Georgia State University
ScholarWorks @ Georgia State University

Counseling and Psychological Services Dissertations

Department of Counseling and Psychological Services

1-6-2012

The Relationship of Lifestyle and Psychological Birth Order with Career Decision Self-Efficacy

Ronald M. Herndon
Georgia State University

Follow this and additional works at: http://scholarworks.gsu.edu/cps_diss

Recommended Citation
Herndon, Ronald M., "The Relationship of Lifestyle and Psychological Birth Order with Career Decision Self-Efficacy" (2012). *Counseling and Psychological Services Dissertations.* Paper 67.

This Dissertation is brought to you for free and open access by the Department of Counseling and Psychological Services at ScholarWorks @ Georgia State University. It has been accepted for inclusion in Counseling and Psychological Services Dissertations by an authorized administrator of ScholarWorks @ Georgia State University. For more information, please contact scholarworks@gsu.edu.

ACCEPTANCE

This dissertation, THE RELATIONSHIP OF LIFESTYLE AND PSYCHOLOGICAL BIRTH ORDER WITH CAREER DECISION SELF-EFFICACY, by RONALD MALCOLM HERNDON, was prepared under the direction of the candidate's Dissertation Advisory Committee. It is accepted by the committee members in partial fulfillment of requirements for the degree Doctor of Philosophy in the College of Education, Georgia State University.

The Dissertation Advisory Committee and the student's Department Chair, as representatives of the faculty, certify that this dissertation has met all standards of excellence and scholarship as determined by the faculty. The Dean of the College of Education concurs.

_____
Gregory L. Brack, Ph.D.
Committee Chair

_____
JoAnna F. White, Ed.D.
Committee Member

_____
Roger O. Weed, Ph.D.
Committee Member

_____
Kevin B. Stoltz, Ph.D.
Committee Member

_____
Date

_____
Brian Dew, Ph.D.
Chair, Department of Counseling & Psychological Services

_____
R. W. Kamphaus, Ph.D.
Dean and Distinguished Research Professor
College of Education

AUTHOR'S STATEMENT

By presenting this dissertation as a partial fulfillment of the requirements for the advanced degree from Georgia State University, I agree that the library of Georgia State University shall make it available for inspection and circulation in accordance with its regulations governing materials of this type. I agree that permission to quote, to copy from, or to publish this dissertation may be granted by the Professor under whose direction it was written, by the College of Education's director of graduate studies and research, or by me. Such quoting, copying, or publishing must be solely for scholarly purposes and will not involve potential financial gain. It is understood that any copying from or publication of this dissertation which involves potential financial gain will not be allowed without my written permission.

_____

Ronald M. Herndon

NOTICE TO BORROWERS

All dissertations deposited in the Georgia State University library must be used in accordance with the stipulations prescribed by the author in the preceding statement. The author of this dissertation is:

Ronald M. Herndon
2289 Cloverdale Drive
Atlanta, GA 30316

The director of this dissertation is:

Dr. Gregory L. Brack
Department of Counseling and Psychological Services
College of Education
Georgia State University
Atlanta, GA 30303 - 3083

VITA

Ronald M. Herndon

ADDRESS: 2289 Cloverdale Drive
Atlanta, Georgia 30316

EDUCATION:

Ph.D.	2011	Georgia State University Counseling Psychology
M.S.	2006	Georgia State University Professional Counseling
B.A.	2001	University of Georgia Journalism

PROFESSIONAL EXPERIENCE:

Georgia Institute of Technology, Atlanta, GA.
Predoctoral Intern.
August 2010-Present

Department of Counseling and Psychological Services, Georgia State University.
Teaching Assistant, Diversity and Human Relations
January 2010-Present

Department of Counseling and Psychological Services, Georgia State University.
Teaching Assistant, Interpersonal Communication Skills
January 2010-August 2010

Department of Counseling and Psychological Services, Georgia State University.
Undergraduate Course Coordinator
January 2007-May 2010

Emory Behavioral Health/Grady Memorial Hospital, Atlanta, GA.
Doctoral Advanced Practicum Student.
June 2008-April 2010.

Emory Behavioral Health/Grady Memorial Hospital, Atlanta, GA.
Doctoral Advanced Diagnostic/Assessment Student
June 2009-September 2009

Regents Center for Learning Disorders, Georgia State University.
Doctoral Assessment Practicum Student.
August 2008 –May 2009.

Georgia State University Counseling Center, Atlanta, GA.
Doctoral Advanced Multicultural Practicum Student.
August 2007-May 2008.

Georgia State University Counseling Center, Atlanta, GA.
Doctoral General Practicum Student.
August 2006-May 2007.

Skyland Trail, Atlanta, GA.
Master's Counseling Intern.
August 2005-May 2006.

PROFESSIONAL SOCIETIES AND ORGANIZATIONS:

American Psychological Association
- Division 17, Society of Counseling Psychology
- American Psychological Association of Graduate Students

PRESENTATIONS:

Herndon, R., Ruiz, C., & Spears, T. (2011). *Working with LGBT university students.* Georgia Tech Division of Student Affairs Mini-Multicultural Competency Conference, Atlanta, GA.

Herndon, R. (2009). *Discover Online/ACT Inc. Presentation & Demonstration*. Department of Defense Worldwide Symposium, Atlanta, GA.

Herndon, R. (2006). *The Criminalization of HIV/AIDS Non-disclosure.* The Society for the Advancement of Sexual Health Annual Conference, Chicago, IL.

Herndon, R. (2005). *HIV/AIDS Disclosure*. The Society for the Advancement of Sexual Health Annual Conference, San Francisco, CA.

Coogle, C., Herndon, R., Landry, D., & Williams, A. (2005). *HIV/AIDS poster presentation.* CSI/AGLBIC Day of Learning, Georgia State University, Atlanta, GA.

TRAINING PRESENTATIONS:

Newton, K., Birckbichler, L., Gagne, T., Herndon, R., & Suprina, J. (2007). *Safe Zone Train-the-Trainer Learning Institute*. American Counseling Association Annual Conference, Detroit, MI.

Newton, K., Birckbichler, L., Gagne, T., Herndon, R., & Suprina, J.(2007). *Safe Zone Training*. CPS-AGLBIC Annual Day of Learning, Georgia State University, Atlanta, GA.

ABSTRACT

THE RELATIONSHIP OF LIFESTYLE AND PSYCHOLOGICAL BIRTH ORDER WITH CAREER DECISION SELF-EFFICACY
by
Ronald M. Herndon

Over the course of the last several decades Adlerians have demonstrated the vocational utility of Individual Psychology and the constructs of lifestyle and psychological birth order in determining career interests, preferences, and choices (Watkins, 1984a; Watts & Engels, 1995). However, these constructs have not been examined in terms of their relationship to career decision self-efficacy (CDSE). This study examined the relationship of the Adlerian lifestyle and psychological birth order constructs with CDSE among undergraduates (N = 156) at a major southeastern university. Participants were administered a survey packet containing a demographic questionnaire, the *BASIS-A Inventory*, the *White-Campbell Psychological Birth Order Inventory (PBOI)*, and the *Career Decision Self-Efficacy Scale (CDSES)*. The *BASIS-A Inventory* and the *PBOI* are instruments measuring the Adlerian constructs of lifestyle and psychological birth order. Both of these instruments do not yield a singular overall score for these constructs. Rather, scores are reported as scale totals corresponding to the factors associated with these constructs. The *CDSES* is an instrument measuring career decision self-efficacy, which yields scores for the overall measure as well as the scales corresponding to the factors associated with the construct. Results indicate that many statistically significant relationships exist among the factors of lifestyle with the factor scales of CDSE and overall CDSE, including belonging/social interest (BSI) and striving

for perfection (P) subscale. Further, the P subscale proved to be a statistically significant predictor of overall CDSE ($\rho < .05$). The factors of psychological birth order had fewer statistically significant relationships with CDSE and associated factors and did not demonstrate statistically significant predictive ability with CDSE. The significant relationships and predictive ability of specific factors of the lifestyle construct, as well as the significant relationships of psychological birth order, found in this study have implications for increasing the theoretical knowledge base and vocational applicability of Individual Psychology as well as gaining further practical understanding of utilizing these constructs in counseling and vocational assessment.

THE RELATIONSHIP OF LIFESTYLE AND PSYCHOLOGICAL BIRTH ORDER WITH CAREER DECISION SELF-EFFICACY

by

Ronald M. Herndon

A Dissertation

Presented in Partial Fulfillment of Requirements for the
Degree of
Doctor of Philosophy
in
Counseling Psychology
in
the Department of Counseling and Psychological Services
in
the College of Education
Georgia State University

Atlanta, GA
2011

Copyright by
Ronald M. Herndon
2011

ACKNOWLEDGMENTS

This dissertation was only possible through the love, encouragement, mentoring, and support of special persons in my life. Your commitment to excellence and service inspire me to pursue the best in life.

To begin, I want to thank my committee members, Greg Brack, JoAnna White, Roger Weed, and Kevin Stoltz for your encouragement, advisement, and support. To my unfailing mentor, Greg Brack, I owe you so much gratitude for the continual encouragement, practicality, and authenticity you have modeled to me over the last few years. We came together during a time of transition, as you have so many, for me and I will never forget the calm, practical, and encouraging support you have provided throughout our association. You are far more than "a simple country counselor" to so many you have mentored and you are held in the highest esteem. To my mentor, JoAnna White, we have worked so closely together over the years and you have always been a constant source of support and encouragement. Your modeling of leadership, poise, and authenticity have impacted my life more than I can say. To my first doctoral advisor, Barry Chung, you inspired me to excellence and scholarship through your advisement and support and I am grateful for the experience.

To my dear cohort, Kristen, Lydia, Natasha, and Tameka, the stars were aligned when were selected to share this amazing journey. You all know how much you mean to me. We have shared so much and I am so blessed to have all of you in my life. We have a special connection and bond that will never be broken. Kristen and Natasha, a special thanks to you for all of your abiding help and encouragement through the internship and dissertation process.

To all of my friends who have supported and loved me throughout my life. Our shared experiences have shaped and determined my life course and I am forever grateful for your abiding love and friendship.

To my loving family members who have inspired me throughout my life. My extended family of aunts, uncles, cousins, and grandparents, I love you. Thank you for your prayers and support. You love me unconditionally and make my life so full. To my nieces and nephews, you rock. Thanks for supporting and loving me no matter what. To my brothers and sister, Keith, Jeanette, Mark, and Kevin, and spouses, Ken, Melissa, and Cynthia, you are so dear to me and I cannot tell you enough how much I love all of you. Most importantly, I owe all of my accomplishments to my dear parents, Malcolm and Mary. Through your endless love and support, you encourage me to reach for my dreams and to embrace greatness. Your unconditional love is without measure and I am so proud to be your son. Mom and Dad, your support has allowed me to take risks in life to reach my potential. The legacy of love and spirituality you instilled in me made me the person I am today. I love you dearly. Lastly, I must thank my wonderful, devoted partner, Anthony. My love for you is beyond compare. You have been my rock and confidant

throughout this long, yet, rewarding journey. You, Bacci, Duke, Malcolm, and Pharaoh lifted me up whenever I thought I could not go on. I could not have dreamed for a more wonderful partner to share my life with and I will love your forever.

TABLE OF CONTENTS

Page

List of Tables v
Abbreviations vi

Chapter
1 THE RELATIONSHIP OF LIFESTYLE AND PSYCHOLGOCIAL BIRTH ORDER WITH CAREER DECISION SELF-EFFICACY 1
Individual Psychology and Vocation 4
An Adlerian Vocational Framework.....17
Summary of Literature Review……..20
References.....22

2 CAREER DECISION SELF-EFFICACY AND THE RELATIONSHIP WITH ADLERIAN LIFESTYLE AND BIRTH ORDER 29
Lifestyle 32
Birth Order 33
Research Questions 36
Method 37
Hypotheses 45
Analyses…….45
Results.....49
Discussion 61
References.....69

LIST OF TABLES

Table Page

1 Descriptive Profile of Study Variables Raw Data 50

ABBREVIATIONS

APP	Self-Appraisal scale of the Career Decision Self-Efficacy Scale
BASIS-A	The Basic Adlerian Scales for Interpersonal Success-Adult Form
BC	Being Cautious scale of the BASIS-A Inventory
BSI	Belonging/Social Interest scale of the BASIS-A Inventory
CDSE	Career Decision Self-Efficacy
CDSES	Career Decision Self-Efficacy Scale
E	Entitlement secondary scale of the BASIS-A Inventory
ERs	Early Recollections
FC	First Child scale of the White-Campbell Psychological Birth Order Inventory
GA	Going Along scale of the BASIS-A Inventory
GOAL	Goal Selection scale of the Career Decision Self-Efficacy Scale
H	Harshness secondary scale of the BASIS-A Inventory
L	Liked by All secondary scale of the BASIS-A Inventory
MC	Middle Child scale of the White-Campbell Psychological Birth Order Inventory
OC	Only Child scale of the White-Campbell Psychological Birth Order Inventory
OCC	Gathering Occupational Information scale of the Career Decision Self-Efficacy Scale
P	Striving for Perfection secondary scale of the BASIS-A Inventory
PBOI	White-Campbell Psychological Birth Order Inventory

PLAN	Planning scale of the Career Decision Self-Efficacy Scale
PROBSOLV	Problem Solving scale of the Career Decision Self-Efficacy Scale
S	Softness secondary scale of the BASIS-A Inventory
TC	Taking Charge scale of the BASIS-A Inventory
WR	Wanting Recognition scale of the BASIS-A Inventory
YC	Youngest Child scale of the White-Campbell Psychological Birth Order Inventory

CHAPTER 1

THE RELATIONSHIP OF LIFESTYLE AND PSYCHOLOGICAL BIRTH ORDER WITH CAREER DECISION SELF-EFFICACY

The study examined the relationships of the Adlerian constructs of lifestyle and psychological birth order (as defined by Alfred Adler's Individual Psychology) with career decision self-efficacy (CDSE). Lifestyle is one of five major constructs in Individual Psychology and can be defined as the personal, phenomenological strategy each individual develops and employs for navigating through life's major tasks (Adler, 1946; Ansbacher & Ansbacher, 1956; Dreikurs, 1953; Watkins, 1984a; Watts & Engels, 1995). These major life tasks are love/intimacy, friendships/relationships, and work (vocation/career). Birth Order, also one of the five major Adlerian constructs, is the perceived psychological positioning of the child in relation to others, specifically the parental figures and other siblings, if any (Adler; Ansbacher & Ansbacher; Watkins; Watts & Engels).

