information to start the planning process of services.

Planning: Once problems are clearly defined, the social worker, along with the client, will develop a set of goals that are measurable, including referring clients to other services based on client's need.

Implementation: Goals are implemented into action steps that are followed by the client with the guidance of the social worker or case manager.

Evaluation: The social worker helps the client assess the outcome of the goals and the action steps.

Termination: Once goals have been accomplished and agreed upon by both the client and the social worker, the client is then discharged.

Follow-up: The social worker will follow up with the client after termination to check client's progress. More information will be provided in Chapters 4 and 5 to further explain the data regarding what strategies the participants used in providing referral resources to clients with precomorbid ADHD.

**Procedures for Participant Recruitment**

The CBH was contacted by phone to gain a provider list. The provider list was narrowed down to social workers and case managers working with adults at mental health agencies. The agencies were randomly chosen for e-mail information. E-mail flyers were sent out to agencies. The e-mail flyers were sent to agency directors requesting the use of agency facilities for interviewing those social worker and case managers who worked with adults with ADHD. The table for the recruitment process is under Appendix A. The table displaying the flyers for recruitment is under Appendix C. For this study, the estimated number of 10 participants were reached.

## Saturation and Sample Size

Saturation occurs when participant responses have become redundant and adding on more participants would increase the incidents of redundant responses (Fusch & Ness, 2015). The expected sample size was 10 because it was assumed that saturation could be met around 10 as social workers/case managers have many common practices and shared experiences as a result of those common practices (National Association of Social Workers, 2017). Those common practices are conducting intakes, intervention strategies for clients needing services, and referring clients to outside resources (CBH, 2017; National Association of Social Workers, 2017). The relationship between sample size and saturation is defined as the point where participant responses will become redundant (Fusch & Ness, 2015). Because social workers and case managers across the board provide services through problem-solving strategies, I assumed that common obstacles are experienced among social workers/case managers when providing referrals for clients.

## Instrumentation

### Sources of Data Collection

**Semistructured interviews.** Reducing biases is an important goal when collecting and analyzing data (Yin, 2013b). Therefore, I applied triangulation. The triangulation process included semistructured interviews and data analysis. Semistructured interviews consisted of 15 open-ended questions designed to offer participants the opportunity to provide feedback that was related to the research topic. I

repeated participant responses back to them so that participants had the opportunity to correct or confirm their statements.

**Document analysis.** The second source of data collection was document analysis. The documentation that was analyzed was the Behavioral Health Training and Education Network (BHTEN). The documents can be found on a website sponsored and funded under the DBHIDS and CBH. The website includes a training calendar, a full course list, and resources that include links to training information such as videos about recovery supported by DBHIDS and CBH (CBH, 2017; DBHIDS, 2017). Most social workers/case managers are required to attend trainings to learn new intervention strategies and to gain more awareness of the various issues that their clients deal with (National Association of Social Workers, 2017). BHTEN is a comprehensive training tool used by social workers, case managers, other healthcare professionals, and the community (CBH, 2017). Under the umbrella of CBH, mental and behavioral health services are provided through DBHIDS where BHTEN trainings are documented, publicized, and offered regularly (CBH, 2017). The documents that were analyzed are listed under the full course list on BHTEN's website. These training documents lay out the training courses that healthcare professionals participate in to gain knowledge about their clients' various mental health issues. The time when trainings are offered was also reviewed. The training model was evaluated; however, the actual participation of the participates within the training model was not confirmed. Although participants did provide feedback on receiving training, BHTEN training was not identified. More about the document analysis will be explained in Chapter 4.

The structure of the training materials helped me to gain information on how training courses were set up and when. In the analysis of training materials, I found how the agencies prepared and trained employees, such as social workers and case managers, to understand mental health. The nature of the training program was to increase knowledge about mental health issues, and social workers and case managers are a part of the staff that BHTEN trains (CBH, 2017). From the view of social problem-solving, positive or open methods of solving problems are defined as being open to the opportunities that allow problems to be solved. Negative or limited problem-solving relates to closed approaches to problem-solving, meaning that the problem is viewed in a pessimistic manner, seeing no way out of the problem or providing limited or incomplete solutions to resolving the problem. BHTEN provides training but the limitations on the training is not further explained on the website; therefore, I was not sure how open DBHIDS or CBH is in creating more training options and opportunities for their employees. The analysis of the training model was conducted at a single location, and it was not necessary to be conducted with or around participants. I confirmed with the DBHIDS the most recent training models presented on the BHTEN website. Below is a check list for the document analysis.

- Establishing that healthcare professionals working under CBH (such as social workers and case managers) use the training courses online
- Confirming that the training courses include the mental health of adults with ADHD
- Documentation of how often training courses occur

- Documenting the length of time social workers are learning about the mental health issues of adults with ADHD
- Exploring whether there is a process or certificate of completion of the courses

The goal of analyzing the training models was to further document what social workers do know about adults with ADHD through the support of the participants' agency's training opportunities through BHTEN. It was not determined through the data that the BHTEN training model was helpful for the participants of this study.

## Sufficiency of Data Collection Instruments

In conducting semistructured interviews, there were two goals: an interview protocol (protocol script found under Appendix D) that explains to participants the interviewing purpose and procedures. Semistructured interviews that included open-ended questions focused on the central phenomena of this study, which was perceived knowledge deficits and obstacles in providing medication and referral resources. The first research question was evaluated by asking eight open-ended questions to explore whether social workers perceived knowledge deficits about adults with precomorbid ADHD. The second question required a section of questions pertaining to obstacles when providing referrals for medication and counseling. Interview Questions 1 through 8 were asked to explore social workers' perceptions of attention disorders and precomorbidity. Questions 9 through 15 were asked to explore how participants provided referral resources to adults with ADHD. Participants were also asked to explain if any obstacles existed when providing referral resources in general. The interview questions can be found under Appendix E.

## Researcher-Developed Instruments

The interview questions were reviewed by three content experts. The three content experts were qualified as they have doctorate degrees in human development, psychology, and social work. The process of recruiting content experts involved contacting each prospective expert and inviting him or her to participate in reviewing the research instrument (interview questions) developed for this study. The invitation was by phone and e-mail, followed by an explanation of the study and a request to evaluate the research instrument. All three content experts prepared a written explanation of their review of the instrument. I received suggestions to add more content about training within the Interview Questions 9 through 15 and to increase clarity about what was to be explored regarding training and knowledge of adults with precomorbid ADHD. From those suggestions, I added career-related training so that the participants would know what training I was asking about.

## Data Analysis

Thematic coding was used to assess the data collected from the semistructured interviews and document analysis. The idea was to not find themes and patterns but to use thematic mapping to understand and explore more in-depth meaning within the themes and patterns, as suggested by Willig and Stainten-Rogers (2016). Instead of coding the repetition of words from participant responses, there was an emphasis placed on how those patterns of words, suggestions, questions, and or phrases related to the research questions by developing overarching themes and subthemes. There was a pattern of perceived knowledge deficits from the participants, and I coded the responses to

provide details about how the patterns of knowledge deficits related to the overarching theme and subtheme by first developing codes. Identifying patterns in terminologies led to identifying codes and then themes (Price, MacDonald, Adair, Koener, & Monson, 2016). The goal of thematic mapping was to piece together the key terms and the number of coded responses to specify subthemes and how they related to the overarching themes. The strategy that was used for conducting data analysis of participant responses can be viewed in Chapter 4. This strategy of coding was used in Price et al. (2016), and it was effective in gathering the meaning of phrases and not just the count or number of times a phrase or comment was mentioned.

