2011

The Role of Siblings in the Identity Formation Process of Emerging Adults

A. Mercedes Nalls
The members of the committee approve the dissertation of A. Mercedes Nalls defended on March 28, 2011.

Ronald L. Mullis  
Professor Directing Dissertation

Patrice Iatarola  
University Representative

Ann K. Mullis  
Committee Member

Marsha Rehm  
Committee Member

Received:

B. Kay Pasley, Chair, Department of Family and Child Sciences

Billie J. Collier, Dean, College of Human Sciences

The Graduate School has verified and approved the above-named committee members.
ACKNOWLEDGEMENTS

First, I would like to acknowledge the Kappa Omicron Nu New Initiatives Grant that made my dissertation research possible. Next, I would like to thank the members of my dissertation committee—Drs. Ronald Mullis, Ann Mullis, Marsha Rehm, and Patrice Iatarola—for their helpful feedback and support.

I would like to extend a special thanks to the Mullis-Cornille-Mullis (MCM) team. When I think of the past five years the following quote from Ralph Waldo Emerson comes to mind, “...to know even one life has breathed easier because you have lived. This is to have succeeded.” I could not have completed this program without your guidance, support, understanding, and senses of humor! I am so thankful to have such wonderful mentors.

I would also like to thank my parents for sacrificing all those years so that I could go to the best schools. Thank you for pushing me academically. This Ph.D. was possible because of your constant encouragement.

Finally, I would like to acknowledge my husband, Luke. I know for sure that I could not have finished this program without my study partner. Thanks for suffering with me!
# TABLE OF CONTENTS

List of Tables................................................................................................................................... v  
Abstract .......................................................................................................................................... vi  

## INTRODUCTION ......................................................................................................................... 1  
Identity Agents .............................................................................................................................. 2  
Purpose of Study ............................................................................................................................. 3  
Research Questions and Hypotheses................................................................................................. 3  
Definition of Terms ......................................................................................................................... 4  
Delimitations .................................................................................................................................... 5  

## LITERATURE REVIEW ............................................................................................................... 6  
Emerging Adulthood ......................................................................................................................... 6  
Eriksonian and Neo-Eriksonian Identity Theory ............................................................................... 7  
Identity Status Extensions ............................................................................................................... 7  
Self-Discovery versus Self-Construction Identity Processes ............................................................... 8  
Identity Formation within a Relational Context ............................................................................. 11  
Identity Agents ............................................................................................................................... 11  
Identity Theory and Sibling Relationships ....................................................................................... 14  
Siblings as Identity Agents ............................................................................................................... 15  
Sibling Relationships ..................................................................................................................... 16  
Sibling Relationships in Emerging Adulthood ............................................................................... 17  
Sibling Gender Composition .......................................................................................................... 18  
Sibling Birth Order ........................................................................................................................... 19  
Racial/Ethnic Background ............................................................................................................... 20  
Sibling Age Spacing ....................................................................................................................... 21  
Parental Divorce and Remarriage ................................................................................................. 22  
Limitations of Current Literature .................................................................................................... 23  
Summary ......................................................................................................................................... 23  

## METHODOLOGY ........................................................................................................................ 24  
Instrumentation............................................................................................................................... 24  
Identity Status ................................................................................................................................. 24  
Identity Style ..................................................................................................................................... 27  
Personal Expressiveness ................................................................................................................... 27  
Sample ............................................................................................................................................... 28  
Sources of Advice ............................................................................................................................ 31  
Online Discussion Groups ............................................................................................................... 37  
Missing Data ..................................................................................................................................... 40  
Data Analysis Plan ............................................................................................................................ 40  

## RESULTS ..................................................................................................................................... 42  
Scoring Subscales .............................................................................................................................. 42
LIST OF TABLES

Table 1 Demographic Information on Respondents ................................................................. 29
Table 2 Percentage of Participants by College and Major ................................................... 30
Table 3 Frequencies of Other Sources of Advice Listed by Participants across Identity Domains .................................................................................. 32
Table 4 Number of Missing Items ......................................................................................... 34
Table 5 Final Sample Selection for Online Discussion Activity ........................................ 35
Table 6 Sibling versus Peer Discussion Group Comparisons across Demographic and Identity Support Variables ........................................................................... 35
Table 7 Demographic Information on 43 Sibling Discussion Pairs ..................................... 37
Table 8 Demographic Information on Peer Discussion Participants ..................................... 39
Table 9 Means, Standard Deviations, Ranges, Skewness and Kurtosis Values on Identity Observed Variables and Total Identity Support Scores............................. 43
Table 10 Bivariate Correlations among the Identity Measures .......................................... 62
Table 11 Means and Standard Deviations from the Identity Support Measure ................... 63
Table 12 Regression Analyses of the Relation between Demographic and Identity Variables and Total Sibling Support ........................................................................ 46
Table 13 Categories, Definitions, and Examples from Sibling Discussion Posts .................. 48
Table 14 Frequency of Specific Topics Found in Sibling and Peer Advice ......................... 50
ABSTRACT

