

THE ROLE OF FAMILY COHESION IN  
INFLUENCING THE VOCATIONAL IDENTITY  
STATUS OF EMERGING ADULTS WITH AUTISM  
SPECTRUM DISORDER

By

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Lastly, I hope the completion of this degree inspires other little Black girls to dream big and make "good trouble".

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Title of Study: THE ROLE OF FAMILY COHESION IN INFLUENCING THE  
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Abstract: This study examines the relationship between family cohesion and vocational identity among emerging adults with Autism Spectrum Disorder (ASD). Family Cohesion was measured using the Family Adaptability and Cohesion Scale (FACES IV) and Vocational Identity was measured using the Vocational Identity Scale (VIS) of My Vocational Situation (MVS). The data were collected using survey method.  $N=42$  participants completed online surveys, and data collected from survey method were analyzed using Pearson Correlations. The findings indicated a correlation between family cohesion and the vocational identity of emerging adults with ASD. The findings also supported a relationship between disengaged family cohesion and the vocational identity of emerging adults with ASD. While the findings did not support a relationship between overall family cohesion and the vocational identity of emerging adults with ASD, the findings provided some support for more research to explore how family cohesion is related to vocational identity, career development and the overall occupational success of emerging adults with ASD.

## TABLE OF CONTENTS

Chapter	Page
I. INTRODUCTION.....	1
Statement of the Problem .....	3
Purpose of the Study.....	6
Research Questions .....	6
Theoretical and Conceptual Framework .....	8
Family Systems Theory .....	8
Vocational Identity .....	11
Conceptual Framework .....	12
Definition of Terms .....	13
II. REVIEW OF LITERATURE .....	16
Vocational Identity Development.....	16
Identity Achievement .....	18
Identity Diffusion and Identity Moratorium.....	19
Identity Foreclosure.....	20
Families and Vocational Identity Development .....	20
Career Development.....	21
Family Influences on Career Development.....	27
Family Structure .....	29
Employment of Persons with ASD.....	31
Summary.....	35
III. METHODOLOGY .....	36
Research Design .....	36
Population and Sample .....	37
Instrumentation.....	48
Demographics Questionnaire .....	38
Family Adaptability and Cohesion Scale (FACES IV) .....	38
VIS .....	39
Research Questions and Hypotheses.....	40
Procedures.....	41
Data Analysis.....	45

Chapter	Page
IV. FINDINGS .....	46
Preliminary Analyses.....	46
Descriptive Statistics.....	47
Hypothesis 1 .....	59
Hypothesis 2 .....	60
Hypothesis 3 .....	60
Hypothesis 4 .....	60
V. CONCLUSION .....	63
Clinical Implications .....	66
Limitations.....	67
Future Directions .....	68
Conclusion.....	69
REFERENCES .....	71
APPENDICES .....	86

## LIST OF TABLES

Table	Page
Table 1: Types of Facebook Groups .....	43
Table 2: Intercorrelations of Emerging Adults with ASD FACES IV Subscales ..	48
Table 3: Descriptive Statistics of the Measures .....	48
Table 4: Perceived Family Cohesion of Emerging Adults with ASD by Education Level.....	51
Table 5: Vocational Identity of Emerging Adults with ASD by Education Level	52
Table 6: Perceived Family Cohesion of Emerging Adults with ASD by Living Arrangements .....	53
Table 7: Vocational Identity of Emerging Adults with ASD by Living Arrangements .....	54
Table 8: Perceived Family Cohesion of Emerging Adults with ASD by Employment Status.....	55
Table 9: Vocational Identity of Emerging Adults with ASD by Employment Status .....	56
Table 10: Perceived Family Cohesion of Emerging Adults with ASD by Racial/Ethnicity.....	57
Table 11: Perceived Vocational Identity of Emerging Adults with ASD by Racial/Ethnicity.....	58
Table 12: Perceived Family Cohesion of Emerging Adults with ASD by Income	59
Table 13: Vocational Identity of Emerging Adults with ASD by Income.....	60
Table 14: Correlation of Family Cohesion and Vocational Identity.....	61
Table 15: Correlations between Perceived Balanced Family Cohesion and VI in Emerging Adults with ASD .....	62
Table 16: Correlations between Perceived Enmeshed Family Cohesion and VI in Emerging adults with ASD.....	63
Table 17: Correlations between Perceived Disengaged Family Cohesion and VI in Emerging Adults with ASD .....	64

## LIST OF FIGURES

Figure	Page
Figure 1: SFT Theoretical Framework .....	11
Figure 2: Conceptual Framework .....	13
Figure 3: Hexagon Representation of Career Typologies .....	23
Figure 4: Vocational Identity of Emerging Adults with ASD by perceived family cohesion by gender .....	49



## CHAPTER I

### INTRODUCTION

From very early in life, individuals are presented with the question, “what do you want to be when you grow up?” Some individuals may answer the question with a rehearsed response that proclaims aspirations of pursuing a career they deem the most socially acceptable. Other individuals may respond with a career that was chosen after careful consideration.

Vocational identity is commonly defined by exploration and commitment to careers (Galles et al., 2019). While several factors can influence vocational identity development, families tend to provide first impressions of employment (Dean & Jayachandran, 2019). Families can also influence how individuals view their roles in the world of work (Larson & Wilson, 1998; Michele, 2018; Powell & Greenhaus, 2012; Whiston, 1996; Zeng, 2020). Vocational identity development is a critical developmental task, and as young people observe parents and other working adults in their lives, they begin to formulate ideas about available careers, and their abilities to obtain specific careers (Gottfredson, 2005; Prescod, 2020).

Secondary education programs play a vital role in the development of career interests and decision making. School counselors, parents, and teachers work together to provide students with career exploration activities, such as vocational related field trips and career interest assessments (Cease-Cook, Fowler, & Test, 2015). Under federal

guidance of the Individuals with Disabilities Education Act Amendment of 1997 (IDEA), schools have an obligation to ensure students with autism spectrum disorder (ASD) are provided with specialized education programs that prepares them to transition to higher education, employment and independent living (1997). However, many individuals with ASD leave secondary education programs and experience challenges with the loss of services while seeking to obtaining employment (Weiss et al., 2019). Obtaining employment can improve the overall quality of life for adults with ASD (Hendricks, 2010). However, many individuals with ASD experience difficulties in communication, challenging behaviors and difficulties in social situations that can make obtaining employment harder than persons without ASD (Hedley, 2016; Hendricks, 2010).

### *Autism Spectrum Disorder*

ASD is a neurodevelopmental condition that has been associated with a wide range of characteristics, including problems with social exchanges and communication (American Psychiatric Association, 2013). ASD symptoms can include, but are not limited to, difficulties in social interactions, fixation on objects, persons, or ideals, difficulties showing emotions or feelings, and difficulties in understanding non-verbal expression (American Psychiatric Association, 2013). Diagnosis of ASD also requires individuals to have a history of engaging in repetitive behaviors (American Psychiatric Association, 2013).

ASD is typically diagnosed in childhood, but the condition is lifelong, and the symptoms can vary in severity. According to the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; DSM-5; American Psychiatric Association, 2013), ASD was

formerly categorized under Pervasive Developmental Disorders (PDD), as Asperger's disorder, autistic disorder, and childhood disintegrative disorders. Symptoms of ASD can be accompanied with or without an intellectual impairment, with or without a language impairment, with another medical or genetic condition, or with another neurodevelopmental, mental, or behavioral conditions (American Psychiatric Association, 1980; American Psychiatric Association, 2013).

Prior to ASD being categorized under PDD in the third edition of the DSM, an estimated four out of every 10,000 children were diagnosed with the condition between the mid-1960s and mid-1970s (Fombonne, 2005). However, by the year 2001, the number of children diagnosed with ASD had increased to 31 children out of every 10,000 (Fombonne, 2005). More recently, The Center for Disease Control and Prevention (CDC) (2020) reported in 2016, 1 out every 54 children had been diagnosed with ASD.

### **Statement of the Problem**

Many scholars on early childhood development agree that plans for future career decisions are negotiated during the early life stage of adolescence or between the ages of 12 to 18 years (Erikson, 1994; Luke & Redekop, 2019; Trice & Greer, 2016). Prominent developmental theorist, Erik Erikson (1994) asserted that employment decisions are made during adolescence because it is the psychosocial stage in which individuals encounter a developmental crisis called identity vs. role confusion. During adolescence, individuals engage in identity development and move away from the family "towards becoming and functioning as well-adjusted adults" (Franz & White, 1985, p.234).

However, when young people are unable to settle on a specific career path, they can experience distress (Degges-White, 2017; Erickson, 1994). Indecisiveness can also

lead young people to adopting the identity of individuals or groups of people around them rather than choosing their own identity (Erikson, 1994). Failure to adopt one's own identity can also result in individuals being easily influenced by society and persons of influence (Erikson, 1994). Therefore, it is important to understand vocational identity and factors that contribute to the obtainment of vocational identity statuses.

Drawing on Erikson's (1994) theory of psychosocial development, James Arnett (2000), argued it was necessary to extend the developmental task or crisis associated with the stage of adolescence to a stage called emerging adulthood. Arnett (2000) suggested emerging adulthood occurred between the ages of 18 and 25 years, and it expand upon traditional understandings of identity development. Because emerging adults tend to be uncommitted to specific life roles, they gain more exposure to various life experiences when compared to other age groups (Arnett, 2000). Emerging adults are forming identities separate from the family, and identity exploration focuses on love, work and worldviews (Arnett, 2000). Emerging adulthood provides a more current and relevant framework for identity formation in a world where many individuals are staying home with families longer and delaying traditional tasks of getting married and having children (Arnett, 2000). Identity formation involves exploring and experiencing a variety of life experiences before making commitments (Arnett, 2000). For individuals with ASD, the social characteristics of ASD can make identity formation more challenging (Ratner & Berman, 2014). For example, Ratner and Berman (2014) examined the identity development of 602 emerging adults with ASD and found as ASD related features increased, difficulties in exploration and commitments also increased. Additionally, as emerging adults with ASD move towards developing an identity separate from the family

of origin, they often experience difficulties in higher education, employment, and independent living (Kirby, 2020; Rast, 2020; Shattuck et al, 2012). Emerging adults with ASD tend to live at home longer than emerging adults without ASD (Dudley, 2019). Thus, it is important to understand how emerging adults' perceptions of their family structure may be related to their vocational identity status.

Research that has examined the relationship between family involvement and the career development process (Johnson, Buboltz, & Nichols, 1999; Lopez, 1989; Penick & Jepsen, 1992; Qudsiyah et al., 2018) has often excluded the voices of emerging adults with ASD. Additionally, much of the literature related to the parent-child relationship and identity development has focused on the perception of parents of children with ASD (Hilado, Hlouskoval, & Lazarova, 2018; Lee, Lee, & Dopson, 2019; Perez, 2019; Yean & Chin, 2019). Literature that examined the role of the family on identity development among persons with disabilities examined the overall development, while limited attention was given to the vocational aspect of identity development.

On November 3, 2020, a search of PscyInfo database yielded 504 articles, dissertations, books, and electronic collections related to vocational identity. However, only three documents included information about family and vocational identity of emerging adults, and no articles related to the family and the vocational identity of emerging adults with disabilities were found in the database. At the same time a search of PsychArticles and Ebsco host yielded no articles related to family and the vocational identity of emerging adults with ASD. The exact search terms included: *family cohesion and emerging adults with ASD, family cohesion and emerging adults with autism, and emerging adults with autism and career*. The current study begins to address that gap in

the literature by exploring the relationship between perceived family structure and vocational identity among emerging adults with ASD.

Therefore, the current study seeks to understand how emerging adults with ASD perceive the level of family involvement in relation to their vocational identity development. For the purpose of the current study, family involvement is examined via family cohesion, which will be described further below.

### **Purpose of the Study**

The purpose of the current study is to add to the body knowledge by examining how perceived family cohesion is related to the vocational identity status of emerging adults with ASD. Additionally, knowing and understanding the relationship between perceived family cohesion and vocational identity development of emerging adults with ASD could help provide a framework for understanding how to better provide effective career related services when working with emerging adults with ASD.

### **Research Questions**

The current study sought to answer the following research questions:

Q1: Does a significant relationship exist between vocational identity and perceived overall family cohesion for emerging adults with ASD?

Q2: Does a significant relationship exist between vocational identity and perceived balanced family cohesion for emerging adults with ASD?

Q3: Does a significant relationship exist between vocational identity and perceived enmeshed family cohesion for emerging adults with ASD?

Q4: Does a significant relationship exist between vocational identity and perceived disengaged family cohesion for emerging adults with ASD?

Based on the research questions, the following research hypotheses were proposed.

H<sub>01</sub>: A significant relationship does not exist between vocational identity and perceived overall family cohesion among emerging adults with ASD.

H<sub>A1</sub>: A significant relationship exists between vocational identity and perceived overall family cohesion among emerging adults with ASD.

H<sub>02</sub>: A significant relationship does not exist between vocational identity and perceived balanced family cohesion among emerging adults with ASD

H<sub>A2</sub>: A significant relationship exists between vocational identity and perceived balanced family cohesion among emerging adults with ASD

H<sub>03</sub>: A significant relationship does not exist between vocational identity and perceived enmeshed family cohesion among emerging adults with ASD

H<sub>A3</sub>: A significant relationship exists between vocational identity and perceived enmeshed family cohesion among emerging adults with ASD

H<sub>04</sub>: A significant relationship does not exist between vocational identity and perceived disengaged family cohesion among emerging adults with ASD

H<sub>A4</sub>: A significant relationship exists between vocational identity and perceived disengaged family cohesion among emerging adults with ASD

## **Theoretical and Conceptual Framework**

The theoretical foundation for the current research is family systems theory (FST). According to FST, individuals within families are best understood when evaluating them within the context of the family as an interconnected system (Bowen, 1978, Minuchin 1974). Family systems are comprised of subsystems or dyads that include the marital, parental, parent-child and sibling subsystems (Bowen, 1978). In the current study, examination of perceived family cohesion involves examining the perceived interactions within the parent-child subsystem as understood through the theoretical lens of structural family therapy (SFT) (Minuchin, 1974 ). Additionally, Marcia (1980) provides a theoretical framework for understanding vocational identity in the current study.