The responses were coded as those that appeared to be the most impactful for the participants as they related to the subthemes and overarching themes. Knowledge deficits were perceived by the participants, and the amount and degree of those deficits was documented and coded. I coded comments and emerged from those comments were the themes. This coding process was mostly developed once I began to identify redundant responses as they were associated with knowledge deficits and perceptions of obstacles. To avoid putting a value on participant comments, I coded phrases by grouping phrases based on repetitive responses. The impact of a statement by participates was coded as it related to the significance of what the participants were expressing and as the participants verbalized as impactful or important. All responses by participants were coded as participants verbalized, and they were analyzed and defined in their own statements. It was important to cover all ways that participants might have expressed their personal perceptions of knowledge deficits and perceptions of obstacles towards providing

medication and counseling referral resources. The terms in the list below demonstrate how participant responses were evaluated. Once coding was complete, the goal was to explain the data from the details of the comments made by participants related to the interview questions as categorized below.

Codes were identified by the number of occurred responses.

Overarching themes identified the themes that stood out the most from the occurred responses.

Subthemes were extracted from the overarching themes.

There was significance in the patterns and themes of what participants said, particularly as those responses related to the research questions.

The next data collection mechanism was document analysis. The documents were web-based and could be obtained by locating the training schedule. The training schedule listed the type of trainings and how to register for the trainings. Document analysis was used to evaluate the training schedule in terms of themes in training schedules and topics. From the analysis of the training schedule, four questions were developed below:

1. What are the trainings about?
2. Who are the trainings for?
3. How often do the trainings occur?
4. What are the guidelines for completing the trainings?

The themes within the document analysis depended on the training models offered by the organizations that implemented the trainings. The training courses were listed and were visible to the public; therefore, it was not difficult to obtain training

information about the courses online. The purpose of the document analysis was to explore another source of data. The second source of data showed the training opportunities for participants working under CBH. More about the training model will be explained in Chapter 4.

## Issues of Trustworthiness

For this qualitative study, semistructured interviews and document analysis were conducted to reduce bias and increase trustworthiness as well as include more than one source of data collection, as suggested by Yin (2013a). Data were stored on a hard drive and maintained by me. The participants were aware of the process, as well as their rights relating to participation, information, and research closure of data and privacy, as suggested by Lichtner et al. (2016). The participants were randomly selected from two different agencies. Each participant was made aware that his or her participation was strictly confidential and voluntary. The participants were informed of their rights while involved in the multiple case study interviewing process. Once consent forms were signed, I began the interviewing process. In the event the participants decided to discontinue; those participants were notified that any data collected prior to discontinuation would not be used in this study.

## Ethical Procedures

The ethical process of conducting the exploratory case studies includes all appropriate and necessary documents so that the study can be developed with fluency. The first step to this process was to follow Walden University's Institutional Review Board (IRB) procedures. Reviewing and including documents from Walden for this study

included adult consent forms, which were needed because all participants in this study were over 18. The consent forms were also used to clarify that data collected were used for this study. Records were maintained by me. This proposal did not require documents relative to recruiting participants who were employed at the same venue as me. The participants were also not underage. According to IRB standards, minors include all of those under the age of 18. The consent forms within the IRB also provide protection of human subjects by providing consent forms so that participants are aware of their rights to privacy. All necessary consent forms were provided to the participants in an effective manner.

Ethical procedures during the recruitment process involved the initial conversation with the stakeholders of CBH. Community behavioral health agents provided information about social workers' agencies of employment and the population they service. The agency directors were contacted by e-mail with the invite and request to sign the letter of cooperation form so that I could use the agency space to conduct interviews. Information was provided to the agencies, as well as agency directors regarding the study. All participating agencies and participants were informed about the data collection process and my role.

Other ethical issues that were avoided included conflict of interest. All precautions were taken to reduce unethical situations including any harmful scenarios that could evolve out of the actual interviewing process. Participants could be at risk for experiencing emotional harm because questions during the interviewing process covered areas of competencies in social work-related tasks, such as problem-solving and

knowledge of client issues. Because participants could feel some level of discomfort when describing knowledge deficits, I made a point to ask the participants if they were comfortable before, during, and after the interview process was over. It would be unethical for me to not pay attention to whether the participants were feeling discomfort when answering questions about perceived knowledge deficits regarding adults with precomorbid ADHD. I was prepared to discontinue the interview if the participants verbalized the desire to discontinue due to any levels of discomfort; however, there was no need to discontinue as no participants expressed any discomfort.

## Treatment of Data

The data collected from the participants were stored on a hard drive, and the data did not include actual names of the participants, as suggested by Merriam and Tisdell (2016), the Research Ethics Guidebook (2017) and Yin (2013a). The consent forms kept by me will be shredded and eliminated 5 years after the study is complete. The hard drive is kept in a safe that only I am aware of. Participant cases were given numbers instead of actual names because numbers are easier to track without compromising participants' privacy, as suggested by Yin (2013b). Each case number followed the letter P for identifying participants.

## Summary

In Chapter 3, the main topics discussed included the role of the researcher and the role and criteria of the chosen population. I established the responsibilities of the researcher during the study. Researcher responsibilities included conducting research that was ethical and organized as well as maintaining sensitive material of the data and the

human subjects involved in the study from where data were collected. The process of collecting data included using the methodology of qualitative multiple case studies for semistructured interviews. Chapter 3 also included the explanation of the methodology and the process by which data were collected. The data collection was conducted through semistructured interviews and was thematically analyzed. The sampling strategy included the process of how I contacted participants and gained participants. The sampling strategy was developed to incorporate saturation and the type of sampling involved purposive sampling to reach saturation. The forms and protocol for collecting data were associated with the ethical guidelines and procedures according to the IRB. Ethical procedures and guidelines were followed by understanding and enacting the IRB procedures to ensure the data were reliable while protecting participant rights. The trustworthy nature of this study included increasing methods for dependability and reflexivity, such as purposive sampling and triangulation of collecting data. The explanation of the treatment of data after the data were collected was the final phase of this study. The breakdown of data storage and data elimination were explained in detail, as well as the materials that were used to store the data. The data storage mechanisms also included the process of how participants' personal information was recorded and stored by using numbers to represent participants and each participant case. In addition to using numbers to secure participant privacy, the anonymous data were then stored on a hard drive only known to me.

In Chapter 4, I present the results of the study.

