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Attention deficit hyperactivity disorder and career ideation : an application of hope theory and social cognitive career theory

Miya V. Drucker
Smith College

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ABSTRACT

This theoretical study explores *hope theory* (Snyder, 1991) and *social cognitive career theory* (Lent, Hackett and Brown, 1994) perspectives related to the impact of Attention Deficit Hyperactivity Disorder (ADHD) on a young adult's professional identity and career ideation. Hope theory posits that there are three primary influences on one's sense of hope, these are: self-agency, pathways and attainment of goals. Social cognitive career theory posits that career ideation and performance is manifested by the interplay of multiple factors, including: self-efficacy, outcome expectations, goals, and negotiation of supports and barriers. The scientific and counseling literatures have not adequately explored the effects of ADHD on the professional identities of young adults and adults in the workplace. Research shows that the symptoms of ADHD can negatively affect the academic performance of children and adolescents, and the job performance of adults. This paper uses the theoretical lenses of hope theory and social cognitive career theory to examine the multiple ways that the condition can influence the career ideation of the individual with ADHD.   Lastly, counseling recommendations are provided for professionals who work with young adults with ADHD.

ATTENTION DEFICIT HYPERACTIVITY DISORDER AND CAREER IDEATION:

AN APPLICATION OF HOPE THEORY AND SOCIAL COGNITIVE CAREER THEORY

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Miya Drucker

Smith College School for Social Work
Northampton, Massachusetts 01063

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"Our chief want is someone who will inspire us to be what we know we could be."

— *Ralph Waldo Emerson*

I am deeply grateful to M.B.A. for her generosity, time and unwavering guidance this past year.

And to my family, who supports me in every way, thank you for teaching me to live life with both motivation and a sense of humor.

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CHAPTER I

Introduction

This paper utilizes the theoretical perspectives of hope theory and social cognitive career theory (SCCT) to examine the impact of having attention deficit hyperactivity disorder (ADHD) on a young adult's career ideation and professional identity, with special reference to executive function and self-agency. Although numerous studies examine the functioning and academic performance of children, adolescents, and college students with ADHD, a paucity of research exists examining how having the disorder affects a young adult's career. Moreover, the vast literature on the functioning of those with ADHD is strikingly lacking in studies that explore strength-based attributes of this population. This paper uses both hope theory and SCCT because these models can be applied to career and professional identity.

Research shows that the symptoms of ADHD can have a negative impact on the careers and job performance of adults with the disorder. Though much focus has been on the effects of ADHD on the academic performance of children and adolescents, noticeably less research has been conducted on the lifelong effects of ADHD on adult functioning. Researchers have found that adults with ADHD have less stability in their careers, worse financial management, and change geographical location more frequently than their peers without the disorder (Murphy, Barkley, & Bush, 2002). Faigel (1995) found that adults with ADHD more often experience occupational underachievement than their peers of similar educational attainment. Fewer people with ADHD reach college or complete degree programs compared to non-ADHD peers (Murphy

et al., 2002). A longitudinal study of the functioning of hyperactive children in young adulthood found that young adults with hyperactivity had held twice as many jobs as did the control group in the same amount of time and had also been fired more than twice as often as the control group (Barkley, Fischer, Smallish, & Fletcher, 2006).

The theoretical perspectives selected to examine how having ADHD might affect career ideation and professional identity, hope theory and SCCT, stem from counseling psychology research and practice. Snyder (1994) developed *hope theory*, which posits that three primary criteria influence the positive motivational state known as hope: (a) self-agency, (b) pathways, and (c) attainment of goals. According to hope theory, these factors have a positive influence on each other and on levels of hope. In education and occupational realms, individuals with higher hope experience greater attainment of goals, including in education and careers. The second theoretical framework of *social cognitive career theory* (Lent, Brown, & Hackett, 1994) posits that career ideation and performance are manifested by the interplay of six factors: (a) formation of self-efficacy and outcome expectations, (b) interest formation, (c) interest–goal linkages, (d) translation of goals into actions, (e) performance skills, and (f) negotiation of transition supports and barriers. Though these theories are distinct, some themes are similar, notably, the importance of positive experiences of goal attainment and of a subjective sense of capability in goal pursuit. Both these theoretical perspectives will be detailed further in later chapters.

Given that the late teens and early 20s is when many young people first make real progress toward realizing their career interests, and that ADHD may affect their career decision-making processes, a better understanding how young adults with ADHD are envisioning their future careers while they are still in the planning phases is important. Though much of the literature on ADHD focuses on how the symptoms of the disorder affect the functioning of

students in childhood and adolescence, considerably less research focuses on college-aged students. The research that has been conducted on the impact of ADHD in college-aged young adults has primarily focused on how the disorder affects student performance on experimental tasks and psychological measures. I could not find one study that explored the perspective of young adults with ADHD in their voices—their future hopes and concerns about careers and work life. Some literature is available that focuses on the impact of the disorder on job performance in adulthood, but researchers have not investigated how a history of symptoms affects career aspirations and hopefulness for those with the disorder. Similarly, in self-help literature for those with ADHD, books target the adolescent planning to attend college, and other books target the professional struggling on the job. No books are aimed at supporting young adults with ADHD in their career explorations and selection processes. It is of note that the counseling stance taken in these self-help books for the already working adult is usually targeted at corrective strategies for problematic areas with which people with ADHD often struggle (e.g., organization, time management, planning) rather than encouraging movement toward ways or careers that capitalize on strengths.

This thesis is of relevance to those in social work; education; and counseling, clinical, and vocational psychology and to all professionals who serve the population with ADHD. It is important for people who work with the ADHD population to know how the disorder can affect their clients' career ideation and self-concept. In many ways, the world of work shapes and defines us in adulthood. Consequently, professionals and clinicians who work with the ADHD population can play an important role in fostering hope and positive career self-concept in their clients who may struggle in these areas.

Chapter 2 includes a conceptualization and methodology. Chapter 3 provides a review of literature on the career, academic, and psychological functions of people with ADHD. Chapter 4 provides an overview of hope theory, whereas chapter 5 focuses on SCCT. Finally, chapter 6 offers a discussion that synthesizes the theoretical perspectives on the phenomenon of ADHD and also includes implications for practice.

CHAPTER II

Conceptualization and Methodology

Conceptualization

Long-standing interest in the impact of ADHD on functioning has led to some review of

existent literature on career selection for people with ADHD. In examining literature on the

impact of having ADHD on one's career, it became clear that this area is lacking in the scientific

research on ADHD or on career ideation. As no professional studies have examined how having

ADHD might impact one's career ideation and professional identity, this thesis was

conceptualized as an exploration of this understudied phenomenon. Similarly, two theories that

are often used to examine career aspirations, hope theory and SCCT, have not been applied to the

ADHD population in scientific research. Given that the core principles in each of these theories

are areas where people with ADHD often struggle, it followed logic that these theoretical lenses

might further elucidate the phenomenon of people with ADHD struggling in work-related areas.

Hope theory (Snyder, 1994) posits that three primary criteria influence one's sense of

hope: self-agency, pathways, and attainment of goals. Hope theory has been applied to various

motivation-oriented and research areas, including health and wellness. This thesis focuses on

educational and career attainment. Hope theory was selected as people with ADHD have been

shown to struggle with motivation and achievement; as such, this theory might help to explain

the difficulties that people with ADHD encounter in their career ideation and achievement.

The second theoretical framework, SCCT, was selected as it takes a broader and in some

ways more holistically logical view of how an individual's career aspirations and professional

identity develop throughout his or her life span. Social cognitive career theorists (Lent et al., 1994) have posited that career ideation and performance are manifested by the interplay of six factors: formation of self-efficacy and outcome expectations, interest formation, interest–goal linkages, translation of goals into actions, performance skills, and negotiation of transition supports and barriers. For the purposes of this paper, three areas of SCCT are covered more in depth: formation of self-efficacy and outcome expectations, goals, and negotiation of barriers. These areas were selected as they are the internalized processes in the SCCT model; as such, they are influenced by the cognitive and subjective experience of the individual, which are core areas impacted by ADHD as well.

Methodology

Via online journal access and several books, I conducted an exhaustive review of the literature on ADHD, hope theory, and SCCT. I evaluated the impact of having ADHD on career identity by conducting a review of the two theoretical frames and through comparison of the two theoretical processes (e.g., goal setting exists in both theories) with some of the core presenting symptoms that affect the population with ADHD (e.g., goal setting is a deficit in ADHD symptomology). I chose articles and studies that had thematic links across these three distinct areas, with an emphasis on self-efficacy and agency, which are both core to each of the theoretical frameworks. Because very little has been written about ADHD and career ideation or professional identity, in this study, I explored ways in which having the disorder may affect a person's career ideation.

CHAPTER III

Attention Deficit Hyperactivity Disorder

The phenomenon that this paper explores is how having ADHD may impact career ideation and professional identity. For many years, research on ADHD has focused on the disorder in childhood; however, recently, scientific understanding of the condition has broadened, and diagnosis of the condition has extended into adulthood. This chapter will provide an overview of the child and adult ADHD research literature; the following areas will be examined: the definition and diagnosis of ADHD, ADHD in children, learning disorders, socialization in childhood, college students with ADHD, college students with ADHD and their career aspirations, ADHD in adults, psychiatric comorbidity, ADHD in the workplace, and ADHD and organizational concerns.

Attention Deficit Hyperactivity Disorder (ADHD): Definition and Diagnosis

According to the *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition, text revision (*DSM-IV-TR*; American Psychiatric Association, 2000), ADHD is defined as "a persistent pattern of inattention and/or hyperactivity–impulsivity that is more frequent and severe than is typically observed in individuals at a comparable level of development" (p. 85). ADHD has three subtypes: hyperactivity–impulsivity, inattention, and combined hyperactivity–inattention. The *DSM-IV-TR* criteria for a diagnosis of ADHD are six or more symptoms in either the inattention or hyperactivity–impulsivity checklist or six symptoms in each of the

checklists for a diagnosis of combined inattentive–hyperactive ADHD. The *DSM-IV-TR* criteria are as follows:

A. Inattention

    1. Often does not give close attention to details or makes careless mistakes in schoolwork, work, or other activities.

    2. Often has trouble keeping attention on tasks or play activities.

    3. Often does not seem to listen when spoken to directly.

    4. Often does not follow through on instructions and fails to finish schoolwork, chores, or duties in the workplace (not due to oppositional behavior or failure to understand instructions).

    5. Often has trouble organizing activities.

    6. Often avoids, dislikes, or doesn't want to do things that take a lot of mental effort for a long period of time (such as schoolwork or homework).

    7. Often loses things needed for tasks and activities (e.g. toys, school assignments, pencils, books, or tools).

    8. Is often easily distracted.

    9. Is often forgetful in daily activities.

B. Hyperactivity

    1. Often fidgets with hands or feet or squirms in seat when sitting still is expected.

    2. Often gets up from seat when remaining in seat is expected.

    3. Often excessively runs about or climbs when and where it is not appropriate (adolescents or adults may feel very restless).