### **Family Systems Theory**

Bowen's (1978) family systems theory provides an explanation for how families interact and adapt to change. In FST, the family is a metaphoric system that is comprised of subsystems contributing to the overall functioning of the system (Erdem & Safi, 2018). Interactions between emerging adults with ASD and parents can be understood through a FST's theoretical understanding of the parent-child subsystem. Another component of family systems is the concept of boundaries. Boundaries are established between subsystems to mediate the emotional closeness within the system (Bowen, 1978). FST asserts that families as systems are in a constant state of attempting to maintain homeostasis (Bowen, 1978). While identity formation is a predictable developmental task, it involves a change within a subsystem that impacts the entire system (Bowen, 1978). As emerging adults with ASD's move towards the differentiation of self and



vocational identity development, the system either attempts to maintain homeostasis or adjust to the change (Bowen, 1978). Differentiation of self refers to the adoption of an identity separate from the family (Jankowski & Hooper, 2012). Since the subsystems are interconnected, it is implausible to understand individual members of subsystems in isolation from the entire family system (Bowen, 1978).

### **Structural Family Therapy (SFT)**

Minuchin's structural family therapy is a type of FST that provides a theoretical framework for understanding the structure of and interactions between the subsystems of families (1974). Family structure can be understood in terms of transactional patterns, family cohesion, and family adaptability (Minuchin, 1974). When working with families with ASD, Parker and Molteni (2017) noted SFT helped to clarify roles and boundaries between the parent-child dyad. Transactional patterns describe the ways in which individuals within the system interact with one another and form hierarchical relationships (Minuchin, 1974). Family cohesion is the level of emotional connectedness shared between the subsystems or individual members within the system (Minuchin, 1974). In family systems, boundaries are established within the system to differentiate between roles of the subsystems (Minuchin, 1974). Family adaptability explains how families respond to change (Minuchin, 1974).

Family cohesion explains how families maintain "the separateness of their members versus togetherness" (Olson, 2000 p.145). Cohesion ranges from disengaged (very low cohesion levels) to enmeshed (very high cohesion levels) (Olson, 2000). Families who are enmeshed possess limited independence within the family, and decisions are often made based on the collective opinion of the family (Olson, 2000).

Enmeshed families are highly connected and lack differentiation (Minuchin, 1974). Additionally, there are no clear distinctions in roles and responsibilities between the subsystems of enmeshed families (Minuchin, 1974). In enmeshed families, it can be difficult to determine whether decisions made by members of subsystem are made without influence from other subsystems (Olson, 2000).

Connected families have moderate levels of family cohesion (Olson, 2000). Within connected families, subsystems are emotionally connected to one another and individuals within subsystems typically feel supported by one another (Olson, 2000). In connected families, individual autonomy is encouraged (Olson, 2000). Connected families have clear boundaries while remaining emotionally connected to one another. Connected families with clear boundaries are able to function without the “undue interference” of another subsystem (Minuchin, 1974, p. 55).

Separated families experience some degree of emotional separation, but the amount of separation is not as extreme as the amount of separation experienced by disengaged families (Olson, 2000). Disengaged families are extremely emotionally separated, and individuals within the subsystems experience an extreme amount of autonomy (Olson, 2000). The disengaged family can be viewed as unsupportive of one another (Olson, 2000). When families are disengaged, the subsystems function independently, encounter difficulties bonding within the system, and encounter difficulties developing a sense of loyalty to the system (Minuchin, 1974).

While the family structure encompasses transactional patterns, family cohesion, and family adaptability, the current study focuses on the family cohesion dimension to better understand how perceived family cohesion is related to the vocational identity

development of emerging adults with ASD. Figure 1 provides a visual illustration of the SFT theoretical framework guiding the current study.

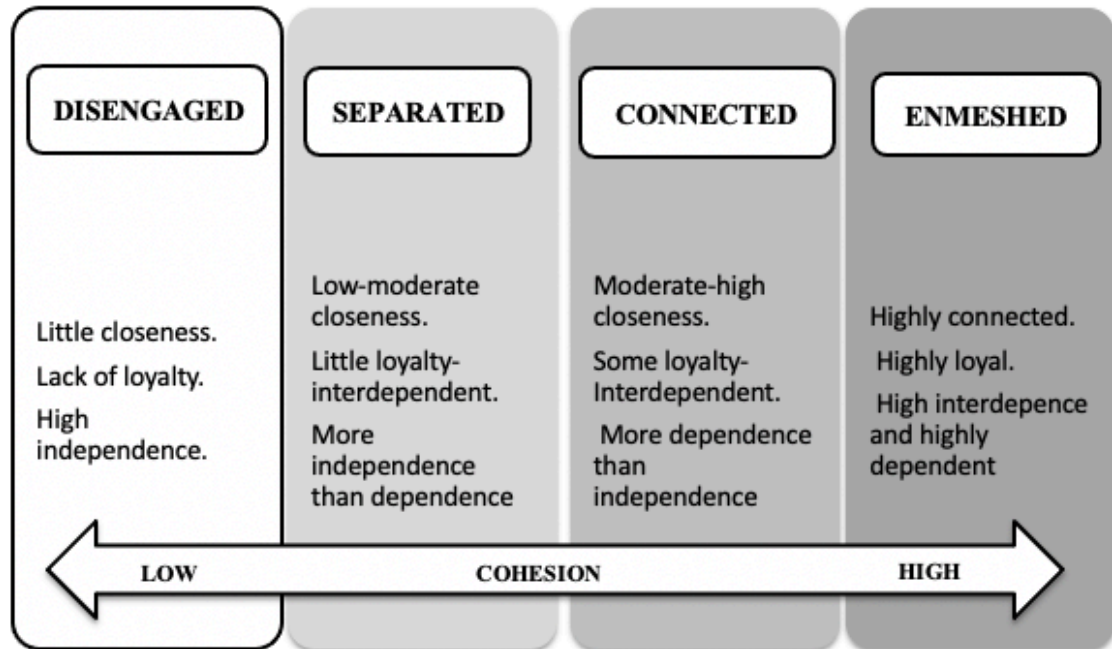


Figure 1: SFT theoretical framework (prepared by researcher)

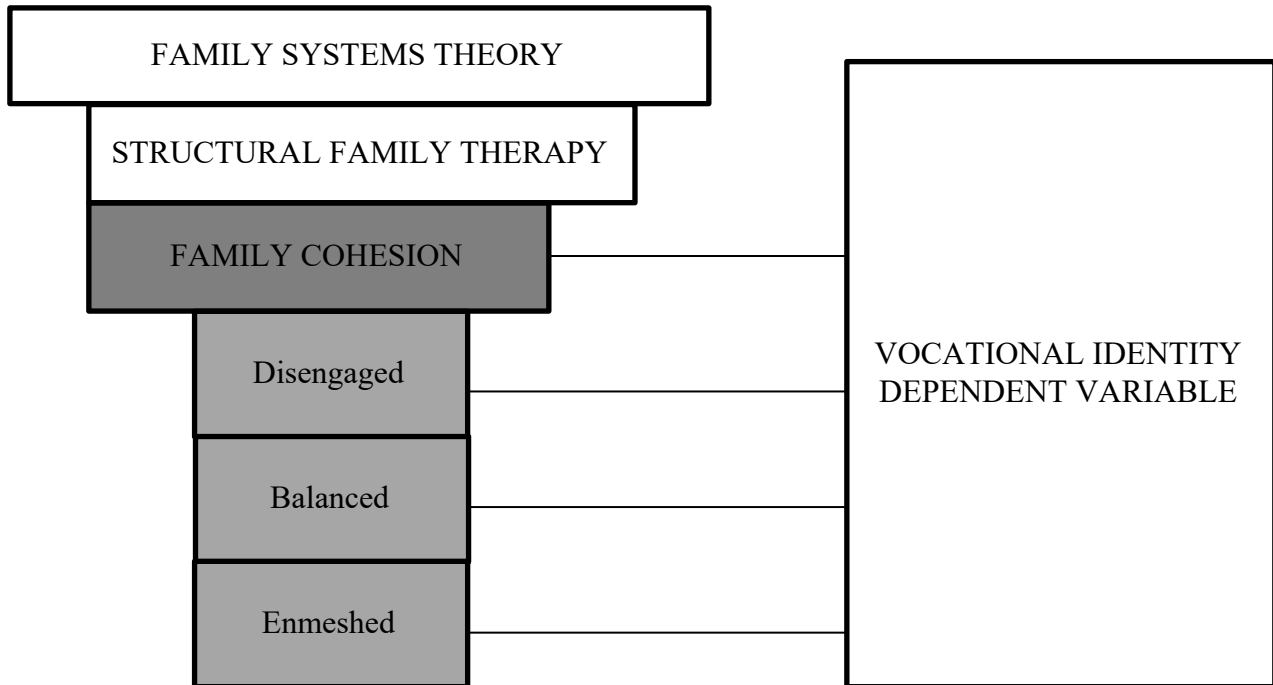
### Vocational Identity

Marcia's (1980) identity status theory is the theoretical framework used to understand vocational identity development. Because vocational identity development involves the exploration and commitment to choices, Marcia (1980) viewed vocational identity in terms of four identity statuses. The four identity status are based on the existence of a career decision making dilemma (crisis) and the extent in which individuals commit to a chosen vocational path (commitment) (1980 ). The four identity statuses include identity achievement, identity foreclosure, identity moratorium, and identity diffusion (Eriksson, Wanggvist, Carlsson & Frisen, 2020; Marcia, 1980).

Vocational identity achievement occurs when individuals have explored careers and are actively pursuing careers that are based on career exploration and commitment (Marcia, 1980; Porfeli, 2011). Additionally, vocational identity achievement occurs only after the presence of an occupational crisis and a commitment to a chosen occupation is present. Whereas, in vocational identity foreclosure, individuals have chosen a career path, but the chosen career path may be based on parental influence or persuasion (Marcia, 1980). Vocational identity moratorium includes individuals who have explored career options but have not committed to a career path (Marcia, 1980). Lastly, vocational identity diffusion involves individuals who have not engaged in career exploration and are uninterested in committing to a career path (Marcia, 1980). In vocational identity diffusion, individuals may or may not have experienced an occupational crisis, and an occupational commitment is absent (Marcia, 1980).

### **Conceptual Framework**

When seeking to understand how perceived family cohesion of emerging adults with ASD is related to vocational identity status, a conceptual framework was derived. The following conceptual framework includes Bowen's (1978) family systems theory, Minuchin's (1974) structural family therapy and Marcia's (1980) vocational identity status theory. In the following conceptual framework, structural family therapy is a type of FST that informs the current study by providing a framework for understanding family cohesion. Additionally, vocational identity is informed by Marcia's (1980) identity status theory. The conceptual framework identifying family cohesion and its dimensions as the independent variables and vocational identity as the dependent variable is illustrated in figure 2.



*Figure 2: Conceptual Framework*

### **Definition of Terms**

The following terms were operationally defined for the purpose of the current study:

- Vocational identity status: Vocational identity status is defined based on Marcia's (1980) four identity status domains of diffusion, achievement, foreclosure, and moratorium.
- Identity diffusion: status that involves an individual who has not begun career exploration and has not committed to a career choice (Marcia, 1980).

- Identity achievement: status that involves an individual who has committed to a career choice after career exploration (Marcia, 1980).
- Identity foreclosure: status that involves an individual who has committed to a career choice without engaging in career exploration (Marcia, 1980).
- Identity moratorium: status that involves an individual who is engaging in the career exploration process but has not fully committed to a career choice (Marcia, 1980).
- Family cohesion: Family cohesion is operationally defined as the emotional connectedness of family members. Family cohesion is defined as having four levels that include enmeshed, disengaged, connected, or separated (Olson, 2000).
- Enmeshed: Independence is limited within the family and decision making is based on the collective option of the family (Olson, 2000).
- Connected: Family members are emotionally connected to one another and feel supported by one another, but individual autonomy is encouraged (Olson, 2000).
- Separated: Families experience some degree of emotional separation, but the amount of separation is not as extreme as disengaged families (Olson, 2000)
- Disengaged: The family is emotionally separated, and individuals experience an extreme amount of autonomy. The family is typically not supportive of one another (Olson, 2000).

- Emerging Adults: For the purpose of this study, emerging adults are defined as individuals between the ages of 18-25.
- Family of origin: Family in which an individual grew up with in the same household either full-time or part-time. Family of origin can include biological or non-biological parents and siblings.
- Competitive employment is defined as employment in which individuals are paid at least part-time wages at or above the federal minimum wage in settings where persons with ASD and persons without ASD work together (Krainski, 2013).

## CHAPTER II

### LITERATURE REVIEW

#### **Introduction**

The purpose of the current study was to gain an understanding of the relationship between perceived family cohesion and the vocational identity development of emerging adults with ASD. The current literature review examined the body of knowledge pertaining to vocational identity development for emerging adults with ASD, perceived family cohesion, and family systems. The following literature review was conducted using research databases that included APA PsycArticles, APA PsycInfo, Ebscohost Psychology and Behavioral Sciences Collection, and Google Scholar.