According to Individual Psychology (Adler, 1946; Ansbacher & Ansbacher, 1956), the individual's lifestyle develops in childhood as a result of their perceptions, thoughts, and behaviors first within the context of the family unit and then the outside world. Children begin to establish goals about how to maneuver in life in order to gain mastery or superiority over the world around them and depending on their degree of social adjustment, these lifestyle goals may vary from very functional to dysfunctional for individuals. Dreikurs (1953) described the process of social adjustment for the child

as learning the rules of the world around them in order to be functional and gain mastery of life's tasks and the first social context or environment is within the family in which the child is living. Further, somewhere between four and six years of age a child has developed a definitive character structure that determines their lifestyle approach and movement throughout life (Adler; Ansbacher & Ansbacher; Dreikurs).

Adler (1946; Ansbacher & Ansbacher, 1956) believed a child's interests become attuned to a future occupation through her/his lifestyle approach and the level of interest increases or decreases depending on the child's belief in the attainability of that goal. The more socially adjusted children are, the more likely they will be able to conceptualize possible occupations and establish realistic goals for the task of work. The life task of work is one facet of an individual's lifestyle that requires some degree of social interest and adaptability, but it is often at the point when choosing a vocation/career that individuals discover a lack of personal social adjustment (Adler; Ansbacher & Ansbacher).

Birth order is a second major construct in Individual Psychology that has received much attention in the literature. In his experience, Adler (1946; Ansbacher & Ansbacher, 1956) found that birth order was one of the most reliable approaches to understanding an individual's personality and lifestyle development. However, it is of paramount importance to understand that Adler's view of birth order was not so much in terms of chronological positioning of siblings as it was in the phenomenological, psychological positioning of the child reference.

According to Adler (1946), it would be an oversimplification to assume that children born into the same family environment form their personalities and lifestyle approach in the same manner. The development of the core personality and lifestyle approach stabilizes between four and six years of age; likewise, children's perceptions of their role and positioning within the family is essentially in place at the same time (Adler; Dreikurs, 1953). As the child continues to develop family atmosphere variables, as well as social environmental variables, influence the child's psychological positioning and roles (Stewart, Stewart, & Campbell, 2001; Watkins, 1984a). The effects of birth order positioning must be viewed through the lens of each individual child's perceptions and interpretations of their position and role within the family and social environments (Adler; Ansbacher & Ansbacher).

Originally, the construct of psychological birth order was classified in terms of five general positions: first, second, middle, youngest, and only child (Adler, 1946; Ansbacher & Ansbacher, 1956). Contemporary Adlerians classify psychological birth order in terms of four general positions: first, middle, youngest, and only child (Campbell, White, & Stewart, 1991; Stewart et al., 2001). The second child position is omitted from recent research regarding psychological birth order because second children can actually be examined in terms of the youngest child with two children in the household or as a middle child with 3 or more children in the household (Campbell et al.; Stewart et al.).

Each of these psychological positions within the family is influenced by and dependent upon multiple family atmosphere dynamics and variables that determine the adaptive or maladaptive adjustment to the role each plays within the family structure

(Ansbacher & Ansbacher, 1956; Stewart, 2004; Stewart et al., 2001). Family atmosphere is comprised of the overall tone of the family and the interaction climate among parents and siblings (Griffith & Powers, 1987; Sherman & Dinkmeyer, 1987). Stewart et al. (2001) characterized family atmosphere as encompassing two dimensions: the "transactional and relational characteristics of the family members…and the content issues and activities around which the family typically relates." (p. 364)

Lifestyle and birth order are widely researched constructs in Individual Psychology and both have been examined in terms of vocational interests, preferences, and choices. Yet, since Individual Psychology is not a specific career theory, it is important to understand how contemporary Adlerians have conceptualized these constructs through a vocational lens. Thus, this manuscript takes a broad view within the literature, presenting a comprehensive review of Adlerian vocational research in terms of lifestyle and birth order, the related construct of early recollections, and the relationship between the three.

Individual Psychology and Vocation

Alfred Adler's Individual Psychology is considered one of the three major psychodynamic theories of personality development and behavior along with those of Sigmund Freud and Carl Jung (Ansbacher & Ansbacher, 1956). Although none of these theories were specifically conceptualized in terms of career, Adler addressed the importance of career development as an integral part of the expression of an individual's lifestyle and viewed work/vocation/career as a major life task (Adler, 1946; Ansbacher & Ansbacher, 1956). Since the re-emergence of Individual Psychology in the latter half of

the Twentieth Century a number of researchers have investigated, with supportive results, the vocational applicability of Adler's personality theory and constructs (Attarian, 1978; Bichekas, 1983; Bliss, 1970; Bradley, 1982; Bryant, 1987; Elliott, Amerikaner, & Swank, 1987; Farley, 1974; Gentry, Winer, Sigelman, & Phillips, 1980; Hafner, 1984, 1986; Hafner & Fakouri, 1984; Kasler & Nevo, 2005; Leong, Hartung, Goh, & Gaylor, 2001; Magner-Harris, Riordan, Kern, & Curlette, 1979; Manaster, 1974; McFarland, 1988; Melillo, 1983; Newlon, 1986; Spector, 2003; Wagner, 1977; Watkins, 1984a, 1992; Watts & Engels, 1995; White, Campbell, Stewart, & Davies, 1997; Zweigenhaft, 1975).

Although many psychologists and vocational/career counselors began to apply Adlerian principles to vocational counseling in the 1960s and 1970s, no attempt to define a vocational/career framework within the context of Individual Psychology emerged until the 1980s. Watkins (1984a) was the first of contemporary Adlerians to attempt to define and develop an Adlerian vocational theory from the principles of Individual Psychology. Watkins proposed a vocational theory based on a critical review of the existing Adlerian vocational research and found that the majority of the research revolved around three major Adlerian constructs: birth order, early recollections, and lifestyle, with birth order investigations being the most widely researched. Watkins' theory will be discussed in detail later in this manuscript.

Watts and Engels (1995) followed with a similar critical review of the existing Adlerian literature examining the life tasks of work/vocation and found a fourth construct, social interest, as an emerging area of interest within the vocational domain. The authors concurred with Watkins (1984a) that although the existing research establishes promising and growing support for Individual Psychology's vocational

applicability, more research is needed to establish a vocational framework from Adler's theory.

As evidenced by these critical reviews of the available Adlerian vocational literature, the constructs of lifestyle, birth order, and early recollections emerge as the most widely researched in terms of career. Thus, it is important to examine how these constructs are conceptualized in terms of career processes. Further, it is incumbent upon the reader to understand how these Adlerian constructs are comprised of numerous dynamic psychological components that are inter-related and interdependent.

Lifestyle

Lifestyle is a complex construct encompassing multiple personality variables that determine an individual's perceptions, understanding, beliefs of, and movement within the world in reaching perceived goals (Adler, 1946, 1947; Ansbacher & Ansbacher, 1956; Dreikurs, 1953). Gushurst (1971) defined lifestyle as, "the totality of system principles which account for the consistency and directionality of an individual's life movements "(p. 30). Adler theorized that lifestyle approach forms the foundation for occupational interest, which increases or decreases according to the individual's self-efficacy in the attainability of the goal (Adler; Ansbacher & Ansbacher).

Gentry et al. (1980) examined lifestyle and vocational preference in a study of male and female undergraduates enrolled in an introductory psychology course. The authors found 18 and 12 coefficients of significant correlation, for males and females respectively, at or below the .05 level of significance between the lifestyle analysis and the vocational preference assessment. However, the authors cautioned that the lifestyle

variables accounted for very small portions of the variance and did little to predict Holland's variables for vocational preferences. Gentry et al. noted that the complexity of the lifestyle construct did not lend itself well to research that involves the study or application of general or universal laws (nomothetic research), rather, the lifestyle construct must be studied in terms of examining and explaining individual cases and events (idiographic research).

Holland's vocational preference typology is used extensively in the literature, and thus, an understanding of these categories is indicated. Holland (1973) theorized that the world of work could be classified in terms of six general categories: Realistic (R), Investigative (I), Artistic (A), Social (S), Enterprising (E), and Conventional (C). Each of these types is characterized by unique work activities and environments that are expressed through the individual's vocational preferences. When these preferences are assessed most individuals will emerge with a one to three letter code, depending upon the strength and differentiation of the preferences. In other words, some persons will have very clear preferences and may have a one or two letter code, while others will have stronger preferences across several vocational types (Holland).

In an investigation of lifestyle type and vocational choice, Magner-Harris et al. (1981) examined male graduate students to see if lifestyle analysis may be useful in determining vocational preferences. Results reported statistically significant inter-judge reliability in selecting vocational preference from lifestyle analysis, with two of the three judges agreeing at a rate of approximately 77%, prompting the authors to conclude that lifestyle analysis appeared to be as effective as a major widely used inventory in predicting vocational preference. Bichekas and Newlon (1983) investigated life style in a

sample of registered nurses providing home hospice care and found similar lifestyle themes, personality characteristics, and attitudes, but did not find the expected characteristics for persons in a helping profession. The authors discovered that hospice nurses possess unique characteristics. They implied from the data that: 1) a high degree of social interest was not a necessary component to working as a caregiver in a hospice setting, an environment that has the potential of serving the lifestyle needs of the caregiver; and 2) discouragement, as opposed to encouragement, in life may be the motivation for working in such an environment.

In a study of the lifestyles of Catholic priests, Newlon (1986) examined the inter-judge agreement on dominant lifestyle themes. The participants completed a general questionnaire and, in turn, three judges chose a dominant lifestyle theme for each of the priests. The judges reliably selected the dominant lifestyle themes and the author has discovered that approximately 70 % of the priests' predominant lifestyle themes fell in one category. Spector (2003) sought to examine the personality profile of successful audio engineers. The author found an emergent pattern of lifestyle themes among audio engineers, including: going along thematic scores ranged from average to high and taking charge scores hovered in the average range. Interestingly, many of the subjects chose their careers early in life, were middle-aged males, and overall were satisfied with their careers. Spector concluded that there is a relationship between lifestyle, early recollections (ERs), and vocational choice among the participants in this study.

As evidenced by the literature, the Adlerian construct of lifestyle is a complex mixture of personality variables that are dependent upon the phenomenology of each individual. The Adlerian vocational literature pertaining to lifestyle reinforces the

complexity of the construct, but also demonstrates the significance and utility of lifestyle analysis in determining vocational preferences and choices. Further, the literature also demonstrates the reliability of the lifestyle construct in categorizing the lifestyle themes of individuals in specific occupations of interest.

Birth Order

Early birth order research examined actual or chronological birth order and specific occupations. Watts and Engels (1995) noted that most of the existing research literature examining birth order focused on actual or chronological positioning rather than the contemporary Adlerian focus on the psychological or perceived ordinal position. Psychological or perceived ordinal birth order positioning includes the perceptions of the child, the siblings, and the parents (Watkins, 1984a).

Bliss (1970) examined birth order and vocation in a sample comparing creative writers and scientists and found that a far greater percentage of first-born and/or only children were scientists rather than creative writers. Bliss' Adlerian focus influenced him to conclude that perhaps firstborns were more conservative and traditional than later children, possessing less creative and artistic qualities. Farley (1974) investigated birth order, rank, and branch of service in a random sample of 3,000 service men and women. They found that firstborns garnered higher service ranks at a significantly greater frequency than latterborns, leading them to conclude that this finding was in concert with the Adlerian perspective that firstborns possess more needs for power and approval, as well as a fear of failure.

In a study of the United States Congress, Zweigenhaft (1975) discovered that firstborns were extremely well represented (42%), while middleborns and lastborns were under-represented. Wagner and Schubert (1977) investigated sibling variables, including family size, ordinal position, and gender among the first 38 presidents of the United States. They found that firstborns were over-represented while last, middle, and only children were under-represented. Additionally, the presidents were from predominantly large families and there was an overrepresentation of male siblings in these families. Bryant (1987) examined the relationship between vocational interest and birth order in a sample of firstborn and lastborn female high school students, ages 16-17 years. The results revealed significant differences in various aspects of vocational preference between firstborns and lastborns, including: higher levels of optimism and self-esteem among firstborns, higher levels of interest in academic careers, working with others, and management opportunities among firstborns.

In a critical review of the existing birth order research, Bradley (1982) found that examining family relationships, patterns, and sibling dynamics can help clients to understand how these influences have shaped their career planning and choices, integrating the concepts of major career theorists such as Holland (1973), Super (1963), and Roe (1956). Parental attitudes and values are a major influence on the child's overall goal establishment and lifestyle development and these greatly shape the child's approach to the world of work. Further, examining birth order and sibling dynamics offers an additional opportunity to discover how personality, goal striving, and the environment are interdependent variables that shape vocational choices. Watkins' (1992) critical review of Adlerian birth order research from 1981 to 1991 revealed that achievement motivation

varies according to birth order. Specifically, first-born children often exhibit the expected qualities found in the theoretical Adlerian literature, but birth order patterns vary by ethnicity.

Melillo (1983) was among the first to investigate the possible differences between actual ordinal birth order position and psychologically perceived birth order position in a study of female doctorates employed in a university setting. Additional variables examined included: age, parental attitudes, occupational position, academic discipline, number of siblings, and family size. Findings supported previous research that revealed significantly higher numbers of only or eldest child female doctorates, but over half the sample was not first born and more than 40% were neither, first or only children. Melillo also examined the perceived ordinal position of these women, but the results did not support any significant differences between perceived birth order position and actual birth order position. Rather, parental encouragement and support toward daughters appeared to be more predictive of career achievement than family size and birth order, perceived or actual.

Although there appears to be a great deal of research literature supporting the link between actual birth order and vocational interests and preferences, there is a paucity of research in the area of perceived psychological birth order and vocation. Yet, in recent years, other researchers have expanded the literature examining the relationship between psychological birth order and career interests (Leong, et al., 2001; White, et al., 1997). White, et al. further expanded the psychological birth order research to the area of career interests/choice using the *White-Campbell Psychological Birth Order Inventory* [(*PBOI*), Campbell et al., 1991] and an occupational interest inventory. The authors found that

psychological birth order was useful in understanding the relationship between position in the family and the development of career interests. While psychological birth order did not appear to be sufficient as a stand-alone construct to indicate career interests, the authors noted that this is consistent with the concept of Adler's holistic view of the person.

Adler's theory of personality and behavior utilizes a holistic approach in understanding individuals and their behavior in contrast to the reductionist approach of Freud's Psychoanalysis (Ansbacher & Ansbacher, 1956). In other words, Individual Psychology expounds that individuals must be viewed in terms of the whole being greater than the sum of the parts. White, et al. (1997) concluded that a thorough evaluation examining birth order and family dynamics, goals, social interest, and lifestyle must be considered to understand the choices and life-movement of the individual.