    4. Often has trouble playing or doing leisure activities quietly.

5.   Is often "on the go" or often acts as if "driven by a motor."

6.   Often talks excessively.

C. Impulsivity

7.   Often blurts out answers before questions have been finished.

8.   Often has trouble waiting one's turn.

9.   Often interrupts or intrudes on others. (p. 86–87)

These criteria were defined to diagnose ADHD in childhood, and several researchers have argued that executive function problems are better predictors of adult ADHD—despite executive functions not being in the *DSM-IV-TR* (Barkley, Murphy, & Fischer, 2008; Kessler et al., 2010).

Barkley (2001) proposed a definition of *executive function* as actions that are cognitively communicated to the self and aimed at the future; these actions are self-control behaviors directed at altering a future outcome. The executive function difficulties of which adults with the disorder frequently complain, according to Barkley et al. (2008), are "impulsive decision making, stopping, starting, and organizing activities, persistence toward goals, and planning for future events" (p. 204). Instead of the *DSM-IV-TR* criteria for ADHD, Barkley and colleagues suggested the following nine-symptom checklist, which focuses on executive function deficits, for the diagnosis of adult ADHD (six are required):

- Is often easily distracted by extraneous stimuli or irrelevant thoughts.

- Often makes decisions impulsively.

- Often has difficulty stopping his or her activities or behaviors when he or she should do so.

- Often starts a project or task without reading or listening to directions carefully.

- Often shows poor follow-through on promises or commitments he or she may make to others.

- Often has trouble doing things in their proper order or sequence.

- Often more likely to drive a motor vehicle much faster than others. (For those who do not drive: Often has difficulty engaging in leisure activities or doing fun things quietly.)

- Often has difficulty sustaining attention in tasks or play activities.

- Often has difficulty organizing tasks and activities. (Barker et al., 2008, p. 437)

Though it has been extensively researched in neurology and psychology, the definitive etiology of ADHD remains unknown. There are wide-ranging theories about the neurological, psychological, and biological origins of ADHD, which will not be explored in this paper. ADHD is a brain-based disorder. Research into the neurological differences of ADHD is ongoing and not yet conclusive, although the prefrontal lobes, which control executive function, appear to be associated with the disorder (Nigg, 2006). ADHD is believed to be a genetically based heritable disorder and has been found at higher incidence rates in relatives and offspring of those who have ADHD (Barkley et al., 2008). ADHD is one of the most frequent diagnoses in child psychiatry and has been widely researched in children; however, in part because it was once thought to be a disorder occurring exclusively in childhood, less research exists that focuses on ADHD in adulthood (Faraone, Sergeant, Gillberg, & Biederman, 2003). According to the National Survey on Comorbidity, the condition is estimated to affect approximately 4.4% of the adult population in the United States, although as few as 11% of adults receive treatment for the disorder (Kessler, Adler, & Barkley, 2006). ADHD is most commonly treated with psychostimulant medications. Cognitive behavioral interventions may also be beneficial for

reducing ADHD symptoms, though intervention remains largely focused on the psychiatric

prescription of medications (Wilens, Faraone, & Biederman, 2004).

ADHD and Children

To examine the impact of ADHD in adulthood, briefly touching on some of the major

findings of what is known about ADHD in childhood is important. ADHD is associated with

poor grades, lower math and reading standardized test scores, higher rates of grade retention, and

more frequent rates of expulsion from school (Barry, Lyman, & Klinger, 2002; DuPaul,

McGoey, & Eckert, 2001). Children with inattentive ADHD may have lower achievement levels

irrespective of intellectual ability (Massetti et al., 2008). Academically, executive function

deficits of impaired impulsivity and attention affect a child's ability to follow through on many

school performance areas: learning difficult or boring concepts; performance on assignments;

following directions; planning, starting, and finishing academic tasks; and revising work for

errors. Cumulatively, these negative academic experiences result in lower rates of high school

graduation and postsecondary education (Loe & Feldman, 2007). As severe ADHD is

recognized as a disability, children with ADHD and a formal diagnosis of the disorder are

eligible for individualized education plans (IEPs), if available in the school context. IEPs vary

depending on the student and school setting, but the plans provide alternatives designed to

support ADHD students such as time accommodations, technological learning supports, tutoring,

or classes that have different teaching approaches and/or comprise higher needs students.

Learning disorders. One factor that complicates the study of the impact of ADHD in

children is that ADHD and learning disorders are believed to co-occur at higher rates than in the

nonlearning disordered population. Frick et al. (1991) estimated that 16% of ADHD children

had a reading disability and that 21% had a math disability, whereas in the control group, these

rates were 5% and 7%, respectively. Perhaps for ethical reasons, or perhaps due to confounding factors, I could not find studies that had explored how ADHD-related patterns of academic failure and behavioral problems affect ADHD children's sense of self. One study on learning disabilities (LDs), which included an LD–ADHD subgroup, showed that educational failings do affect the subjective well-being of children. Tabassam and Grainger (2002) conducted a study that compared students with LD, students with LD–ADHD, and typically achieving peers in elementary school. The study comprised 172 elementary school students; 44 students had LDs, 42 students had combined LD–ADHD, and 86 students were in the typically achieving control group. Results indicated that academic self-concept, academic self-efficacy, and academic attribution were significantly lower for both the LD and LD–ADHD students; however, no significant results existed between these two groups. Peer-relation self-concept was lower for LD–ADHD students than for LD students or the peer control group. Self-efficacy, in particular, was found to play an influential mediating role in academic attainment for those with learning disorders (Tabassam & Grainger, 2002). The LD–ADHD students reported lower academic self-concept than the other two groups, but the difference was not significant.

ADHD and socialization in childhood. The results of the Tabassam and Grainger (2002) study indicate that ADHD may negatively affect the social functioning and peer relations of children with the disorder. The authors suggest that impulsivity in children with ADHD may lead to more frequent disruptive, intrusive, or socially bothersome behavior with peers. Another study (Wiener & Mak, 2009) found that children with ADHD may experience higher rates of bullying others, of being the target of bullying, and of being in the combined bully–victim role; the victimization rates were higher in girls. Understandably, how ADHD affects the social and developmental functioning of children with the disorder is of concern as these areas play a large

role in determining subjective well-being. Multiple researchers have suggested that children with ADHD would benefit from training in social problem-solving skills and anger management skills.

College Students with ADHD

The need for adequate ADHD services in colleges is evident; according to Faigel (1995), "attention deficit disorders with or without hyperactivity are reported to be the second most common disability affecting college students and other young adults" (p. 147). Studies have estimated that 2%–8% of college students in the United States report clinical levels of ADHD, although the precise percentage of college students with a full diagnosis is unknown (DuPaul, Weyandt, O'Dell, & Varejao, 2009). No data exist on the specific number of high school students with ADHD who go to college. The exact percentage of the ADHD population that transitions from high school to college, persists throughout college, and has adequate occupational functioning as adults is unknown; these numbers are difficult to capture owing to several factors such as the limits on sample size, uncertainties in substantiating diagnosis— including variability in both self-report and professional diagnosis—and the difficulty of conducting longitudinal studies.

College usually presents a new set of challenges to the adolescent with ADHD: College courses require more independent scholarship than high school courses; the student confronts different social challenges in living with peers in dorms and in having to form new social relationships; and most college settings have less parental and teacher supervision. According to Norwalk, Norvilitis, and MacLean (2009), "those with ADHD who attend college may have a more difficult time dealing with the academic, social and career-planning demands" (p. 251), which may lead to higher rates of dropout. Students with ADHD in college have been found to

have a lower grade point average, report more academic problems, and are more likely to be on academic probation (Heiligenstein, Guenther, Levy, Savino, & Fulwiler, 1999). Although college students with ADHD are eligible for support from on-campus disability services (if available), Hennessey, Rumrill, Roessler, and Cook (2006) found that both ADHD and non-ADHD students underutilize support services in postsecondary education. However, students with LDs were found to make more frequent use of support services, which the authors suggested is due to previous familiarity with support services. The results of this study have implications for the success of college-aged students with ADHD, as presumably, support services facilitate college success. These results also indicate that students with ADHD who are not accessing academic services are consequently not being counseled in the development of new work performance strategies and coping skills that would be beneficial in their future careers.

In one study of factors associated with adjustment to college, Norwalk et al. (2009) found that there was a negative relationship between career decision-making self-efficacy, study skills, and academic adjustment and ADHD symptoms. Specifically, inattention symptoms predicted even lower scores on the three scales than the other subtypes of ADHD. The researchers suggested that college presents a less structured setting than high school and that this is particularly distracting for those who have ADHD inattentive type. However, the study had several limitations. Results are based on a population ($n = 263$) with subthreshold ADHD (not meeting full diagnostic criteria) that was also overwhelming Caucasian and female. Moreover, as the sample was selected from psychology courses at an undergraduate university, it is possible that the results are already skewed for very high-functioning individuals with ADHD traits. Though the authors believed that a link exists between inattentive-type symptoms and executive

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function and career selectivity, these results are from a one-point testing and would provide more illuminative data if the study were longitudinal.

ADHD college students and career aspirations. Very few studies have examined the career-related beliefs of college students with ADHD. Hennessey et al. (2006) found that college students with ADHD perceive that they lack knowledge of issues related to employment and discrimination. The students' primary concerns were understanding the risks and benefits of disclosing disability status to employers, knowing their rights, and knowing how to inform employers of accommodation needs. The researchers suggested working with college-age students on improving their self-determination and advocacy skills so that they could better highlight their strengths. They also recommended providing students with networks of employers and faculty members who could inform them of employment issues that face students with disabilities and to have these networks help the students in their career decision-making processes.

ADHD and Adults

Research has shown that adults with ADHD have less stability in their careers, worse financial management, and more frequently change geographical location than their peers without the disorder. A longitudinal study that followed the functioning of hyperactive individuals from childhood through young adulthood found that as young adults, the participants had held twice as many jobs as did participants in the control group in the same amount of time and had also been fired more than twice as often as the control group (Barkley et al., 2006). Additionally, Barkley and colleagues found that the hyperactive young adults were less likely to have a savings account or credit card and had higher debt and greater difficulty paying bills on time; the hyperactive group had also relocated more often than the control group. Not

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surprisingly, participants who were hyperactive and had oppositional defiant symptoms encountered more difficulties with job stability and job performance. The results from this study indicate earlier sexual activity and earlier parenthood for hyperactive adolescents in comparison to a sample of non-ADHD young adults, which served as a control group. However, of note is that the non-ADHD sample was half the size of the ADHD group ($n = 149$ vs. $n = 72$, respectively); as well, the age range of the participants at follow-up was 18–25 years, which does not provide an accurate overview of participants' entire career trajectory. In another study of ADHD and achievement, Biederman and Faraone (1993) found that adults with ADHD more often experience educational and occupational underachievement than their peers of similar educational attainment. Gudjonsson, Sigurdsson, Eyjolfsdottir, Smari, and Young (2009) found that functional impairments associated with the disorder (social impairment and emotional dysregulation) are correlated with lower life satisfaction in university students. People with ADHD may also have skewed high self-efficacy perceptions regarding their ability to succeed, but this confidence does not translate into achievement owing to lower persistence in the face of obstacles and to greater reliance on external measures of success such as supervisor feedback (Reaser, Prevatt, Petscher, & Proctor, 2007).