#### **Vocational Identity Development**

According to Holland (1997), vocational identity development focuses on the achievement of “a clear and stable picture of one’s goals, interests, and talents” (p.5). Thus, vocational identity achievement has long been understood as the commitment to a vocational choice (Lee et al., 2020; Li et al., 2018). Emerging adults develop vocational identity achievement when they make crystalized decisions following the exploration of available options (Landline, 2016; Wong & Rasdi, 2019). Vocational identity been an important piece of career development conversations because it has been found to be associated to positive employment outcomes (Shorikov, 2016). When individuals achieve high levels of identity, they tend to have greater vocational success (Shorikoy, 2016). In



contrast, individuals with lower levels of identity may experience “poor performance, dissatisfaction, and change in job or self” (Shorikov, 2016, p.51). Erikson (1994), one of the forefathers of vocational identity development, has long asserted that vocational identity development occurs during adolescence. Adolescence is a time in which individuals prepare to separate from the family and seek to develop a sense of self. However, current vocational identity research has referred to the Erikson psychosocial stage of development, “identity vs. role confusion” as the stage in which individuals begin to adopt an identity separate from the family (Degges-White, 2017).

According to Erikson, individuals progress through several psychosocial developmental stages in which they encounter crises where they must decide to adopt one of two competing outcomes. The goal for adolescents is to successfully navigate the crisis of identity achievement versus identity diffusion (Erikson, 1980). While Erikson’s (1980) identification of adolescence as the stage in which individuals experience the crisis of identity vs role confusion provides us with a framework for identity development, it gives little consideration for emerging adults who approach life milestones later in life. Ratner and Berman (2015) explored identity development among emerging adults with ASD and found as the amount of ASD related features increased, the more individuals with ASD struggled to formulate an identity.

Individuals with ASD can display a wide range of ASD specific features (Ratner et al., 2015). The findings of Ratner et al. (2015) did not specific which characteristics negatively predicted identity development. However, Schriber, Robins, and Solomon (2014) compared the personality traits of adults with ASD with the personality traits of adults without ASD and found the adult sample of 37 adults with ASD were “more

socially withdrawn and inhibited; less soft-hearted, empathic, and warm; less organized and responsible; and less emotionally stable” (p. 124). Schriber et al. (2014) found that adults with ASD were more agreeable than adults without ASD. Additionally, Schriber et al. (2014) found adults with ASD did not believe they knew themselves any more than the people around them knew them. Such findings are important to vocational identity development because individuals experience distress when they fail to settle on a vocational choice (Berman, 2019), and individuals who fail to commit to an identity, may adopt the identity of those around them (Arnett, 2000).

During emerging adulthood, individuals begin to make choices about the future, which may include whether or what college to attend, where to work, who to date or marry and whether to have children (Arnett, 2000). Therefore, Arnett (2000) suggested the psychosocial crisis of identity vs. role confusion likely occurs during emerging adulthood or between the ages 18-25 years. Individuals who successfully navigate through the psychosocial developmental stage of identity vs. role confusion have found a balance between how they view themselves and how they think the world views them (Erikson, 1980). Given emerging adults are in the unique situation of “having left the dependency of childhood and adolescence, and having not yet entered the enduring responsibilities that are normative in adulthood,” emerging adulthood is an appropriate age range to examine vocational identity development (Arnett, 2000, p.470). Therefore, the current study chose to specifically examine perceived family cohesion and its relation to the vocational identity development of emerging adults with ASD.

### *Identity Achievement*

Continuing the early identity development work of Holland (1973), Marcia (1980) developed a model that defined vocational identity in terms of four identity statuses that are based on the existence of a career decision making dilemma (crisis) and the extent to which individuals are committed to a chosen vocational path (commitment). While Marcia (1980), agreed that adolescence is a critical stage in development, he also suggested that limiting identity development to the achievement of a specific task undermines the complex nature of identity development. Marcia (1966) emphasized the importance of developing a vocation. “A successful outcome of the industry period leaves one with specific skills and confidence in one’s capacity for worthwhile work” (Marcia, 1980 p. 110). The four identity statuses include identity achievement, foreclosure, identity diffusion, and moratorium (Marcia, 1980). Waterman (1982) and Meeus et al. (2010) suggested that individuals navigate through Marcia’s (1980) identity statuses in a directional fashion that involves reaching identity achievement after one starts at diffusion and moves through foreclosure or moratorium before settling at either moratorium or achievement.

#### *Diffusion and Moratorium*

Identity diffusion occurs when individuals have not made a commitment to an occupational choice because they have not begun to explore career decisions (Marcia, 1980), whereas moratorium occurs when individuals struggle to decide between multiple career decisions (Marcia, 1980). When individuals experience moratorium, they have engaged in the career exploration process, but they have not committed to a career. Hargrove et al. (2002) found relationships within the family were related to emerging adults’ ability to obtain “clear and stable career goals” (p.197).

Identity development scholars consistently agree that individuals who explored career options and committed to career goals that were based on the gathering of information about themselves and their work environments experienced greater job satisfaction (Blustein, 1997; Grotevant, 1997; Marcia, 1980). While much of the literature has not specifically addressed the vocational identity development of emerging adults with ASD, it has been documented that vocational identity achievement is foundational in job satisfaction and overall wellbeing (Erikson, 1997; Kroger & Haslett, 1991; Skorikov & Vondracek, 1998; Upreti, 2020).

### *Foreclosure*

Identity foreclosure occurs when individuals make commitments without exploration (Leung, 1998). Additionally, foreclosed individuals commit to careers without examining whether the work environments are congruent with their personality (Marcia, 1980). Individuals with ASD have unique features that may include difficulties in social situations and repetitive behaviors that can make it difficult to adjust to new environments (Vincent, 2017). Thus, individuals with ASD might find themselves making commitments for the sake of fitting in with their environments. In a qualitative study conducted by Bagatell (2007), Ben, a 21-year old college student with ASD, struggled to find his place on campus and initially mimicked his environment by experimenting with drugs and alcohol. Blustein et al. (1991) found family interactions were related to vocational identity foreclosure among emerging adults. Additionally, family environments with high levels of psychological separation created environments that encouraged individuals to make career decisions without fully engaging in career exploration (Blustein et al., 1991).

### *Families and Vocational Identity Development*

Since families typically provide emerging adults with support and guidance, it is important to understand how the perception of family interactions among emerging adults with ASD are related to the ways in which they approach decision-making, engage in career exploration, and make career choices. Developmental theorist Ainsworth (1989) noted, “Most adults continue a meaningful association with their parents, regardless of the fact that the parents penetrate fewer aspects of their lives than they did before” (p.710). Thus, when considering the implications for how emerging adult perceive family interactions and families’ influence on career decision-making, it is noteworthy to mention that individuals with ASD typically live at home longer than individuals without ASD (Billstedt et al., 2005; Burgess, 2007). In one study that highlighted the long-term outcomes for individuals with ASD between 13 to 22 years, Billstedt et al. (2005) found of the 120 participants, only four participants lived independently from the family. Thus, emerging adults with ASD spend a lot of time with families and caregivers. Families are inherently part of the career development process for young adults, and since vocational identity development involves career exploration and career commitment, it is important to include career development in the conversation about vocational identity (Bratcher, 1982).

### *Career Development*

Several studies have found a relationship between vocational identity and career development (Hargrove et al., 2002; Johnson et al., 1999; Leung, 1998; Rogers, Creed & Praaskova, 2018). Career development can be defined as “the interactive progression of

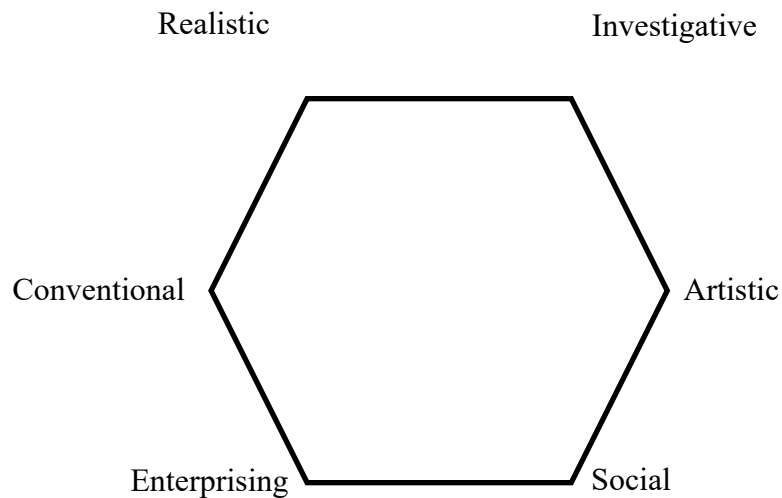
internal career identity formation and the growth of external career significance” (Hoekstra, 2011, p.159).

A key figure in the field of career development, Frank Parsons, suggested individual’s personalities influenced career choices (Parsons, 1909; Jones, 1994). Having experienced his own career indecision, Parsons was trained as an engineer and later became a professor (Pope, Mark, & Sveinsdottir, Maria, 2005). Before his death, Parsons made another career transition to become an attorney (Pope et al., 2005). Parsons’ experience with career indecision led him to postulate that career success can be measured by how well interests, skills, and abilities are aligned with the required knowledge and skills for the chosen vocation (Parsons, 1909; Pope et al., 2005).

While Parsons’ theory of career development primarily focused on the individual characteristics of the career seeker, Parsons understood individual’s perception of the family may influence career decisions, stating, “No person may decide for another what occupation he should choose, but it is possible to help him so to approach the problem that he shall come to a wise conclusion for himself” (Parsons, 1909, p. 24). Thus, Parsons suggests that individuals can be influenced by external factors such as family, educators, or peers.

Expanding on Parson’s assertion that matching individuals’ personality with work environments leads to greater job satisfaction, John Holland introduced a career topology concept to help individuals better align their personalities with potential work environments. Using the notion that individuals in a specific career field all share similarities in personality and values, Holland identified six personality types that can be related to work environments (Holland, 1973). The six personality types are realistic,

investigative, artistic, social, enterprise, and conventional (Holland, 1973). The personality types are visually represented on a hexagon. Figure 3 shows the diagram of the personality types.



*Figure 3: Hexagon Representation of Career Typologies. Adapted from Holland (1980).*

Career personality types that are closer in proximity on the hexagon are more closely related (Holland, 1973). Personality types that lie adjacent from one another are the most dissimilar. Realistic is a personality typology that describes individuals who enjoy jobs that involve tactical work. Individuals who have a realistic personality type may prefer working with machines and tools over working with people (Holland, 1973). Occupations that align with realistic personality include an automobile mechanic or a painter.

Investigative is a personality typology that describes individuals who enjoy jobs that involve working with things that can be observed. Individuals with investigative personality types may prefer working in environments that require analytical or scientific skills (Holland, 1973). Occupations that align with investigative personality include a scientific researcher or a physician.

Artistic is a personality typology that describes individuals who enjoy work that involves creating or working with ideas (Holland, 1973). “The Artistic environment is characterized by the dominance of environmental demands and opportunities that entail ambiguous, free, systematized activities and competencies to create art forms or products” (Holland, 1973 p. 38). Individuals who have artistic personality types typically enjoy work environments that involve freedom of expression (Holland, 1973). Occupations that align with artistic personality include a music performer or an artist.

Social is a personality typology that describes individuals who enjoy work that involves working with people rather than working with machines or tools (Holland, 1973). Individuals who have social personality types typically enjoy work that involves helping or persuading others (Holland, 1973). Occupations that align with social personality include a teacher or a counselor.

Enterprise is a personality typology that describes individuals who enjoy work that involves sales or persuasion (Holland, 1973). Individuals who have enterprise personality types typically enjoy work environments that involve sales. Occupations that align with enterprise personality include a business owner or a politician.

Conventional is a personality typology that describes individuals who enjoys work that involves organization (Holland, 1973). Individuals who have conventional



personality types typically enjoy work environments that involve clerical work or organization (Holland, 1973).

Congruence or a close relation between individual typology and work environment is vital for vocational success (Holland, 1973). The concept of congruence and its influence on career success has been well documented (Ishitani, 2010; Perdue, Reardon, & Peterson, 2007; Zanskas & Strohmer, 2010) and an understanding of self and the work environment has been associated with stable job history (Perdue et al., 2007).

However, Tziner, et al., (2014) and Bryant, Zvonkovic, and Reynolds (2006) found parents played an important role in influencing how adolescents felt about their role in the world of work. Although several studies support Holland's notion that people must be paired with work environments that closely align with their personality, Holland's theory does not give much consideration for how external factors such as perceived family interactions and community can influence work satisfaction.

Donald Super (1980) examined external factors related to career development and postulated that individuals have certain life experiences that hinder or help them move toward vocational maturity. Super discussed the role of self-concept in the career development process, and he provided some insight on how family can influence the career development process and self-concept. "One cannot choose one's own family. It is an accident of birth that one person is potentially bright and another dull" (Freeman, 1993, p. 259). Thus, Super postulated it is the family that contributes to the development of self-concept for individuals as they move towards career maturity (Super, 1980). Wallace-Broschious, Serafica, and Osipow (1994) found self-concept to be correlated to career maturity among high school students. Walsh and Osippow (1973) found when

individuals have crystalized career decisions; they tend to be more stable within their careers. Weng and McElroy (2010) found that “clear career goals [in] an individual can positivity affect their own vocational self-concept” (p.242).

Super viewed the journey towards career maturity as a cyclical process in which individuals can cycle in and out of various stages depending on life experiences. Super identified five stages that individuals can experience. The five stages are growth, exploration, establishment, maintenance, and disengagement (Smart & Peterson, 1997).

**Growth:** During the growth stage, individuals begin to develop self-concept. This stage provides a time in which individuals develop a self-concept that can often be influenced by family, peer, or past successes or failures. Super emphasized that self-concept can be dependent on the role of the individual. Thus, an individual may have an occupational self-concept that differs from their academic self-concept (Freeman, 1993). The growth stages typically occur between age five and 15 years (Super, 1980).