Several of the studies examining psychological birth order noted the salient influence of family atmosphere and dynamics on vocational interests and preferences (Melillo, 1983; White, et al., 1997). Intuitively, family atmosphere and dynamics relate to psychological influences and perceptions more than actual birth order positioning. As noted previously, Bradley (1982), in his review of birth order research, emphasized the importance of examining family relationship patterns and sibling dynamics as major influences on the vocational interests and decisions of individuals. Recently, Stewart et al. (2001) investigated psychological birth order in relation to family atmosphere variables and personality traits in two exploratory studies. They found that family atmosphere variables accounted for a greater proportion of psychological birth order

variance than individual personality variables, although both are significant contributors to individuals positioning and role in the family.

Other research has examined the relationship of career maturity to personality and social adjustment (Savickas, Briddick, & Watkins, 2002) as well as the role of career adaptability in understanding life space/life span theory (Savickas, 1997). Savickas et al. (2002) found that career development competence related to greater realized potential and greater social adjustment in individuals. The authors also found that more mature attitudes regarding career planning and exploration related to an extroverted, interpersonal adjustment style with a positive orientation to social norms. Savickas (1997) examined career adaptability and adaptation to life roles from a developmental perspective finding that career adaptability can be conceptualized from a similarly to career maturity, particularly in terms of planning, exploring, and deciding.

Two recent studies have examined the relationship between the Adlerian constructs of psychological birth order and lifestyle (Gfroerer, Gfroerer, Curlette, White, & Kern, 2003; White, Campbell, & Stewart, 1995). White, et al. investigated the relationship between psychological birth-order and lifestyle using the *PBOI* (Campbell et al., 1991). The authors found psychological birth order, rather than chronological birth order, correlated strongly with lifestyle. Gfroerer et al. examined the relationship between psychological birth order and lifestyle using the *PBOI* (Campbell et al.) and the *BASIS-A* (Wheeler, Curlette, & Kern, 1993), the most widely used Adlerian lifestyle assessment instrument in use presently. Results revealed that psychological birth order position related to nine of the 10 lifestyle scales on the *BASIS-A* with some statistically significant correlations between psychological birth order variables and lifestyle themes.

Birth Order, like lifestyle, is therefore a complex construct involving the interplay of multiple family atmosphere variables. As demonstrated above, these family atmosphere variables include the overall tone and interaction climate of the family, as well as the perceptions of roles and positioning within the family of the child, the parents, and the siblings. As in the case of lifestyle, the vocational literature demonstrates the utility of examining birth order in relation to vocational interests, preferences, and choice, thus lending support for further birth order research in the career domain. Further, recent research has demonstrated the relationship between the constructs of birth order and lifestyle.

Early Recollections

Adler (1958) believed that early recollections (ERs) could be very valuable in career assessment and guidance because they offer important information about how an individual uniquely perceives and relates to the world. Adler (1947) noted the influence of early recollections on his personal choice of career. Early recollections are specific events held in an individual's recall memory, which occurred in early childhood (Adler, 1946; Ansbacher & Ansbacher, 1956; Dreikurs, 1953). Watkins (1984b) concluded that a comprehensive analysis of ERs requires: 1) paying attention to the themes and details of the memory, and 2) examining at least three ERs for the themes present.

Several studies have examined the link between vocational choice and ERs. Manaster (1974) developed a rating scale for ERs and conducted a study to examine how ERs related to vocational choice in a sample of university students. This study found that the ERs of nursing students had the greatest proportion of mother figures with counseling

students following a close second. Further, nursing student's ERs contained more people than business students. The ERs of counseling students revealed more positive affect than any other group in the study. Attarian (1978) followed with a study examining the link between ERs and choice of college major in a sample containing college seniors from various fields of study. The students were asked to give five ERs and were administered a popular career choice assessment instrument by qualified interviewers who then placed the students in one of six majors. Results revealed a link between career choice and the ERs through personality, expressions of personality, and significance of early memories.

In two studies examining the relationship between the manifest content of ERs and vocational choice, Hafner (1984) and Hafner and Fakouri (1984) concluded that ERs were a viable tool for helping to distinguish college major and should be considered in vocational assessment and counseling. Hafner (1986) followed with a study of college seniors from three subspecialties of the engineering discipline. The authors expected to find no significant variation between the various engineering specializations, but surprisingly they were able to conclude further that ERs are effective in distinguishing between occupational subspecialties and should be utilized in vocational assessment and guidance.

Elliot, et al. (1987) investigated how early recollections ratings would relate to vocational interests and choice in a sample of college students who had completed at least one year of employment and were currently employed in a related field. The study further supported the use of ERs in vocational assessment and guidance by showing that the manifest content of ERs could predict vocational interests and preferences at a moderately high level of accuracy. In a study of female nurses and medical technologists,

McFarland (1988) found further support for the use of ERs as a tool for vocational guidance and a birth order effect on lifestyle.

In a more recent study, Kasler and Nevo (2005) examined the manifest content of ERs as a predictor of major area of study choice in a sample of young Israeli adults enrolled in a pre-academic program. The authors utilized the ER scoring method of Manaster and Perryman to determine area of study in accordance with Holland's typology. Results revealed that ERs could predict area of study and Holland types just as well as the Holland typology classification instrument. The findings for the social, realistic, and artistic categories were more robust than the investigative, enterprising, and conventional categories due to a limited number of cases for latter types.

In summary, the available vocational literature regarding Adlerian lifestyle, birth order, and ERs demonstrates the applicability and utility of these constructs in the vocational domain. They have been shown to be as significantly effective in understanding vocational interests, preferences, and choices as many widely used career assessment instruments. It is important to note the interdependence and interaction of these constructs, as well as the interplay of dynamic family atmosphere variables contributing to these constructs, in understanding the holistic view of an individual. Lifestyle and birth order analyses are fundamentally incomplete without examining ERs, which provide a window into an individual's perceptions and thoughts regarding self, others, and the world around them.

An Adlerian Vocational Framework

In his seminal article proposing an Adlerian vocational theory, Watkins (1984a) presented theoretical hypotheses and corollaries based on Individual Psychology theoretical principles and four primary categories found within the available Adlerian vocational literature. These categories are: 1) the life task of work; 2) family atmosphere and relationships, including the construct of psychological birth order; 3) early recollections; and 4) lifestyle. For the purposes of this article, the focus is Watkins' hypotheses and corollaries related to lifestyle, birth order, and early recollections. These hypotheses and corollaries will further elucidate and enrich an understanding of the vocational applicability of these constructs.

Lifestyle

Watkins (1984a) proposed two specific hypotheses regarding lifestyle and vocation from the available literature. The first hypothesis, "Vocational choice represents the individual's implementation of a life style" (p. 32), is based on lifestyle as the predominant determinant of an individual's way of relating to the world in order to function and reach life goals, which includes attempts at self actualization and achievement of life goals, whether they are functional or dysfunctional. Watkins concluded that lifestyle is the ultimate determinant of vocational choice and all of the processes involved in the choice.

Watkins' (1984a) second hypothesis, "The lifestyle's core entails three distinct variables—attitudes toward self, others, and the world—each of which has implications for vocational choice" (p. 32), is derived from the Adlerian theoretical proposition that

the individual's lifestyle includes these three fundamental attitudes. Watkins concluded that these attitudes serve as determinants of and have an effect on an individual's baseline personality, which includes vocational choice, personality, and effectiveness. Watkins proposed three corollaries regarding these distinct attitudes: 1) "The attitude an individual holds toward self significantly affects one's presentation of, implementation of, and expectations for self as worker" (p. 32); 2) "The attitude held toward others influences one's perceptions of and manner of interacting with co-workers" (p. 33); and 3) "The attitude held toward the world in general influences how a person perceives the purpose of work and its personal significance" (p. 33).

Birth Order

Watkins' (1984a) vocational framework conceptualized and postulated hypotheses and corollaries related to birth order through the lens of family atmosphere and relationships. He proposed three hypotheses in this category. The first is "A person's perceptions of and relationships with his/her parents affects the values and expectations held toward self as worker, the activity of working, and the world of work." (p. 35). Parents convey these values and expectations regarding work to the child through parental feelings and expressions regarding their work/careers and the practical application of these values and expectations when working together with the child on various tasks. The corollaries associated with this hypothesis are summarized as follows: the perceptions of and relationships with the mother/father shape the individual's values and expectations of women/men as workers, the role of women/men in the work force, and the individual's interactions with female/male workers (Watkins).

Watkins' (1984a) second hypothesis related to birth order/family atmosphere was "A person's perceptions of and relationships with his/her siblings affect the establishment of a life style and vocational/operational goals." (p. 36). As noted previously, Adlerian psychology strongly emphasizes sibling relationships and their influence on a child's personality formation, perceived role within the family structure, and feelings of cooperation and/or competition within the family. According to Watkins, these sibling relationships also influence the establishment and path of vocational goals. The corollaries associated with this hypothesis are summarized as follows: (1) the perceptions of and relationships with sisters/brothers shape an individual's views of female/male co-workers and their place in the world of work; (2) individuals reared exclusively with same sex siblings shapes their views about opposite-sex co-workers via the relationship with the opposite-sex parent and/or peers; (3) individuals reared without siblings shapes their views of both female and male co-workers via relationships with parents and/or very close peers, who the individual may regard as family (Watkins).

The final family atmosphere/birth order hypothesis proposed by Watkins' (1984a) is "The individual's birth order creates a particular set of interactional-environmental events that influences the view of self as worker, adoption of work behaviors, and interpersonal work style." (p. 37). Watkins noted that traditional rights and privileges of actual birth order positioning interface with perceived/psychological birth order positioning in shaping these views of the world of work.

Early Recollections

Watkins (1984a) proposed two hypotheses to illustrate the relationship between ERs and vocation. First, "early recollections are psychic representations that contain an individual's basic vocational/operational hypotheses and manner of viewing the world of work" (p. 38). ERs provide a window into an individual's unique life story; these early events serve to remind the individual of life goals and a tested style of action from experiences in the past to meet the challenges of present and future situations, including the world of work (Ansbacher & Ansbacher, 1956). Second, "early recollections are psychic representations that sustain, support, and guide an individual's work behavior" (p. 39). The individual's view of and perceived role within the world of work are imbedded within ERs, which serve as a foundation and map of the individual's work behavior (Watkins).

The link between ERs and the constructs of lifestyle and birth order is evidenced in the above literature and appears strong. ERs serve as the foundation for conceptualizing the psychological effects of the perceived birth order of the individual and the development of the individual's lifestyle (Adler, 1946, 1947; Ansbacher & Ansbacher, 1956). Further, ERs are the underlying foundational technique used in the assessment of psychological birth order (Campbell, White, & Stewart, 1991) and lifestyle (Gfroerer, et al., 2003; Wheeler, et al., 1993).

Summary of Literature Review

Although Individual Psychology was not originally conceived by Adler as a particular vocational theory, it is evident from the available theoretical and applied

literature that Adler's theory of personality has emphasized the importance of the world of work to the individual's development and functioning (Adler, 1946; Ansbacher & Ansbacher, 1956; Watkins 1984a; Watts & Engels, 1995). The individual's involvement in the task of work is one of the unique, major tasks of life that define our lifestyles and life movement. Adler believed that each life task was central to the development of the personality and the holistic representation of the individual (Ansbacher & Ansbacher). Adlerian theory states it is impossible to understand and conceptualize the individual through the reductionist lens of psychoanalytic principles as theorized by Freud. Rather, the lens must be of the whole person as they seek and strive to meet the major tasks of life: love/intimacy, relationships/friendship, and work (Adler; Ansbacher & Ansbacher).

The available Adlerian vocational literature has demonstrated the applicability of Individual Psychology to the world of work. Much of that literature examined the foundational Adlerian constructs of lifestyle, psychological birth order, and ERs and the role they play in the development of vocational interests, preferences, and choices (Watkins, 1984a, Watts & Engels, 1995). Further, lifestyle and psychological birth order have correlated strongly in recent studies (Gfroerer, et al., 2003; White, et al., 1995). These Adlerian constructs have been shown to comprise multiple, dynamic family atmosphere variables that contribute to the process of career development, however, these constructs have not been examined in terms of self-efficacy in making informed career decisions. The purpose of the present study was to determine the relationship between the Adlerian constructs of lifestyle and psychological birth order with CDSE.

References

Adler, A. (1946). *The practice and theory of individual psychology*. London: K. Paul, Trench, Trubner & Co. Ltd.

Adler, A. (1947). How I chose my career. *Individual Psychology Bulletin, 6*, 9-11.

Ansbacher, H. L., & Ansbacher, R. (1956). *The individual psychology of Alfred Adler: A systematic presentation in selections from his writings*. Oxford England: Basic Books.

Attarian, P. J. (1978). Early recollections. predictors of vocational choice. *Journal of Individual Psychology (00221805), 34*(1), 56-62.

Bichekas, G., & Newlon, B. J. (1983). Life-Style Analysis of Hospice Care Nurses. *Individual Psychology: The Journal of Adlerian Theory, Research & Practice, 39*(1), 66-70.

Bliss, W. D. (1970). Birth order of creative writers. *Journal of Individual Psychology, 26*(2), 200-202.

Bradley, R. W. (1982). Using birth order and sibling dynamics in career counseling. *Personnel & Guidance Journal, 61*(1), 25-31.

Bryant, B. L. (1987). Birth order as a factor in the development of vocational preferences. *Individual Psychology: The Journal of Adlerian Theory, Research &*

Practice, 43(1), 36-41.

Campbell, L., White, J., & Stewart, A. (1991). The relationship of psychological birth order to actual birth order. *Individual Psychology, 47*, 380-391.

Dreikurs, R. (1953). *Fundamentals of Adlerian psychology*. Chicago: Alfred Adler Institute.

Elliott, D., Amerikaner, M., & Swank, P. (1987). Early recollections and the Vocational Preference Inventory as predictors of vocational choice. *Individual Psychology: Journal of Adlerian Theory, Research & Practice, 43*(3), 353-359.

Farley, F. H. (1974). Birth order, rank, and branch of service in the military. *Journal of Individual Psychology (00221805), 30*(2), 227-231.

Gentry, J. M., Winer, J. L., Sigelman, C. K., & Phillips, F. L. (1980). Adlerian lifestyle and vocational preference. *Journal of Individual Psychology (00221805), 36*(1), 80-86.

Gfroerer, K. P., Gfroerer, C. A., Curlette, W. L., White, J., & Kern, R. M. (2003). Psychological birth order and the BASIS-A. *Journal of Individual Psychology, 59*(1), 30-41.

Griffith, J., & Powers, R. L. (1987). *An Adlerian lexicon:Fifty-nine terms associated with the individual psychology of Alfred Adler*. Chicago: American Institute of Adlerian Studies.