Psychiatric comorbidity. ADHD has also been found to be highly comorbid with other psychiatric disorders. A national U.S. survey found that among adults with ADHD, 47% had a comorbid anxiety disorder, 38% had a comorbid mood disorder, and 15% had a comorbid substance use disorder (Kessler et al., 2006). Additionally, ADHD in adults may be linked to higher incidence of suicidality (suicidal ideation and suicide attempts); major depressive disorder, dysthymia, and ADHD symptom severity all significantly contribute to suicidal ideation (Barkley et al., 2008). Halmøy, Fasmer, Gillberg, and Haavik (2009), in a study of 414

adults with ADHD, found that "a lifetime occurrence of significant depression and/or anxiety was reported by 70% of the patients" (p. 180). Halmøy and colleagues found that early identification and early treatment of ADHD are strong predictors of having a job as an adult, irrespective of comorbid psychiatric disorder, substance abuse, and current treatment. This study was fairly exhaustive in terms of its sample size and diverse representation as participants were recruited from the national registry of adults with ADHD in Norway. However, participants self-selected, which may have had a confounding effect on the sample. In all likelihood, the sample comprised people who were higher functioning, had steady addresses, and had an interest in participating in academic research. Moreover, the authors noted that participants seemed to report substance abuse histories at a rate lower than the national percentage, which was likely due to participant reporting bias.

ADHD in the workplace. People with ADHD experience numerous challenges in the workplace. Over the years, patterns of lower educational and academic achievement and poorer relationships with others may become embedded in one's identity and may also exacerbate negative responses to adversity. In work, "as failure mounts, the adult with ADHD experiences increasing amounts of discouragement, guilt, and negative self-perceptions" (Painter, Prevatt & Welles, 2008, p. 179). Challenges that affect work performance for adults with ADHD include short attention span, poor time management, lack of attention to detail, disorganization, more conflict, difficulty multitasking or completing complex assignments, resistance to training in new skills, and poor social behavioral impulse control. These challenges can lead many adults with ADHD to resistance and conflict with supervisors, self-incrimination and despair, or emotional overarousal, which can lead to exhibiting shyness or even hostility (Hallowell & Ratey, 1994). Impulsivity can lead to promises that go unfulfilled—or tasks that get started without any follow-

through. A disjunction may exist between how people with ADHD view themselves and how others in the workplace view them. Painter et al. (2008) found that people with ADHD often rate themselves as very good employees despite having numerous external conflicts in the workplace, including being fired from jobs. Painter and colleagues theorized that adults with ADHD may have an inability to perceive social cues, which results in a lack of self-awareness and perspective taking, both of which are needed for ideal adjustment to the workplace. Painter and colleagues (2008) suggested that the disorder can impair positive career development:

> It is not surprising that employees with these patterns of functioning will report career dissatisfaction, confusion, anxiety, and conflict. It is likely that the employee has held a number of jobs, receives negative performance evaluations, and experiences consistent conflict in the workplace. Employees with ADHD symptoms may switch types of jobs or careers, in the hope of finding a job that reduces external conflict. (p. 185)

Adding further to work-related impairments, Kern, Rasmussen, Byrd, and Wittschen (1999) found that in self-report personality testing, ADHD-identified people are more likely to be confrontational and aggressive, as well as more independent, less rule focused, and less likely to have their manner influenced positively or negatively by corrective feedback. This suggests that people with ADHD may have problems self-regulating not only their behavior but also their emotions, which can further negatively affect their work performance and appraisals.

ADHD and organizational concerns. While little indication that organizations are intentionally not hiring people with ADHD exists—which would be illegal under the Americans With Disabilities Act—academic research has touched on the risk to businesses that employees with ADHD present. In a study of employer costs, employees with ADHD or with children with ADHD were found to place a higher economic burden on companies (estimated as a nationwide

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cost of $77 billion per year) owing to higher health costs, absences, and terminations; Kleinman, Durkin, Melkonian, and Markosyan (2009) suggested that employees who have ADHD detract from the organization's level of productivity when compared to their non-ADHD colleagues. Arguably, any health condition of one's own or in the family can result in more absences and increased health costs. Moreover, productivity estimates on health status or parental status are irrelevant as these identifiers are present in employees outside of the ADHD population—and to hire based on the health status of the employee or his or her child would be discrimination. Of concern is that people with ADHD have lower salaries—they earn $8,900 to $15,400 less per year than peers with similar education who do not have ADHD (Faraone & Biederman, 2005); this phenomenon has not been studied and may be due to any number of factors such as poor job fit, ADHD symptomology, or discrimination.

As evidenced by multiple trade books for working adults with ADHD and online career-advice resources, much need exists for adults with ADHD to be aware of the ways in which the disorder affects their functioning at work. However, I have not found many self-help resources that highlight areas for career growth and opportunity for young adults with ADHD. The ADHD research literature, which informs recommendations for counseling and clinical practice, focuses heavily on the K–12 and college student populations; in a sense, this absence of information replicates the dearth of support that young adults with ADHD experience when transitioning from school to work. Despite the extensive literature on ADHD, surprisingly little information exists on how ADHD affects young adults' career perceptions or that captures their expectations for the future. This study explores this underrepresented area by examining the ways in which ADHD may impact career ideation.

CHAPTER IV

Hope Theory

This chapter on hope theory provides an overview of the theoretical background of the theory; explains the major concepts of the theory; describes some of the applications of the theory, including several studies on hope; and also includes a brief outline of some of the criticism of hope theory.

Snyder's (1994) hope theory is one of the major theories of the positive psychology movement, which focuses on human strengths as opposed to human deficits. Snyder (2002) suggested that hope is shaped as an interaction among a sense of self-agency, which is one's perceived ability to accomplish tasks or goal-directed energy; pathways to meet those goals; and the achievement of goals. Snyder argued that higher hope consistently predicts better outcomes than the other theories of motivation.

Hope theory hinges on the dynamic interplay of people's sense of capacity, their motivation and their past achievements, to develop hope for ongoing achievement or improvement of circumstances. One's sense of agency and capacity, or one's perceived ability to accomplish tasks and goals, is mitigated by unanticipated problems and emotional responses to setbacks. Snyder also advocated for assisting people in pursuing the goals for which they are best suited by fostering those areas that already have positive, or hopeful, perceived outcomes as based on one's perceived ability to attain the goal. Hope theory hinges on the interaction of

positive and negative experiences of success and failure and the feedback generated from one's

social milieu as shaping influences on one's hopefulness.

Snyder was greatly influenced by the motivational psychology movement of the 1950s to

1970s (Snyder, Cheavens, & Michael, 2005). Additionally, Snyder (2002) cited Fritz Heider, a

colleague at Kansas University, and Karl Menninger, former president of the American

Psychology Association and director of the Menninger Foundation, as two mentors who

contributed to his formulation of hope theory. In the mid-1980s, Snyder's (2002) research

hinged on people's excuse-making cognitive processes that result from mistakes or poor

performance. The participant interviews led Snyder to become interested in the converse

cognitive process of how people form positive goals. Snyder, Irving, and Anderson's (1991)

initial paper on hope theory posited that hope is "a motivational state that is based on an

interactively derived sense of successful a) agency (goal directed energy), and b) pathways

(planning to meet goals)" (p. 287).

Core Tenets of Hope Theory

The guiding assumption of Snyder's (2002) study was that human actions are goal

directed. Snyder continued to hone the three underlying concepts of hope theory throughout the

1990s and early 2000s. I will briefly outline the three core tenets of hope theory: goals,

pathways, and agency.

Goals. According to Snyder (2002), a *goal* is the cognitive component that serves as the

mental target of action sequence—in other words, a goal drives humans to act. Goals vary

according to specificity and temporal frame. For example, a short-term goal would be what one

wants to eat for dinner, whereas a long-term goal would be to buy one's first car. Specific goals

are more likely to occur in high-hope thinking, whereas vague goals are less likely to result in

conscious motivation and the consequent imagining of multiple pathways toward goal

attainment. The two major types of goals in hope theory are the positive goal outcome and

negative goal outcome. The first type of goal, the positive or approach goal, is one that (a) is

imagined for the first time, (b) sustains a present goal, or (c) furthers a goal for which there has

already been progress. These are the goals toward which people strive or the goals that maintain

a present positive state, for example, maintaining a certain grade point average throughout the

school year. The second type of goal, the negative goal outcome, is one that (a) involves

deterring a negative event or (b) delays a negative event (Snyder et al., 2005). One common

example of this, often recommended in substance abuse programs, is to actively avoid old friends

who might be a bad influence. Initially, Snyder et al. (2005) omitted extremely difficult goals

from hope theory, as he theorized that these goals would be perceived as truly unattainable and

therefore not possible for success. However, Snyder and colleagues later noted that "high hope

people occasionally alter those seeming absolute failure situations so as to attain the impossible"

(p. 251). In these rare circumstances, for example, an Olympic athlete overcoming a physical

disability or a man landing on the moon, the given goal is mediated by high levels of agency,

multiple pathways, and persistence.

Pathways. Snyder argued that humans have the capacity to predict multiple possible

futures and multiple routes toward these futures—this future-oriented thinking is influenced by

the individuals' experiences of their pasts and presents. Goals can't be pursued by someone

without that person having imagined pathways or thoughts of usable routes to attain them.

Higher hope individuals are more confident of their routes and consequently more decisive about

their pathways toward goals, whereas lower hope people's pathways are more vague and

therefore less well articulated. Consequently, higher hope individuals are more effective in

finding alternate routes toward their goals when faced with blockages—essentially, higher hope people are more flexible or resilient.

> Pathways thinking should become increasingly refined and precise as the goal pursuit sequence progresses toward the goal attainment. Differences in this process should appear, however, depending on the trait hope level of the person. That is to say, high-hope people more so than low-hope people should more quickly tailor their routes effectively so as to reach their goals. (Snyder, 2002, p. 251)

Agency. The motivational component of hope theory is *agency* thought or an individual's perceived capacity to use pathways to reach goals. According to Snyder et al. (2005), "these self-referential thoughts involve the mental energy of using a pathway, as well as to continue using that pathway through all stages of the goal pursuit" (p. 107). Agency is especially important for maintaining motivation when people encounter blockages; according to Snyder (2002), people who are high-hope individuals are able to channel agentic energy toward a better alternate pathway. Higher hope people also engage in agentic self-talk such as "I can do this" (Snyder, 2002). Pathways and agency thoughts are iterative as well as additive in a goal pursuit sequence—they feed each other.