**Exploration:** The exploration stage typically involves a time in which individuals engage in leisure activities, engage in volunteer activities, and develop a work history to make determinations about likes and dislikes. During this stage, individuals may begin to engage in career related research. Yates, Johnson, and Johnson (1979) found when high school students participated in vocational exploration groups, they experienced greater levels of career maturity. More recent scholars have also found a positive correlation between career exploration and vocational identity achievement (Ferrari, et al., 2015; Hirschi, 2010; Rogers & Creed, 2011). The exploration stages typically occur between age 15 and 25 (Super, 1980).

Establishment: The establishment stage involves beginning a career. This stage can be marked by obtaining an entry level job with the aspirations of transitioning to a higher level position within the industry. During this stage, individuals begin to solidify decisions to either continue or discontinue participation in a particular career field. The exploration stage typically occurs between the age of 25 and mid-forties (Super, 1980).

Maintenance: The maintenance stage can be marked by promotions and shifting from entry level positions to higher level positions. The maintenance stage typically occurs between mid-forties and mid-sixties (Super, 1980).

Disengagement: The final stage is the disengagement stage when individuals prepare to leave the workforce and enter into retirement. The disengagement stage typically occurs between mid-sixties until death (Super, 1980).

As individuals go through life stages, they develop various life roles that contribute to career maturation. While Super's theory of career development provides some consideration for the family in the career development process, it does not provide specific information about the role of the family in vocational identity development.

#### *Family Influence on Adolescent Career Development*

Grotevant and Cooper (1985) provided one of the first analyses of the relationship between family and identity development among adolescents and found family interaction to be associated with exploration. Hargrove et.al (2005) has been cited numerous times in research related to the influence of family on the vocational identity of adolescents. Hargrove et al (2005) focused on how family dynamics influenced career decision and concluded that one's perceived ability to express their problems with family members were important in predicting the ability of adolescent to make career decisions.

Research on how family influences career decision making often points to attachment theory (Perrone, Webb, & Jackson, 2007; Scott & Church, 2001). In attachment theory, Ainsworth and Bell (1970) initially suggested that individuals can avoid future maladaptive behaviors by belonging to a family system where love and support is provided by parental figures during infancy. Ainsworth (1989) later expanded on attachment theory to “deal with theoretical issues regarding attachments and other affectional bonds beyond infancy to provide a normative context for an understanding of individual differences” (p. 709). Thus, Ainsworth (1989) suggested that individuals must remain somewhat attached to parents or parental surrogates into adulthood.

When exploring the role of parental attachment on the career decision making of college students, Scott and Church (2001) found college students of divorced parents who reported greater attachment to parents were more committed to career decisions. Similar findings were confirmed by Dietrich and Kracke (2009) who found family support was associated with career exploration among adolescents. Furthermore, Blustein et al. (1991) found women who had a moderate degree of parental attachment were more likely to commit to a career after engaging in the career exploration process. Insecure attachment was found to be associated with difficulties in making career decisions. Despite literature that supported the notion that parental attachment is associated with career exploration and crystalized career decision, Josselson (1987) found women who had greater attachment to relationships were more likely to experience foreclosure or make career decisions without commitment and without engaging in a career exploration process. While attachment theory has provided some insight on the influence of family on career decision making, the results have been mixed (Blustein et al. 1991; Josselson, 1987).

Attachment theory has not been substantial in addressing specific ways in which the family influences career exploration and career decision making among emerging adults with ASD. However, family can play a vital role in the overall development of adolescents and emerging adults with ASD (Arnett, 2004; Jaramillo-Sierra, Kaestle, & Allen, 2016; Sussman & Arnett, 2014).

### **Family Structure**

During identity development, individuals seek a differentiation of self that is separate from the family. Individuals with a differentiation of self tend to cope well with stress and “their life courses are more orderly and successful, and they are remarkably free of human problems” (Bowen, 1978, p.362). While much of existing developmental research has emphasized the physical, psychological, and psychosocial aspects of development, vocational identity development is also a vital part of overall development (Lee & McLanahan, 2015; Olson, Willard Clifford, & Olson, 1959; Silver & Singer, 2014). Additionally, previous research has explored the relationship between family and vocational identity of adolescents and emerging adults (Blustein et al. 1991; Josselson, 1987). However, the research has not explored the relationship between family structure and vocational identity among emerging adults with ASD.

Structural Family Therapy (SFT) provides a theoretical lens that aims to understand individuals by understanding the overall functioning of the family as a system (Minuchin, 1974). Consistent with other family systems theories, SFT views information obtained from the family as more valuable than information obtained solely from an individual within the system (Minuchin, 1974).

Thus, when individuals experience difficulties, those difficulties are a direct result of how the family functions. Concepts associated with SFT include:

1. Boundaries: Boundaries are established rules and roles of the subsystem (Minuchin, 1974). Boundaries are categorized as clear boundaries, diffused boundaries, or rigid boundaries. “All families can be conceived as falling somewhere along a continuum whose poles are the two extremes of diffused boundaries and overly rigid boundaries” (Minuchin, 1974, p.54)
2. Family structure: “Family structure is the invisible set of functional demands that organizes the ways in which family members interact” (Minuchin, 1974, p.51).
3. Subsystem: Families are viewed as systems with individual members as subsystems. “The family system differentiates and carries out its functions through subsystems. Subsystems can be formed by generation, by sex, by interest, or by function” (Minuchin, 1974, p.52).
4. Family adaptation: Family adaptation describes the family’s ability to resolve demands that arise within and outside of the family (Minuchin, 1974).
5. Transactional patterns: Transactional patterns describes the styles in which families interact. Transactional patterns are disengagement, clear, or enmeshment (Minuchin, 1974).
6. Family cohesion: Family cohesion is defined as the emotional bonds that are shared among families (Olson, 2000).

SFT began as a therapeutic method to treat children with psychiatric disorders (Minuchin, 1974). SFT theorists view families as organized hierarchical systems with subsystems regulating the overall functioning of the system (Minuchin, 1974). Subsystems consist of parental, sibling, and marital subsystems (Minuchin, 1974). Hierarchy is the way in which power is distributed among the subsystems (Minuchin, 1974). Cohesion and adaptability are concepts to help understand the overall functioning of the family structure. Cohesion is the emotional connectedness within the family and adaptability is the degree to which families are flexible and adapt to change (Minuchin, 1974). The current study focused on the cohesion domain of the family structure.

### **Employment of Emerging Adults with ASD**

Employment is a vital part of life for all individuals, and employment helps to promote healthy mental, physical, and social well-being (Lindsay, 2011). It is difficult to narrow down the exact number of individuals diagnosed with ASD. However, a 2016 report published by the Centers for Disease Control and Prevention (CDC) estimated one out of every 54 child born in the United States was diagnosed with ASD (Centers for Disease Control and Prevention, 2020). The report indicated an increase in the number of persons diagnosed with ASD. Previous estimates also showed one out every six children were diagnosed with ASD between 2006 and 2008 (Centers for Disease Control and Prevention, 2016). While there has been much debate, regarding whether the prevalence of ASD has increased or if the methods for detecting ASD have improved, there remains a need to understand how persons with ASD can successfully transition into adulthood and employment (Pinborough-Zimmerman et al., 2012). Additionally, persons with ASD are often underrepresented in the workforce (Parsi, & Elster, 2012; Shattuck et al., 2012).

In general, individuals with ASD are more likely to be unemployed and underemployed when compared to individuals without ASD (Solomon, 2020). According to Roux et al., (2015) 58% of adults with ADS in their 20s have worked outside of the home after high school. Weiss et al. (2014) conducted a longitudinal study with 120 emerging adults with ASD and found 34.7% of the sample were either unemployed and not enrolled in post-secondary education two years after leaving high school. The findings also showed only 20.1% of the sample were employed for at least half-time (Weiss et al., 2014).

### **Employment Barriers**

Taylor and Seltzer (2011) reported of 66 study participants with ASD, only 6.1 percent were competitively employed in the community. ASD is a neurodevelopmental disorder that impacts communication, social skills and behavior (Schriber et al, 2014). Thus when emerging adults with ASD seek employment, some of the barriers to employment can be experienced very early in the employment process (Taylor & Seltser, 2011). Difficulties with navigating various stages of the employment process can result in employment opportunities ending for persons with ASD before they begin (Lorenz et al., 2016). Employment search related activities such as completing job applications, interviewing, and conducting follow up phone calls may cause difficulties for persons with ASD (Lorenz et al., 2016). When persons with ASD are able to obtain employment, they may struggle in work settings that involve navigating social cues, communicating effectively, and practicing good hygiene (Schriber et al, 2014). Additionally, the lack of understanding the tools persons with ASD need to be successful in the workplace can



make it difficult for individuals with ASD to get hired and maintain employment (Schriber et al, 2014).

### **Employment Strengths**

While persons with ASD have some unique challenges when it comes to employment, persons with ASD also possess some unique employment strengths such as good attention to detail, creativity, and kind personalities (Giarelli, Ruttenberg, & Segal, 2013; Kenyon, 2015). Thus, when persons with ASD are left out of the workforce, employers may miss some benefits associated with hiring qualified individuals. Furthermore, studies support the notion that persons with ASD are more dependable in the workforce and work well in settings that require repetitive work or attention to detail (Brostrand, 2006; Unger, 2002). Through social skills training, Morgans, Leatzow, and Siller (2014) found employment barriers such as poor interview skills improved when persons with ASD participated in mock interviews designed to enhance social interactions and employability.

### *Self-Advocacy*

Self-advocacy is the notion that individuals with ASD take an active roles in communicating their needs and desires (Ne'Eman & Bascam, 2020). While the relationship between family structure and vocational identity foreclosure has not been explored among emerging adults with ASD, individuals with ASD who were encouraged by the family to engage in self advocacy activities experienced greater positive outcomes related to increased involvement in employment, post-secondary education and community advocacy (Zhang, Roberts, Landmark & Ju, 2019).

With the self-advocacy movement, individuals with ASD have become more empowered to make their own decisions (Petri, Beadle, & Bradshaw, 2020). Self advocates understand that some support may be needed, but they also fight to dismantle the notion that people with ASD are incapable of making their own decisions (Petri, Beadle, & Bradshaw, 2020). As a result, the current study seeks to provide an understanding of how the emerging adults with ASD's perceptions of family cohesion is related to vocational identity development.

### *Vocational Rehabilitation*

In accordance with The Rehabilitation Act of 1974, vocational rehabilitation (VR) agencies often coordinate employment services with LEA and other agencies involved in the transitional planning of students with disabilities. Although VR programs are the only programs that are legislatively mandated to provide employment related services specifically for youth and adults with disabilities, few individuals with ASD actually access services through VR (Chen, Sung, & Pi, 2015). Furthermore, some individuals with ASD are often denied VR services because social barriers to employment are not easily recognized by VR counselors who determine eligibility for VR services (Chen, et al, 2015). Nonetheless, Chen et al. (2015) found the adults who did receive employment related services through local VR programs were employed at a greater rate than individuals with ASD in the general population. As such, it is vital for current research to explore factors that help increase career exploration, vocational identity, and employment outcomes for emerging adults with ASD.

Structured career exploration opportunities are often provided through local VR agencies via career assessments or coordinated work experience programs. In accordance

with the Rehabilitation Act of 1973, VR programs provide employment related services to help persons with disabilities obtain and maintain competitive integrated employment in an integrated setting. Competitive employment in an integrated employment indicates individuals are employed in a community setting with or without job supports.

For youth with disabilities, transitional services are provided to high school students to aid in the transition from high school to the world of work. As part of the transitional planning required under the Individuals with Disabilities Education Act (IDEA), students with disabilities are typically referred to local VR agencies before the age of 16.

Vocational rehabilitation counselors work with persons with disabilities to ensure that employment plans are individualized, and consumers are active participants in the rehabilitation process. Early studies suggested a family systems approach to vocational rehabilitation counseling can better assist persons with disabilities in obtaining or maintaining employment (Dew, Phillips, & Reiss, 1989).

### **Summary**

This literature review analyzed literature related to employment and persons with ASD, discussed current findings on the role of family and vocational identity development among adolescents, and discussed career theories used to understand career development for persons with ASD. Although there are some findings that consider the association between family and vocational identity development among adolescents, there is a gap in the literature related to the relationship between family structure and vocational identity among emerging adults with disabilities.

## CHAPTER III

### METHODOLOGY

#### **Research Design**

The current study sought to answer the research questions utilizing a survey research approach. The current quantitative study explored the relationship between perceived family cohesion and the vocational identity development of emerging adults with ASD. Quantitative methods have been chosen for the current study because it allows the investigator to measure the relationship between perceived family cohesion and the vocational identity status of emerging adults with ASD. According to Creswell and Creswell (2013), qualitative research involves examining the meaning of phenomena with narratives and artifacts (Creswell & Creswell, 2013). In contrast, quantitative research examines whether phenomena exist and relies on abstracting and measuring numerical data (Creswell & Creswell, 2013).

Since the relationship between the proposed variables in the current study is unknown, quantitative research is more appropriate. Correlational research is the most appropriate when research seeks to measure the relationship or association between variables (Creswell & Creswell, 2013). This study was approved by the Institutional Review Board of Oklahoma State University.

## **Philosophical Worldview**

According to Creswell and Creswell (2013), all research is rooted in a philosophical worldview that influences research practices, and it “needs to be identified” (Location, 514). Philosophical worldviews guide how individuals develop research questions and conduct research (Creswell & Creswell, 2013). The current quantitative study is guided by postpositivism worldview in which the research takes on the role as an observer versus and active participant in the research process (Creswell & Creswell, 2013). The current study seeks to observe whether a relationship exist between the variables. However, the research does not imply a causal relationship. Postpositivism worldview has moved away from positivism notion that emphasis cause and effect (Creswell & Creswell, 2013). A postpositivism worldview is maintained throughout the study’s examination of the relationship between perceived family cohesion and the vocational identity of emerging adults with ASD.