Gushurst, R. S. (1971). The technique, utility, and validity of life style analysis. *The Counseling Psychologist, 3*(1), 30-40. doi: 10.1177/001100007100300104

Hafner, J. L. (1984). Early recollections and vocational choice. *Individual Psychology: The Journal of Adlerian Theory, Research & Practice, 40*(1), 54-60.

Hafner, J. L. (1986). Early recollections of individuals preparing for careers in chemical. electrical, and mechanical engineering. *Individual Psychology: The Journal of Adlerian Theory, Research & Practice, 42*(3), 360-366.

Hafner, J. L., & Fakouri, M. E. (1984). Early recollections of individuals preparing for careers in clinical psychology, dentistry, and law. *Journal of Vocational Behavior, 24*(2), 236-241. doi: 10.1016/0001-8791(84)90009-5

Holland, J. L. (1973). *Making vocational choices: A theory of careers*. Englewood Cliffs, N.J.: Prentice-Hall.

Kasler, J., & Nevo, O. (2005). Early recollections as predictors of study area choice. *The Journal of Individual Psychology, 61*(3), 217-232.

Leong, F. T. L., Hartung, P. J., Goh, D., & Gaylor, M. (2001). Appraising birth order in career assessment: Linkages to Holland's and Super's models. *Journal of Career Assessment, 9*(1), 25-39.

Magner-Harris, J., Riordan, R. J., Kern, R. M., & Curlette, W. L. (1979). Reliability of life style interpretations. *Journal of Individual Psychology, 35*(2), 196-201.

Manaster, G. J. (1974). Early recollections and occupational choice. *Journal of Individual Psychology (00221805), 30*(2), 232-237.

McFarland, M. (1988). Early recollections discriminate persons in two occupations. *Medical Technology and Nursing, 44*(1), 77-84.

Melillo, D. (1983). Birth order, perceived birth order, and family position of academic women. *Individual Psychology: The Journal of Adlerian Theory, Research & Practice, 39*(1), 57-62.

Newlon, B. J. (1986). Adlerian life-styles among Catholic priests. *Individual Psychology: The Journal of Adlerian Theory, Research & Practice, 42*(3), 367-374.

Roe, A. (1956). *The psychology of occupations.* New York: Wiley.

Savickas, M. L. (1997). Career adaptability: An integrative construct for life-span, life-space theory. *Career Development Quarterly, 45*(3), 247-259.

Savickas, M. L., Briddick, W. C., & Watkins, C. E. (2002). Relation of career maturity to personality type and social adjustment. *Journal of Career Assessment, 10*(1), 24-41.

Sherman, R., & Dinkmeyer, D. (1987). *Systems of FamilyTherapy: An Adlerian integration.* New York: Bruner Mazel.

Spector, A. B. (2003). *The use of an Adlerian lifestyle measure to identify the personality profile of successful audio engineers(Alfred Adler)*. (Thesis) 64, ProQuest Information & Learning, US. Retrieved from http://ezproxy.gsu.edu:2048/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2003-95016-057&site=ehost-live Available from EBSCOhost psyh database.

Stewart, A. E. (2004) (Vol. 82, pp. 167-1760748-1760796). US: American Counseling Assn.

Stewart, A. E., Stewart, E. A., & Campbell, L. F. (2001). The relationship of psychological birth order to the family atmosphere and to personality. *Journal of Individual Psychology, 57*(4), 363-387.

Super, D. (1963). Self-concepts in vocational development. In D. Super, R. Starishevsky, N. Martlin, & J.P. Jordaan (Eds.), *Career Development*: *Self-concept theory*. New York: CEEB Research Monograph No. 4.

Wagner, M. E. (1977). Sibship variables and united states presidents. *Journal of Individual Psychology (00221805), 33*(1), 78-85.

Watkins, C. E. (1984a). The Individual Psychology of Alfred Adler: Toward an Adlerian vocational theory. *Journal of Vocational Behavior, 24*(1), 28-47. doi: 10.1016/0001-8791(84)90064-2

Watkins, C. E. (1984b). Using early recollections in career counseling. *Vocational Guidance Quarterly, 32*(4), 271-276.

Watkins, C. E. (1992). Birth-order research and Adler's theory: A critical review. *Individual Psychology: Journal of Adlerian Theory, Research & Practice, 48*(3), 357-368.

Watts, R. E., & Engels, D. W. (1995). The life task of vocation: A review of Adlerian research literature. *TCA Journal, 23*(1), 9-20.

Wheeler, M. S., Kern, R. M., & Curlette, W. L. (1993). *BASIS-A.* Highlands, NC: TRT.

White, J., Campbell, L., & Stewart, A. (1995). Associations of scores on the White-Campbell Psychological Birth Order Inventory and the Kern Lifestyle Scale. *Psychological Reports, 77*(3, Pt 2), 1187-1196.

White, J., Campbell, L., Stewart, A., & Davies, M. (1997). The relationship of psychological birth order to career interests. *Individual Psychology: Journal of Adlerian Theory, Research & Practice, 53*(1), 89-104.

Zweigenhaft, R. L. (1975). Birth order, approval-seeking and membership in congress. *Journal of Individual Psychology (00221805), 31*(2), 205-210.

Chapter 2

CAREER DECISION SELF-EFFICACY AND THE RELATIONSHIP WITH ADLERIAN LIFESTYLE AND BIRTH ORDER

Self-efficacy is a concept that refers to a person's belief in their personal ability to perform successfully a task/behavior or set of tasks/behaviors for a desirable, positive outcome or outcomes and is the predominant mediator of behavior and behavioral change (Bandura, 1977, 1986, 1997). Bandura (1997) stated that beliefs are key factors in the control of choice behaviors, thought processes, emotional/affective states, and persistence. Lower self-efficacy expectations result in greater frequency of avoidance behaviors and higher self-efficacy expectations result in greater frequency of approach behaviors and success. Thus, greater self-efficacy towards a specific task will result in heightened interest, persistence, and success in completion of the task (Bandura, 1997; Nilsson, Schmidt, & Meek, 2002). Since Bandura's seminal proposal of self-efficacy theory, the concept has been applied to various domains, including career decision/indecision (Hackett & Betz, 1981; Nilsson et al.; Taylor & Betz, 1983).

Hackett and Betz (1981) extended Bandura's Self-efficacy theory to the career domain, career decision self-efficacy (CDSE) can be defined as an individual's belief that she/he can engage in the career decision making process to arrive at a desirable, positive outcome or outcomes. Career self-efficacy is divided into two specific areas: career choice content and career process domains. Career choice content refers to self-efficacy in specific domains of interest such as the sciences or the arts, whereas career process refers to the behavioral domains pertaining to making career decisions (Hackett & Betz, 1981). Taylor and Betz (1983) utilized these two specific areas of career self-efficacy,

along with Crites' (1961) five career choice competencies (accurate self-appraisal, gathering occupational information, goal selection, making future plans, and problem solving), to develop the *Career Decision Self-Efficacy Scale* (*CDSES*).

Career decision self-efficacy (CDSE) has received much attention in the literature among diverse populations. Much of the research is with student populations, including: American (Gushue, Scanlan, Pantzer, & Clarke, 2006) and international high school students (Creed, 2002), American (Chung, 2002; Luzzo, 1993b; Taylor & Betz, 1983; Taylor & Popma, 1990) and international undergraduates (Liu, Hao, & Li, 2006; Mau, 2000; Tomiyasu, 1997), non-traditional college students (Quimby & O'Brien, 2004) college undergraduates of color (Brown & Lavish, 2006; Chung, 2002; Jenkins, 2005; Rush, 2002), and students with disabilities (Ochs & Roessler, 2001).

A review of the available literature revealed that most of the research regarding CDSE is examined in terms of career decision/indecision (Taylor & Betz, 1983; Taylor & Popma, 1990) and vocational identity (Gushue, et al., 2006; Hargrove, Creagh, & Burgess, 2002; Scott & Ciani, 2008) Although there is a paucity of research examining CDSE particularly in terms of personality development, the emerging research points to the salient role of family dynamics and atmosphere on CDSE (Floyd, 2004; Hargrove, et al.; Lease & Dahlbeck, 2009; Rush, 2002; Wright, 2008).

Hargrove et al., (2002) examined family-of-origin interaction patterns in relation to vocational identity and CDSE and discovered that various family variables accounted for significant variance in CDSE including cultural, moral, achievement, and intellectual orientations and levels of family conflict and expressiveness. In a study of African American students, Rush (2002) found positive support for a relationship between family

adaptability and cohesion with CDSE and further, the link between supportive/non-supportive family environments with successful/less-successful negotiations in career development behaviors.

Floyd (2004) examined the relationship between family dysfunction, parental attachment, and CDSE, finding a significant positive relationship with maternal attachment and a significant inverse relationship with family dysfunction. Further, the results revealed that maternal attachment was a significant predictor of CDSE beliefs for females and the combination of family structure variables and attachment significantly predicted CDSE beliefs for males. Wright (2008) also found support for the link between attachment and CDSE, concluding that parental attachment acts as a source of general self-efficacy information and is a salient component of an individual's perceptions of self-efficacy in the career decision domain. In a recent study investigating gender differences in CDSE in relation to parental attachment, parenting styles, and career locus of control, Lease and Dahlbeck (2009) found that an authoritarian parenting style was predictive of CDSE and parental attachment was a salient factor for females; neither of these variables was significant for males. Locus of control was not significant for females but was important for males.

This important emerging research linking family dynamics and atmosphere variables with CDSE lend promise to the examination of the Adlerian constructs of lifestyle and psychological birth order within the career self-efficacy domain. Adler (Ansbacher & Ansbacher, 1956) and Dreikurs (1953) elaborated extensively regarding the salience of family dynamics and atmosphere on lifestyle and psychological birth order. Further, contemporary Adlerian research links these family variables to lifestyle

formation (Gfroerer, Gfroerer, Curlette, White, & Kern, 2003) and psychological birth order (Gfroerer, et al., 2003; White, Campbell, Stewart, & Davies, 1997).

Lifestyle

Lifestyle is a complex construct encompassing multiple personality variables that determine an individual's perceptions, understanding, beliefs of, and movement within the world in reaching perceived goals (Adler, 1946; Ansbacher & Ansbacher, 1956). Gushurst (1971) defined lifestyle as, "the totality of system principles which account for the consistency and directionality of an individual's life movements "(p. 30). Lifestyle is a holistic construct of how each person thinks about and moves within the world around them or, an individual's attitude towards self, others, and the world. Adler (1946; Ansbacher & Ansbacher, 1956) believed a child's interests become attuned to a future occupation through her/his lifestyle approach and the level of interest increases or decreases depending on the child's belief in the attainability of that goal. In proposing an Adlerian vocational theory, Watkins (1984a) echoed Adler's belief concluding that lifestyle is the ultimate determinant of vocational choice and all of the processes involved in the choice.

Dreikurs (1953) stated that the development of a lifestyle pattern is largely determined within the first social environment a child is exposed. For most children this initial social environment would consist of the child's family, but for other children it may consist of an orphanage, foster homes, or a combination of the two. Adler (Ansbacher & Ansbacher, 1956) and Dreikurs (1953) believed that an individual's personality and character are solidified by four to six years of age. Intuitively, it would appear that personality and lifestyle develop concurrently and are interdependent. As

evidenced in the literature, the construct of Adlerian lifestyle has correlated significantly with various measures of personality, including the MBTI and the MMPI (Kern, Gormley, & Curlette, 2008).

The available vocational literature demonstrates that an assessment of the Adlerian construct of lifestyle is instrumental in understanding vocational preferences and choices (Bichekas & Newlon, 1983; Gentry, Winer, Sigelman, & Phillips, 1980; Magner-Harris, Riordan, Kern, & Curlette, 1979; Newlon, 1986; Spector, 2003). Although to date, the construct of Adlerian lifestyle has not been correlated specifically with CDSE, Dinter (2000) examined the construct in relation to general self-efficacy using the *BASIS-A* (Wheeler, Curlette, & Kern, 1993). The author found that students who possessed strong feelings of belonging and social interest as well as a strong striving for perfection exhibited greater self-efficacy than those who were not strong in these characteristics. Those students who were strong in belonging and social interest but less desirous of recognition also exhibited greater general self-efficacy than those who did not possess these characteristics.

Birth Order

Birth order in Adlerian psychology is another family dynamic variable that contributes to early personality and lifestyle development (Ansbacher & Ansbacher, 1956). Birth order research contributed significantly to the knowledge base regarding vocational interests, preferences, and choices and is the single-most researched Adlerian construct in the vocational literature (Bradley, 1982; Watkins, 1984; Watts & Engels, 1995). However, Watts and Engels noted that the vast majority of birth order research has

focused on actual or chronological birth order rather than perceived or psychological positioning within the family. In a critical review of the birth order research, Bradley concluded that parental attitudes and values are a major influence on the child's overall goal establishment and lifestyle development and these greatly shape the child's approach to the world of work. Further, examining birth order and sibling dynamics offers an additional opportunity to discover how personality, goal striving, and the environment are interdependent variables that shape vocational choices. Watkins' (1992) critical review of Adlerian birth order research from 1981 to 1991 revealed that achievement motivation varies according to birth order. Specifically, first-born children often exhibit the expected qualities found in the theoretical Adlerian literature, but birth order patterns vary by ethnicity.

Adler (1946; Ansbacher & Ansbacher, 1956) theorized that psychological birth order is a significant contributor to a child's lifestyle development. As children develop within the family unit they begin to formulate a lifestyle pattern that is commiserate with their perceptions of their roles and place within that system, including their sibling group or lack thereof in the case of only children (Ansbacher & Ansbacher, 1956; Gfroerer, et al., 2003; White, Campbell, & Stewart, 1995). The core psychological positioning of the child stabilizes between four and six years of age, but as the child continues to develop family and social atmosphere variables will further influence the roles of the child (Adler; Ansbacher & Ansbacher; Dreikurs, 1953; Stewart et al., 2001; Watkins, 1984a).

Traditionally, firstborn children are usually responsible, rule-oriented, and dependable, seeking to please parents and adults in socially appropriate ways. They tend to be leaders and trailblazers. Second born children will often seek to find their place of

significance in different or even contrasting ways from firstborns. Their alternative approaches may be quite functional within the family unit and garner approval, but they may be expressed also as rebellion and opposition of the rule-oriented, pleasing firstborns (Ansbacher & Ansbacher; Gfroerer, et al.; White, et al.). Adler also described these children as possibly appearing to be in competition with firstborns in order to supplant them and if successful, the firstborn may revert to displaying characteristics more reflective of the second child (Ansbacher & Ansbacher).