# Chapter 4: Results

## Introduction

The purpose of this qualitative, multiple case study was to explore how social workers describe and assess their knowledge about precomorbid adult ADHD and how social workers describe and assess obstacles towards providing medication and counseling referral resources to the population of adults with precomorbid ADHD. In this chapter, I will describe the participants' interviewing process. The interview process included the setting, demographics, data collection, and data analysis strategies. The physical setting included the agencies where participants were interviewed. The demographics included the population and the specifics of that population as it pertained to the participant criteria needed to address the research questions.

Data were collected through interviewing participants, and there were 10 participant cases. The face-to-face interviews conducted were used to describe the participants' responses through thematic coding. The triangulation of data consisted of two parts where the participants' answers to the interview questions were analyzed as well as the training models used to train participants about mental illnesses. The last process included the evidence of trustworthiness and the results. The results section displays the thematic coding that was modified after the data were collected based on responses from the participants. The coding modification includes themes and patterns that were discovered based on participants' description of the terminologies stemming from the research questions.

## Settings

There were two recruiting cites that allowed access to interview participants. Both agencies provided services to adults with mental illnesses and adults with ADHD. The two agencies were not close to each other as one agency was in another section of the city from the other. The first agency director who approved the use of office space to interview participants also allowed the participants and me to choose an area that was comfortable and away from office noise. The interview environment was a spacious office where employees shared space. The office room was empty, and the interviewees and I sat at the meeting table in the center of the office. Four participants from the first agency completed the interview. The participants were identified as case managers for adults by the agency director. Each interviewee came ready to participate and was initially curious about the study. I started with a self-introduction and then an explanation of the study. The participants were then allowed to ask questions regarding the research that was followed by an explanation of the consent forms. The participants were able to take a couple of minutes to look the consent form over and sign it.

## Demographics

The participants were full-time employees of the two agencies included in this study. The job requirements consisted of supporting and advocating for clients as well as providing referral resources to meet the clients' needs. The foundation of participants providing services to clients was based on guidelines through CBH that included the intake process, building a relationship with the clients, identifying the problems, referring resources to clients, and helping clients achieve goals (CBH, 2017). The way that

participants described helping clients included referring the clients to outside agencies where those clients could receive services that were specific to their needs.

The second agency was equal to the first agency in terms of organizational levels and a large population of employees providing mental health services. Both agencies require employees to provide referrals resources and maintain billable hours. In the second agency, six participants volunteered to participate in the study. The second agency provided services for adults with mental illnesses as well as services for children. The second agency also provided services for families, such as therapy and drug and alcohol treatment. The participants also worked in teams and individually. In the first agency, participants worked in teams and in some cases individually. In the second agency, the participants worked mostly individually but worked in teams when necessary, such as in crisis situations. The administrative staff of both agencies consisted of directors and social workers, also called case management supervisors or lead case managers. The lead case managers acted as floor managers of the case managers but still needed to report to the department directors. Both agencies were funded under CBH.

## Data Collection

There was a total of 11 volunteers who agreed to participate between the two agencies. I completed 10 interviews from the 11 volunteers. I met each group of participants at their respective agencies. The first agency director located near central Philadelphia provided a shared office space for me to conduct the interviews. The four participants came one at a time and had scheduled appointments. The time of the interview ranged from 30 minutes to 35 minutes, which included an explanation of the

research, consent forms, and terminologies included in the interview questions. The participants had a shared space, which is not unusual for offices located in CBH-affiliated agencies; however, the space was also chosen by the director to be used for the interviews. The large space did make it easier to set up laptop and audio equipment. The participants appeared comfortable and did not verbalize any issues with being in a bigger space. The door was closed for privacy.

Within the second agency, three of the participants identified with the title of social worker, and the other three identified as case managers. Both case managers and social workers performed the same duties of providing referral resources and services to clients. The difference between the titles mainly related to their academic degree and the number of clients the participants were serving. The second agency provided a smaller room made available to interview participants. The audio recording device was small so that the audio was not distracting or intimidating. Because agencies are public places, I made the decision not to use video to ensure that no one else, particularly clients, could even be accidentally recorded on video. Ten participants were interviewed with the initial intention of analyzing the data to see if saturation was reached. As the interviews were taking place, about half-way through the participant responses redundancy was identified; however, it was necessary to continue interviewing until 10 participants were interviewed to complete the interviewing process.

## Data Analysis

All 10 participants answered the 15 interview questions. Participant responses were audio-recorded and transcribed by me. The responses from the participants were not

lengthy in general and varied from a couple of sentences to a paragraph long. All responses were analyzed and are explained further in this chapter. A thematic map was designed to demonstrate the themes and the subthemes and codes. Thematic mapping is a summary of the coding process from analyzing the data. The coding process led to the overarching themes that were identified. The overarching themes also represent the research questions as the research questions are related to the research topic. The two overarching themes were knowledge deficits and perceptions of obstacles. The overarching themes were developed from subthemes, and the subthemes were reflective of the codes that were interpreted based on the number of responses that occurred relating to the codes. The first overarching theme was knowledge deficits, and the subtheme was knowledge deficits regarding precomorbid ADHD in adulthood. I interviewed participants to understand their perceptions relating to precomorbid ADHD in adulthood. Based on participant responses, three codes were created. The codes are as follows: Code 1- training, Code 2- precomorbidity, and Code 3- comorbidity.

The terminologies in the codes above were implemented from the interview responses regarding social workers' knowledge about precomorbidity in adults with ADHD. The third code, comorbidity, was identified as a code due to a pattern of responses related to participants differentiating between comorbidity and precomorbidity. The codes are interpreted below.

**Training**

- Training was received relating to precomorbid adult ADHD in adulthood
- Training was not received regarding precomorbid ADHD in adulthood

- Unsure if training was received regarding precomorbid ADHD in adulthood

**Precomorbidity**

- Identified precomorbidity in adults with ADHD
- Difficulty identifying precomorbidity in adults with ADHD
- Unsure if precomorbidity was identified in adults with ADHD
- Identified cooccurring when asked about precomorbidity

**Comorbidity**

- Knowledge about comorbidity (cooccurring) disorders in adults with ADHD
- Expression of no knowledge about comorbidity in adults with ADHD
- Expressed uncertainty about comorbidity in adults with ADHD
- Did not provide a response that answered the question regarding knowledge about comorbidity

## Perceptions of Obstacles

The subtheme was obstacles referring resources and the codes were based on adults with precomorbid ADHD. The codes were as follows:

- Code 1-medication and counseling
- Code 2-referral resources for adults with precomorbid ADHD
- Code 3- challenges to providing referral resources to adults with precomorbid ADHD

**Medication and Counseling**

- Obstacles were perceived providing counseling referral resources
- Obstacles were not perceived providing counseling and referral resources

- Unsure that obstacles were perceived
- Obstacles were perceived providing medication referral resources
- Obstacles were not perceived providing medication and referral resources
- Unsure that obstacles were perceived
- Referral resources for precomorbid adults with ADHD
- Resources and services were not referred
- Resources and services were referred
- Unrelated response

**Challenges to providing referral resources to adults with precomorbid ADHD**

- Challenges were perceived
- Challenges were not perceived
- Unsure if challenges were perceived

The overarching theme, knowledge deficits, unfolded from the subtheme, and then the subtheme unfolded from the coded responses. The discrepancy in one code categorized under the subthemes was, unrelated response, which was identified once I realized that some responses appeared to have no relation to the interview question. I determined the lack of relationship to the interview question based on answers that did not appear answer the question.