## **Population and Sample**

The population for the current sample included emerging adults between the ages of 18 and 25 years with ASD. According to the Centers of Disease Control and Prevention, the number of adults over the age of 18 years with ASD living in the United States is estimated to be 5,437,98 individuals (Centers for Disease Control and Prevention, 2020). However, at the time of the current study, the number of individuals with ASD between the ages of 18 and 25 years is unknown. The sample in the current study consisted of 42 emerging adults who self-identified as having a diagnosis of Autism Spectrum Disorder (ASD). It should be noted that recruitment took place during the start of a global pandemic, COVID-19. One recruitment criterion was that

participants were between the ages of 18 and 25 years. However, demographic findings showed the sample in the current study included individuals who self-identified as persons with ASD between the ages of 20-25. Participants were purposively sampled from online social media groups. More detailed description of recruitment procedures is provided below under data collection.

### **Instrumentation**

**Demographic Questionnaire.** A demographic questionnaire was used to obtain background information about participants including their age, gender, education level, income, racial/ethnic background, current relationship status, current living arrangement, and employment status. Additionally, metadata from surveys were used to determine the location of survey participants. Appendix A provides a list of the demographic questions.

**FACES IV.** Family cohesion was measured using the Family Adaptability and Cohesion Scale (FACES IV) (Olson 2000). FACES IV was developed in 1983 (Olson, Sprenkle, & Russell, 1983), and it is comprised of six scales that measure family cohesion and family flexibility (Olson, 2000). FACES IV has been used in numerous research studies and in clinical settings (Olson & Gorall, 2006). FACES IV has been used in a longitudinal study that examined the adaptability on behavioral problems of maternal depression in families of adolescents with Autism (Baker, Seltzer, & Greenberg, 2011). FACES IV has been more recently used in a study that examined family environment of overweight and obese adolescents (Carbert, Brussoni, Geller, & Mâsse, 2019).

The measure consists of six subscales that measure for family cohesion, flexibility, family communication, and family satisfaction (Olson, 2000). FACES IV is a

62-item self-report assessment in which participants were asked to respond to questions in a 5-point Likert-type scale that ranges in responses from 1-“Does not describe our family at all” to 5-“Describes our family very well”.

The most recent version of FACES, (FACES IV) was used in the current study to measure family cohesion. FACES-IV has been used to measure family cohesion among other diverse groups, including individuals with Autism (Rieger & Mcgrail, 2013). Utilizing online survey methods, the instrument was self-administered in its entirety. However, for the purpose of current study, score from the family cohesion subscale were used.

FACES IV has good reliability with test-retest reliability ranges from .83 to .93 at a 3-week interval (Franklin, Streeter, & Springer, 2001) and internal consistency ranging from .65 to .81 (Franklin, Streeter, & Springer, 2001). The internal consistency of the FACES IV six scales range from .77 to .89 (Olson, 2011), indicating very good reliability. Permission to use FACES IV was granted by the authors. Due to copyright regulations, the questions for this measure are not included in the appendix. In the current study, Cronbach’s alpha .914, and the Cronbach’s alpha for family cohesion subscale was .835.

**Vocational Identity Scale.** Vocational identity was measured using the vocational identity subscale of My Vocational Situation (MVS; Holland et al., 1980). MVS is a self-report instrument used to measure career decision making. MVS consists of three subscales (Vocational Identity Scale, Occupational Information Scale, and Barriers). For this study, only the Vocational Identity Subscale (VIS) was used to determine the level of vocational identity achievement. The VIS is an 18-item measure

that asks participants to respond to statements by indicating “true” or “false.” The VIS is scored by totaling the number of false statements. Participants were asked to respond to statements such as, “I need reassurance that I have made the right choice of occupation,” “I am uncertain about the occupations I could perform well,” and “If I had to make an occupational choice right now, I’m afraid I would make a bad choice” (Holland, Daiger, & Power, 1980a). Higher scores on the VIS indicate increased levels of vocational identity and more stable career decisions. Whereas, lower scores indicate career indecision and lower levels of vocational identity achievement.

The Vocational Identity Subscale was found to have internal consistency reliability ranging from .86 to .89. (Holland et al., 1980a). Using test-retest methods for evaluating reliability, it was also reported that VIS had reliability coefficients ranging from .63 to .93 (Hargrove et al., 2005). Previous studies have found VIS to be a valid instrument in measuring career-decision validity (Hargrove et al., 2005). In this study, Cronbach’s alpha of the VIS was .906.

### **Research Questions and Hypotheses**

This chapter describes the methodology used to answer the following research questions:

Q1: Does a significant relationship exist between vocational identity and perceived overall family cohesion for emerging adults with ASD?

Q2: Does a significant relationship exist between vocational identity and perceived balanced family cohesion for emerging adults with ASD?

Q3: Does a significant relationship exist between vocational identity and perceived enmeshed family cohesion for emerging adults with ASD?



Q4: Does a significant relationship exist between vocational identity and perceived disengaged family cohesion for emerging adults with ASD?

Based on the research questions, the following research hypotheses were proposed.

**H<sub>01</sub>:** A significant relationship does not exist between vocational identity and perceived overall family cohesion among emerging adults with ASD.

**H<sub>A1</sub>:** A significant relationship exists between vocational identity and perceived overall family cohesion among emerging adults with ASD.

**H<sub>02</sub>:** A significant relationship does not exist between vocational identity and perceived balanced family cohesion among emerging adults with ASD

**H<sub>A2</sub>:** A significant relationship exists between vocational identity and perceived balanced family cohesion among emerging adults with ASD

**H<sub>03</sub>:** A significant relationship does not exist between vocational identity and perceived enmeshed family cohesion among emerging adults with ASD

**H<sub>A3</sub>:** A significant relationship exists between vocational identity and perceived enmeshed family cohesion among emerging adults with ASD

**H<sub>04</sub>:** A significant relationship does not exist between vocational identity and perceived disengaged family cohesion among emerging adults with ASD

**H<sub>A4</sub>:** A significant relationship exists between vocational identity and perceived disengaged family cohesion among emerging adults with ASD

## **Procedures**

### **Recruitment tool**

Participants were identified and recruited for the current study using social media as a recruitment tool. Specifically, Facebook was used to share information regarding the current research and to recruit research participants. The use of social media as a research recruitment tool has recently increased. In accordance with the guidance of Bioeth (2017), the researcher was careful to avoid any ethical challenges that might arise in the privacy and the treatment of research participants during recruitment and data collection. Social media was chosen as the recruitment tool because it allowed the investigator accesses to a targeted group for purposive research sampling.

### **Recruitment methods**

Research participants were targeted by using passive online recruitment methods in Facebook groups for individuals with ASD. Passive on-line recruitment methods are similar to passive off-line recruitment methods because both methods involve posting information about the research study and instructing potential participants to contact the investigator for more information (Biotech, 2017).

In the current study a recruitment flyer that included contact information was posted in 10 different private groups for individuals with ASD. Recruitment began March 11, 2020 and ended April 10, 2020. The number of members in each targeted group ranged from 80 to 20,000 group members. Facebook groups provides opportunities for individuals to interact with one another using an online platform. Any member of Facebook can create a Facebook group and control the membership settings. When a member of the Facebook community creates a group and invites other Facebook users to

join the group, they become the group Administrators, or Admin. The role of Admin can also be assigned to multiple group members via invitation from the original Admin. Admins control group settings and determine the level of privacy for the group. The level of group privacy ranges from public to private with different levels of access to contents of the group for Facebook users who are not members of the Facebook group.

Table 1

*Types of Facebook Groups*

<i>Privacy Setting</i>	Who Can join the group?	Who can see what is posted in the group?	Who can see other group members?
<i>Private</i>	Any Facebook user	Current group members	Current group members
<i>Public</i>	Any Facebook user	Any Facebook User and anyone online	Any Facebook user

All 10 of the Facebook groups targeted for recruitment were private Facebook groups. All groups required Facebook users to answer membership questions before being accepted by an Admin in the group. Membership questions included questions like “Why do you want to be a member of this group,” “Do you have Autism,” and “Do you promise not to market to us?” To ensure the integrity of each group was maintained, the investigator was transparent with the group Admin regarding their role as a researcher and their intent to recruit research participants for the current study. Additionally, the

investigator sent private messages to the Admins of the targeted Facebook groups to request permission to post about the study within the group. After permission was granted to by the group Admin to recruit participants, the recruitment flyer was posted in Facebook groups as a status update. Eligibility requirements to participate in the study were included in the recruitment materials and in the informed consent.

#### *Inclusion and exclusion criteria*

Inclusion criteria included emerging adults between the ages of 18 to 25 years who self-reported as being a person with ASD. Participants were instructed to reach out to investigator via email to express their interest in participating in the current study. When participants expressed an interest in participating in the study, participants were emailed a link to a Qualtrics survey. The survey began with an informed consent page and information about the research. Participants who consented to the survey were directed to brief reading test.

Exclusion criteria was used to ensure participants were able to read and comprehend the survey. After participants consented to participate in the online survey, they were navigated to the next page to complete a Quick Picture Reading Test (QPRT) before beginning the research survey. Prior to the distribution of the online survey, investigator entered scoring criteria for (QPRT) in Qualtrics and set a survey condition to end survey for individuals who scored below a 4<sup>th</sup> grade reading level. The average completion time for the survey was 30 minutes. However, there was no time limit enforced after the start of the survey. After the completion of the survey, participants were sent a \$25 electronic Amazon gift card via an email address provided by the participant. Approval for the data collection was obtained from Oklahoma State

University's Human Subjects Research Office Institutional Review Board. IRB approval form included in the Appendix.

### **Scoring the Data**

**VIS.** In the current study, vocational identity was a dependent variable measured in a continuous scale using VIS. The VIS consisted of 18 *true* or *false* questions. The scores for the VIS subscale was computed in Microsoft Excel by totaling the number of *true* responses on VIS. The vocational identity score is the total number of *true* responses on the 18 item VIS.

**FACES IV.** Family Cohesion is a continuous independent variable that was measured using FACES IV. Data from FACES IV was scored using the Microsoft Excel file supplied with the FACES IV administration manual. The family cohesion ratio score was used to determine levels of perceived family cohesion among 42 emerging adults with ASD. Ratio scores are calculated by dividing the average of disengaged and enmeshed scores (Oson, 2006). Balanced cohesion, enmeshed cohesion and disengaged cohesion dimension scores were used.

### **Data Analysis**

Data was analyzed using IBM's SPSS Version 26. Survey data from Qualtrics were imported into the Excel spreadsheet scoring table provided with the FACES IV administration manual. VIS and FACES IV were scored in Excel and imported into a SPSS file. Independent samples t-tests and ANOVAs were used to explore differences between groups in the sample. Bivariate Pearson correlation was used to measure the relationship between perceived overall family cohesion and vocational identity.

## CHAPTER IV

### FINDINGS

#### **Preliminary Analyses**

During preliminary analyses, the data was analyzed, and no data were missing or suspicious. To avoid missing data, each question in the survey required a response from the participant in order to navigate to the next questions. An inspection of box plot indicated the data did not contain any outliers. A test of multicollinearity indicated multicollinearity between enmeshed family cohesion and disengaged family cohesion. Thus, the assumption of collinearity was not met, and the current study was unable to run a regression analysis. All variables were normally distributed, as determined by Shapiro-Wilk's test.

#### **Participants**

Using online recruitment methods, data were collected between March 11, 2020 until April 10, 2020. Participants included 42 emerging adults ( $n = 23$  males,  $n = 19$  females) who self-identified as individuals with ASD. Participants ranged in age from 20-25 years, and average age of participants as was 23.57 years of age ( $SD = 1.516$ ). Participants' racial and ethnic demographics included 7.1% Asian American, 9.5% Black or African American, 7.1% Hispanic/Latino, 4.8% Mixed Race, and 71.4% White/Caucasian. Additional demographic information is included in the descriptive statistics.

## Descriptive Statistics

Intercorrelations of the subscales of FACES IV were calculated to determine if the subscales were consistent with previous validation findings. The finding presented in Table 2 show the intercorrelations of the current study were mostly consistent with the validation study of Olson (2011) with the exception of the following: the validation sample found chaotic and cohesion ( $r = .50$ ) were moderately related, but the currently study did not find a significant relationship between the chaotic subscale and the cohesion subscale ( $r = .71$ ).

The current study also found a strong correlation between chaotic and disengaged ( $r = .83$ ). Whereas, the validation study found a moderate relationship ( $r = .60$ ) relationship between chaotic subscale and they disengaged subscale. However, for the purposes of the current study, balanced cohesion, enmeshed, and disengaged were the only FACE IV subscales used in data analysis.

In the current study, disengaged and enmeshed had a weak negative relationship ( $r = -.34$ ). However, in the validation study, disengagement and enmeshment did not have a significant relationship indicating the subscales were independent (Olson, 2011). The differences between the current study and the validation study can likely be attributed to the differences in the sample size. The validation sample consisted of a sample size of  $N = 469$ . Whereas, the current sample size is  $N = 42$ .

Table 2

*Intercorrelations of Emerging Adults with ASD FACES IV Subscales (N= 42)*

	1	2	3	4	5	6
1. Balanced Cohesion	1	.71**	-.34*	-.23	.08	-.24
2. Balanced Flexibility	.71*	1	.03	.13	.25	.11
3. Disengaged	-.34*	.03	1	.81**	.47**	.76**
4. Enmeshed	-.23	.13	.81**	1	.58**	.82**
5. Rigid	.08	.25	.47**	.58**	1	.40**
6. Chaotic	-.24	.11	.76**	.82**	.40**	1

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

Descriptive statistics for VIS and FACES IV is shown in Table 3 include the mean, standard deviation, and the skewness for all the variables.