Middle children share a unique and complex position within the family. According to Dreikurs and Stoltz (1964), middle children may feel they have no place of significance as compared to their first and lastborn counterparts. Hence, they may feel discouraged and that life is inequitable (Ansbacher & Ansbacher, 1956; Gfroerer, et al., 2003), however, Dreikurs and Stoltz noted that an encouraged middle child might emerge as a peacemaker and seeker of justice. The only child (and in cases of a significant age difference between the youngest and the preceding child) holds a very unique place within the family. Only children do not have siblings to gauge their place within the family and will develop their lifestyle based upon the salient adult and/or peer relationships in their lives (Watkins, 1984). They may often exhibit many characteristics of firstborns, but in general, as only children, they will feel more pressure to achieve and please (Gfroerer, et al.).

All of these sibling positions carry traditional ordinal expectations, but as noted above, the available research points to salient psychological factors, such as encouragement, within the family atmosphere that can play significant roles in the psychological perceptions of how children view themselves. These salient influences of

family atmosphere and parental attitudes and values on vocational interests, preferences, and choices as related to psychological birth order are documented in the literature (Bradley, 1982; Melillo, 1983; Watkins, 1984; White, Campbell, Stewart, & Davies, 1997).

Currently, there is no research available examining the relationship between psychological birth order and CDSE, and only one study was found examining the relationship between birth order and general self-efficacy (Seff & Gecas, 1993). The authors found some support for a relationship between self-efficacy and participation in dangerous sports but found no support for a relationship between self-efficacy and birth order, however, it is important to note that the author examined ordinal birth order position rather than psychological birth order position in the family.

Research Questions

The purpose of the present study is to determine if a relationship exists between CDSE and the Adlerian constructs of lifestyle and birth order. Further this study investigated whether the factors contributing to the Adlerian constructs of lifestyle and psychological birth order served as significant predictors of CDSE. Since the relationship between these Adlerian constructs and career decision self-efficacy has not been investigated before, the results of this study yield valuable information for the inclusion of lifestyle and birth order analysis in career and career decision-making counseling interventions. Therefore, this study sought to answer the following research questions:

1) Is there a relationship between the Adlerian construct of lifestyle and CDSE?

2) Is there a relationship between the Adlerian construct of psychological birth order and CDSE?

Method

Sample

The convenience sample used in the present study included undergraduate students enrolled in five sections of a career development and life planning course and three online courses (diversity/human relations, interpersonal communication skills, and career and lifespan development) at Georgia State University. The available pool of participants was approximately 650. Since the purpose of this study was correlational in nature, there were no qualifiers that would prevent any student from participating in the research. The sample yielded a useable data set of 156 participants (n = 156), or approximately 24% of the available pool of participants. The sample's gender distributions were 108 females (69%) and 48 males (31%). The 156 sample participants, ages 18-65 identified ethnically as follows: 89 African American (57%), 24 White/European American (15%), 17 Asian/Pacific Islander (11%), 10 Multiracial/Mixed ethnicity (6%), 6 Black/Non African-American (4%), 4 Middle Eastern (3%), 2 Latina/Latino (1%), 2 other (1%), and 2 preferred not to answer (1%). The sample participants classified their class standing as follows: 71 seniors (46%), 49 juniors (31%), 22 sophomores (14%), 9 freshmen (6%), and 5 other (3%).

Procedures

A survey packet was administered to participants containing an informed consent, a brief demographics questionnaire, and 155 items from the *BASIS-A* (65 total items), the *PBOI* (40 total items), and the *CDSES* (50 total items). All survey packets were administered in the classroom or at designated administration times. Students were presented with an informed consent form and were only administered the survey upon providing their signature of consent. The signatures from the informed consent were used to meet the research requirement for the courses and/or assign extra credit when applicable, which was not contingent upon completion of the survey. Once the applicable research requirement and/or extra credit was noted by the course instructors, the informed consents were separated from the surveys and stored in a safe place to guarantee anonymity and confidentiality.

Measures

Career Decision Self-efficacy. The Career Decision Self-efficacy Scale (*CDSES*, Betz, Hammond, & Multon, 2005; Betz & Klein, 1996) is designed to measure a person's confidence in her/his ability to make effective career decisions and is comprised of 50 items grouped into five 10 item subscales measuring career decision-making tasks and behaviors. The five subscales and content items are based on Crites' (1961) five constructs of career-choice competencies, which are: Self-Appraisal (APP), Occupational Information Gathering (OCC), Goal Selection (GOAL), Planning (PLAN), and Problem-Solving (PROBSOLV). Responses to the 50 items are rated on a 5-point Likert scale ("no confidence at all" to "complete confidence"). Total scores range from

50 to 250 with higher scores indicating greater levels of CDSE. Examples of items within each of these career-competency subscales include: (1) “Accurately assess your abilities.” (APP); (2) “Describe the job duties of the career/occupation you would like to pursue.” (OCC); (3) “Choose a career that will fit your preferred lifestyle.” (GOAL); (4) “Make a plan of your goals for the next five years.” (PLAN); and (5) “Change occupations if you are not satisfied with the one you enter.” (PROBSOLV).

Taylor and Betz (1983) reported internal consistency reliability of .97 within each subject group and for the entire group of participants in the initial study of the *CDSES*. Reliability coefficient alphas for the five subscales ranged from .86 (PROBSOLV) to .89 (GOAL and PLAN). Although the authors did not find the five scales to be parallel to Crites’ (1961) five factor career choice competencies, they found that the resulting factor structure from the analysis along with the high internal consistency and high subscale inter-correlations suggested that the *CDSES* may be best utilized as a global assessment of CDSE tasks and behaviors.

More recently, Luzzo (1993a) conducted an analysis of the validity and reliability of the *CDSES*. The author conducted construct validity testing, examining the relationship between *CDSES* scores with two well-known measures of career maturity attitudes and decision-making. The results exhibited that those scoring higher on the *CDSES* were more mature in their attitudes toward career decision-making, but could not support that the *CDSES* as a predictor of skill in making the decision. Discriminant validity testing examined the relationship between *CDSES* scores, GPA, and gender, but no significant differences were found, thus supporting the discriminant validity of the instrument. The internal consistency coefficient alpha was .93 and item total score

correlations were moderate to high (46 out of 50 items >.50). Test-retest reliability was .83 after a 45-day interval.

Lifestyle. The Basic Adlerian Scales for Interpersonal Success-Adult Form (*BASIS-A*, Wheeler et al., 1993) contains 65 items measuring five primary lifestyle themes and five secondary HELPS themes, which are utilized in the interpretation of the primary lifestyle scales. The five primary lifestyle scales of the *BASIS-A* are: Belonging-Social Interest (BSI), Going Along (GA), Taking Charge (TC), Wanting Recognition (WR), and Being Cautious (BC). The five HELPS secondary scales are: Harshness (H), Entitlement (E), Liked by All (L), Striving for Perfection (P), and Softness (S). Since this instrument assesses the construct of Adlerian lifestyle, which is based on perceptions of recollections from early childhood experiences, each item begins with "When I was a child, I…" The respondent answers each question according to a five point Likert scale from strongly disagree to strongly agree, with an indifferent option at the middle of the continuum (Wheeler, et al.).

Curlette, Wheeler, and Kern (1997) reported strong internal consistency coefficient alpha reliabilities for the five primary lifestyle scales in the .82 to .87 range (BSI = .86, GA = .83, TC = .85, WR = .82, BC = .87). Test-retest reliabilities for the inaugural study are reported as follows: BSI = .87, GA = .72, TC = .77, WR = .66, BC = .80. For the initial study, subjects (n = 1083) included undergraduates, graduate students, teachers, clinical patients, and persons from various other occupations. Ethnicity distribution of the sample was not reported. In a replication study utilizing 144 undergraduate students, the authors reported internal consistency coefficient alphas ranging from .84 (GA and WR) to .86 (TC and BC). Test-retest reliabilities reported for

the replication study at one week, four week, and 10 week intervals ranged from .60 to .91. The authors further reported statistically significant Pearson correlations from criterion validity studies on the instrument (Curlette et al., 1997). Several subsequent studies examining the validity and reliability of the *BASIS-A* reported similar findings (Peluso, Peluso, Buckner, Curlette, & Kern, 2004; Peluso, Stoltz, Belangee, Frey, & Peluso, 2010), as well as validation of the utility of the instrument with diverse populations (Miranda, Frevert, & Kern, 1998; Peluso, Peluso, White, & Kern, 2004).

Scores for these scales are reported as *T*-scores with a mean of 50 and a standard deviation of 10 with cutoffs for low and high scores set at one standard deviation below and above the mean respectively (Curlette et al., 1997; Kern, Wheeler, & Curlette, 1997). BSI measures characteristics central to the individual's sense of being in the world; specifically a sense of belonging in the world in which they operate (Kern et al.). Persons scoring high on BSI are generally extroverted and feel comfortable in group situations; they are encouraging, cooperative, and interpersonally skilled. Low BSI scores indicate that a person may be more comfortable and creative alone or interacting with one or a few others (Kern et al.). An example item from the BSI scale is "When I was a child, I enjoyed playing with other children."

GA measures how much the individual is oriented towards rule-directed behaviors (Kern et al., 1997). Persons scoring high on GA like knowing the rules and expectations in order to direct their behaviors in the expected direction; they tend to be accommodating and avoid confrontations. Low scores on GA indicate a tendency for independent thinking and being opinionated. An example item from the GA scale is, "When I was a child, I rebelled if I did not get my way." Taking Charge (TC) measures a

tendency for leadership and authority (Kern et al.). High scorers on TC tend to be assertive and task-oriented, possessing a take control approach to life, while low scorers may be completely capable of taking charge as the need arises, but prefer to expend energies in a different fashion. An example item from the TC scale is, “When I was a child, I liked telling others what to do.”

The WR scale measures the tendency for seeking approval and being achievement/success-oriented (Kern et al., 1997). Lower WR scores may indicate an individual may value approval and validation from others less. An example item from the WR scale is, “When I was a child, I felt important when I succeeded.” Finally, BC measures an individual’s feelings of empathy and sensitivity to affect (Kern et al., 1997). High scores on this scale may indicate an unpredictable or erratic family environment and an individual may approach life in one of two ways: sensitivity to environmental cues and non-verbal behaviors of others, or a lack of concern for what others think and acting without concern for consequences. Low BC scores generally indicate a stable and comfortable home life, trusting that your needs will be met and life’s problems can be solved (Kern et al.). An example of an item from the BC scale is, “When I was a child, I had a parent who felt I was hopeless.”

The five secondary HELPS scales are interpreted using cut scores, thus reliability is reported in terms of coefficients of agreement (the probability that an individual will be consistently classified in the same category, high/not high) on two administrations of the instrument (Curlette et al., 1997). The authors reported these coefficients as follows: H = 1.00, E = .94, L = .97, P = .92, S = .94. It is important to note the supplemental uses of the secondary scales for interpretation. H and S are measures of faking bad and faking

good respectively and the E, L, and P scales are used to offer a more detailed description of the primary scales (Curlette et al.).

High H scores indicate the individual may perceive their childhood experiences as being more difficult than they may have been (Kern et al., 1997). Sampson, Lenz, Reardon, & Peterson (1999) noted the salient influence of negative cognitions regarding self and their influence on meta-cognitive processing regarding occupational and employment choices. An example of an item on the H subscale is, “When I was a child, I had several close friends.” Persons scoring high on E enjoy special recognition from others and an expectation of their needs being met. An example of an item on the E subscale is, “When I was a child, I got special attention.” High scores on L may indicate a tendency for accommodating others and approval seeking. An example of an item on the L subscale is, “When I was a child, I pleased adults rather than upset them.” Individuals scoring high on P are self-efficacious and resourceful in meeting life’s challenges. An example of an item on the P subscale is, “When I was a child, I felt sure of myself in several areas.” High scores on S indicate a tendency for viewing childhood experiences in a more positive fashion and downplaying the negative aspects, which may be a resourceful coping strategy in difficult life situations (Kern et al.). An example of an item on the S subscale is, “When I was a child, I caused my parents a lot of trouble.”

Birth Order. The White-Campbell Psychological Birth Order Inventory (*PBOI*, Campbell, White, & Stewart, 1991) is a 40 item, yes/no questionnaire designed to assist in distinguishing between psychological or perceived birth order and actual or chronological birth order positioning. The inventory questions were developed from Adler’s (Ansbacher & Ansbacher, 1956) descriptions of the experiences, feelings, and

behaviors of persons in four psychological birth order positions [first (FC), middle (MC), youngest (YC), and only (OC)] and were designed to be highly descriptive of at least one of these psychological positions. The instrument was also designed to assist therapists/counselors in assessing an individual's lifestyle in counseling. Primary factor analysis of the instrument showed a significant relationship between actual and psychological birth order, however the majority of the subjects in the analysis reported their psychological positioning different from their actual birth orders (Campbell et al.). The authors reported five-week test-retest reliability coefficients ranging from .70 (only child scale) to .87 (middle child scale).

Respondents are instructed to answer the items according to their perceptions and feelings when they lived in the family of origin or if they lived in multiple families, respond according to the one in which they spent the most time (Campbell et al., 1991). Further, if the respondent is an only child, she/he is instructed to ignore the items related to experiences with siblings. Examples of the items on the PBOI are: (1) "I believed my parents had high expectations of me."; (2) "I was taken less seriously than anyone in the family."; (3) "I was pampered by my family members."; and (4) "I felt isolated from others."

Stewart and Campbell (1998) conducted a two-part investigation into the reliability and validity of the PBOI. The first study examined the construct validity of the instrument through factor analysis. Pearson correlation coefficients for each of the scales are: first (.93), middle(.96), youngest(.89), and only (.91). The first study found that the four factor scales as a whole accounted for 26% of the variance. The second study examined the reliability of the instrument and the authors found responses to be very

consistent up to two months after the initial administration; most test-retest reliabilities at the three week interval were above .90 and at the eight week interval ranged from .80 to .94.

Research Hypotheses

The following research hypotheses were tested:

1. Students scoring high on the BSI and TC primary scales and P and S secondary scales of the BASIS-A will exhibit greater CDSE and serve as predictors of CDSE.
2. Students scoring high on the GA and BC primary scales and H secondary scale of the BASIS-A will exhibit lower CDSE and serve as predictors of CDSE.
3. Psychological first-borns will possess greater CDSE and serve as a predictor of CDSE.
4. Psychological last-born and only children will possess lower CDSE and serve as predictors of CDSE.

Analyses

Power analysis. To ensure high statistical power for analyses, the G*Power 3 program (Faul, 2009) was used to determine the necessary number of participants. For medium effect size with power set to .80 and .05 alpha levels, a sample size of 84 was required for the bivariate correlation analysis. The regression models were a more robust test of power. For the regression analyses, the most robust test of power was the multiple regression analysis including four predictors (*BASIS-A* BSI, TC, P, and S scales); for a medium effect size ($f^2 = .15$) when $\alpha = .05$ and power is set to .80, requiring 85

participants. With all other parameters being equal and power is set to .95, 129 participants were therefore required.