## Evidence of Trustworthiness

### Credibility

The sampling method for this case study was used to reduce bias by recruiting participants without using a structured system of selecting participants employed under

CBH. I received a list of agencies that was a link provided by CBH, and I used that list to select employees to e-mail invitations to participate in my study. The initial contact and invitation to participate was through e-mails identified on the agency websites. When participants responded to the e-mail, I provided information about the research and the interviewing process in more detail. Some employees from the website only had phone numbers and not a direct e-mail contact. Employees without a direct e-mail were invited by phone, and e-mails were requested over the phone. I scheduled meeting times with the participants through e-mail. Once the meetings were arranged, I was prepared with recording equipment, consent forms, and information about the study.

**Transferability**

The participants were a part of a population that services adults with mental illnesses (CBH, 2017). The participants were identified as either social workers or case managers. For example, four out of six of the participants in the second agency identified as CUA case managers who provide social work services to adults; these services include the problem-solving skills covered in Chapter 3. According to the National Association of Social Workers (NASW, 2017), those employees who are fulfilling social work duties should be following the social work problem solving techniques, which includes engagement, assessment, planning, implementation, evaluation, termination and follow-up (NASW, 2017). CBH follows the guidelines of social work problem-solving; therefore, this study could be conducted inviting employees who have the duties of completing intake, problem identification, and provision of referrals according to the guidelines of NASW (CBH, 2017; NASW, 2017). If employees at agencies experience

knowledge deficits about ADHD without comorbidity, then it is possible for participants at any agency providing social work to also have difficulty identifying and servicing adults with ADHD without comorbidity.

### Confirmability

I did add one explanation to the interview questions and that was a definition for precomorbidity. I explained that precomorbidity for this study was the presence of symptoms of ADHD in adults without the presence of a comorbid disorder. Most of the participants still did not understand the terminology comorbidity as explained in the context of adults with ADHD; therefore, I had to define precomorbidity without the presence of a cooccurring disorder. The participants understood the other terminologies regarding comorbidity including coexisting disorders or adults with ADHD with other disorders with a clear understanding of cooccurring disorders. Once I was able to clarify precomorbidity in the manner that the participants understood, the participants went on to provide their responses to the questions that were related to precomorbidity.

## Document Analysis

Prior to meeting with participants, I reviewed the training model presented on BHTEN. The BHTEN website included the price of each course. The website did not have a mandate for CBH employees to take the training but the training modular was open to employees and the community. There was no list of trainings specifically regarding adults with ADHD with or without comorbidity all the way to December of 2018. There was no way to determine if future trainings were available regarding adults with ADHD as the schedule for 2019 had not yet been posted. Information about

BHTEN's training model can be found in chapter 5, which included the analysis of the training model used. The training model was a part of the triangulation of data. The purpose of the analysis of the training model was to get another understanding of how participants could receive mental health training provided by their major funding source, which was CBH. Many of the interview questions surrounded the concepts of knowledge about adults with precomorbid ADHD. Analyzing BHTEN training model provided some insight of participants' general access to education about mental and behavioral health.

Once the evaluation of BHTEN training website was complete, I was unclear about what was offered to the participants regarding adults with ADHD. Three of the 10 participants explained that they did receive some training related to adults with ADHD. The training models at one point might have provided training about ADHD but perhaps not in the past 6 months. It is important to add that there is no way of knowing whether any ADHD-related training came directly from the BHTEN training model. The participants did not specify the source of the training, so it is possible that the training was from another source other than BHTEN. One participant did identify that training about adults with ADHD was provided from another source outside of what the agency offered. Most of the participants were unsure about the training they received or explained that they had not received training regarding adults with precomorbid ADHD. The participants who did receive training did not clearly state the source of the training.

BHTEN website has the statement shown below,

> The Behavioral Health Training and Education Network is committed to supporting the Philadelphia Department of Behavioral Health and Intellectual

> disAbility Services (DBHIDS) and other human service systems by planning, coordinating and providing quality learning experiences both in the classroom and soon virtually over the Internet (e-learning) in Behavioral Health and related topics. Our training audiences include providers and administrators of services, individuals engaged in services, family members and other interested community members. This website is designed primarily to help you to find and sign up for the trainings that interest you. We plan to add features and content on an ongoing basis and hope you will return regularly to see what new trainings and resources we have to offer here.

There are roughly four categories of courses offered: case management training, behavioral training, crisis training, and trauma training. Some of the courses offered are as follows:

- Trauma recovery and empowerment
- Addictions
- Bullying prevention
- Anxiety, depression, and youth
- Adult case management orientation

## Results

The participants answered questions to address whether they met the criteria for this study. The criteria, as mentioned in Chapter 3, for participants to be employed under CBH providing social work services such as intakes, problem identification, and referral services to clients. Another criterion was that participants provide services for adults with

ADHD. Tables 1 and 2 shows the participants' responses to the first three interview questions.

Table 1
*Agency One*

| Participants | Job title | Assigned Job duties | Do you service adults with ADHD |
|---|---|---|---|
| Participant-1 | Drug and alcohol case manager | Individual and group services | yes |
| Participant-2 | Patient advocate social worker | Access and provide resources for clients | yes |
| Participant-3 | Case manager | Intakes | yes |
| Participant-4 | Case manager | Life skills | yes |

Table 2
*Agency Two*

| Participants | Job title | Assigned Job duties | Do you service adults with ADHD |
|---|---|---|---|
| Participant-5 | CUA case manager | Assist clients with treatment plans/goals represent clients respond to emails | yes |
| Participant- 6 | Assistant counseling social worker | Intakes, individual and group sessions | undecided |
| Participant- 7 | Case manager | Maintain housing and medication management for adults with severe mental illness | We have a few on our case load |
| Participant -8 | CUA case aid | Maintain mental health records and documents for clients as well as assist clients in court | Not sure |
| Participant-9 | Crisis social worker | Evaluations inpatient and outpatient referrals | yes |
| Participant-10 | Social worker | Referrals and assist clients with life skills | Yes- co-occurring |

The most significant discrepancy that was identified was the participants who responded as undecided and “not sure” about servicing adults with ADHD. I made the decision to continue with the interview to further investigate whether the participants would still meet the criteria for this study. The participants who identified as not sure or undecided did fit the criteria as the participants did provide feedback relative to the process of referring resources to adults with ADHD as more interview questions were asked. Ten participants responded to the interview questions, and all responses were

categorized in codes then subthemes, and then overarching themes. The codes were developed and organized to interpret the data as most of the data reflected repetitive responses that were connected back to the research questions. The research questions were assessed in addition to the development of the overarching themes, subthemes, and codes. Using inductive reasoning, the explanation of the results will begin with the categorized codes to the overarching theme. The thematic map below in Figure 1 provides an overview of the coding process.