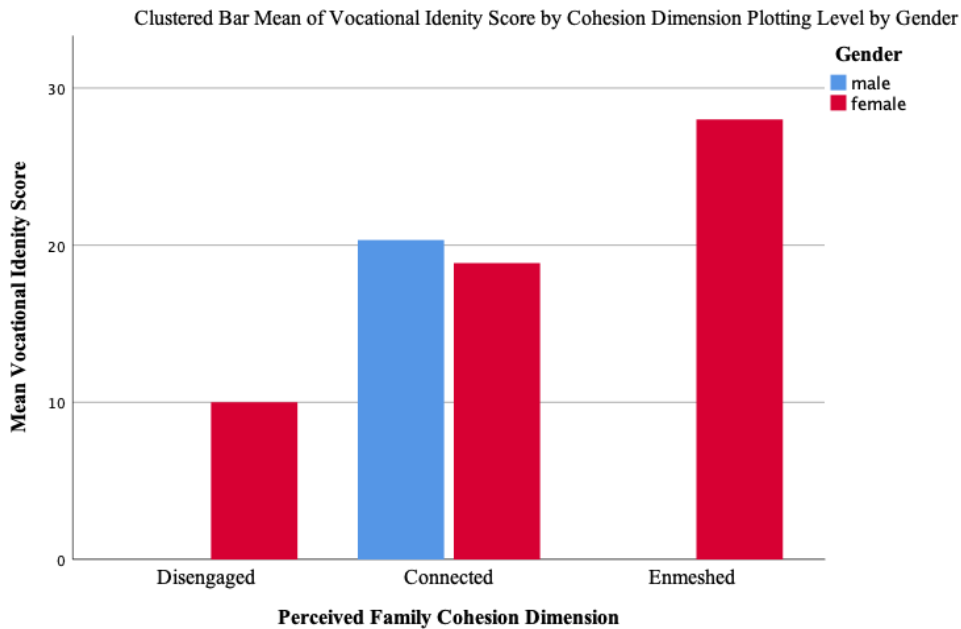
Table 3

*Descriptive Statistics of the Measures (N=42)*

	Mean	SD	Skewness	Kurtosis
FACES IV				
Balanced Cohesion % Score	62.5	15.7	-.672	-.357
Disengaged % Score	40.3	23.3	.488	-1.12
Enmeshed % Score	40.9	24.9	.538	-.902
Cohesion Ratio	2.38	1.96	1.33	1.23
Vocational Identity	16.7	11.2	.255	-1.29



Using the FACES IV cohesion ratio score and the vocational identity score of emerging adults with ASD, an independent samples t-test was conducted to compare the means of male and female participants when measuring the overall perceived family cohesion and vocational identity of emerging adults with ASD. The independent samples t-test for overall perceived family cohesion indicated male participants ( $M=2.56$ ,  $SD=2.157$ ) perceived balanced family cohesion to be slightly higher than female ( $M=2.16$ ,  $SD=1.72$ ) participants. Additionally, an independent samples t-test for vocational identity indicated male participants ( $M=17.48$ ,  $SD=11.48$ ) had higher levels of vocational identity than female ( $M=15.79$ ,  $SD=11.19$ ) participants. Figure 4 is a visual depiction of the vocational identity status of emerging adults with ASD and the difference between the means of perceived family cohesion of by gender.



*Figure 4.* Vocational Identity of Emerging Adults with ASD by perceived family cohesion by gender

### *Education*

In the current study, emerging adults with ASD were asked to identify their level of education. Demographic findings yielded some surprising results. Of the sample, 4.8% reported having an advanced degree; 40.5% reported completing college; 9.5% reported completed high school; 42.9% reported completing some college, and 2.4% reported completing some high school.

A one-way ANOVA was conducted to determine if the means of perceived family cohesion was different between participants with different education levels. Participants were classified into five groups: some high school ( $n = 1$ ), completed high school ( $n = 4$ ), some college completed ( $n = 18$ ) completed college ( $n = 17$ ), and advanced degree ( $n = 2$ ). Findings showed there was no statistically significant differences between the means,  $F(4, 37) = .928, p = .458$  Tables 4 and 5 include the descriptive statistics for education level.

Table 4

*Perceived Family Cohesion of Emerging Adults with ASD by Education Level*

	N	Mean	SD	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
some high school	1	.713	.	.	.	.	.713	.713
completed high school	4	1.70	1.62	.809	-.878	4.27	.800	4.12
some college	18	2.30	2.14	.504	1.24	3.36	.559	7.73
completed college	17	2.90	1.90	.461	1.92	3.87	.760	8.00
advanced degree	2	.795	.09287	.0656	-.039379	1.6295	.72941	.86075
			6	73		5	1	9
Total	42	2.38	1.96	.302	1.76	2.99	.559	8.00

A one-way ANOVA was also conducted to determine if the means of vocational identity of emerging adults with ASD was different between participants with different education levels. Participants were classified into five groups: some high school ( $n = 1$ ), completed high school ( $n = 4$ ), some college completed ( $n = 18$ ), completed college ( $n = 17$ ), and advanced degree ( $n = 2$ ). Findings showed there was no statistically significant differences between the means,  $F(4, 37) = 1.022, p = .409$

Table 5

*Vocational Identity of Emerging Adults with ASD by Education Level*

	N	Mean	SD	Std. Error	95% Confidence Interval for Mean		Minim um	Maxim um
					Lower Bound	Upper Bound		
some high school	1	10.00	.	.	.	.	10	10
completed high school	4	11.50	10.25	5.12	-4.81	27.81	2	26
some college	18	17.78	10.40	2.45	12.61	22.95	0	36
completed college	17	18.59	12.32	2.99	12.25	24.92	0	34
advanced degree	2	5.00	4.243	3.00	-33.12	43.12	2	8
Total	42	16.71	11.17	1.72	13.24	20.19	0	36

*Current Living Arrangements*

Current living arrangements of the participant varied with 31% of participants living alone, 31% of participants living with parents, 23.8% participants living with a partner, 9.5% of participants living with children, and 4.8% of participants having other living arrangements. A one-way ANOVA was conducted to determine if perceived family cohesion level was different between participants with different living arrangements. Participants were classified into five groups: alone ( $n = 14$ ), with other ( $n = 1$ ), with parents ( $n = 13$ ), with partner ( $n = 10$ ), and with partner and children ( $n = 4$ ). Findings showed there was no statistically significant difference between the means of perceived family cohesion levels based on living arrangements among emerging adults

with ASD,  $F(4, 37) = .579, p = .680$ . Tables 6 and 7 include the descriptive statistics for living arrangements.

Table 6

*Perceived Family Cohesion of Emerging Adults with ASD by Living Arrangements*

	N	Mean	SD	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Alone	14	2.48	2.08	.556	1.28	3.69	.729	7.73
With Other	1	.559	.	.	.	.	.559	.559
With Parents	13	2.09	1.53	.42603	1.16	3.02	.713	4.72
With Partner	10	2.43	1.87	.59248	1.09	3.78	.800	6.46
W/partner and children	4	3.25	3.36	1.6776	-2.08	8.59	.824	8.00
Total	42	2.38	1.96	.30243	1.7646	2.99	.559	8.00

A one-way ANOVA was conducted to determine if vocational identity was different between participants with different living arrangements. Participants were classified into five groups: alone ( $n = 14$ ), with other ( $n = 1$ ), with parents ( $n = 13$ ) with partner ( $n = 10$ ), and with partner and children ( $n = 4$ ). Findings showed there was no statistically significant difference between the means of vocational identity based on living arrangements among emerging adults with ASD,  $F(4, 29) = .402, p = .805$ .

Table 7

*Vocational Identity of Emerging Adults with ASD by Living Arrangements*

	N	Mean	SD	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Alone	14	18.0	12.65	3.38	10.70	25.3	2	36
With Other	1	6.00	.	.	.	.	6	6
With Parents	13	12.0	9.13	2.53	6.48	17.5	0	32
With Partner	10	21.8	11.1	3.50	13.9	29.7	0	34
w/partner and children	4	17.5	9.00	4.50	3.18	31.8	6	28
Total	42	16.7	11.2	1.72	13.2	20.2	0	36

*Employment Status*

A one-way ANOVA was conducted to determine if the means of perceived family cohesion level was different between participants with different employment status. Participants were classified into five groups: unemployed ( $n = 2$ ), student ( $n = 4$ ), employed part-time ( $n = 7$ ), employed full-time ( $n = 25$ ), and self-employed ( $n = 4$ ). Findings showed there was no statistically significant difference between the means of perceived family cohesion based on employment status among emerging adults with ASD,  $F(4, 37) = .627$ ,  $p = .647$ . Tables 8 and 9 include the descriptive statistics for employment status.

Table 8

*Perceived Family Cohesion of Emerging Adults with ASD by Employment Status*

	N	Mean	SD	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Unemployed	2	2.47	2.33	1.65	-18.6	23.5	.813	4.12
Student	4	2.20	1.61	.805	-.362	4.76	.559	3.80
Employed Part-Time	7	1.57	1.27	.479	.399	2.74	.842	4.38
Employed Full-Time	25	2.44	1.97	.393	1.63	3.25	.713	7.72
Self-Employed	4	3.52	3.24	1.63	-1.67	8.70	.760	8.00
Total	42	2.38	1.96	.302	1.76	2.99	.559	8.00

A one-way ANOVA was conducted to determine if the means of perceived family cohesion level was different between participants with different employment status.

Participants were classified into five groups: unemployed ( $n = 2$ ), student ( $n = 4$ ), employed part-time ( $n = 7$ ) employed full-time ( $n = 25$ ), and self-employed ( $n = 4$ ).

Findings showed there was no statistically significant difference between the means of perceived family cohesion based on employment status among emerging adults with ASD,  $F(4, 37) = .627, p = .647$ .

Table 9

*Vocational Identity of Emerging Adults with ASD by Employment Status*

	N	Mean	SD	Std. Error	95% Confidence Interval for Mean		Minim um	Maxim um
					Lower Bound	Upper Bound		
Unemployed	2	1.00	1.41	1.00	-11.7	13.7	0	2
Student	4	23.5	12.8	6.40	3.14	43.9	6	34
Employed Part-Time	7	17.7	7.70	2.90	10.6	24.8	6	26
Employed Full-Time	25	17.2	11.34	2.27	12.5	21.9	2	36
Self-Employed	4	13.0	11.94	5.97	-6.01	32.0	0	28
Total	42	16.7	11.17	1.723	13.2	20.2	0	36



*Racial and Ethnic Background*

A one-way ANOVA was conducted to determine if perceived family cohesion level was different between participants with different racial and ethnic identities.

Participants were classified into five groups: Asian American ( $n = 3$ ), Black or African American ( $n = 4$ ), Hispanic/ Latino ( $n = 7$ ) Mixed Race ( $n = 25$ ), and White/Caucasian ( $n = 4$ ). Findings showed there was no statistically significant difference between the means of vocational identities based on race/ethnicity among emerging adults with ASD,  $F(4, 37) = .988, p = .426$ . Tables 10 and 11 include the descriptive statistics for racial/ethnic backgrounds.

Table 10

*Perceived Family Cohesion of Emerging Adults with ASD by Racial/Ethnicity*

	N	Mean	SD	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Asian American	3	.944	.145	.083	.584	1.30	.813	1.10
Black or African American	4	2.23	1.49	.746	-.145	4.60	1.02	4.12
Hispanic/ Latino	3	.927	.418	.241	-.110	1.96	.559	1.38
Mixed Race	2	2.57	2.56	1.81	-20.2	25.5	.760	4.38
White/Caucasian	30	2.67	2.11	.385	1.88	3.46	.713	8.00
Total	42	2.38	1.96	.302	1.76	2.99	.556	8.00

A one-way ANOVA was conducted to determine if vocational identity level was different between participants with different racial and ethnic identities. Participants were classified into five groups: Asian American ( $n = 3$ ), Black or African American ( $n = 4$ ), Hispanic/ Latino ( $n = 7$ ) Mixed Race ( $n = 25$ ), and White/Caucasian ( $n = 4$ ). Findings showed there was no statistically significant difference between the means of vocational identities based on race/ethnicity among emerging adults with ASD,  $F(4, 37) = 1.23, p = .314$ .

Table 11

*Perceived Vocational Identity of Emerging Adults with ASD by Racial/Ethnicity*

	N	Mean	SD	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Asian American	3	13.3	16.65	9.61	-28.0	54.7	0	32
Black or African American	4	9.50	9.00	4.50	-4.8	23.8	2	22
Hispanic/ Latino	3	14.0	7.21	4.16	-3.9	31.9	6	20
Mixed Race	2	7.00	1.41	1.00	-5.7	19.7	6	8
White/ Caucasian	30	18.9	11.15	2.03	14.7	23.1	0	36
Total	42	16.7	11.16	1.72	13.2	20.1	0	36

*Income Level*

When asked about the average household income, table 5 shows participants demonstrated a broad range of income levels, ranging from less than \$10,000 annually to \$81,000-\$99,999 annually.

A one-way ANOVA was conducted to determine if perceived family cohesion level was different between participants with different income levels. Findings showed there was no statistically significant difference between the means of family cohesion based on race/ethnicity among emerging adults with ASD,  $F(4, 37) = .262, p = .974$ .

Tables 12 and 13 include the descriptive statistics for income.

Table 12

*Perceived Family Cohesion of Emerging Adults with ASD by Income*

	N	Mean	SD	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Less than \$10,000	7	2.27	1.63	.618	.755	3.78	.558	4.72
\$10,000 - \$20, 999	5	1.98	1.48	.662	.140	3.81	.713	3.81
\$21,000 - \$30,999	5	2.42	1.31	.587	.796	4.06	1.05	4.38
\$31,000 - \$40,999	5	2.92	3.15	1.41	-.982	6.81	.760	8.00
\$41,000 - \$50,999	8	2.70	2.48	.876	.638	4.78	.921	7.73
\$51,000 - \$60,999	1	3.42	.	.	.	.	3.42	3.42
\$61,000 - \$80,999	6	1.50	1.24	.510	.186	2.81	.729	3.95
\$80,000 - \$89,999	2	2.53	2.24	1.59	-17.7	22.7	.942	4.12
\$81,000 - \$99,999	3	2.72	3.24	1.87	-5.34	10.8	.824	6.46
Total	42	2.34	1.96	.302	1.76	2.99	.559	8.00
\$81,000 - \$99,999	3	55.0	38.2	22.1	-39.9	150	12	85
Total	42	40.3	23.3	3.59	33.1	47.6	10	85

A one-way ANOVA was conducted to determine if the means of vocational identity were different between participants with different income levels. Findings

showed there was no statistically significant difference between the means of vocational identities based on race/ethnicity among emerging adults with ASD,  $F(4, 37) = .764$ ,  $p = .637$ .