> The full low hope person (i.e., low pathways and low agency) will have iterative pathway and agentic thought that is halting and slow (if at all operative) in the goal sequence. The mixed pattern of high pathways and low agency would entail active routing thoughts [i.e., many ideas of possibilities that *could* lead toward goals] that are not energized by the necessary motivational thinking. (Snyder, 2002, p. 252)

As well, Snyder's (1995) model addressed human variability in optimism and intelligence, although hope does not hinge on these traits: "High hope often assures the person of success in reaching goals; high intelligence may only give the person a chance" (p. 358).

Barriers and Emotions

In his hope theory, Snyder et al. (2005) emphasized hope as a cognitive process as opposed to an emotional process: "success (or lack thereof), as well as thoughts about the success, regarding personal goal pursuits influences subsequent emotions" (p. 107). Thus positive emotions result from successful achievements of goals or overcoming of barriers. Negative emotions are the result of being unsuccessful either in a specific goal pursuit or in general and of the unlikeliness of being able to enact plans that are envisioned as the pathway to a desired goal (Snyder, 1995):

> Higher hope persons, with their elevated sense of agency and pathways for situations in general, approach a given goal with a positive emotional state, a sense of challenge, and a focus on success rather than failure. Low-hope persons, on the other hand, with their enduring perceptions of deficient agency and pathways in general, probably approach a given goal with a negative emotional state, a sense of ambivalence, and a focus upon failure rather than success. (p. 355).

People who have more negative perceptions of their ability to work toward their goals and to achieve goals are believed to thwart their own success by nature of their negative or uncertain approach to goal attainment.

Research

Snyder (2002) argued that higher hope is related to greater outcomes in academics, athletics, physical health, psychological adjustment, and psychotherapy. Several of the studies that I will outline examined the role of hope in academic and work performance; Feldman, Rand, and Kahle-Wrobleski (2009) studied the core tenet of Snyder's hope theory that hope predicts goal attainment. Feldman and colleagues found that a goal-specific measure of hope, in particular, agency, predicts goal attainment better than Snyder's Hope Scale (Snyder et al., 1991), which measures hope regarding goals in general. The study of 163 college-aged participants was a 3-month longitudinal investigation of whether hope predicts goal attainment. The researchers assessed the participants' hope scores and goals during the first week and the last week of the spring semester. At the first measurement, participants chose seven goals that they wished to accomplish by the end of the semester, rated the importance of each goal, and measured their goal-specific hope for each accomplishment as well as an overall measure of hope. At the end of the semester, participants completed measures of goal attainment for their initial goals and also completed another set of goal-specific hope measures. The measures that were used were the Hope Scale (Snyder et al., 1991), which measured hope for goals in general and had items that measured pathways thinking and agency thinking, and the Goal-Specific Hope Scale, which the authors of the study created from a rewording of Snyder's Hope Scale to focus on specific goals. The results were analyzed for any differences in hope and goal attainment across gender or age, and no significant effect was found. The results of the study showed that participants with high goal-specific hope predicted goal attainment much more than did general hope as measured by the Hope Scale. The second major finding of the study was that goal importance influenced goal-specific pathways and agency in an individual—the researchers

described this effect as cognitive motivation or agency-related thoughts. The third finding of the study supported Snyder's hypothesis that individuals alter their hope levels based on the level of success or failure associated with their goals—or the iterative nature of goal attainment and goal-specific hope. One of the limitations of this study is that researchers collected data from a sample of college undergraduates, who inherently have very specific age-related goals that likely do not apply to the population as a whole. Moreover, demographic data beyond age and gender were not collected, so the heterogeneity or homogeneity of the sample is unknown—which further brings into question how generalizable the results would be to other populations. As well, the findings are based on self-report scales, which are less accurate than objective measures. The study also did not assess for other constructs that influence trait and goal-specific hope, namely, optimism, locus of control, and self-efficacy.

Snyder et al. (2002) also studied the impact of hope on academic success in college. Their 6-year longitudinal study found that higher levels of hope, measured by the Hope Scale, predicted better grade point averages and graduation rates. The authors suggested that intelligence and ability alone are not sufficient for academic achievement but that hope is also crucial to success. Snyder and colleagues proposed that students' levels of hope lead them to choose learning goals, wherein high-hope individuals are able to imagine multiple strategies to attain goals. An initial mass screening of 808 freshman students completed the Hope Scale (Snyder et al., 1991) in the beginning of the fall semester. The actual study sample was 213 selected college freshmen who had been divided into groups according to gender and level of hope (high, medium, and low). Six years later, participant grades, American College Testing scores, and graduation statuses were obtained. Graduation status was divided into four categories: dismissed owing to poor performance, withdrawn in good standing, still enrolled, and

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graduated. The results of the study show that a higher Hope Scale score is a reliable prediction of a higher cumulative grade point average, a higher likelihood of graduating from college, and a lower likelihood of being expelled owing to poor grades. Low-hope students overall graduated at the rate of 40.27%, compared to the rate of 53.80% for the entire class of 3,287 students—and high-hope participants graduated at 56.50%. Snyder et al. (2002) suggested that the higher hope students have higher motivation and "benefit by staying very focused on their goals" (p. 824); conversely, "the low-hope student . . . is oblivious to internal goals and is very attuned to what other people are doing academically . . . [and] establishes 'all at once goals' that are too big, overwhelming, and anxiety producing" (p. 824). The authors suggested that low-hope students would benefit from programs aimed at teaching hopeful thinking and that this would improve goal pursuits in areas both inside and outside academic settings (and would also increase positive emotions, psychological adjustment, and social support). The study had a few limitations. First, the graduation rate of the class on the whole is relatively low; it would be interesting to know more about the college in terms of national rank and also to have the study replicated in diverse college settings, including in both high-performing schools and community colleges. Moreover, this study did not take into account demographic factors that may have affected withdrawal from college such as socioeconomic status, health, and disability status. As well, the authors suggested that future research could investigate the role that teachers play in fostering academic hope.

Juntunen and Wettersten (2006) developed a measure for hope as applied to vocational situations, called the Work Hope Scale (WHS), and conducted an initial study of the measure's validity. The researchers noted the role that work has in life satisfaction and sought to apply the three components of hope theory (goal, pathways, and agency) to the pursuit of meaningful

work. The authors of the study researched positive psychology, vocational research, and career development theories in the development of the measure. The study included participants from diverse backgrounds and economically disenfranchised populations; 224 participants were recruited from various settings: a community college; a university; a large university; a powwow; a state job service agency, where some female participants were recipients of Temporary Assistance for Needy Families (TANF); and an Upward Bound program for adolescents. Participants were given a demographic form with gender, age, educational level, ethnicity, and employment status; the Work Hope Scale (WHS); the Career Decision Self Efficacy-Short Form, a measure of confidence in career decision-making tasks; and the My Vocational Situation and the Vocational Identity scale, which measure the stability of one's goals, interests, personality, and talents. The sample was nearly evenly divided between those who were employed and those who were not—those who were employed showed satisfaction with their work. The sample was 72% female and 26% male and largely European American (58%) and Native American (20%). The authors hypothesized that TANF welfare recipients and Upward Bound would have lower WHS scores—and this was found to be true. As well, Juntunen and Wettersten (2006) hoped to assess whether distinct factors were at play in the agency, pathways and goal section of their newly developed WHS.

The results indicated a two-factor construct for measuring work hope in that agency and pathways questions had high internal consistency, but the goals-oriented questions lacked this distinction. Therefore the authors suggested that further refinement of the measure was needed—and that "with the addition of a specific attempt to assess the presence of goals, the WHS has the potential to contribute to the current understanding of whether hope is a single-factor, two-factor, or three-factor construct" (p. 102). The study had several limitations. One,

which was acknowledged by the researchers, is that the diversity of the sample may have confounded the within group factors; as well, women were overrepresented in the study sample. Another limitation is that work hope may be more complex and also more individual than can be easily captured by a measure of a sample.

Criticism

Hope theory has received some criticism from other psychological scholars. Aspinwall and Leaf (2002) voiced several concerns in their commentary article on hope theory. The authors argued that the theory fails to integrate other well-validated literature on similar constructs such as optimism and control and models of self-regulation. As well, Aspinwall and Leaf pointed out that the language used in hope theory is vague and that the core tenets, such as goal-related thinking, comprise many processes. Moreover, they pointed out that Snyder's theory neglects to address beliefs about the future, and with its emphasis on individual agency, also neglects interpersonal aspects of hope. Aspinwall and Leaf noted that the studies that have investigated hope theory may not have produced results that are exclusive to hope theory—that these results and ideas can be applied to other theories. The authors further suggested that hope theory could better integrate other models of self-regulation. Aspinwall and Leaf also argued that affect warrants more of a role in the hope model as affect greatly influences motivation, decision making, and efficiency. As well, the authors asked how hope functions when people face insurmountable problems, and they suggested that the importance of disengaging from tasks can be essential to success as this is required to focus on alternate means.

Vohs and Schmeichel (2002) also critiqued Snyder's hope theory and its lack of inclusion of self-regulation concepts. First, Vohs and Schmeichel pointed out that hope is situation specific and therefore governed by self-regulatory resources, something described as an

"intrapsychic mechanism that controls desires, impulse, and motivations" (p. 318)—and these are finite. The authors offered the example of a dieter eating significantly more calories after suppressing an emotion because the act of suppressing the emotion depletes the person's goal-pursuant self-regulatory resources. Moreover, the authors argued that people with high hope have high self-control and are therefore more able to imagine, commit to, and achieve their multiple goals.

The next chapter reviews SCCT and its core concepts.

CHAPTER V

Social Cognitive Career Theory

This chapter provides an overview of SCCT, including background of the theory, a summary of the studies that have been conducted that relate to the theory, and a brief summary of selected criticism of the theory.

SCCT (Lent et al., 1994) is based in Bandura's (1986) social cognitive theory. Bandura's theory provides a framework for understanding, predicting, and changing human behavior:

> Social cognitive theory explains human functioning in terms of triadic reciprocal causation. In this model of reciprocal causality, internal personal factors in the form of cognitive, affective, and biological events, behavioral patterns, and environmental influences all operate as interacting determinants that influence one another bidirectionally. . . . In social cognitive theory, sociostructural factors operate through psychological mechanisms of the self system to produce behavioral effects. Thus, for example, economic conditions, socioeconomic status, and educational and family structures affect behavior largely through their impact on people's aspirations, sense of efficacy, personal standards, affective states, and other self-regulatory influences, rather than directly. (Bandura, 2001, p. 14–15)

Many of these core concepts of social cognitive theory are embedded in SCCT.