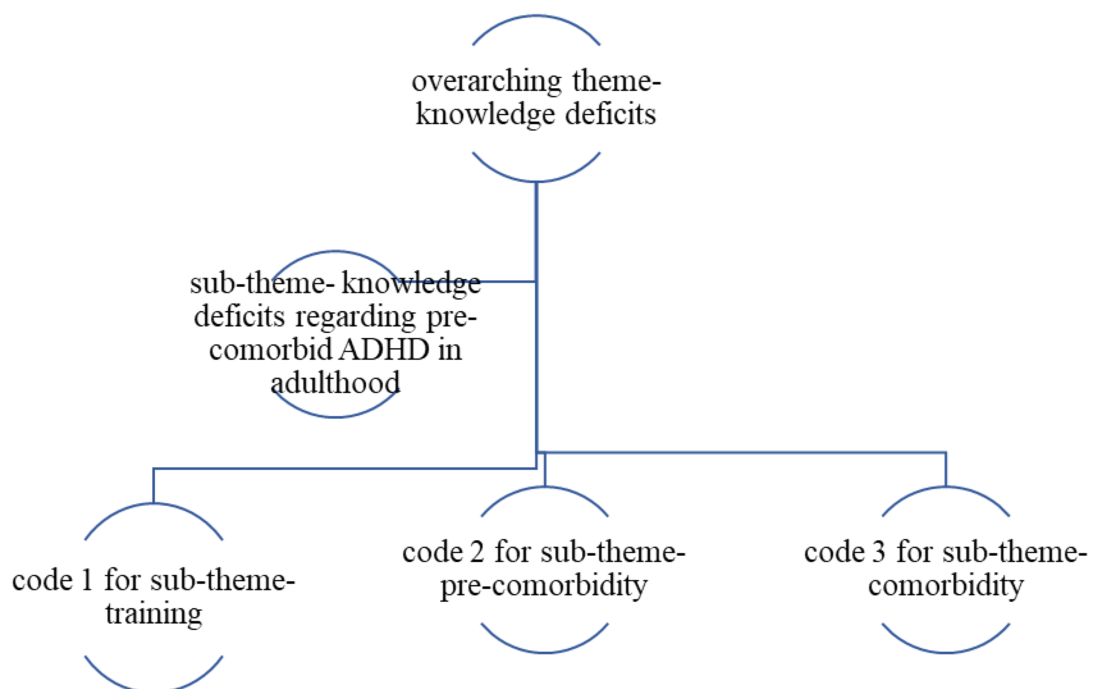


*Figure 1.* Coding process.

The term training was identified for code development. The code for training was interpreted in three different responses based on participant responses in Table 3 below,

Table 3

*Code-1 Training Regarding Knowledge Deficits of Adults with Precomorbid ADHD in Adulthood*

| Code | Number of occurred responses |
|---|---|
| Training was received relating to pre-comorbid adult ADHD in adulthood | 7 |
| Training was not received regarding precomorbid ADHD in adulthood | 2 |
| Unsure if training was received regarding precomorbid ADHD in adulthood | 1 |

One participant responded unsure if they received training, which was an unexpected answer as I was expecting either yes or no. There was no further explanation associated with the participants' unsure response. It is not uncommon for healthcare professionals to be uncertain about training or knowledge regarding adults with ADHD (Bushe et al., 2015; Hall et al., 2013). There were two occurrences of no training, which is also not uncommon based on previous literature (Hall et al., 2013). The next code was precomorbidity, and the description for the code is in Tables 4 and 5.

Table 4

*Code-2 Precomorbidity Regarding Knowledge Deficits of Adults with Precomorbid ADHD in Adulthood*

| Code 2 | Number of occurred responses |
|---|---|
| Identified precomorbidity in adults with ADHD | 2 |
| Difficulty identifying precomorbidity in adults with ADHD | 2 |
| Unsure if precomorbidity was identified in adults with ADHD | 1 |
| Identified cooccurring when asked about precomorbidity | 5 |

Table 5

*Code-3 Comorbidity Regarding Knowledge Deficits of Adults with Precomorbid ADHD in Adulthood*

| Code 3 | Number of occurred responses |
| --- | --- |
| Knowledge about comorbidity (cooccurring) disorders in adults with ADHD | 5 |
| Expressed uncertainty about comorbidity in adults with ADHD | 2 |
| Did not provide a response that directly answered the question regarding knowledge about comorbidity | 3 |

Comorbidity is the presence of another identified diagnosis other than ADHD (Duran et al., 2014). The recognized terminology among the participants appeared to be cooccurring, as cooccurring was used by the participants to explain adults with ADHD and comorbidity. Three participants may have made comments regarding comorbidity in adults with ADHD. I was unsure of whether the participants were explaining situations of comorbidity in clients as opposed to knowledge of comorbidity. Below are the three responses to the interview question “How would you define your clients with ADHD in terms of comorbidity?” These were the responses that were coded as not a response that directly answered the question regarding knowledge about comorbidity.

(Participant response) “Ill-informed most of mine are not even aware of what they are dealing with.”

(Participant response) “Well, their diagnosis is already done when they come to me.”

(Participant response) “Well a lot of my clients some of them are required to go but I don't know but I would say on paper sometimes they might not be ADHD but their drug use that plays a major part in how they may behave.”

Two of the participants were uncertain about comorbidity in adults with ADHD. Five participants expressed knowledge about comorbidity (cooccurring disorders), which was consistent with healthcare professionals’ acknowledgement of cooccurring disorders in adults with ADHD (Bushe et al., 2015; Duran et al., 2014). The participants expressed knowledge about adults with ADHD and comorbidity as compared to precomorbid ADHD. In the Code 2 table when participants were asked about precomorbidity, the occurrences of knowledge from participants was still in reference to ADHD with comorbidity as a response to what precomorbidity was in ADHD.

Using inductive reasoning to analyze the data, I first looked at the codes and the occurrences of responses from those codes. From the interview questions, patterns of responses revolved around what was known and what was not known about ADHD as ADHD is associated with comorbidity and precomorbidity as well as participants’ training about ADHD. Significant occurrences of participants’ perceived knowledge involved adults with ADHD with cooccurring disorders. The extent of that knowledge as understood by me was participants’ identification of clients needing “guidance to focus,

pay attention and stay on task." Participant knowledge of adults with ADHD was specific and primarily associated with cooccurring, such as "substance abuse or drug and alcohol." Some participants did receive training regarding adults with ADHD. Participant knowledge regarding precomorbidity was limited. When looking at Code 2, participant knowledge was limited to clients needing "guidance" and "direction." Each code was analyzed to explore the concepts surrounding the subtheme knowledge deficits regarding adults with pre-comorbid ADHD. The data for this study reflected previous literature that ADHD is mostly recognized with comorbidity or cooccurring disorders (Anderson, 2016; Bushe et al., 2015; Pehlivanidis et al., 2014). The overarching theme knowledge deficits provided the basis for my exploration into knowledge of precomorbidity. The next overarching theme was perceptions of obstacles. The subtheme for the overarching theme was obstacles referring resources to adults with precomorbid ADHD. The codes were developed from the interview questions related to perceived obstacles. The thematic mapping for the codes is shown in Figure 2 below,