Table 13

*Vocational Identity of Emerging Adults with ASD by Income*

	N	Mean	SD	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
Less than \$10,000	7	15.1	11.4	4.30	4.63	25.7	0	32
\$10,000 - \$20, 999	5	17.6	12.9	5.81	1.47	33.7	0	34
\$21,000 - \$30,999	5	17.2	12.4	5.54	1.83	32.6	4	34
\$31,000 - \$40,999	5	14.0	8.49	3.80	3.46	24.5	8	28
\$41,000 - \$50,999	8	22.3	11.83	4.18	12.4	32.1	6	36
\$51,000 - \$60,999	1	34.0	.	.	.	.	34	34
\$61,000 - \$80,999	6	13.7	8.89	3.63	4.34	23.0	6	26
\$80,000 - \$89,999	2	10.0	11.3	8.00	-91.7	111	2	18
\$81,000 - \$99,999	3	12.7	15.1	8.74	-24.9	50.2	2	30
Total	42	16.8	11.1	1.72	13.2	20.1	0	36

**Research Questions**

**Research Question 1**

*Q1: Does a significant relationship exist between overall perceived family cohesion and vocational identity for emerging adults with ASD?*

Using the family cohesion ratio score and the vocational identity score, correlation analysis was conducted to examine the relationship between the variables. Pearson's product-moment correlation was utilized to examine the relationship between the perceived overall family cohesion and the vocational identity status of emerging

adults with ASD. Pearson r correlations are measured by the r value (Creswell and Cresswell, 2013). The closer the r value is to 1, the greater the association between the variables. To answer the current research question, Pearson correlation was chosen because of its ability to examine linear relationships between two variables.

Table 14 shows there was a small significant relationship between overall perceived family cohesion and vocational identity of emerging adults with ASD. Thus, the null hypothesis of no difference was rejected, and the alternative hypothesis was accepted.

Table 14

*Correlation of Family Cohesion and Vocational Identity*

		Family Cohesion	Vocational Identity
Family Cohesion	Pearson Correlation	1	.386*
	Sig. (2-tailed)		.012
	N	42	42
Vocational Identity	Pearson Correlation	.386*	1
	Sig. (2-tailed)	.012	
	N	42	42

\*. Correlation is significant at the 0.05 level (2-tailed).

**Research Questions 2 -4**

*Q2: Does a significant relationship exist between balanced family cohesion and vocational identity for emerging adults with ASD?*

*Q3: Does a significant relationship exist between perceived enmeshed family cohesion and vocational identity for emerging adults with ASD?*

*Q4: Does a significant relationship exist between disengaged family cohesion and vocational identity for emerging adults with ASD?*

In research questions 2-4, the current study sought to explain whether a relationship between each of the family cohesion dimensions (disengaged, balanced, and enmeshed) were related to the vocational identity of emerging adults with ASD. Previous studies (Craddock, 2001 & Carvalho) examined family cohesion as an independent variable that is on a continuum from disengaged (very low cohesion) to enmeshed (very close family cohesion) (Cohen, 2000). To examine the relationship between the dimensions of perceived family cohesion and the vocational identity status of emerging adults three sets of Pearson correlation was used.

*Research Question 2*

Pearson correlation was used to evaluate the relationship between perceived balanced family cohesion and vocational identity. As shown in Table 15, there was a no statically significant relationship between perceived balanced family cohesion and vocational identity in emerging adults with ASD,  $r = .263$

Table 15

*Correlations between Perceived Balanced Family Cohesion and VI in Emerging Adults with ASD*

		Vocational Identity Score	Cohesion Raw Score
Vocational Identity Score	Pearson Correlation	1	.263
	Sig. (2-tailed)		.093
	N	42	42
Cohesion Raw Score	Pearson Correlation	.263	1
	Sig. (2-tailed)	.093	
	N	42	42

*Research Question 3*

Pearson correlation was used to evaluate the relationship between enmeshed family cohesion and vocational identity. As shown in Table 16, there was a moderate negative relationship between perceived enmeshed family cohesion and vocational identity in emerging adults with ASD,  $r = -.35$ .

Table 16

*Correlations between Perceived Enmeshed Family Cohesion and VI in Emerging adults with ASD*

		Vocational Identity Score	Enmeshed Raw Score
Vocational Identity Score	Pearson Correlation	1	-.348*
	Sig. (2-tailed)		.024
	N	42	42
Enmeshed Raw Score	Pearson Correlation	-.348*	1
	Sig. (2-tailed)	.024	
	N	42	42

\*. Correlation is significant at the 0.05 level (2-tailed).

*Research Question 4*

Pearson correlation was used to evaluate the relationship between perceived disengaged family cohesion and vocational identity. As shown in Table 17, there was a moderate negative relationship between perceived disengaged family cohesion and vocational identity in emerging adults with ASD,  $r = -.39$ .

Table 17

*Correlations between Perceived Disengaged Family Cohesion and VI in Emerging adults with ASD*

		Vocational Identity Score	Disengaged Raw Score
Vocational Identity Score	Pearson Correlation	1	-.385*
	Sig. (2-tailed)		.012
	N	42	42
Disengaged Raw Score	Pearson Correlation	-.385*	1
	Sig. (2-tailed)	.012	
	N	42	42

\*. Correlation is significant at the 0.05 level (2-tailed).



## CHAPTER V

### CONCLUSION

#### **Discussion and Implications**

The current study examined how perceived family cohesion of emerging adults with ASD were related to vocational identity. Although the employment rates of emerging adults with ASD have increased, many emerging adults with ASD continue to need assistance from parents and caregivers. Thus, this relational study sought to understand how emerging adults with ASD's perception of family cohesion was related to their vocational identity.

#### Hypotheses

##### *Perceived overall family cohesion and vocational identity*

The first hypothesis asserted that overall perceived family cohesion would be related to the vocational identity of emerging adults with ASD. This hypothesis was supported by the findings. Additionally, the findings are also supported by previous finding that found perceived family cohesion to be related identity formation (Perosa & Perosa, 1993). Xiang et al. (2020) found a significant relationship between perceived family cohesion and overall wellbeing. Thus, findings suggest the way in which emerging adults with ASD perceived the overall cohesion of the family is related to their overall wellbeing. Xiang et al. (2020) also found family cohesion to be related to self-concept. The current study findings may provide a framework for understanding how emerging

adults with ASD's perception of family relates to their self-concept in making career choices.

*Perceived balanced family cohesion and vocational identity*

When families are perceived to have balanced cohesion, boundaries within the family are clear, and individuals have a balance between remaining emotionally connected to the family and developing autonomy (Olson, 2001). The current study did not find a statistically significant relationship between perceived balanced family cohesion and the vocational identity of emerging adults with ASD. These findings were unexpected and inconsistent with the findings of Walters (2019) who suggested that college students with ASD were more decisive about college majors and career decisions when they have supportive family.

Another possible explanation for the lack of a relationship between perceived balanced family cohesion and vocational identity could be related to difficulties in identifying the extremes in interactions that have become part of the normative functioning of the system. The current study focused on the emerging adults' perception of the family. Such information can be limiting because it does not account for how other individuals in the system view the overall family functioning. Additionally, enmeshed or disengaged may have been perceived as balanced by emerging adults who have grown accustomed to the enmeshed or disengaged nature of the family.

*Perceived enmeshed family cohesion and vocational identity*

The current study only found a small negative association between vocational identity and perceived enmeshed family cohesion among emerging adults with ASD. Findings suggested that perceived higher levels of enmeshed family cohesion were

associated with lower levels of vocational identity among study participants. The findings are consistent with research that suggests high levels of perceived family enmeshment are related to identity diffusion and difficulties in career decision making (Perosa & Perosa, 1993). Walton and Tiede (2020) noted that individuals with ASD have higher support needs than individuals with TD and hypothesized that high levels of family enmeshment would be related to positive outcomes for individuals with ASD. However, consistent with the current study findings, higher levels of enmeshment were not related to higher levels of positive outcomes (Walton and Tiede, 2020).

The findings suggest that some emerging adults in the current study perceived the family as enmeshed and may view the family as overly involved. Overly involved or enmeshed families tend to make decisions for individuals within the system without involving others in the process (Olson, 2006). Vocational identity involves the exploration and crystallization of career choices (Kroger, 2010). Thus, if emerging adults perceived the family as enmeshed, they may lack the confidence needed to initiate career exploration and commit to career choices.

#### *Perceived disengaged family cohesion and vocational identity*

The current findings also found a small negative correlation between perceived disengaged family cohesion and the vocational identity of emerging adults with ASD. Similar to enmeshed families, disengaged families represented extremes in the level of family cohesion in which families (Olson, 2000). Enmeshed or very disconnected families lack emotional closeness (Olson, 2000). Emerging adults with ASD may perceive disengaged as lacking emotional support needed when exploring and negotiating career choices. Additionally, emerging adults with ASD who perceive the family as disengaged

may be highly independent but may lack the confidence and support needed to make crystalized career decisions.

### **Clinical Implications**

In the current study, the extremes on the family cohesion were associated with lower levels of vocational identity achievement. Enmeshed families tend to be overly connected and overly involved in the lives of members of the subsystem (Olson, 2000). Whereas, disengaged families tend to be emotionally detached and may not consult with one another when it comes to individual decision making (Olson, 2000). Thus, when emerging adults perceive the family as enmeshed or disengaged, interventions should be administered to help create psychological distance and establish more clear boundaries within the system (Minuchin, 1981).

When emerging adults with ASD perceive the family as enmeshed or overly connected, parents and caregivers may view themselves as being helpful. However, emerging adults may perceive them as being overly involved in their decision-making process. The current findings suggest when emerging adults with ASD perceive too much family involvement, it might actually hinder them in making career decisions.

The goal of emerging adults is to be able to operate independently from the system. However, family systems also seek to maintain homeostasis, (Bowen, 1978). Thus, emerging adults who perceive the family as enmeshed or disengaged may continue behaviors that work to maintain the normative dysfunction of the system. When working with emerging adults who perceive the family as enmeshed, vocational rehabilitation counselors must be careful to create psychological distance in without alienating the family from the rehabilitation process.

Vocational rehabilitation counselors who use a family systems approach in clinical practice should also consider that changes within the family system are typically met with attempts by the system to bring the family system back to homeostasis. Thus, emerging adults who perceive the family as enmeshed might initially continue to overly involve parents and caregivers in the rehabilitation process. Additionally, emerging adults who perceive the family as disengaged may be accustomed to making decisions independently from the family system but lack the confidence to commit to career choices. When vocational rehabilitation counselors work with emerging adults with ASD who perceive the family to be enmeshed or disengaged, they should use career interventions that allow the emerging adult opportunities to be the expert.

### **Limitations**

The findings from the current study should be interpreted with consideration for the limitations. FACES IV has been previously normed using a database established by the author (Olson, 2011) in which researchers who have previously used the measure were asked to voluntarily report the sample and the research findings to the research author (Olson, 2011). The current study is limited in that the findings in the current study may be the result of a small sample  $n= 42$ . A larger sample sizes would have provided more accuracy when interpreting the findings of the current study (Creswell and Creswell, 2018).

The findings for the current study are also limited because the survey participants were purposefully sampled to include emerging adults with ASD, and participants were recruited from online social media based support groups for individuals with ASD. Thus, individuals with ASD who do not participate in ASD support groups may have been

excluded from the study. Furthermore, previous research indicates that individuals who attend ASD support groups tend to be individuals from “middle- and upper-income, more educated, married, suburban whites” (Mandell & Salzer, 2007). Diversity in recruitment methods might assist in avoiding a homogenous sample.

Data collection took place during the widespread of COVID-19, a global pandemic. Thus, the pandemic limited the researcher’s ability to recruit a larger number of participants for the current study. The pandemic also changed who individuals lived and worked and may have influenced how participants answered survey questions. For example, some participants may have indicated their temporary living arrangements on the survey versus their permanent living arrangements.

### **Future Directions**

Families are complex interconnected systems. While the current study does not provide a complete framework for understanding how families impact or influence the career decision making of individuals with ASD, it provides a preliminary basis for future exploration. Future research that examines the relationship between family and the vocational identity development of emerging adults with ASD should clarify the extent to which enmeshed or disengaged families influence the vocational identity development of individuals with ASD. Furthermore, future research should address specific patterns that may exist within enmeshed or disengaged families that may cause vocational identity developmental concerns. Lastly, future research should also seek to increase the sample size to include heterogeneous samples that are representative of the population to allow generalizability of the findings. Research with individuals with ASD is dependent on individuals understanding the personal or global benefit of their participation (Haas et al,

2016). Thus, it may be more beneficial for the research to engage in more active recruitment methods that provide opportunities to explain the purpose of the research (Haas et al, 2016).

### **Surprising outcomes**

The current study consisted of 42 emerging adults with ASD, but the demographics of the samples should be taken into consideration with the implications of the findings. The sample consisted of a slightly higher number of males than females in the study. The high number of females in the sample was surprising considering males are four times more likely to be diagnosed with ASD than females (Schuck, F., 2019)

Another surprising finding in the current study was the range of income among participants. Income demographic findings showed more than half of the participants reported income levels between \$31,000-\$99,000. The reported income levels seemed high for the age group. Income levels also seemed high for a population that is often unemployed or underemployed. Thus, it should be noted that participants were not asked to specify whether income levels were their incomes or the income of the family of origin.