Descriptives. Demographic distributions for gender, ethnicity, academic class standing, and age were computed with mean scores and standard deviations for all three measures. Additionally, the descriptive profiles of the participants were assessed and evaluated against instrument norms.

Internal consistency reliability. Cronbach's alpha coefficients were determined for each scale in the present study. For the *BASIS-A* primary scales, the coefficient alphas were: BSI (.82); GA (.83); TC (.89), WR (.81); and BC (.85). These are strong and comparable to those reported by Curlette et al. (1997). Coefficient alphas for the five supplemental HELPS scales of the *BASIS-A* are not reported as their scores are interpreted as cutoff scores and reliability was originally reported as coefficients of agreement for these scales after two administrations (Curlette et al., 1997), whereas this study only examines one administration.

It is important to note that reliability for the *PBOI* scales was not originally reported as internal consistency reliability, rather it was reported in terms of test-retest reliability (Stewart & Campbell, 1998). The *PBOI* coefficient alphas are reported here separately for women and men due to the items and number of items for scoring each scale are different for women and men (Stewart & Campbell). The coefficient alphas for women in the present study were: FC (.48); MC (.86); YC (.53); and OC (.52). The coefficient alphas for men in the present study were: FC (.57); MC (.77); YC (.66); and OC (.71). The *CDSES* coefficient alphas for the present study were: APP (.83); OCC

(.85); GOAL (.78); PLAN (.84) and PROBSOLV (.78). These are strong and comparable to those reported by Taylor and Betz (1983), though the range of coefficients is slightly lower for the present study.

Correlational analysis. In order to establish confidence in the data of the current study and determine relationships between the scales and subscales of the *CDSES*, *BASIS-A*, and *PBOI*, bivariate correlational analyses were conducted. Confidence in the validity of the current dataset increases if scales and subscales correlate in the expected directions, using a critical value of .05 for α.

Regression for prediction of Career decision self-efficacy. Simple linear regression and simultaneous multiple regression models were conducted to determining to what end the *BASIS-A* scales and subscales and the *PBOI* scales of interest from the research hypotheses predict CDSE using a critical value of .05 for α. Simple linear regression, or bivariate regression is the preferred method for examining the effects of one predictor variable on a dependent variable and multiple regression analysis is the appropriate method to determine the individual and collective effects of two or more predictor variables on a dependent variable (Heppner, Kivlighan, & Wampold, 1999; Huck, 2004; Pedhazur, 1997). Further, simultaneous multiple regression, where the predictor variables are entered into the equation synchronously, is the most common method used for prediction, where there is no particular reason for entering any of the predictor variables before another (Heppner et al., 1999).

Due to the exploratory nature of this study examining the relationship between lifestyle, psychological birth order, and Career decision self-efficacy, one bivariate

regression model and three multiple regression models using the simultaneous method were conducted to support the research hypotheses. Total Scores on the *CDSES* served as the dependent variable for all the models. The independent variables for the first multiple regression model were the total scores from the BSI and TC primary scales and the P and S subscales of the *BASIS-A*. For the second multiple regression model, the independent variables were the total scores from the GA and BC primary scales and the H secondary subscale of the *BASIS-A*. The total scores from the *PBOI* first child scale served as the independent variable in the simple regression model. The final multiple regression model examined the total scores from the *PBOI* youngest child and only child scales as independent variables.

The above scales were of interest based on the personal characteristics they are designed to measure and previous research. The BSI (belonging/social interest) scale was of interest because persons high in BSI are generally outgoing, encouraging, and interpersonally skilled (Kern et al., 1997), and BSI demonstrated to be predictive of general self-efficacy (Dinter, 2000). The TC (taking charge) scale was of interest because it measures tendencies for assertiveness and leadership. The P (striving for perfection) subscale was selected because persons high on P are generally self-efficacious and resourceful in meeting life's tasks (Kern et al.). The S (softness) scale was of interest because it is a measure of faking good (or minimizing negative experiences) on the *BASIS-A*. Likewise, the H (harshness) scale is a measure of faking bad (or maximizing negative experiences) explaining why it was hypothesized as a non-predictor of CDSE. The GA (going along) scale was selected because high scores indicate a tendency for being accommodating, non-confrontational, and less inclined toward independent

thinking. The BC (being cautious) scale was of interest because high scores may indicate an unpredictable family environment (Kern et al.).

The FC (first child) scale of the *PBOI* was selected because persons identifying psychologically as first children are generally associated with family cohesiveness and an achievement orientation (Stewart et al., 2001). The YC (youngest child) and OC (only child) scales were of interest because they were found to be less dependent upon family atmosphere variables than the other two *PBOI* scales (Stewart et al.). Depending upon the age spread between a youngest child and the next oldest sibling, youngest children may display characteristics of the youngest child or an only child (Adler, 1946; Ansbacher & Ansbacher, 1956; Dreikurs, 1953). Further, the OC scale is related to scrutiny, control, and a lack of independence within the family (Stewart et al.).

The *BASIS-A* is interpreted using *T*-scores (Curlette et al., 1997; Kern et al., 1997). Due to the uneven number of items and dichotomous scoring of the *PBOI* scales, it was necessary to convert the raw scores from the data sample into standardized scores in order to make accurate comparisons between the study instruments for the correlation and regression analyses (Stewart et al., 2001). Thus, all raw scores, including those of the *CDSES*, were converted to *T*-scores for all of the study instruments for these purposes.

Results

A descriptive analysis was performed for the sample in the current study and is reported here in Table 1. Gender, ethnicity, age, and class standing distributions are excluded from the table as they are reported in the sample section of the manuscript. Age and class standing means and standard deviations are reported here.

The descriptive analysis reveals that the average participant in this study was approximately 24 years of age and classified as a junior in college. Based on instrument norms, the participant exhibited the following characteristics for the variables in this study. For the scales of the *BASIS-A* factors, the participant exhibited an average sense of BSI, GA, TC, WR and BC (Kern et al., 1997; Wheeler et al., 1993). With regard to CDSE, the average participant exhibited a moderately high level of overall CDSE and moderately high levels of CDSE factors, APP, OCC, GOAL, PLAN, and PROBSOLV (Taylor & Betz, 1983).

For the factors of the *PBOI*, the average participant identified with more characteristics of the FC factor than the other *PBOI* factors, however, it is important to note that the factor scales of the *PBOI* are best examined in tandem rather than separately as children with siblings may be classified in one of these categories at some point in time (Stewart & Campbell, 1998; Stewart et al., 2001).

Table 1

Descriptive Profile of Study Variables Raw Data

Variable	Mean	SD
Age	23.96	6.61
Class Standing	3.26	0.94
Belonging/Social Interest (BSI)	34.77	5.78

Going Along (GA)	29.69	5.77
Taking Charge (TC)	21.67	6.75
Want Recognition (WR)	43.17	5.97
Being Cautious (BC)	16.28	6.41
Harshness (H)	13.07	2.72
Entitlement (E)	18.37	5.59
Liked by All (L)	22.86	3.88
Strive for Perfection (P)	22.11	3.24
Softness (S)	19.74	2.98
First Child (FC)		
Females (n = 108)	5.44	1.31
Males (n = 48)	3.81	1.28
Middle Child (MC)		
Females	1.69	2.26
Males	0.73	1.33
Youngest Child (YC)		
Females	2.03	1.29

Males	2.04	1.56
Only Child (OC)		
Females	1.29	1.14
Males	1.75	1.56
Self-Appraisal (APP)	40.84	5.59
Gathering Occupational Information (OCC)	40.26	6.21
Goal Selection (GOAL)	38.55	5.60
Planning (PLAN)	38.91	6.39
Problem Solving (PROBSOLV)	37.38	6.23
Career Decision Self-Efficacy (CDSE)	195.94	26.69

(n = 156)

In order to answer the research questions and determine if there is a relationship between the Adlerian constructs of lifestyle and psychological birth order with career decision self-efficacy, a correlational analysis was performed. The lifestyle construct is a complex construct of five primary scales and five sub-scales and does not yield a singular

overall score to account for lifestyle, thus, the correlations between the scales and sub-scales of the lifestyle construct with career decision self-efficacy are reported as separate correlations.

The results of the analysis for this study revealed that two of the primary scales of the *BASIS-A*, BSI and BC, significantly correlated with career decision self-efficacy (CDSE). The correlation coefficient for BSI, $r(154) = .252$, $p < .01$, though significant, demonstrates a low positive relationship with CDSE, which suggests that participants who reported feeling a sense of belonging in the world and are interpersonally skilled tended to report more career decision self-efficacy. The correlation coefficient for BC, $r(154) = -.191$, $p < .05$, though significant, demonstrates a low inverse relationship with CDSE, suggesting that participants reporting unpredictable or erratic family environments tended to report less career decision self-efficacy.

Of the five secondary scales of the BASIS-A, three significantly correlated with CDSE. The S secondary scale had a statistically significant correlation with CDSE, $r(154) = .211$, $p < .01$, demonstrating a low positive relationship and suggesting that participants who may have reported their childhood experiences more favorably than they actually were exhibited more career decision self-efficacy. The H secondary scale correlation was statistically significant, $r(154) = -.238$, $p < .01$, illustrating a low inverse relationship with CDSE, which suggests that participants who may have reported their childhood experiences less favorably than they actually were exhibited lower career decision self-efficacy. The P secondary scale correlation with CDSE was statistically significant, $r(154) = .420$, $p < .01$, indicating a moderate positive relationship and,

suggesting that participants who are self-efficacious and resourceful in meeting life's challenges tended to report higher career decision self-efficacy.

Further analysis of the *BASIS-A* primary scales and secondary scales with the five scales of the *CDSES* reveal other important relationships. The BSI scale of the *BASIS-A* had statistically significant correlations with all five of the *CDSES* scales revealing low positive relationships for all (APP, $r(154) = .235$, $p < .01$; OCC, $r(154) = .211$, $p < .01$; GOAL, $r(154) = .211$, $p < .01$; PLAN, $r(154) = .240$, $p < .01$; & PROBSOLV, $r(154) = .225$, $p < .01$). Thus, participants who feel a sense of belonging in the world reported greater self-efficacy in the self-appraisal, occupational information gathering, goal selection, planning, and problem solving tasks involved in making career decisions.

The WR scale of the *BASIS-A* had statistically significant correlations with the APP scale, $r(154) = .209$, $p < .01$, and the OCC scale $r(154) = .175$, $p < .05$, indicating low, positive relationships with these tasks of CDSE. This suggests that participants seeking approval and validation from others feel more efficacious in the self-appraisal and occupational information gathering tasks of the career decision process. The BC scale of the *BASIS-A* had statistically significant correlations with three of the CDSE scales, APP, $r(154) = -.173$, $p < .05$; OCC, $r(154) = -.216$, $p < .01$; PLAN, $r(154) = -.231$, $p < .01$), all demonstrating low inverse relationships, suggesting that participants who reported more unpredictable or erratic family environments reported lower self-efficacy in the self-appraisal, occupational information gathering, and problem solving tasks of the career decision process.

The P secondary scale of the *BASIS-A* had statistically significant correlations with all five of the *CDSES* scales, demonstrating moderate positive relationships with APP, $r(154) = .470$, $p < .01$, OCC, $r(154) = .369$, $p < .01$, GOAL, $r(154) = .356$, $p < .01$, PLAN, ($r(154) = .407$, $p < .01$, and a low positive relationship with PROBSOLV, $r(154) = .274$, $p < .01$. This suggests that participants who are more self-efficacious and resourceful reported greater self-efficacy in the self-appraisal, occupational information gathering, goal selection, planning, and problem solving tasks of the career decision process. The H sub-scale of the *BASIS-A* had statistically significant correlations with four of the *CDSES* scales, APP, $r(154) = -.233$, $p < .01$, OCC, $r(154) = -.231$, $p < .01$, PLAN, $r(154) = -.230$, $p < .01$, and PROBSOLV, $r(154) = -.221$, $p < .01$, illustrating low inverse relationships. This suggests that students who tended to view their childhood experiences less favorably than they actually were reported lower self-efficacy in the self-appraisal, occupational information gathering, planning, and problem solving tasks of the career decision process.

The S secondary scale of the *BASIS-A* had statistically significant correlations with four of the *CDSES* scales, APP, $r(154) = .181$, $p < .05$, OCC, $r(154) = .186$, $p < .05$, GOAL, $r(154) = .200$, $p < .05$, and PLAN, $r(154) = .235$, $p < .01$, demonstrating low positive relationships. Thus suggesting that participants who view their childhood experiences more favorably than they actually were tended to report greater self-efficacy in the self-appraisal, occupational information gathering, goal selection, and planning tasks involved in the career decision process. The E secondary scale of the *BASIS-A* had a statistically significant, low positive relationship with PLAN, $r(154) = .174$, $p < .05$, indicating that participants who reported enjoying special recognition and an expectation

that their needs will be met tended to report greater self-efficacy in the planning task of the career decision process.

The correlational analysis revealed fewer significant correlations between the *PBOI* and the *CDSES*. The MC scale was the only scale of the *PBOI* that significantly correlated with overall CDSE and revealed a low inverse relationship, $r(154) = -.157$, $p = .05$. Further, the MC scale correlated significantly with the PLAN scale of the *CDSES*, $r(154) = -.206$, $p = .01$. These findings suggest those participants reporting more middle child psychological characteristics such as feeling discouraged or not garnering enough attention within the family tended to report lower self-efficacy in the planning task of making career decisions and overall CDSE. The FC scale of the *PBOI* significantly correlated with the APP scale of *CDSES*, $r(154) = .195$, $p < .05$, suggesting that participants who reported more first child psychological characteristics such as leadership and preferences for order and rule-oriented behaviors reported greater self-efficacy in the self-appraisal task of the career decision process.

The primary and secondary scales of the *BASIS-A* correlated significantly with many scales of the *PBOI.* Before explaining these relationships and their meaning, it is important to note that the significant correlations of the YC scale of the *PBOI* with the primary and secondary scales of the *BASIS-A* found in the current study suggest that participants identifying with youngest child characteristics may have experienced encouragement and more role salience within the family, thus displaying more first child characteristics. The BC scale of the *BASIS-A* correlated significantly with all four scales of the *PBOI*. BC had a significant, high positive relationship with the MC scale, $r(154) = .661$, $p < .01$, and a significant, moderate positive relationship with the OC scale, $r(154)$

= .378, $p < .01$. This suggests that participants who identified with feelings of inattention, role salience, dependence, and being controlled within the family may have experienced more unpredictable or erratic family environments. BC had statistically significant low inverse relationships with the FC, $r(154) = -.261$, $p < .01$, and YC, $r(154) = -.263$, $p < .01$, scales, suggesting that participants reporting more unpredictable or erratic family atmospheres identified less with feelings of leadership, achievement, and role salience within the family.