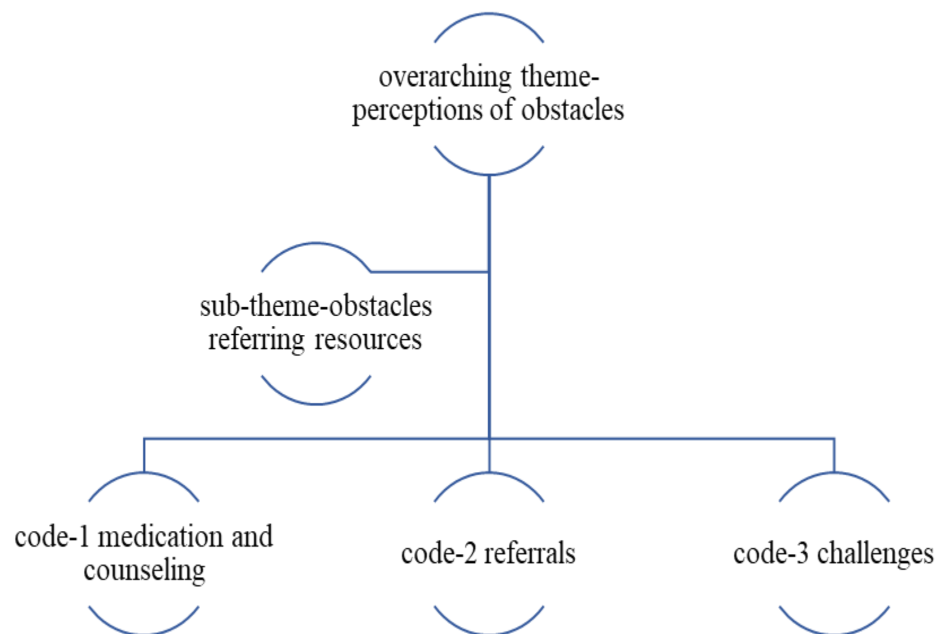


*Figure 2*. Thematic mapping.

The above thematic map shows the process of how the overarching theme perceptions of obstacles was developed. The codes were organized to show the focus of the interview questions related to the perception of obstacles. These codes provided a detailed description of how perceptions of obstacles referring resources was explored. The type of referrals was explored through the type of resources the participants offered the clients, which involved participants contacting outside agencies to further assist the clients. Table 6 below displays the codes.

Table 6

*Code-1 Medication and Counseling Resources for Adults with Precomorbid ADHD)*

| Code 1 | Number of occurred responses |
| --- | --- |
| Obstacles were perceived referring counseling resources | 6 |
| Obstacles were not perceived referring counseling resources | 4 |
| Obstacles were perceived referring medication resources | 6 |
| Obstacles were not perceived referring medication resources | 4 |

Medication and counseling combined have been identified from previous authors as being a more comprehensive level of treatment then just counseling alone or medication alone (de Braek et al., 2017; Leahy, 2018;). Participants' perceptions of obstacles were assessed within the interview questions to explore what perceptions the participants had about servicing adults with ADHD and the challenges of providing services specific to medication and counseling.

Under Code 1, there were six occurrences of perceiving obstacles referring counseling resources for clients with ADHD and four occurrences of not perceiving obstacles referring counseling resources. There were also six occurrences of perceptions of obstacles referring medication resources and four occurrences of not perceiving obstacles referring medication resources. The even split of occurrences was unexpected. Table 7 displays Code 2.

Table 7

*Code-2 (Referral Resources for the Precomorbid Adults with ADHD)*

| Code 2 | Number of occurred responses |
|---|---|
| Resources and services were not referred | 2 |
| Resources and services were referred | 6 |
| Possible unrelated responses | 2 |

There were more occurrences (six out of 10) of participants who provided referrals for clients. Of those referrals, the most redundant answer was “referring clients to therapy, a psychiatrist or counselor.” Of the occurrences, two participants responded with “resources and services were not referred.” There was no further explanation of why resources were not referred. The two unrelated responses were as follows,

> They feel as though they don't need these things and you try to tell them and then they may say things like you're not perfect and your trying to tell me something's wrong with me so sometimes they are in denial and they will put it back on you.

“As far as helping them with what they need if they had to go to the doctors or something like that if they had to go and get food, I would help them.”

I was unsure of whether the participant responses were in reference to providing resources or not providing resources. Because I could not distinguish with clarity that the responses were directly related to the question, the occurrences were identified as possible unrelated responses. Overall, more occurrences were documented for participants who did provide referrals for various services for their clients with ADHD. Most of the referrals provided by participants were referrals to see a counselor, therapist, or psychiatrist. Table 8 provides the last set of codes below.

Table 8

*Code-3 (Challenges to Providing Referral Resources to Adults with Precomorbid ADHD)*

| Code 3 | Number of occurred responses |
|---|---|
| Challenges were perceived | 6 |
| Challenges were not perceived | 4 |

Ultimately, the data from the codes showed the pattern of challenges referring resources to adults with precomorbid ADHD. The pattern included a redundancy of occurrences of perceived obstacles from the participants when providing referrals resources including medication and counseling resources for clients with precomorbid ADHD.

I was able to assess the participants' pattern of providing resources for adults with ADHD. Based on participant responses and the occurrences of those responses, I found a pattern of problem solving that was outlined in three parts.

- Part 1- how the participants perceived obstacles
- Part 2- how participants worked through those perceptions of obstacles
- Part 3- how participants actively found solutions to those obstacles that were perceived when providing referrals for their clients with ADHD.

Patterns were identified when the participants described perceptions of obstacles in phrases such as, “in my opinion many of my clients don’t think they need help.” “I find that some of my clients are not aware of their symptoms.”

The above phrase reflected how perceptions of obstacles might have developed for certain participants while working with clients with ADHD and providing referrals. The participants identified obstacles, and these obstacles appeared to be related to clients’ resistance to treatment or lack of understanding that they need services. These perceptions of obstacles could have influenced how fluid the participants were in referring resources for their clients.

The patterns found in Part 2 related to how the participants worked through obstacles providing referrals for clients with precomorbid ADHD. Finding solutions to problems begins with how a problem is perceived (Yetter & Foutch, 2014). The participants described their perceived obstacles as well as how obstacles were worked through. Below are participant responses to how participants were working through clients’ resistance to receiving services and working through figuring out what services their clients needed in general.

“A lot of times between the addiction and the ADHD it's hard to get them to focus let alone to do something in the future but we try to get them to do as much as possible.”

"We would guide them towards more mental health."

"If there is some type of deficit, I was told to send them over to someone who is more skilled."

"See uh services would be generalized probably like JFK or the mental health center".

In Part 3 of the patterns discovered, the participants also provided responses that reflected how they actively found solutions to the problems and below are some examples.

"I think the type of referrals seems like for case management someone to help them with their day to day activities make sure give them some things in life to help them stay on tasks. So, most referrals would surround life support."