Social Cognitive Career Theory

SCCT (Lent et al., 1994) is a framework that identifies the causal pathways by which an individual can exercise personal agency in the planning, choice, and entry phases of career development and career satisfaction. According to S. D. Brown, Lent, Telander, and Tramayne (2011), "SCCT hypothesizes that general cognitive ability and academic or work skills that people develop through past direct and vicarious experiences influence academic and work performance both directly and indirectly via self-efficacy beliefs and outcome expectations" (p. 81). The SCCT framework explains how people's interests, career choices, and academic and work performance are interactively influenced by several internal and external factors. The internal and external influences on career development are demographic variables, contextual factors (e.g., support or barriers), life experiences, personal inputs (e.g., health or disability status, psychological outlook), self-efficacy (beliefs about capabilities to organize and carry out courses of action), outcome expectations (expected consequences of action), and goals. For the purposes of this paper, I will primarily focus on the internal factors of self-efficacy, outcome expectations, and goals.

Self-efficacy. *Self-efficacy* beliefs refer to a person's confidence in his or her ability to accomplish important performance goals. According to Lent (2005), "self-efficacy is conceived as a dynamic set of self-beliefs that are linked to particular performance domains and activities" (p. 104). For example, a person may feel that he or she will do well at performing a violin concert but may feel that he or she is less competent at mechanical tasks or social situations; although this person's self-esteem may be relatively stable, this individual's self-efficacy varies greatly across different performance domains. Betz (2007) listed four types of career self-efficacy. The first is content or task-oriented self-efficacy, which is one's confidence in his or

her ability to complete a task. Another type is coping self-efficacy, which is one's confidence in dealing well with barriers. The third type is process self-efficacy, "which includes skills necessary for career exploration, decision making, and implementation, such as career decision[s]." The fourth is self-regulatory self-efficacy, which refers to a person's ability to organize and manage his or her time and workload to facilitate success or career adaptation.

Self-efficacy beliefs are believed to be acquired through four primary sources: personal performance accomplishments, vicarious learning, persuasion, and physiological and affective states (Bandura, 1997). Self-efficacy hinges on beliefs in a person's future capacity to perform an action, which is in part formed by the person's perception about his or her past performance—self-efficacy hinges on a person's judgment of himself or herself. Personal accomplishments, both having had them in the past and continuing to attain them presently, are believed to impact self-efficacy more than any of the other SCCT concepts. Experiences that are successful raise self-efficacy, and similarly, failures lower self-efficacy in relation to that task or domain. For the individual, observation of other models of success, exposure to supportive feedback or messaging, and "experience of facilitative affective states can also promote growth of self-efficacy in a particular domain" (Lent & Brown, 2006, p. 16). The amount of influence that these factors actually have on self-efficacy depends on how the individual experiences, remembers, and perceives them, for example, significant successes may not affect self-efficacy if they are discounted, not remembered, or attributed to externalized events such as chance or luck.

People's sense of self-efficacy or perception of their prospective capabilities is based on subjective, and therefore likely biased, interpretation of past events.

The relation between past performance and self-efficacy is imperfect because people need to attend to, interpret, encode, and recall how well they have done in the past when

appraising their current capabilities. . . . Although cognitive and memory processes are subject to distortion, people nevertheless rely heavily on their perceived past personal mastery and failure experiences in judging what they can do in the future. (Lent & Fouad, 2011, p. 76)

For example, when weighing an endeavor, self-efficacy might be shaped by a person's sense of his or her future motivation for the task, his or her likely emotional reactions in undertaking it, and whether the performance context hinges on his or her abilities or the actions of others (Lent & Brown, 2006). In the words of Lent and Fouad (2011),

self-efficacy can have implications for self-evaluation and, hence, for self-esteem. For example, when people view themselves as inefficacious at performing behaviors required of a central life role, they may well engage in self-rebuke, which can spill over into negative global feelings about the self. (p. 75)

Self-efficacy is related to constructs of self-confidence and self-esteem and locus of control but is assessed at a more specific level than these other developmental psychology constructs. If a person's self-efficacy beliefs are inaccurate, whether high or low, the individual will likely choose unchallenging or overly challenging career paths that can lead to work dissatisfaction.

Outcome expectations. Outcome expectations are the beliefs about the results of taken courses of action. According to Lent (2005), "whereas self-efficacy beliefs are concerned with one's capabilities (e.g., 'can I do this?'), outcome expectations involve imagined consequences of particular courses of action (e.g., 'if I try doing this, what will happen?')" (p. 104). Outcome expectations can also apply to people's beliefs about the degree to which they will be able to meet their own primary values by pursuing a certain career, for example, financial gain, self-approval, success, and benefits to one's family . Obviously, outcome expectations do not

guarantee that a hoped-for outcome will actually occur. It is possible to have high self-efficacy

for one's job appraisal but low outcome expectation for financial gain if there are no funds for

raises in an organization.

Goals. *Goals* are defined as the intention to undertake a specific activity or to obtain a

desired outcome. SCCT includes two foremost types of goals: *choice-content goals*, which refer

to the type of domain an individual would like to pursue, and *performance goals*, which refer to

a desired level of quality of performance to which one aspires within a specific domain. For

example, a choice goal might be selecting a college major, whereas a performance goal might be

the grades that one achieves within that course of study (Lent & Brown, 2006). It is important to

emphasize that goals are idiosyncratic; individuals differ in the types of goals they have, the level

of importance of those goals, and how much effort will be put to the pursuit of his or her goals.

Goal-directed behavior and the achievement of goals is believed to be a key element of an

individual's experience of work and life satisfaction; conversely, weak goal commitment, lack of

goals, and failure in pursuing goals are believed to contribute to job and life dissatisfaction (Lent

& Brown, 2008).

Contextual support and barriers. The SCCT model includes a focus on contextual

supports and barriers. Contextual supports can be facilitative environmental influences in

reaching one's goal pursuits, for example, parental income or positively perceived aspects of a

person's environment such as a good education, whereas barriers are obstacles that people

anticipate will accompany their career goals such as the lack of availability of role models or the

presence of race or gender bias in a given career. According to Lent and Brown (2006),

"beneficial environment conditions (presence of high supports and low barriers) are assumed to

strengthen goals and their likelihood of being enacted" (p. 18). An SCCT approach to career

development includes an examination of the specific social, financial, temporal, and discriminatory supports and barriers that would promote or impede career development.

Research

Many studies have been conducted to test the relationship of subconstructs of SCCT and also to evaluate the application of SCCT to specific populations. In one such study, Lent, Brown, and Larkin (1984) researched the relationship between self-efficacy expectations and academic achievement among undergraduate students. Forty-two participants, 28 men and 14 women, were enrolled in a 10-week career–educational planning course for students interested in pursuing a degree in science and engineering majors and careers. Participants completed measures of self-efficacy in the first and final sessions of the course and also at a follow-up 8 weeks after the course was completed. In addition to the self-efficacy measure, participants' college records, PSAT scores, high school ranks, and college grades and declared major choices for the year following the career planning course were obtained to assess the relationship between self-efficacy, academic aptitude, and scholastic performance. The results indicate a significant relationship between self-efficacy and grade performance as well as persistence in technical–scientific major choices. All the students who reported high levels of self-efficacy were enrolled in the technical college for all subsequent four quarters, whereas only 58% of the low-self-efficacy students persisted. Self-efficacy is significantly correlated to objective measures of academic ability as indicated by PSAT scores and high school ranks.

This early investigation of the relationship between self-efficacy and academic behaviors had several limitations. There was no significant difference between genders for self-efficacy. The sample was drawn from a course that focused on providing career information, which means that the participants were more informed about future paths in engineering and science fields

than the average college participant would be—which also makes the study less generalizable. These results are contrary to an earlier study (Betz & Hackett, 1981) that found that women had lower career outcome expectations in male-dominated fields. Additional research has examined self-efficacy; Multon, Brown, and Lent (1991) conducted a meta-analysis of the relationship of self-efficacy beliefs to academic outcomes. Thirty-nine studies were included in the meta-analyses. The investigation showed overwhelming support for the SCCT interconnectedness of self-efficacy and performance. Multon et al.'s (1991) meta-analyses showed a significant positive relationship between self-efficacy beliefs and academic outcomes and persistence.

Schaub and Tokar (2005) studied the role of learning experiences and personality in SCCT. Though personality traits have been included in some of the research in SCCT, for the purposes of this review of literature, they are briefly explained owing to constraints on the number of theories that may be considered for this paper. The study included 327 students who were enrolled at a private university, with an age range of 18–49 years. Sixty-seven percent of the participants were White, 12.8% were Asian American, 5.2% were African American, 3.4% were multiracial, 3.1% were Latino American, and 8.6% were of other ethnicity. Of the participants, 48.9% identified as upper middle class, 28.7% as middle class, 12.2% as upper class, and 8% as working class. Participants completed a measure of personality (NEO Five-Factor Inventory), a measure of learning experiences (Learning Experiences Questionnaire), a measure of self-efficacy (Skills Confidence Inventory), a measure of outcome expectations (Occupational Outcome Expectations), and a measure of vocational interests (Strong Interest Inventory). Results indicate that personality's relationship to career interests is both direct and indirect, by way of learning experiences and socio-cognitive variables. Results also indicate a positive relationship between learning experiences and corresponding self-efficacy beliefs and

outcome expectations—moreover, the effect of learning experiences on outcome expectations occurs primarily through self-efficacy. The authors stated that "findings indicate general support for SCCT's posited relations of personality to learning experiences and of self-efficacy and outcome expectation to interests" (p. 323). In another study, Dahling and Thompson (2010) also found that "negative affectivity moderated the relationship between choice self-efficacy and choice decisions" (p. 374)—people who have negative affect encounter more difficulty making decisions and have a lower sense of self-efficacy in their decisions.

Lindley (2005) studied the relationship between self-efficacy, outcome expectations, perceived barriers, and career selection. Participants were 225 students, approximately 50% men and 50% women, enrolled in a university. Among the participants, 43 were African American, 3 were Native American, 165 were White, 3 were Latino American, 8 identified as other ethnicity, and 3 did not provide a response. Participants were given a Perceptions of Barriers Scale, a Coping with Barriers Scale, the Occupational Self-efficacy Beliefs Scale, and the Occupational Outcome Expectations Scale. Self-efficacy for careers was more strongly associated with beliefs about coping with barriers for men than it was for women; this finding indicates that men who have confidence for certain careers also have more confidence in their capacity to overcome obstacles in their career pursuits. High rates of correspondence were found between participants' career choices and their highest self-efficacy and outcome expectation scores. However, the hypothesis that outcome expectations would be negatively linked to outcome expectations was not supported, for which the authors posited that it may be possible that people may realistically assess barriers to achievement while also exaggerating the rewards of a career that is thought to be unattainable. Several limitations existed in this study. Participants were not prescreened to ensure that vocational interest was evenly distributed across all vocational categories, which

affects the generalizability of the results. The authors also did not include ethnic differences in the analysis of the data from this study.