The BSI scale of the *BASIS-A* had statistically significant correlations and low positive relationships with the FC, $r(154) = .285$, $p < .01$, and YC, $r(154) = .294$, $p < .01$, scales of the *PBOI.* This suggests that participants who reported a greater sense of belonging in the world identified with feelings of leadership, achievement, and role salience within the family. Additionally, BSI had a significant moderate, inverse relationship with the MC scale of the *PBOI*, $r(154) = -.385$, $p < .01$, demonstrating that participants who identified with feelings of inattention and less role salience within the family reported a lower sense of belonging in the world.

The GA scale of the *BASIS-A* had a statistically significant, low positive correlation with the FC scale, $r(154) = .262$, $p < .01$, and a statistically significant, low inverse correlation with the MC scale, $r(154) = -.292$, $\rho < .01$. These findings suggest that participants who identified with feelings of leadership, achievement, and role salience within the family exhibit an orientation towards rule-directed, expected behaviors, while those who identified more with feelings of inattention and lack of role salience within the family did not exhibit this orientation. The WR scale of the *BASIS-A* had a statistically significant moderate, positive correlation and with the FC scale, $r(154) = .452$, $p < .01$,

and a statistically significant low, inverse correlation with the MC scale, $r(154) = -.177$, $p < .05$. These relationships suggests that participants identifying with feelings of leadership, achievement, and role salience within the family are more desirous of approval and validation, while participants who identify less with these feelings within the family are less desirous of approval and validation. The TC scale of the *BASIS-A* had a statistically significant low, positive correlation and relationship with the YC scale, $r(154) = .322$, $p < .01$, suggesting that participants who identified with feelings of achievement and role salience within the family exhibited more tendencies for leadership and authority.

Further, the secondary scales of the *BASIS-A* had significant correlations with the scales of the *PBOI*. The S scale of the *BASIS-A* significantly correlated with all four scales of the *PBOI*. The S scale had statistically significant, low positive relationships with the FC, $r(154) = .294$, $p < .01$, and YC, $r(154) = .157$, $p = .05$ scales of the *PBOI*. This finding indicates that participants who identify with feelings of leadership, achievement, and role salience in the current study may have reported their childhood experiences slightly more favorably than they actually were. Additionally, the S scale of the *BASIS-A* had a statistically significant, moderate inverse relationship with the MC scale, $r(154) = -.498$, $p < .01$, and a statistically significant, low inverse relationship with the OC scale, $r(154) = -.317$, $p < .01$. This illustrates that participants who may have felt a lack of attention and role salience, as well as a sense of being controlled and dependency, within the family most likely did not report their childhood experiences more favorably than they actually were.

The H sub-scale of the *BASIS-A* had a statistically significant, moderate positive relationship with the MC scale of the *PBOI*, $r(154) = .431$, $p < .01$, and a statistically significant, low positive relationship with the OC scale, $r(154) = .170$, $p < .05$. These findings suggest that participants who felt a lack of attention and role salience, as well as those who felt a sense of being controlled and dependent, within the family likely view their childhood experiences more harshly than they actually were. Additionally, the H scale had statistically significant, low negative correlations with the FC, $r(154) = -.253$, $p < .01$, and the YC, $r(154) = -.163$, $p < .05$, scales, suggesting that participants who felt a sense of leadership, achievement motivation, and role salience within the family were more likely to not view their childhood experiences more harshly than they actually were.

The E secondary scale of the *BASIS-A* had a statistically significant, high positive correlation with the YC scale of the *PBOI*, $r(154) = .694$, $p < .01$, suggesting that participants who felt a sense of achievement orientation and role salience within the family expect their needs to be met and enjoy receiving special recognition from others. The E scale had a statistically significant, low inverse relationship with the MC scale $r(154) = -.313$, $p < .01$, suggesting that participants who felt a lack of attention and role salience within the family were more likely not to have an expectation of their needs being met and were less desirous of receiving special recognition.

The P sub-scale of the *BASIS-A* had a statistically significant, moderate positive relationship with the FC scale of the *PBOI*, $r(154) = .399$, $p < .01$, and a statistically significant, moderate negative correlation with the MC scale, $r(154) = -.356$, $p < .01$. This suggests that participants who felt a sense of achievement motivation and role salience within the family were more likely to be self-efficacious and resourceful, while

those who felt a lack of attention or role salience within the family were less likely to be self-efficacious and resourceful. Lastly, the L sub-scale of the *BASIS-A* had a statistically significant, moderate positive correlation with the FC scale of the *PBOI*, $r(154) = .410$, $p < .01$, which might suggest that participants who felt a sense of achievement, leadership, and role salience within the family are more likely to be accommodating and desirous of validation.

To assess the accuracy of our a priori hypotheses, bivariate and multiple regression analyses were employed to determine the predictive ability of the specified independent variables on the dependent variable, CDSE. Hypothesis one sought to examine if BSI, TC, P, S would serve as predictors of CDSE and multiple regression was used to determine their predictive ability. Since the purpose of this analysis was exploratory in nature, all of the variables were entered simultaneously into the regression equation. The model indicated that these four independent variables explained a significant proportion of variance in total CDSE scores, $R^2 = .19$, $F(4,151) = 8.654$, $\rho < .01$. Striving for Perfection (P) was the only independent variable in the model that emerged as a significant predictor of CDSE, $\beta = .376$, $t(151) = 4.624$, $\rho < .01$.

A multiple regression model using the forward method was used with the predictor variables, BSI, TC, P, and S based on the strength of their zero-order correlation coefficients to determine the specific amount of variance on total CDSE scores accounted for by the predictor variables in the equation (Huck, 2004; Pedhazur, 1997). This model yielded P as the only predictor in the model and excluded the BSI, S, and TC variables. Striving for perfection (P) explained a significant proportion of the variance in total CDSE scores, $R^2 = .18$, $F(1, 154) = 33.070$, $\beta = .420$, $t(154)$, $\rho < .01$. Thus, this

hypothesis was partially supported. Further, this confirmed that BSI, TC, and S combined accounted for only 1% of the variance in the previous regression model.

A second simultaneous multiple regression model was used to evaluate hypothesis two that GA, BC, and H would serve as predictors of CDSE. The model was significant, $R^2 = .07$, $F(3,152) = 3.624$, $p < .05$, indicating that these three variables accounted for 7% of the variance in total CDSE scores.. The *BASIS-A* Harshness Scale (H) was the only independent variable in the model that emerged as a significant predictor of CDSE ($\beta = -.190$, $t(152)$, $\rho < .05$). A separate regression model using the forward method based on zero-order correlation coefficients using these three variables as the predictors (Huck, 2004; Pedhazur, 1997), revealed that H was indeed the only significant predictor of CDSE, $R^2 = .06$, $F(1,154) = 9.243$, $\beta = -,238$, $t(154)$, $\rho < .01$) accounting for 6% of the variance in total CDSE scores. Thus, confirming that GA and BC combined accounted for only 1% of the variance in total CDSE scores. The hypothesis was partially supported.

The third multiple regression model was used to evaluate hypothesis four that YC and OC would serve as significant non-predictors of higher CDSE. The model was not significant and the hypothesis was not supported. Bivariate regression was used to evaluate hypothesis three that FC would serve as a significant predictor of higher CDSE. The model was not significant and the hypothesis was not supported.

Discussion

The results of the present study yield valuable information about the relationship of the Adlerian constructs of lifestyle and psychological birth order with CDSE. The numerous statistically significant correlations between the primary and secondary scales

of the *BASIS-A* and overall CDSE, as well as the factors of CDSE, are encouraging for the application of this construct in counseling and vocational assessment. Further, the finding that the P and H scales of the *BASIS-A* were both statistically significant predictors of CDSE, partially supporting the hypotheses of this study.

Striving for perfection (P) was expected to have a statistically significant positive relationship with CDSE and serve as a predictor of CDSE as persons high in P are generally self-efficacious and resourceful in meeting life's challenges. Additionally persons high in P value optimism, structure, and detail. As expected, Harshness (H) had a statistically significant inverse relationship with CDSE and served as a significant predictor of CDSE. Persons high in H may regard their childhood experiences within the family more harshly than they actually were and may negate the more positive aspects of their experiences. Thus, persons high in H may possibly exhibit more negative attitudes and cognitions regarding CDSE. Negative cognitions regarding childhood experiences influence meta-cognitive processing and self-talk regarding occupational and employment choices (Sampson et al., 1999).

As expected, BSI had a statistically significant positive relationship with overall CDSE based on the characteristic profile of persons with higher BSI exhibiting resourcefulness and a sense of belonging in the world. Persons high in BSI are generally extroverted, interpersonally skilled, and cooperative, which may contribute to their resourcefulness. This finding further expands the positive findings of Dinter (2000) regarding the relationship between BSI and general self-efficacy to the career decision domain.

As expected, BC had a statistically significant negative relationship with CDSE. Persons exhibiting higher BC are characterized as having unpredictable or erratic family atmospheres and fewer expectations that their needs will be met and life's problems can be solved. Given the characteristic profile of TC it was expected that TC would emerge as a significant predictor of CDSE but the findings of the present study did not support this expectation or the expectation that TC would demonstrate a statistically significant positive relationship with overall CDSE and CDSE factors.

The *PBOI* scales demonstrated few relationships with CDSE and CDSE factors. Further, the regression analyses regarding the predictive ability of the designated *PBOI* scales did not support expectations. This is most likely due to the factors of psychological birth order are best examined in tandem and holistically (Stewart et al., 2001). However, the MC scale was the only factor that demonstrated a statistically significant negative relationship with overall CDSE in the present study. MC was not evaluated for predictive ability with CDSE.

Clinical Implications

The results of the present study demonstrate the utility of examining lifestyle and psychological birth order in relation to CDSE in counseling and vocational assessment. The findings suggest that certain factors of lifestyle and psychological birth order influence self-efficacy beliefs in the career domain. Assessment of these constructs in counseling and career counseling may elucidate treatment directions and options.

Clinicians may find it useful to examine beliefs, attitudes, and values related to the client's sense of belonging/social interest and life approach to gain additional

perspective regarding their general and career decision self-efficacy. Those assessed to have lower social interest, a higher sense of caution, or a harsh view of their childhood experiences may benefit from experiential interventions and group therapy to increase their social awareness, sense of belonging, and self-efficacy. These clients could also benefit from cognitive restructuring of their possible negative self talk and cognitions that influence their occupational and employment decision-making. Clients who have high standards and perfectionist tendencies resulting in heightened generalized anxiety may find it helpful to focus on these personality characteristics from a strengths perspective in examining their general and career decision self-efficacy as an alternative to focusing on the possible dysfunctional manifestation of these qualities.

Although the clinician may be compelled to examine specific factors of these constructs in conceptualizing the client's self-efficacy beliefs, caution should be exercised. Individual psychology is a holistic approach to viewing the individual's personality characteristics (Adler, 1946; Ansbacher & Ansbacher, 1956). The importance of this fundamental tenant cannot be overemphasized. Reducing the client through examinations of specific aspects of the personality, rather than holistically, may be a disservice and foster a sense of deficiency rather than proficiency. It is important to view the client from a strengths and growth perspective to maximize their potential in increasing their self-efficacy across life domains.

Research Implications

Although the results of the current study did not fully support the research questions and hypotheses, the numerous statistically significant relationships between the

factors of lifestyle and CDSE and factors, as well as the predictive ability of several of the *BASIS-A* secondary scales, provide an impetus for future research. BSI was not found to be a statistically significant predictor of CDSE as expected. However, the results of the statistically significant relationships between BSI and overall CDSE and all five CDSE factors (APP, OCC, GOAL, PLAN, PROBSOLV) warrant further inquiry in future studies regarding BSI's predictive ability with CDSE and CDSE factors. Further, despite BC not emerging as a statistically significant non-predictor of CDSE, the statistically significant negative relationships between BC and overall CDSE as well as three of the CDSE factors (APP, OCC, PLAN) warrants further examination. It was surprising that TC did not have a significant relationship or predictive ability with CDSE, which may be a limitation of the current study. High TC is generally indicative of leadership and being in control, therefore future research may examine TC in terms of career locus of control.

Considering the significant positive relationship and significant predictive ability of the *BASIS-A* secondary scale P, future research directions may include replication of the findings of the present study as well as examining P as a measure of career optimism and perfectionism. Likewise, the significant negative relationship and significant predictive ability of the *BASIS-A* secondary scale H, warrants further replication and additional research in the area of career pessimism, attitudes, and decisions. Additionally, although the S secondary scale of the *BASIS-A* did not emerge as a significant predictor of CDSE, the significant positive relationship between the two demonstrated in the current study warrants additional replication research and further examination of optimism and career attitudes. Future research regarding the predictive ability of the

BASIS-A scales with CDSE and CDSE factors will hopefully enhance the present findings and elucidate further predictive ability of lifestyle with CDSE.

Future research examining the *PBOI* and CDSE should include richer demographic data and instrumentation to account for mediating family atmosphere variables not included in the current study, which may also be a limitation. Given the significant negative relationship of the MC scale with CDSE, this factor should be examined in terms of predictive ability with CDSE in future studies.

The findings of the current study underscore the importance of remembering a foundational tenant of the theory of Individual Psychology- that it is best applied as a holistic approach in examining the personality characteristics of individuals (Adler, 1946; Ansbacher & Ansbacher, 1956). This important tenant may supersede reducing the constructs of lifestyle and psychological birth order into parts and examining them separately. Further, the relationships of these constructs of Individual Psychology with CDSE may be best examined by employing a mixed, quantitative and qualitative methodology to extract particular nuances from the data.

Limitations

In examining the outcomes of the current study, several limitations surfaced. Not all of the lifestyle and psychological birth order variables were examined in terms of their predictive ability on CDSE in the current study. For example, the MC scale of the *PBOI* emerged as having a significant inverse relationship with CDSE but was not examined in terms of predictive ability.

The generalization of the results to other populations may be limited due to the convenience sampling at one southeastern university and limitations within the sample itself. For example, of the available pool of participants, approximately 500 of them were from the online courses and were required to come onto campus for the administration in order to participate. Due to copyright limitations of one of the instruments, the survey was not available online. Additionally, the fact that the participants in the current study had a possible research requirement and/or received extra credit for their participation may have implications for the generalization of these results to other populations. It is possible that students who were performing well in these courses elected not to participate and students with poor performance were more motivated to participate.