"As far as helping them with what they need if they had to go to the doctors or something like that if they had to go and get food, I would help them."

"Yes, we look for PCP or other supports in the area."

The research questions can be summarized through explaining the overarching themes knowledge deficits and perceptions of obstacles. The participants provided responses that reflected levels of knowledge deficits and levels of perceived obstacles. Some of the responses were generalized, meaning participants did not provide specifics on the knowledge deficits. Instead, more emphasis was put on knowledge deficits relative to adults with or without cooccurring disorders. Knowledge deficits that were identified were associated with knowing more about ADHD with cooccurring disorders as compared to what participants knew about ADHD without a cooccurring disorder. There

was more description of perceived obstacles and problem-solving through those perceived obstacles that were identified. Participants recognized that clients needed services and that resources were needed to provide clients with assistance regarding their ADHD symptoms.

A summary of key findings will be presented in Chapter 5.

# Chapter 5: Discussion, Conclusions, and Recommendations

## Introduction

The exploration of perceived knowledge deficits regarding adults with precomorbid ADHD was guided by two research questions.

1. How do social workers describe and assess their knowledge about precomorbid adult ADHD?
2. How do social workers describe and assess obstacles towards providing medication and counseling referral sources to the population of adults with precomorbid ADHD?

The first set of interview questions were asked to participants to get a clearer understanding of their description and assessment of their knowledge deficits. Those questions were 1 through 8, and each participant's response was analyzed to gain insight on perceptions of precomorbid ADHD. The second research question was explored through Interview Questions 9 to 15; these interview questions were asked to participants to gain an understanding of the referral process, types of referrals, and challenges when providing referral resources to clients with precomorbid ADHD.

Regarding Interview Questions 1 through 8 when precomorbidity was introduced into the language within the interview questions, the participants verbally asked for clarification of precomorbidity. I wanted to make sure that the participants would be able to answer the questions accurately; therefore, the term "without a known disorder" was explained along with the terminology precomorbidity. In addition, I developed a process

of repeating more familiar terms along with comorbidity. The two terms were coexisting and cooccurring. Key findings included the list below.

Participants perceived that they had limited knowledge about precomorbid ADHD.

1. A few participants struggled with separating the difference between adults with just ADHD and those with coexisting disorders; therefore, some of the responses appeared inconsistent.
2. In reference to participant training regarding adults with precomorbid ADHD, about half of the participants said they did receive training about adults with ADHD.
3. The referral process for more than half of the participants did include referring clients to a therapist, psychiatrist, doctor, or an expert in the field
4. The referral process included clients with ADHD in general; however, when participants were asked about clients without a known disorder, explaining the referral process was more of a challenge.

## Interpretation of Findings

Healthcare professionals in general, including social workers, have limited knowledge of how to provide services for adults with ADHD as the only disorder (Adamou et al., 2016; Anderson, 2016; Bushe et al. 2015; Ginsberg et al., 2014). The data from this study confirmed the common theme found in previous literature regarding the challenges that exist when providing services for adults with precomorbid ADHD. The challenges, based on this study's data, have been documented as providing referrals

for clients who are not completely on board with receiving treatment from the perspective of the social workers/case managers interviewed. Another confirmation from the interviews based on previous literature was the process of providing services mostly associated with ADHD with comorbidity (Adamou et al., 2016; Knecht et al., 2015). Certain words such as cooccurring were used and appeared as if there was a common practice to provide services when cooccurring was paired with ADHD. The two major services were for mental health or drug and alcohol. I was able to gain insight on the perceptions of knowledge deficits experienced by the participants in a field where those participants provided front-line referral resources to clients. The referral process mainly consisted of specialists or experts in the field who were identified by some participants as psychiatrists or therapists. Because the participants struggled with perceptions of precomorbid ADHD in terms of providing referral resources, it was not clear whether the experts (doctors, therapist, psychiatrists) took an active role in informing participants about adults with ADHD as the only treated disorder. The obstacles from some of the participants were that the clients themselves refused services, particularly medication.

## Theoretical Framework and the Findings

The social problem-solving process, as explained by the participants, occurred in two ways. The first problem-solving process related to how the participants perceived the problem, and the second process was how participants resolved the problems. The participants mostly identified adults with ADHD in terms of cooccurring disorders. This perception created an uncertainty about referring services to clients based on precomorbid ADHD. However, the participants mostly described dealing with the

problem of knowledge deficits by referring the clients to other agencies or experts who could better service them. Participant feedback also reflected that clients needed to be helped so the solution centered around getting help for clients by referring them to outside sources. Participants responded with the use of negative words when explaining problem-solving techniques. The problem-solving techniques were guided by perceptions that were limited to not recognizing a process of solving the problem of knowledge deficits. Participants' problem-solving focused more on referring clients to other healthcare professionals. Only one participant expressed the need to increase awareness about clients with ADHD as the only disorder other than referring them to someone else more qualified. The participant who was open to needing more awareness stated,

> I believe it is lacking I can always understand more in this field as more information becomes available, we need to get it in the hands of the people faster in the front lines, usually it filters down to us after it’s already relevant.

The participants had a process of referring resources to clients with ADHD. The process of referrals included intake, problem identification, and goal planning, as mentioned in Chapter 2. The obstacles involved issues of problem solving when referring clients who had ADHD in adulthood without another disorder, and that obstacle seemed to occur during the problem identification phase of providing resources. Participants were able to explain what they would do in the event a client needed services for precomorbid ADHD. For some of the participants, it appeared that figuring out the process of providing referral resources to clients with precomorbid ADHD was in theory and had not yet been practiced. I was able to see that more than half of the participants were

attempting to solve the problem theoretically (talking about it) but not having enough actual practice of gaining knowledge about adults with precomorbid ADHD from their feedback.

## Limitations of the Study

This study was a multiple case study that targeted social workers/case managers within one city and two agency locations. The case studies consisted of 10 cases divided into two locations. A small group of participants provided responses for the interviewing process. Each case included a participant who was actively working with adults at a work location, which made this research a case study design. The interviewing process allowed me to identify the participants' experiences working with the adult ADHD population. Although the participants were randomly selected from the CBH agency list, they were not randomly chosen from multiple agencies. These limitations caused some restriction on the representation of social workers and case managers providing referral resources to clients (Anderson et al., 2014).

## Recommendations

It would be beneficial for future researchers to conduct a broader study. A broader study would include using a bigger sample of social workers and case managers to analyze their knowledge about adults with precomorbid ADHD in adulthood. A strength of this study reflected the need for social workers and case managers to recognize ADHD even if a cooccurring disorder has not been identified by a doctor. A quantitative study that would include a larger population of social workers and case managers to evaluate the degree of knowledge deficits regarding precomorbidity would provide more insight.

CBH-affiliated agencies should explore current trainings offered to social workers and case managers about precomorbidity in adults with ADHD to clarify if there is a lack of training models. Scholars could further examine how social workers and case managers obtain knowledge about precomorbidity, which would be beneficial to existing literature on ADHD in adulthood.