SCCT has been applied to a number of different populations and age ranges; however, certain other populations would benefit from research, notably people who have ADHD. Though there has not been any study of how ADHD affects a person's career and academic development, a few articles have been written on topics of relevance to the ADHD community regarding LDs and psychiatric disabilities. ADHD is often comorbid with LDs (an ADHD diagnosis, similar to a learning disability, can result in a student being given some academic accommodation). In addition, ADHD has a higher comorbidity with some psychiatric disorders, namely, anxiety and depression. Some research has examined SCCT in a sample with LDs and in a sample with psychiatric comorbidity. Ochs and Roessler (2004) examined the impact of LDs on young adults' career exploration behaviors. Ochs and Roessler compared a sample of 77 high school special education students and 99 general education students and found that career decision self-efficacy and academic and career outcome expectations were predictors of career exploratory intentions in both groups. The researchers suggested that students with LDs may benefit from interventions that build mastery experiences in pre-career decision-making activities. Smith and Milson (2011) wrote a theoretical paper about applying SCCT to improving the vocational counseling and work status of adults with psychiatric disabilities—this population often has difficulty getting jobs or keeping jobs. The authors suggested that this population would benefit from career counseling that explores realistic goals, work-related self-efficacy beliefs, and perceived employment barriers.

Criticism. There is limited critical discussion about SCCT in the literature. D. Brown (2000) has suggested that the independent decision making implied in the model is more

applicable to a dominant culture narrative. Contrary to this independent decision making, D. Brown noted that in many cultures and communities, decisions are made more collectively. D. Brown also noted that the SCCT concept of goals implies a future-oriented temporal mentality that is not shared by all cultures.

The following chapter will apply SCCT and hope theory to the career development of young adults who have ADHD and provide suggestions for treatment and further research.

CHAPTER VI

Discussion

In this paper I have outlined some important challenges that affect the work lives of adults with ADHD, and have provided an overview to two theoretical lenses that are useful in understanding how having ADHD may impact a person's career development. While I do not claim that all people who have ADHD experience having the condition as thwarting to their career aspirations, ADHD is one factor in a constellation of factors that will likely influence a person's career path, whether consciously or not. This paper covers how having ADHD may affect one's career aspirations so that those who work with people who have ADHD (i.e., school counselors, teachers, therapist, family members), and those who have the condition, might better understand how ADHD can impact career ideation and professional development. This chapter will briefly review the concepts presented in chapters 3-5, provide a synthesis of the information about ADHD with the two theories, and also offer suggestions for working with young adults with ADHD.

Summary of Major Concepts

In chapter three, I provided an overview to the ways in which having ADHD impacts a person's functioning in academic, career and psychological spheres. Characteristics of ADHD often create workplace issues that impede an individual's upward career mobility, such as emotionality, disorganization, impulsivity, and inattention. People who have ADHD often have histories rife with academic frustrations and failures which negatively impact their sense of self-

efficacy and life satisfaction. In adulthood, people with ADHD have been shown to experience

higher rates of underemployment, financial instability and life dissatisfaction

In chapter four, I outline Snyder's hope theory (1991), in which he posited that one's

sense of hope is shaped by an interaction between a person's goals, agency, and pathways

towards goals; agency is shaped by achievement of past and current goals. Individuals with

higher hope have more academic success, graduate at higher levels and achieve more career

goals. Higher hope individuals are believed to envision more ways of achieving their goals and

are therefore better able to attain goals when faced with deterrents. Relatedly, higher hope

individuals are more persistent in goal pursuits, and also better able to gauge when a goal-pursuit

activity should be abandoned for an alternate pathway strategy or goal.

In chapter five, I provided an overview to Lent, Hackett and Brown's (1994) social

cognitive career theory, in which they posited that a person's career aspirations are formed

through an iterative process of internal and external factors. These factors are demographic

variables (e.g., race, socio-economic class, gender), personal inputs (e.g., health, mental health,

disability status), contextual supports and barriers, self-efficacy beliefs, outcome expectations,

and goals. Individuals who have higher self-efficacy beliefs and higher outcome expectations

tend to set and achieve higher goals.

Applying Theory to Career Ideation of Young Adults with ADHD

Social cognitive career theory. Applying the social cognitive career theory frame to a

young adult with ADHD, one may see several areas that might be impacted by having the

disorder. Namely, these areas are self-efficacy, goal setting and outcome expectations, and

barriers.

In SCCT, self-efficacy is hypothesized to help promote academic and career-related interests, choices, performance, and satisfaction. That is, people are more likely to develop interest in, choose to pursue, do well in, and feel satisfied at school and work activities for which they believe they possess the necessary capabilities. (Lent & Fouad, 2011, p. 74)

A young adult with ADHD is more likely to have a lower sense of career-specific self-efficacy due to an educational legacy of years of academic struggles and underachievement, which can result in lower self-esteem and self-evaluation. SCCT could shed light on why people with ADHD are more likely to be underemployed; possibly they have lower outcome expectations and choose less challenging career goals, or, within certain careers, they may not aspire to higher tier job positions due to lowered self-efficacy and lowered outcome expectations.

The individual with ADHD also may encounter many career barriers. Given difficulties with impulse control behaviors, time management, organization and negotiating interpersonal communications, possibly people with ADHD are underemployed due to the barrier of receiving poor evaluations by supervisors. For the individual with ADHD, barriers are both internal and external: they can have poor internal thought organization due to ADHD, and the symptoms can result in external disorganization of workspace, of use of time and, even, of presentation of self. According to SCCT, the ways in which individuals negotiate barriers will have vast implications for attaining (or re-orienting) their goals; in this respect, the emotional reactivity of ADHD and impulsivity may result in people opting out of careers they were passionate about, engaging in conflict with supervisors, or quitting the workplace in an emotional outburst. How someone negotiates barriers also affects that person's sense of self-efficacy; when the person with ADHD encounters a persistent barrier, such as poor organizational skills, matched by an environment or

a supervisor with expectations for good organizational skills, the young adult with ADHD may begin to feel lower self-efficacy as an employee. Consequently, they may experience lower levels of work satisfaction and lower levels of life satisfaction: "obstacles that impede goal progress may diminish satisfaction," (Lent & Brown, 2008, p. 15).

When people evaluate themselves as not being capable of success because of past failings, they are likely to experience a sense of foreshortened future. A sense of limited future possibilities may result in fewer goals; arguably a life with fewer goals, ones that have been thwarted or ones that have been let go of, would be less fulfilling.

> Among the many advantages of goal-directed behavior are that it enables people to participate in personally and culturally valued activities, may bring them into contact with others for mutual support, and helps provide life structure and meaning, all of which can promote domain and life satisfaction (Lent & Brown, 2008, p. 14).

However, for the individual with ADHD, goal setting is one of the executive function areas that can be difficult. As self-efficacy, outcome expectations, negotiation of barriers, and goal setting may be impaired in adults with ADHD, it is crucial that young adults with ADHD, who are at the beginning of their careers, are made aware of how these areas may impact their career development.

Hope theory. Utilizing the lens of hope theory to examine how having ADHD might impact one's career ideation and professional identity, some of the same tenets of social cognitive career theory are equally important. In hope theory, goals are foundational to success: "hope theory is built upon the importance and necessity of goals in daily living. There is much to be gained from fashioning very concrete goals" (Snyder, 1995, p. 73). In addition to long-term goals, it is important for the individual with ADHD to be able to set short-term or proximal

goals. However, as we know from the research on executive functioning, breaking down tasks can be difficult for the person with ADHD, as both time management and prioritization can be impaired.

The second component of hope theory is pathways thinking, "pathways thinking reflect the perceived ability to produce successful avenues to desired goals…[it is] a way to link the present to the future through one's goals" (Cheavens et al., 2006, p. 137). The pathways that one envisions towards one's goals as strategies are also imperative; for the adult with ADHD, however, strategies can be undermined by difficulties prioritizing tasks, planning complex multi-step actions, and time management. As well, impulsivity can lead to early aborts of goal pursuits. Moreover, poor social interactions can undermine goal pathways: individuals with ADHD may struggle to communicate well with colleagues and supervisors and their inattention to details may result in careless mistakes leading to being fired or job demotion.

Similarly to SCCT's self-efficacy concept, hope theory's concept of agency is crucial to goal attainment. "Agency thinking involves thoughts about one's ability to initiate and sustain movement along pathways toward desired goals, even when faced with impediments," (Cheavens et al., 2006, p. 137). Young adults who have had a history of educational difficulties may have less confidence in their abilities to pursue a particular goal. Moreover, agentic thinking is impacted by the messages that people receive from their social groups, families, schools, and cultures. How social systems communicate to individuals with ADHD will greatly influence what the individuals believe they are capable of. Young adults with ADHD may have had years of experiencing their parents as critical of them or as being overly-involved, so those young persons will have less confidence in their abilities to persist in a goal pursuits.

Agency and pathways thinking impact each other. Experiences of being successful at envisioning pathways and working towards goals leads to a greater sense of agency; conversely experiences of not being successful at envisioning pathways to goals and not working towards goals will lead to less agency and less hope. For example, the young adult with ADHD who always wanted to be a veterinarian but had poor high school science marks, may not attempt to take at the required college-level science classes; instead he or she might choose a major that seems like a safe choice but will lead to another career where he or she might be less satisfied.

As in all career ideation, individuals with ADHD may begin to place more of their self-confidence in areas that are not associated with academic achievement (e.g., "I'm a good artist," "I'm funny," ""'m a caring friend") and they may begin to envision career paths out of these strengths. Certainly these approaches to envisioning the professional future would be better than selecting a career where one's areas of deficit are at the core of the profession (e.g., tax accountant, librarian, genetic researcher, or corporate lawyer). "Activities of high personal interest that minimize routine tasks and allow for autonomy are typically more tolerable for the adult with ADHD," (Carroll & Ponterotto, 1998, p. 90). Though there are very few career guidance resources for young people with ADHD, one article (Farrington, 2005) highlighted careers that were better tailored to the ADHD population. Some of these were sales, performing arts, visual arts and design, entrepreneurship, teaching, counseling and therapy, and recreation, fitness, sports. It is important to note that it would be poor professional practice to steer a young adult with ADHD towards these professions if he or she did not have any interest in these areas. Similarly, I do not wish to generalize that all individuals with ADHD cannot succeed at jobs that might challenge ADHD symptom areas; it is important, however, for people to know the ways in which ADHD may impact them in their careers.

Working with Young Adults with ADHD: Practice Implications

As evidenced by the literature, a mismatched person-in-environment job fit or career path can be detrimental to the person with ADHD. Therefore, it is crucial that those who provide counsel to young adults with ADHD help their clients to identify career goals that will be satisfying. "Choosing among employment alternatives, overcoming the roadblocks to making changes, and solving the problems that will emerge during the employment decision-making process may be particularly difficult for clients with ADHD" (Carroll & Ponterotto, 1998, p. 91). The following are some counseling suggestions from hope theory and social cognitive career theory, followed by suggestions specifically for the ADHD population.