Another major limitation may be that the ethnicity distribution of the convenience sample in this study was quite different from that of the previous study normed samples of the *BASIS-A* and *PBOI*. Although ethnicity information was not provided in the inaugural studies of these instruments (Campbell et al., 1991; Curlette et al., 1997, respectively), several subsequent studies examining the validity and reliability of these instruments (Peluso et al., 2004; Stewart & Campbell, 1998; Stewart et al., 2001) were with sample populations heavily skewed with white/Caucasian participants.

In contrast, the ethnicity distribution of participants in the present study was quite different; approximately 85% of the sample identified as persons of color and 57% identified as African American. Although previous research validates the use of the *BASIS-A* (Miranda et al., 1998; Peluso et al., 2004), this difference in ethnicity distribution may indicate some limitations of the *BASIS-A* and the *PBOI* in detecting ethnic and cultural variability, thus influencing the strength of correlations and predictive

ability of these constructs with CDSE in the current study. Additionally, the high distribution of persons of color in the current sample may indicate that many of the participants may be first generation college students with fewer resources for career planning and development. However, it is important to note that the current study sample means for lifestyle were all in the average range and the means for CDSE were in the high average range.

An additional related limitation of the current study in relation to the *PBOI* may include the lack of detailed, demographic information of the participants. These may include actual birth order, number of siblings, and family atmosphere dynamics, which have been included in most of the recent research regarding psychological birth order (Stewart & Campbell, 1998; Stewart et al., 2001).

Recent research examining CDSE in terms of family atmosphere variables found that persons of color have other possible mediating factors that affect the career decision process (Brown & Lavish, 2006; Rush, 2002). Brown and Lavish (2006) found that Native American students' decisions regarding education and selection of a career are positively related to family/community participation and commitment. In a study of African American freshmen, Rush (2002) found positive relationships between family adaptability and cohesion with CDSE and the overall influence of family support versus non-support. Further recent research suggests that parental attachment and family structure are positively related to CDSE and family dysfunction is negatively related to CDSE (Floyd, 2004). Future research examining the relationship between lifestyle and psychological birth order with CDSE should examine these constructs in relation to these family variables, gender, and ethnicity.

References

Adler, A. (1946). *The practice and theory of individual psychology*. London: K. Paul, Trench, Trubner & Co. Ltd.

Ansbacher, H. L., & Ansbacher, R. (1956). *The individual psychology of Alfred Adler: a systematic presentation in selections from his writings*. Oxford England: Basic Books.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191-215. doi: 10.1037/0033-295x.84.2.191

Bandura, A. (1986). The explanatory and predictive scope of self-efficacy theory. *Journal of Social and Clinical Psychology, 4*(3), 359-373.

Bandura, A. (1997). Self-efficacy. *Harvard Mental Health Letter, 13*(9), 4-6.

Betz, N. & Klein, K. (1996). Relationships among measures of career self-efficacy, generalized self-efficacy, and global self-esteem. *Journal of Career Assessment, 4*, 285-298.

Betz, N. E., Hammond, M., & Multon, K. (2005). Reliability and validity response continua for the Career Decision Self-efficacy Scale. *Journal of Career Assessment, 13*, 131-149.

Bichekas, G., & Newlon, B. J. (1983). Life-style analysis of hospice care nurses. *Individual Psychology: The Journal of Adlerian Theory, Research & Practice, 39*(1), 66-70.

Bradley, R. W. (1982). Using birth order and sibling dynamics in career counseling. *Personnel & Guidance Journal, 61*(1), 25-31.

Brown, C., & Lavish, L. A. (2006). Career assessment with Native Americans: Role salience and Career Decision-Making Self-Efficacy. *Journal of Career Assessment, 14*(1), 116-129. doi: 10.1177/1069072705281368

Campbell, L., White, J., & Stewart, A. (1991). The relationship of psychological birth order to actual birth order. *Individual Psychology, 47*, 380-391.

Chung, Y. B. (2002). Career decision-making self-efficacy and career commitment: Gender and ethnic differences among college students. *Journal of Career Development, 28*(4), 277-284. doi: 10.1023/a:1015146122546

Creed, P. A. (2002). Cross-cultural equivalence of the Career Decision-Making Self-Efficacy Scale-Short Form. *An Australian and South African Comparison, 10*(3), 327-343.

Crites, J. O. (1961). A model for the measurement of vocational maturity. *Journal of Counseling Psychology, 8*(3), 255-259. doi: 10.1037/h0048519

Curlette, W. L., Wheeler, M. S., & Kern, R. M. (1997). *BASIS-A technical manual*. Highlands, NC: TRT Associates.

Dinter, L. D. (2000). The relationship between self-efficacy and lifestyle patterns. *Journal of Individual Psychology, 56*(4), 462-473.

Dreikurs, R. (1953). *Fundamentals of Adlerian psychology*. Chicago: Alfred Adler Institute.

Dreikurs, R., & Stoltz, V. (1964). *Children: The challenge*. New York: Hawthorn.

Faul, F. (2009). Statistical power analyses using G*Power 3.1. *tests for correlation and regression analyses, 41*(4), 1149. doi: 41/4/1149

Floyd, T. D. (2004). *Family dysfunction, parental attachment, and career decision-making self-efficacy among college students.* (Thesis) 64, ProQuest Information & Learning, US. Retrieved from http://ezproxy.gsu.edu:2048/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2004-99010-259&site=ehost-live Available from EBSCOhost psyh database.

Gentry, J. M., Winer, J. L., Sigelman, C. K., & Phillips, F. L. (1980). Adlerian lifestyle and vocational preference. *Journal of Individual Psychology (00221805), 36*(1), 80-86.

Gfroerer, K. P., Gfroerer, C. A., Curlette, W. L., White, J., & Kern, R. M. (2003). Psychological birth order and the BASIS-A. *Journal of Individual Psychology, 59*(1), 30-41.

Gushue, G. V., Scanlan, K. R. L., Pantzer, K. M., & Clarke, C. P. (2006). The relationship of career decision-making self-efficacy, vocational identity, and career exploration behavior in african american high school students. *Journal of Career Development, 33*(1), 19-28. doi: 10.1177/0894845305283004

Gushurst, R. S. (1971). The technique, utility, and validity of life style analysis. *The Counseling Psychologist, 3*(1), 30-40. doi: 10.1177/001100007100300104

Hackett, G., & Betz, N. E. (1981). A self-efficacy approach to the career development of women. *Journal of Vocational Behavior, 18*, 326-339.

Hargrove, B. K., Creagh, M. G., & Burgess, B. L. (2002). Family interaction patterns as predictors of vocational identity and career decision-making self-efficacy. *Journal of Vocational Behavior, 61*(2), 185-201. doi: 10.1006/jvbe.2001.1848

Heppner, P. P., Kivlighan, D. M., & Wampold, B. E. (1999). *Research design in counseling.* Belmont, CA: Wadsworth.

Huck, S. W. (2004). *Reading statistics and research.* Boston: Pearson Education.

Jenkins, K. E. (2005). *The influence of parental attachment, gender, and academic major choice on the career decision-making self-efficacy of first-year African American college students.*(Thesis) 65, ProQuest Information & Learning, US. Retrieved from http://ezproxy.gsu.edu:2048/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2005-99005-037&site=ehost-live Available from EBSCOhost psyh database.

Kern, R. M., Gormley, L., & Curlette, W. L. (2008). BASIS-A empirical studies: Research findings from 2000 to 2006. *The Journal of Individual Psychology, 64*(3), 280-309.

Kern, R. M., Wheeler, M. S., & Curlette, W. L. (1997). *BASIS-A interpretive manual.* Highlands, NC: TRT Associates.

Lease, S. H., & Dahlbeck, D. T. (2009). Parental influences, career decision-making attributions, and self-efficacy: Differences for men and women? *Journal of Career Development, 36*(2), 95-113. doi: 10.1177/0894845309340794

Liu, C.-J., Hao, F., & Li, S. (2006). Career decision-making difficulties of college students and its relationship with self-efficacy. *Chinese Journal of Clinical Psychology, 14*(5), 502-506.

Luzzo, D. A. (1993a). Reliability and validity testing of the Career Decision-Making Self-Efficacy Scale. *Measurement and Evaluation in Counseling and Development, 26*(2), 137-142.

Luzzo, D. A. (1993b). Value of career-decision-making self-efficacy in predicting career-decision-making attitudes and skills. *Journal of Counseling Psychology, 40*(2), 194-199. doi: 10.1037/0022-0167.40.2.194

Magner-Harris, J., Riordan, R. J., Kern, R. M., & Curlette, W. L. (1979). Reliability of life style interpretations. *Journal of Individual Psychology, 35*(2), 196-201.

Mau, W.-C. (2000). Cultural differences in career decision-making styles and self-efficacy. *Journal of Vocational Behavior, 57*(3), 365-378. doi: 10.1006/jvbe.1999.1745

Miranda, A. O., Frevert, V. S., & Kern, R. M. (1998). Lifestyle differences between bicultural and low-and-high-acculturation-level Latino adults. *Journal of Individual Psychology, 54*(1), 119-134.

Melillo, D. (1983). Birth order, perceived birth order, and family position of academic women. *Individual Psychology: The Journal of Adlerian Theory, Research & Practice, 39*(1), 57-62.

Newlon, B. J. (1986). Alderian life-styles among Catholic priests. *Individual Psychology: The Journal of Adlerian Theory, Research & Practice, 42*(3), 367-374.

Nilsson, J. E., Schmidt, C. K., & Meek, W. D. (2002). Reliability generalization: An examination of the Career Decision-Making Self-Efficacy Scale. *Educational and Psychological Measurement, 62*(4), 647-658. doi: 10.1177/0013164402062004007

Ochs, L. A., & Roessler, R. T. (2001). Students with disabilities: How ready are they for the 21st century. *Rehabilitation Counseling Bulletin, 44*(3), 170-176.

Pedhazur, E. J. (1997). *Multiple regression in behavioral research.* US: Wadsworth.

Peluso, P. R., Peluso, J. P., Buckner, J. P., Curlette, W. L., & Kern, R. M. (2004). An analysis of the reliability of the BASIS-A using a northeastern and southeastern U.S. sample. *Journal of Individual Psychology, 60*(3), 294-308.

Peluso, P. R., Peluso, J. P., White, J. F., & Kern, R. M. (2004). A comparison of attachment theory and Individual Psychology: A review of the literature. *Journal of Counseling and Development, 82*, 139-145.

Peluso, P. R., Stoltz, K. B., Belangee, S., Frey, M. R., & Peluso, J. P. (2010). A confirmatory factor analysis of the Adlerian lifestyle, the BASIS-A. *Journal of Individual Psychology, 66*(2), 152-166.

Quimby, J. L., & O'Brien, K. M. (2004). Predictors of student and career decision-making self-efficacy among nontraditional college Women. *The Career Development Quarterly, 52*(4), 323-339.

Rush, L. C. (2002). *Family relationship dynamics and the career decision-making self-efficacy of African-American college students.* (Thesis) 63, ProQuest Information & Learning, US. Retrieved from http://ezproxy.gsu.edu:2048/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2002-95013-032&site=ehost-live Available from EBSCOhost psyh database.

Sampson, J. P., Lenz, J. G., Reardon, R. C., & Peterson, G. W. (1999). A cognitive information processing approach to employment problem solving and decision making. *The Career Development Quarterly, 48*(1), 3-18.

Scott, A. B., & Ciani, K. D. (2008). Effects of an undergraduate career class on men's and women's career decision-making self-efficacy and vocational identity. *Journal of Career Development, 34*(3), 263-285. doi: 10.1177/0894845307311248

Seff, M. A., & Gecas, V. (1993). Birth order, self-concept, and participation in dangerous sports. *Journal of Psychology, 127*(2), 221-232.

Spector, A. B. (2003). *The use of an Adlerian lifestyle measure to identify the personality profile of successful audio engineers (Alfred Adler).* (Thesis) 64, ProQuest Information & Learning, US. Retrieved from http://ezproxy.gsu.edu:2048/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=psyh&AN=2003-95016-057&site=ehost-live Available from EBSCOhost psyh database.

Stewart, A. E., & Campbell, L. F. (1998). Validity and Reliability of the White-Campbell Psychological Birth Order Inventory. *Journal of Individual Psychology, 54*(1), 41-60.

Stewart, A. E., Stewart, E. A., & Campbell, L. F. (2001). The relationship of psychological birth order to the family atmosphere and to personality. *Journal of Individual Psychology, 57*(4), 363-387.

Taylor, K. M., & Betz, N. E. (1983). Applications of self-efficacy theory to the understanding and treatment of career indecision. *Journal of Vocational Behavior, 22*(1), 63-81. doi: 10.1016/0001-8791(83)90006-4

Taylor, K. M., & Popma, J. (1990). An examination of the relationships among career decision-making self-efficacy, career salience, locus of control, and vocational indecision. *Journal of Vocational Behavior, 37*(1), 17-31. doi: 10.1016/0001-8791(90)90004-l

Tomiyasu, H. (1997). The relationship between career decision-making, self-efficacy, and career decision behavior in undergraduates. *Japanese Journal of Developmental Psychology, 8*(1), 15-25.

Watkins, C. E. (1984). The Individual Psychology of Alfred Adler: Toward an Adlerian vocational theory. *Journal of Vocational Behavior, 24*(1), 28-47. doi: 10.1016/0001-8791(84)90064-2

Watkins, C. E. (1992). Birth-order research and Adler's theory: A critical review. *Individual Psychology: Journal of Adlerian Theory, Research & Practice, 48*(3), 357-368.

Watts, R. E., & Engels, D. W. (1995). The life task of vocation: A review of Adlerian research literature. *TCA Journal, 23*(1), 9-20.

Wheeler, M. S., Kern, R. M., & Curlette, W. L. (1993). *BASIS-A.* Highlands, NC: TRT.

White, J., Campbell, L., & Stewart, A. (1995). Associations of scores on the White-Campbell Psychological Birth Order Inventory and the Kern Lifestyle Scale. *Psychological Reports, 77*(3, Pt 2), 1187-1196.

White, J., Campbell, L., Stewart, A., & Davies, M. (1997). The relationship of psychological birth order to career interests. *Individual Psychology: Journal of Adlerian Theory, Research & Practice, 53*(1), 89-104.

Wright, S. L. (2008). *The impact of adult attachment on career decision self-efficacy, relationship efficacy, and life satisfaction.* (Thesis) 69, ProQuest Information & Learning, US. Retrieved from http://ezproxy.gsu.edu:2048/login?url=http://search.ebscohost.com/login.aspx?dir

ect=true&db=psyh&AN=2008-99240-224&site=ehost-live Available from EBSCOhost psyh database.