The high number of individuals that reported completing college was also surprising. Such findings were surprising because previous research found that emerging adults of ASD experience difficulties in higher education (Anderson et al, 2016). However, participants were not asked to specify whether college completed was a 2-year college, 4-year college/university, or Career or Technical college. with ASD.

The findings showed a high number of research participants reported living alone. These findings were surprising and inconsistent with previous research that found emerging adults with ASD tend to live at home longer. However, data collection for the current study occurred during the start of a global pandemic, and the living arrangements for many individuals were altered due to various government mandated stay-at-home orders. The demographics survey only allowed participants to choose one answer regarding living arrangements. Thus, the living arrangements findings may reflect the living arrangements of the participant during the time of the survey, but it may not reflect the traditional living arrangements of participants.

### **Conclusions and Final Thoughts**

This study was relational in nature. Additional research is needed to examine how family interactions influence the vocational identity status of emerging adults with ASD. As previously mentioned, the current study was the first study to examine how emerging adults with ASD's perception of the family is related vocational identity development. Future studies should examine how both emerging adults with ASD and their caregivers perceived family cohesion and its relationship to family cohesion. For vocational rehabilitation counselors, privacy and confidentiality concerns and large caseloads can preclude them from involving parents and caretakers in the career development process of emerging adults. However, it should be noted that when working with individuals, it is difficult to provide career related services in isolation from families and support systems. Thus, it is the hope that this study has provided a rationale for the importance of involving parents in the career decision making process and serving families alongside of the individual seeking career related services.



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## APPENDICES

### APPENDIX A

#### Demographic Questionnaire

Age:

Gender:

- Male (1)
- Female (2)
- M2F (3)
- F2M (4)
- Please Specify: (5) \_\_\_\_\_

Do you have a diagnosis of Autism?

- Yes (1)
- No (2)

Education:

- Some high school (1)
- Completed High school (2)
- Some college (3)
- Completed College (4)
- Advanced degree (5)

Income: (If relevant)

- Less than \$10,000 (1)
- \$10,000 - \$20, 999 (2)
- \$21,000 - \$30,999 (3)
- \$31,000 - \$40,999 (4)
- \$41,000 - \$50,999 (5)
- \$51,000 - \$60,999 (6)

- 
- \$61,000 - \$80,999 (7)
  - \$81,000 - \$99,999 (8)
  - \$80,000 - \$89,999 (9)
  - \$100,000 or more (10)

Ethnic Background: (check all that apply)

- Asian American (1)
- Black or African American (2)
- Hawaiian or Pacific Islander (3)
- Hispanic/ Latino (4)
- Mixed Race (5)
- Native American (6)
- White/Caucasion (7)

Current Relationship status:

- Single, never married (1)
- Single, divorced (2)
- Single, widowed (3)
- Married, first marriage (4)
- Married, not first marriage (5)
- Life-partnered (6)
- Living together (7)
- Separated (8)

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Current Living Arrangement

- Alone (1)
- With Parents (2)
- With Partner (3)
- With Other (4)
- With Children (5)
- With Partner and Children (6)

Employment Status

- [Unemployed](#) (1)
- [Student](#) (2)
- [Employed Part-Time](#) (3)
- [Employed Full-Time](#) (4)
- [Self-Employed](#) (5)

## APPENDIX B

### Participant Informed Consent Form



#### **PARTICIPANT INFORMATION OKLAHOMA STATE UNIVERSITY**

**Title:** The Role of Family Cohesion in Influencing the Vocational Identity Status of Emerging Adults with Autism Spectrum Disorder

**Investigator(s):** Ashley R. Bryant MS, LPC

**Purpose:** This study seeks to provide an understanding of how families influence the vocational identity status of emerging adults with Autism Spectrum Disorder (ASD). You must be between the ages of 18-25 years or older to participate.

**What to Expect:** This research study is administered online. Participation in this research will involve completion of two questionnaires. Please answer all questions to the best of your ability. You will be expected to complete the questionnaire once. It should take you about 45-60 minutes to complete.

**Risks:** There are no risks associated with this project which are expected to be greater than those ordinarily encountered in daily life.

**Benefits:** There are no direct benefits to you. However, you may gain an appreciation and understanding of how research is conducted.

**Compensation:** Your participation is voluntary. At the completion of your survey, you will receive a \$25 electronic gift card.

**Your Rights and Confidentiality:** Your participation in this research is voluntary. There is no penalty for refusal to participate, and you are free to withdraw your consent and participation in this project at any time.

**Confidentiality :** The records of this study will be kept private. Any written results will discuss group findings and will not include information that will identify you. Research records will be stored on a password protected computer in a locked office and only researchers and individuals responsible for research oversight will have access to the records. Data will be destroyed three years after the study has been completed.

**Contacts :** You may contact any of the researchers at the following addresses and phone numbers, should you desire to discuss your participation in the study and/or request information about the results of the study: Principal Investigator: Ashley Bryant 405-202-1027 [abryant@okstate.edu](mailto:abryant@okstate.edu) or Advisor: Julie Koch PhD, 405-744-6040; [julie.koch@okstate.edu](mailto:julie.koch@okstate.edu).

For information on participants' rights, contact Dawnett Watkins, IRB Chair, 219 Cordell North, Stillwater, OK 74078, 405.744.3377 or [irb@okstate.edu](mailto:irb@okstate.edu).

**If you choose to participate :** Please, click YES if you choose to participate. By clicking YES, you are indicating that you freely and voluntarily and agree to participate in this study and you also acknowledge that you are at least 18 years of age.

It is recommended that you print a copy of this consent page for your records before you begin the study by clicking below.

- Yes, I consent to participate in the current study
- No, I do not wish to participate on the current study



# VOLUNTEERS NEEDED



Doctoral student seeking research participants for study on how family influences career decisions for young adults with Autism

## WHO DO WE NEED?

- Individuals with Autism between the ages of 18-24
- Be willing to participate in an online survey. Survey takes about 20-25 minutes to complete
- Survey participants will be compensated \$25



## TO PARTICIPATE, PLEASE EMAIL:

Ashley Bryant MS, LPC, CRC  
Oklahoma State University  
Doctoral Candidate  
athorn@okstate.edu



## APPENDIX D

### PERMISSION TO USE FACES IV



**Ashley Bryant**  
**September 11, 2017**

### **Permission to Use FACES IV Package**

We are pleased to give you permission to use the **FACES IV Package** in your research project, teaching or clinical work with couples or families. In order to use FACES IV, you must use the entire FACES IV Package which contains 62 items.

You may either duplicate the materials directly or have them retyped for use in a new format. If they are retyped, acknowledgement should be given regarding the name of the instrument, the developers' names, and PREPARE/ENRICH, LLC.

In exchange for providing this permission, we would appreciate a copy of any papers, theses or reports that you complete using the **FACES IV Package**. This will help us to stay abreast of the most recent developments and research regarding this scale. Also, we are requesting that you provide us with a *set of your data* so that we can build a large and diverse norm base. We will acknowledge your contribution to the master database. We will not use your data for individual studies on your topic or any topic. We would appreciate it if you used the format we have provided in an Excel spreadsheet (Microsoft). We thank you for your cooperation in this effort.

In closing, we hope you find the **FACES IV Package** of value in your work with families.

APPENDIX E

MY VOCATIONAL SITUATION

My Vocational Situation

Name \_\_\_\_\_ Date \_\_\_\_\_ M \_\_\_ F \_\_\_ Age \_\_\_\_\_
Education completed \_\_\_\_\_ Other \_\_\_\_\_

List all the occupations you are considering right now.

Four sets of horizontal lines for writing occupations.

Try to answer each of the following statements as mostly TRUE or mostly FALSE. Circle the answer that best represents your present opinion.

In thinking about your present job or in planning for an occupation or career:

- 1. I need reassurance that I have made the right choice of occupation. T F
2. I am concerned that my present interests may change over the years. T F
3. I am uncertain about the occupations I could perform well. T F
4. I don't know what my major strengths and weaknesses are. T F
5. The jobs I can do may not pay enough to live the kind of life I want. T F
6. If I had to make an occupational choice right now, I'm afraid I would make a bad choice. T F
7. I need to find out what kind of career I should follow. T F
8. Making up my mind about a career has been a long and difficult problem for me. T F
9. I am confused about the whole problem of deciding on a career. T F
10. I am not sure that my present occupational choice or job is right for me. T F
11. I don't know enough about what workers do in various occupations. T F
12. No single occupation appeals strongly to me. T F
13. I am uncertain about which occupation I would enjoy. T F
14. I would like to increase the number of occupations I could consider. T F
15. My estimates of my abilities and talents vary a lot from year to year. T F
16. I am not sure of myself in many areas of life. T F
17. I have known what occupation I want to follow for less than one year. T F
18. I can't understand how some people can be so set about what they want to do. T F

(over)



For questions 19 and 20, circle YES or NO.

19. I need the following information:

- |  |   |   |
|--|---|---|
| How to find a job in my chosen career.                 | Y | N |
| What kinds of people enter different occupations.      | Y | N |
| More information about employment opportunities.       | Y | N |
| How to get the necessary training in my chosen career. | Y | N |

Other: .....

20. I have the following difficulties:

- |  |   |   |
|--|---|---|
| I am uncertain about my ability to finish the necessary education or training. | Y | N |
| I don't have the money to follow the career I want most.                       | Y | N |
| I lack the special talents to follow my first choice.                          | Y | N |
| An influential person in my life does not approve of my vocational choice.     | Y | N |

Anything else? .....

Other comments or questions: .....

Developed by John L. Holland, Denise C. Daiger, and Paul G. Power.

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This form is available under Faculty/Resources for Professionals at the University of Maryland, Department of Counseling and Personnel Services Web site: <http://www.education.umd.edu/EDCP/tools/MVS/MVS.html>



APPENDIX F  
IRB APPROVAL

**Oklahoma State University Institutional Review Board**

Date: Monday, December 4, 2017  
IRB Application No ED17102  
Proposal Title: The Role of Family Cohesion in Influencing the Vocational Identity Status of Emerging Adults with Autism Spectrum Disorder

Reviewed and Processed as: Exempt

**Status Recommended by Reviewer(s): Approved Protocol Expires: 12/3/2020**

Principal Investigator(s):  
Ashley Bryant Starla Halcomb  
Stillwater, OK 74078 Stillwater, OK 74078

---

The IRB application referenced above has been approved. It is the judgment of the reviewers that the rights and welfare of individuals who may be asked to participate in this study will be respected, and that the research will be conducted in a manner consistent with the IRB requirements as outlined in section 45 CFR 46.

- The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

As Principal Investigator, it is your responsibility to do the following:

- 1Conduct this study exactly as it has been approved. Any modifications to the research protocol must be submitted with the appropriate signatures for IRB approval. Protocol modifications requiring approval may include changes to the title, PI advisor, funding status or sponsor, subject population composition or size, recruitment, inclusion/exclusion criteria, research site, research procedures and consent/assent process or forms.
- 2Submit a request for continuation if the study extends beyond the approval period. This continuation must receive IRB review and approval before the research can continue.
- 3Report any adverse events to the IRB Chair promptly. Adverse events are those which are unanticipated and impact the subjects during the course of the research; and
- 4Notify the IRB office in writing when your research project is complete.

Please note that approved protocols are subject to monitoring by the IRB and that the IRB office has the authority to inspect research records associated with this protocol at any time. If you have questions about the IRB procedures or need any assistance from the Board, please contact Dawnett Watkins 219 Scott Hall (phone: 405-744-5700, dawnett.watkins@okstate.edu).

Sincerely,



Hugh Crethar, Chair  
Institutional Review Board

APPENDIX G  
IRB MODIFICATION

**Oklahoma State University Institutional Review Board**

Date: Tuesday, March 10, 2020      **Protocol Expires: 12/3/2020**  
IRB Application No: ED17102  
Proposal Title: The Role of Family Cohesion in Influencing the Vocational Identity Status  
of Emerging Adults with Autism Spectrum Disorder  
  
Reviewed and Exempt  
Processed as: **Modification**  
  
Status Recommended by Reviewer(s) **Approved**  
Principal Investigator(s):  
  
Ashley Bryant      Starla Halcomb  
Stillwater, OK 74078      Stillwater, OK 74078

---

The requested modification to this IRB protocol has been approved. Please note that the original expiration date of the protocol has not changed. The IRB office **MUST** be notified in writing when a project is complete. All approved projects are subject to monitoring by the IRB.

- The final versions of any printed recruitment, consent and assent documents bearing the IRB approval stamp are attached to this letter. These are the versions that must be used during the study.

The reviewer(s) had these comments:

expand participation to individuals with ASD across the U.S., recruit via social media and national groups, pay participants \$25

---

Oklahoma State University Institutional Review Board

Tuesday, March 10, 2020  
Date

VITA

Ashley R. Bryant

Candidate for the Degree of

Doctor of Philosophy

Thesis: THE ROLE OF FAMILY COHESION IN INFLUENCING THE  
VOCATIONAL IDENTITY STATUS OF EMERGING ADULTS WITH  
AUTISM SPECTRUM DISORDER

Major Field: Workforce and Adult Education

Biographical:

Education:

Completed the requirements for the Doctor of Philosophy in Workforce and Adult Education at Oklahoma State University, Stillwater, Oklahoma in December, 2020.

Completed the requirements for the Master of Science in Rehabilitation Counseling at Langston University, Bethany, Oklahoma in 2012.

Completed the requirements for the Bachelor of Science in Family Studies and Gerontology at Southern Nazarene University, Bethany, Oklahoma in 2010.

Experience:

Psychotherapist, 2015-Present  
Legacy Family Services, Inc. Oklahoma City, OK

Vocational Rehabilitation Counselor, 2012- Present  
Oklahoma Department of Rehabilitation, Oklahoma City, OK