Social cognitive career theory. SCCT recommendations for career counseling center upon assessing the client's self-efficacy. As self-efficacy beliefs and outcome expectations may not match objective assessments of abilities, Lent and Brown (1996) recommended exploring career options that have been foreclosed upon due to faulty beliefs. They recommended assessing the clients' perceptions of barriers in careers that interest them and exploring with clients whether they feel these barriers can be surmounted. As well, Lent and Brown suggested working with clients to modify faulty self-efficacy beliefs and outcome expectations by helping clients identify new successes and previous accomplishments. Moreover, Lent and Fouad (2011) suggested helping clients break down long-term goals into sub-goals. Helping a client form sub-goals facilitates goal pursuit in several ways: the totality of a goal pursuit is less overwhelming, outcome expectations become informed by experience rather than expectation, and success in achieving sub-goals builds up the client's sense of self-efficacy.

Hope theory. The author's of hope theory recommendations for fostering hope in clients are similar. Snyder (1995) suggested clarifying and concretizing the client's goals and working

with the client to conceptualize sub-goals that are more immediately attainable. The key areas to target are the client's sense of agency and of pathways. In order to improve hopefulness, the counselor should a) focus on improving client self-talk as this impacts self-agency, b) reframe the client's goals and setbacks as challenges not as failures, c) reframe difficulties as indicative of the wrong strategy not lack of ability, d) recall previous successes and reward oneself for sub-goal attainment successes, and e) work with the client to re-goal (when goal blockages are encountered). While the above hope-based counseling strategy is very comprehensive, Snyder (1995) argued that "often changing only one component will serve as a catalyst for change in the other components…even though people may encounter profound difficulties in life, the chances of restarting the hope machine are often favorable" (p. 359).

ADHD-specific career advice. Other publications have dispensed self-help advice to people with ADHD on topics ranging from relationships and parenting to careers. I was able to find one article, *A.D.D. On the Job* (Farrington, 2005) that provided workplace advice directly to young people and defined several criteria for success on the job. The author suggested that adults with ADHD in the workplace would benefit from a) setting up an organizational system at the onset of a new job;, b) using coping strategies; c) asking for what they need (without necessarily disclosing ADHD status); d) seeking out mentors, coaches, and other supportive people; e) learning from mistakes; f) keeping home and work organized; and e) not being afraid to switch jobs (Farrington, 2005). These suggestions are valid; however they are suggestions that target the very executive function difficulties that people with ADHD encounter. It is worth considering whether people with ADHD who are expending all their time in the maintenance of these areas will be able to function creatively or to set long-term career goals. Farrington's advice centered on managing symptoms rather than on offering guidance for how to envision

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careers where flourishing is a possibility. In contrast to symptom management advice, Painter et al. (2008) suggested that people with ADHD are likely to do better with jobs that reward creativity, spontaneity and frequent change of tasks; moreover, jobs where other support staff can be responsible for the organizational or structural components of the workplace are a better fit for the person with ADHD.

In one of the very few articles on ADHD-specific career guidance to clinicians, Nadeau (2005) offered counseling suggestions that correlate to both SCCT and hope theory. Nadeau (2005) outlined several external factors that are important to look at when working with the ADHD client: the importance of a job that is the right fit, an encouraging social environment, mentorship, and support services (i.e., clinical, organizational, etc.) hired as needed. The clinician should work with the client to build career capacity by a) reframing any negative self-views the client has, b) fostering aspirations for goals and for persistence towards goals, and c) create goal strategies that target the client's areas of strength. As well, Nadeau recommended that clinicians conduct a work history to assess past functioning, client concerns and social relations at work. If possible, a neurocognitive test, psychological test, personality and interest test are also recommended. The clinician should approach working with an ADHD client as a balance between practical solutions to brain-based issues and psychotherapy for the individual's sense of self. "A basic step in psychotherapy is to help the client reach a level of self-acceptance—to reach a point at which she can celebrate her strengths without apologizing for [her] weaknesses…" (Nadeau, 2005, p. 556).

In my perspective both SCCT and hope theory provide useful strategies for helping a young adult with ADHD in the career exploration and selection process; some additional salient points exist that may also be useful in working with a young client with ADHD. It is important

to explore how having ADHD has impacted the individual and whether he or she is distressed by any symptoms. Potentially, one of the most reparative experiences for clients is for them to better understand how having ADHD impacts their lives. Psycho-education about the disorder helps to externalize the symptoms and, in doing so, diminishes the shame associated with past experiences of failure and the subjective experience of symptoms as character flaws. The focus of the ADHD literature has been on deficits and symptom management, not aspirations or strengths. The research on ADHD needs to shift from discussion of ADHD as a brain deficit to discussion of the condition as a brain difference. In clinical or counseling encounters, the client's strengths should be the focus of career discussion. Ideally clients would seek work in areas that capitalize on their capacities, but often young adults are impacted by family and social messages about appropriate career paths. It is much more important for young adults with ADHD to find work in niches that suit them where they do not have to constantly feel they are fighting an uphill battle. When envisioning a future job, it would be important to give a realistic picture of the particular areas where the client might need to apply more effort and to discuss practical strategies for how that can be done (communication tools, organizational skills). Lastly, in an ideal world, all clients would have access to ongoing support throughout their careers so that young adults with ADHD may continue to receive feedback on how to better negotiate barriers, interpersonal communication and goal-planning strategies.

Limitations

One of the limitations of this study is that my review of the literature may have been biased by my own perspective as a person who has ADHD. It is possible that my ADHD status and work history have influenced the focus of this paper and what literature was presented. Another limitation of this paper is that there is no research on the impact of ADHD on young

adult career ideation and professional identity, thus this paper is an exploration rather than based on concrete experimental results.

Implications for Future Research

Given the vast research on ADHD (particularly in childhood and adolescence), it is important look at how the disorder impacts adults' careers. There is a paucity of research focused on the career perspectives of young adults with ADHD; it is important to capture this point of view in the literature, so that those who work with young adults with ADHD are better informed about their career challenges and hopes. Future research should be conducted using both the hope theory and social cognitive career theory lenses (in separate studies) to conduct qualitative interviews with college students and recently graduated young adults about their career ideation; this potential research study should be longitudinal so that the literature has more representation of the long-term career development of adults with ADHD.

Conclusion

In conclusion, this paper has explored the multiple ways that ADHD can impact the career ideation and professional identity of young adults with the disorder. ADHD in adulthood is marked by impulsivity, inattention, and difficulties with executive functions. The impact of ADHD on career development begins in early years through lowered academic self-efficacy and poorer peer relations, and these same areas continue to impact the educational and career identities of young adults with the disorder. It is important to note that maintaining hope for positive career outcomes in the face of lowered self-agency and negative feedback from teachers or supervisors is difficult; it is imperative that clinicians who work with young adults with ADHD facilitate client recognition of past and present successes and assist the client in establishing clear career goals and the plans toward goal achievement. In the U.S., adults are often defined, at the societal level and personally, by their work. Given the importance of one's

career in defining subjective wellbeing, young adults with ADHD deserve and need ongoing

support so that they may experience work-related successes and greater life satisfaction.

References

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.

Aspinwall, L. G., & Leaf, S. L. (2002). In search of the unique aspects of hope: Pinning our hopes on positive emotions, future oriented thinking hard times, and other people. *Psychological Inquiry, 13*(4), 276–288. doi:10.1207/S15327965PLI1304_02

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ US: Prentice-Hall, Inc.

Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York, NY: W. H. Freeman/Times Books/Henry Holt.

Bandura, A. (2001). Social cognitive theory: An agentic perspective. *Annual Review of Psychology, 52*, 1–26. doi:10.1146/annurev.psych.52.1.1

Barkley, R. A. (2001). The executive functions and self-regulation: An evolutionary neuropsychological perspective. *Neuropsychology Review, 11*(1), 1–29.

Barkley, R. A., Fischer, M., Smallish, L., & Fletcher, K. (2006). Young adult outcome of hyperactive children: Adaptive functioning in major life activities. *Child & Adolescent Psychiatry, 45*(2), 192–202. doi:10.1097/01.chi.0000189134.97436.e2

Barkley, R. A., Murphy, K. R., & Fischer, M. (2008). *ADHD in adults: What the science says*. New York, NY: Guilford Press.

Barry, T. D., Lyman, R. D., & Klinger, L. G. (2002). Academic underachievement and attention-deficit/hyperactivity disorder: The negative impact of symptom severity on school performance. *Journal of School Psychology, 40*(3), 259–283. doi:10.1016/S0022-4405(02)00100-0

Betz, N. E. (2007). Career self-efficacy: Exemplary recent research and emerging

directions. *Journal of Career Assessment, 15*(4), 403–422. doi:10.1177/106907270-

7305759

Betz, N. E., & Hackett, G. (1981). The relationship of career-related self-efficacy expectations to

perceived career options in college women and men. *Journal of Counseling*

Psychology, 28(5), 399–410. doi:10.1037/0022-0167.28.5.399

Biederman, J., & Faraone, S. V. (1993). Patterns of psychiatric comorbidity, cognition, and

psychosocial functioning in adults with attention deficit hyperactivity disorder. *American*

Journal of Psychiatry, 150: 1792-1798.

Brown, D. (2000). Theory and the school-to-work transition: Are the recommendations suitable

for cultural minorities? *Career Development Quarterly, 48*(4), 370–375.

Brown, S. D., Lent, R. W., Telander, K., & Tramayne, S. (2011). Social cognitive career theory,

conscientiousness, and work performance: A meta-analytic path analysis. *Journal of*

Vocational Behavior, 79(1), 81–90. doi: 10.1016/j.jvb.2010.11.009

Carroll, C. B., & Ponterotto, J. G. (1998). Employment counseling for adults with attention-

deficit/hyperactivity disorder: Issues without answers. *Journal of Employment*

Counseling, 35(2), 79-95. doi:10.1002/j.2161-1920.1998.tb00478.x

Dahling, J. J., & Thompson, M. N. (2010). Contextual supports and barriers to academic choices:

A policy-capturing analysis. *Journal of Vocational Behavior, 77*(3), 374–382. doi:

10.1016/j.jvb.2010.07.007

DuPaul, G. J., McGoey, K. E., & Eckert, T. L. (2001). Preschool children with attention-

deficit/hyperactivity disorder: Impairments in behavioral, social, and school

functioning. *Child & Adolescent Psychiatry, 40*(5), 508–515. doi:10.1097/00004583-200105000-00009

DuPaul, G. J., Weyandt, L. L., O'Dell, S., & Varejao, M. (2009). College students with ADHD: Current status and future directions. *Journal of Attention Disorders*, 13(3), 234-250. doi: 10.1177/1087054709340650

Faigel, H. C. (1995). Attention deficit disorder in college students: Facts, fallacies, and treatment. *Journal of American College Health, 43*(4), 147–155. doi: 10.1080/07448481.1995.9940467

Faraone, S. V., & Biederman, J. (2005). Adolescent predictors of functional outcome in adult ADHD: A population survey. *Psychiatric Times*, pp. 6–9.