## Implications

The exploration of precomorbidity is essential to reducing cooccurring symptoms because adults with ADHD would benefit from receiving treatment that could reduce comorbidity, which is more plausible the earlier ADHD is detected (Adamou et al., 2016; Anderson, 2016; Bushe et al., 2015). The best way to reduce comorbidity in adults with ADHD is to detect ADHD in childhood (Camilleri & Makhoul, 2013). It is common for ADHD to not be discovered until adulthood (Camilleri & Makhoul, 2013). Because adults with ADHD have a high risk for developing a comorbid disorder, understanding ADHD without a coexisting disorder might provide some insight into what treatments are needed to help reduce coexisting disorders as they relate to ADHD in adulthood. If social workers and case managers have better knowledge of identifying precomorbidity in adults with ADHD, then the possibility of improving services for adults with ADHD can be enhanced within the healthcare profession. It is the job of social workers and case managers to problem solve by identifying problems in clients (Anderson, 2016). If knowledge about precomorbidity in adults with ADHD is limited, it would be difficult to identify precomorbidity in adults to provide resources. The social implications, therefore, are increased awareness of precomorbidity, which can lead to increased identification of

precomorbidity and increased services for the precomorbid populations of adults with ADHD.

## Conclusion

This study was conducted to explore the knowledge deficits regarding precomorbid ADHD in adulthood and the challenges of referring medication and counseling resources to adults with ADHD from the perspective of social workers and case managers. The issues surrounding ADHD in adulthood are compounded with a lack of services as well as limited services for adults with precomorbid ADHD (Pehlivanidis et al., 2014). Inconsistent knowledge about adult ADHD is apparent in the healthcare profession. Healthcare professionals, like social workers and case managers, should be equipped with the knowledge needed to provide the appropriate resources. The knowledge that should be obtained include identifying precomorbidity, in addition to other symptoms, to better provide resources to the population of adults with attention disorders. Even if clients appear to have fewer issues, it is not necessarily more manageable to provide service referrals. The struggles that participants reported when providing referrals for clients who only have ADHD emphasized a focus on cooccuring disorders in CBH-affiliated agencies. ADHD diagnosing and symptom identification are associated with the need for continued research on attention disorders to better understand them (Adamou et al., 2016; Bushe et al., 2015). Based on this study it is my conclusion that it was less problematic to service clients who have a disorder that is easier to identify for the participants other than ADHD.

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# Appendix A: Recruitment Procedures

Recruitment Procedures

| Contact stakeholders | Recruitment | The interview process |
|---|---|---|
| Contact agencies by phone from CBH provider list that respond to the email flyer. | After meeting with the agency directors, the email flyer (refer to step 1 in this column for the participant email flyer) will be emailed to prospective social workers/case managers within the participating agencies. | After the signing of the consent form, the interviews will take place and expected to take about 45 minutes but may take less time depending on participant responses. |
| Over the phone or by email, invite agency directors to meet face to face. | Once the prospective participants respond to the email flyer expressing interest, a follow up email will be sent to set up an interview meeting time, as well as attaching a summary of what the research is about. | After the interviews are over the participants will be thanked for participating and informed to look out for a summary of the results by email. |
| The letter of cooperation form will be explained, and directors will be invited to sign the form. The researcher will request email information for social workers/case managers to invite them to participate in the study, if the researcher is not able to get the prospective participants email through the agency website. | During the meeting time for the interview, the consent form will be reviewed and if prospective participants would like to participate, they will be invited to sign the consent form. | |

Appendix B: Email Flyer for Stakeholders

Hello!

My name is Denise Brown and as a doctoral candidate of Walden University, I would like to invite your social workers/case managers to participate in a case study. This case study design focuses on adults with ADHD. The purpose of the study is to explore social workers' experiences working with adults with pre-comorbid ADHD. If your agency services adult clients with ADHD as the only or even primary diagnoses, then I am interested in recruiting your social workers/case managers to participate. The interview process will take an estimated time of 30-50 minutes.

Thank you for your time and consideration
Denise Brown

Email Flyer for Recruiting Prospective Participants

Hello!

My name is Denise Brown and as a doctoral candidate of Walden University, I would like to invite you to participate in a case study. This is a case study that focuses on adults with ADHD. The purpose of the study is to explore social workers/case managers' experiences working with adults with pre-comorbid ADHD. If you service adult clients with ADHD as the only or even primary diagnoses, then I am interested in your experiences providing referral sources for those clients. The case study will

take an estimated time of 30-45 minutes for the actual interview and a couple of minutes just to review and sign the consent form. The interview can take place during your lunch hour and lunch will be provided.

Thank you for your time and consideration

# Appendix C: Criteria for Participant Selection

Criteria for Participant Selection

| Job Title | Job duties | Clients serviced |
| --- | --- | --- |
| Social worker or case manager | To provide social services and or case management | Active caseloads of adult clients with attention disorders |

# Appendix D: Script for Interview Protocol

Script for Interview Protocol

"You are invited to participate in an interview where you as the volunteering participant will be asked 15 questions regarding your service to the adult ADHD population. The purpose of this qualitative case study is to explore perceptions of knowledge deficits about adults with pre-comorbid ADHD when providing medication and counseling referral resources to adults with pre-comorbid ADHD. The interview questions will be open-ended. The estimated time for the entire interviewing process is 50 minutes however the time could be less. This interview is strictly voluntary, and you can discontinue at any time. You will be asked to sign consent forms regarding your rights and risks of participating in this study prior to the start of the interview. Your rights include your freedom to participant or not participant in this study. The risks include possible levels of discomfort that could arise from answering questions relating to your knowledge, skills, and professional practice when servicing adults with ADHD. The interviewer will ensure that the interview is done in a timely manner with precision and the least amount of discomfort possible. Thank you for your cooperation and participation in this study."

# Appendix E: Interview Questions

Interview Questions for Research Question 1

1. What is your title?
2. What are your assigned duties at your place of work?
3. Do you service adults with ADHD?
4. What is your career-related training regarding adults with pre-comorbid ADHD?
5. Do you perceive adults with ADHD as having pre-comorbidity?
6. How would you define your clients with ADHD in terms of comorbidity?
7. What is the knowledge you have obtained through working with adults with ADHD without comorbidity?
8. Do you service adults with pre-comorbid ADHD, if so, do you perceive your knowledge of pre-comorbidity or adult ADHD in general as a problem? Please explain your response.

Interview Questions for Research Question 2

9. What type of referrals do you provide for adults with ADHD?
10. What type of referrals do you provide for adults with pre-comorbid ADHD?
11. What is your understanding about the type of referrals that are needed for adults with pre-comorbid ADHD?
12. Do you face challenges when providing referrals for adults with pre-comorbid ADHD?
13. If so, what are the challenges?

14. Do you provide medication and counseling referral sources to your clients with pre-comorbid ADHD?
15. If you are not providing medication and counseling referrals to adults with pre-comorbid ADHD, do you feel it is necessary to do so, and if so, what are the obstacles faced when providing adult pre-comorbid ADHD clients with medication and counseling referral sources if at all?