Faraone, S. V., Sergeant, J., Gillberg, C., & Biederman, J. (2003). The worldwide prevalence of ADHD: Is it an American condition? *World Psychiatry: Official Journal of the World Psychiatric Association, 2*(2), 104–113.

Farrington, J. (2005). A.D.D. on the job. *Career World, 34*(3), 6–9.

Feldman, D. B., Rand, K. L., & Kahle-Wrobleski, K. (2009). Hope and goal attainment: Testing a basic prediction of hope theory. *Journal of Social & Clinical Psychology, 28*(4), 479–497.

Frick, P. J., Kamphaus, R. W., Lahey, B. B., Loeber, R., Christ, M. G., Hart, E. L., & Tannenbaum, L. E. (1991). Academic underachievement and the disruptive behavior disorders. *Journal of Consulting And Clinical Psychology*, 59(2), 289-294. doi:10.1037/0022-006X.59.2.289

Gudjonsson, G. H., Sigurdsson, J. F., Eyjolfsdottir, G. A., Smari, J., & Young, S. (2009). The relationship between satisfaction with life, ADHD symptoms, and associated problems

among university students. *Journal of Attention Disorders, 12*(6), 507–515. doi: 10.1177/1087054708323018

Hallowell, E. M., & Ratey, J. J. (1994). *Driven to distraction: Recognizing and coping with attention deficit disorder from childhood through adulthood.* New York: Pantheon Bks.

Halmøy, A., Fasmer, O. B., Gillberg, C., & Haavik, J. (2009). Occupational outcome in adult ADHD: Impact of symptom profile, comorbid psychiatric problems, and treatment: A cross-sectional study of 414 clinically diagnosed adult ADHD patients. *Journal of Attention Disorders, 13*(2), 175–187. doi: 10.1177/1087054708329777

Heiligenstein, E., Guenther, G., Levy, A., Savino, F., & Fulwiler, J. (1999). Psychological and academic functioning in college students with attention deficit hyperactivity disorder. *Journal of American College Health, 47*(4), 181–186.

Hennessey, M. L., Rumrill, P. D., Jr., Roessler, R. T., & Cook, B. G. (2006). Career development needs among college and university students with learning disabilities and attention deficit disorder/attention deficit hyperactivity disorder. *Learning Disabilities: A Multidisciplinary Journal, 14*(1), 57–66.

Juntunen, C. L., & Wettersten, K. B. (2006). Work hope: Development and initial validation of a measure. *Journal of Counseling Psychology, 53*(1), 94–106. doi: 10.1037/0022-0167.53.1.94

Kern, R. M., Rasmussen, P. R., Byrd, S. L., & Wittschen, L. K. (1999). Lifestyle, personality, and attention deficit hyperactivity disorder in young adults. *Journal of Individual Psychology, 55*(2), 186–199.

Kessler, R. C., Adler, L., & Barkley, R. (2006). The prevalence and correlates of adult ADHD in

    the United States: Results from the national comorbidity survey replication. *American*

    Journal of Psychiatry, 163(4), 716-723. doi:10.1176/appi.ajp.163.4.716

Kessler, R. C., Green, J. G., Adler, L. A., Barkley, R. A., Chatterji, S., Faraone, S. V., et al.

    (2010). Structure and diagnosis of adult attention-deficit/hyperactivity disorder: Analysis

    of expanded symptom criteria from the adult ADHD clinical diagnostic scale. *Archives of*

    General Psychiatry, 67(11), 1168–1178. doi:10.1001/archgenpsychiatry.2010.146

Kleinman, N. L., Durkin, M., Melkonian, A., & Markosyan, K. (2009). Incremental employee

    health benefit costs, absence days, and turnover among employees with ADHD and

    among employees with children with ADHD. *Journal of Occupational & Environmental*

    Medicine, 51(11), 1247–1255. doi:10.1097/JOM.0b013e3181bca68c

Lent, R. W. (2005). A social cognitive view of career development and counseling. In S. D.

    Brown & R. W. Lent (Eds.), *Career development and counseling: Putting theory and*

    research to work (pp. 101–127). Hoboken, NJ: John Wiley.

Lent, R. W., & Brown, S. D. (2006). On conceptualizing and assessing social cognitive

    constructs in career research: A measurement guide. *Journal of Career*

    Assessment, 14(1), 12–35. doi: 10.1177/1069072705281364

Lent, R. W., & Brown, S. D. (2008). Social cognitive career theory and subjective well-being in

    the context of work. *Journal of Career Assessment, 16*(1), 6–21. doi:

    10.1177/1069072707305769

Lent, R. W., Brown, S. D., & Hackett, G. (1994). Toward a unifying social cognitive theory of

    career and academic interest, choice, and performance. *Journal of Vocational*

    Behavior, 45(1), 79–122. doi:10.1006/jvbe.1994.1027

Lent, R. W., Brown, S. D., & Hackett, G. (2000). Contextual supports and barriers to career

   choice: A social cognitive analysis. *Journal of Counseling Psychology, 47*(1), 36–49.

   doi:10.1037/0022-0167.47.1.36

Lent, R. W., Brown, S. D., & Larkin, K. C. (1984). Relation of self-efficacy expectations to

   academic achievement and persistence. *Journal of Counseling Psychology, 31*(3), 356–

   362. doi:10.1037/0022-0167.31.3.356

Lent, R. W., & Fouad, N. A. (2011). The self as agent in social cognitive career theory. In P. J.

   Hartung & L. M. Subich (Eds.), *Developing self in work and career: Concepts, cases,

   and contexts* (pp. 71–87). Washington, DC: American Psychological Association.

   doi:10.1037/12348-005

Lindley, L. D. (2005). Perceived barriers to career development in the context of social cognitive

   career theory. *Journal of Career Assessment, 13*(3), 271–287. doi:10.1177/1069072705-

   274953

Loe, I. M., & Feldman, H. M. (2007). Academic and educational outcomes of children with

   ADHD. *Journal of Pediatric Psychology, 32*(6), 643–654. doi: 10.1093/jpepsy/jsl054

Massetti, G. M., Lahey, B. B., Pelham, W. E., Loney, J., Ehrhardt, A., Lee, S. S., et al. (2008).

   Academic achievement over 8 years among children who met modified criteria for

   attention-deficit/hyperactivity disorder at 4–6 years of age. *Journal of Abnormal Child

   Psychology, 36*(3), 399–410. doi:10.1007/s10802-007-9186-**4**

Multon, K. D., Brown, S. D., & Lent, R. W. (1991). Relation of self-efficacy beliefs to academic

   outcomes: A meta-analytic investigation. *Journal of Counseling Psychology, 38*(1), 30–

   38. doi:10.1037/0022-0167.38.1.30

Murphy, K. R., Barkley, R. A., & Bush, T. (2002). Young adults with attention deficit

    hyperactivity disorder: Subtype differences in comorbidity, educational, and clinical

    history. *Journal of Nervous and Mental Disease, 190*(3), 147–157.

Nadeau, K. G. (2005). Career choices and workplace challenges for individuals with

    ADHD. *Journal of Clinical Psychology, 61*(5), 549–563. doi:10.1002/jclp.20119

Nigg, J. T. (2006). *What causes ADHD? Understanding what goes wrong and why*. New York,

    NY: Guilford Press.

Norwalk, K., Norvilitis, J. M., & MacLean, M. G. (2009). ADHD symptomatology and its

    relationship to factors associated with college adjustment. *Journal of Attention*

    Disorders, 13(3), 251–258. doi:10.1177/1087054708320441

Ochs, L. A., & Roessler, R. T. (2004). Predictors of career exploration intentions: A social

    cognitive career theory perspective. *Rehabilitation Counseling Bulletin, 47*(4), 224–233.

Painter, C. A., Prevatt, F., & Welles, T. (2008). Career beliefs and job satisfaction in adults with

    symptoms of attention-deficit/hyperactivity disorder. *Journal of Employment*

    Counseling, 45(4), 178–188.

Reaser, A., Prevatt, F., Petscher, Y., & Proctor, B. (2007). The learning and study strategies of

    college students with ADHD. *Psychology in the Schools, 44*(6), 627–638.

    doi:10.1002/pits.20252

Schaub, M., & Tokar, D. M. (2005). The role of personality and learning experiences in social

    cognitive career theory. *Journal of Vocational Behavior, 66*(2), 304–325.

    doi:10.1016/j.jvb.2004.09.005

Smith, A., & Milson, A. (2011). Social cognitive career theory and adults with psychiatric

    disabilities: Bringing theory to practice. *Journal of Applied Rehabilitation*

    Counseling, 42(3), 20–25.

Snyder, C. R. (1994). *The psychology of hope: You can get there from here.* New York, NY:

    Free Press.

Snyder, C. R. (1995). Conceptualizing, measuring, and nurturing hope. *Journal of Counseling &*

    Development, 73(3), 355–360.

Snyder, C. R. (2002). Hope theory: Rainbows in the mind. *Psychological Inquiry, 13*(4), 249–

    275. doi:10.1207/S15327965PLI1304_01

Snyder, C. R., Cheavens, J. S., & Michael, S. T. (2005). Hope theory: History and elaborated

    model. In J. A. Eliott (Ed.), *Interdisciplinary perspectives on hope* (pp. 101–118).

    Hauppauge, NY: Nova Science.

Snyder, C. R., Irving, L. M., & Anderson, J. R. (1991). Hope and health. In C. R. Snyder & D. R.

    Forsyth (Eds.), *Handbook of social and clinical psychology: The health perspective* (pp.

    285–305). Elmsford, NY: Pergamon Press.

Snyder, C. R., Shorey, H. S., Cheavens, J., Pulvers, K. M., Adams, V. H. I., II, & Wiklund, C.

    (2002). Hope and academic success in college. *Journal of Educational*

    Psychology, 94(4), 820–826. doi:10.1037/0022-0663.94.4.820

Tabassam, W., & Grainger, J. (2002). Self-concept, attributional style and self-efficacy beliefs of

    students with learning disabilities with and without attention deficit hyperactivity

    disorder. *Learning Disability Quarterly, 25*(2), 141–151. doi:10.2307/1511280

Vohs, K. D., & Schmeichel, B. J. (2002). What makes hope hopeful? The relationship between

    hope and self-regulation. *Psychological Inquiry, 13*(4), 318–321.

Wiener, J., & Mak, M. (2009). Peer Victimization in Children with Attention-

      Deficit/Hyperactivity Disorder. *Psychology in the Schools*, 46(2), 116-131.

      doi:10.1002/pits.20358

Wilens, T. E., Faraone, S. V., & Biederman, J. (2004). Attention-deficit/hyperactivity disorder in

      adults. *Journal of the American Medical Association, 292*(5), 619–623.

      doi:10.1001/jama.292.5.619