The primary goal of the current study was to explore who emerging adults consult regarding their identity issues and to explore the characteristics of emerging adults who consult siblings. Another goal was to examine the advice and support of siblings and peers related to the career and educational goals of emerging adults. A mixed method approach was used. The sample consisted of 396 students with a smaller subsample asked to participate in an online discussion forum with their sibling (N = 43) or peers (N = 24). Online discussions were analyzed for concepts and themes related to types of advice or informational support given to aid a sibling or peer in their identity formation process. Participants reported seeking the most advice from friends, parents, significant others, and siblings regarding long term goals and careers. Participants reported seeking advice from siblings the most regarding long term goals. Regarding the demographic and identity formation characteristics of participants who reported frequently consulting siblings, the number of siblings reported was the strongest predictor followed by the normative and diffuse-avoidant identity styles. Related to patterns found in sibling and peer advice, no differences were found with both groups providing cognitive-emotional and behavioral advice in their feedback posts. Student participants and related siblings ascribed a more important role to siblings over peers in their identity formation processes. The need for further research on siblings as identity agents was discussed.
CHAPTER ONE

INTRODUCTION

Erikson (1964) described adolescence as a time for identity exploration where identifications from childhood are questioned. Physical and cognitive developments spur on the individual and society to require the adolescent to begin making commitments to a future career and political or religious ideologies. Erikson’s theoretical crisis of identity was further developed by Marcia (1966) who operationalized the construct as consisting of two orthogonal dimensions: exploration and commitment. Marcia described exploration as the process where individuals sort through numerous alternatives, and commitment as referring to when individuals make a choice to commit to one of the alternatives across domains such as career, romantic attachments, political and religious beliefs to name a few. The two dimensions yield four identity statuses: achievement (high commitment and exploration), diffusion (low commitment and exploration), foreclosure (high commitment and low exploration), and moratorium (low commitment and high exploration).

In the modern world, the developmental tasks of adolescence, such as identity formation, extend into college or graduate school, a period Arnett (2007) termed emerging adulthood. College campuses are places where individuals are “actively engaged in forming their identities” (Penuel & Wertsch, 1995, p. 83). During emerging adulthood, decisions related to relationships, belief systems, education, and occupations become more salient. Côté and Levine (2002) argued that the extended period, characterized by few normative demands, offered to emerging adults to explore their identity has placed the burden on families, teachers, and other adults to be the main source of support related to identity formation. Identity theorists have recognized that the identity formation process of emerging adults has grown more complex as they are allowed to explore the numerous opportunities offered and also to delay adult responsibilities in order to gain the skills necessary to join the modern workforce (Arnett, 2007).

Neo-Eriksonian theorists have characterized the identity formation process as cyclical in nature where individuals explore their options (i.e., moratorium), make commitments (i.e., achievement), and continually evaluate those commitments and explore them in depth (e.g., Luyckx, Goossens, Soenens, Beyers, & Vansteenkiste, 2005). For example, Berzonsky (1990) argued that individuals explore and evaluate commitments by seeking out many conflicting
sources of information, consulting parents, or even avoiding the topic. Others evaluate commitments based on how they fit with their ideal self (e.g., Waterman, 1990). Schwartz (2002) argued that in combining the self-construction (e.g., Berzonsky) and self-discovery (e.g., Waterman) processes a coherent identity can be achieved. He suggested a process model where self-construction aided by self-discovery is viewed as the path and self-realization as the destination. Schwartz theorized that an individual could begin to purposely explore alternatives in building an identity (e.g., self-construction) or serendipitously discover an aspect that fits with his or her ideal self. Both paths would require the individual to weigh alternatives and evaluate commitments and he concluded that others should guide emerging adults in the process and tailor their intervention to how emerging adults approach their identity formation path. Schwartz’s model provides the theoretical foundation for this study.

Identity Agents

Previous identity research has ignored the role of others as intentional agents in the identity formation processes of emerging adults (Schachter & Ventura, 2008). Highlighting this oversight, Schachter and Ventura formulated the concept of identity agents as individuals who actively participate in the identity formation youth. Identity agents are concerned for the individual’s identity formation and are aware of their role, theories, goals, and practices related to the individual’s identity formation. Recent research has suggested teachers (Harrell-Levy & Kerpelman, 2010), peers (Sugimura & Shimizu, 2010), therapists (Blume, 2010), and parents (Von Korff, Grotevant, Koh, & Samek, 2010; Schachter & Ventura, 2008) as potential identity agents. Siblings have not been mentioned.

In a parallel body of literature, researchers of career decision making processes have found that individuals make decisions within the context of relationships (Blustein, Phillips, Jobin-Davis, Finkelberg, & Roarke, 1997; Schultheiss, Kress, Manzi, & Glasscock, 2001; Schultheiss, Palma, Predragovich, & Glasscock, 2002). Schultheiss and colleagues have found that siblings are frequently listed by emerging adults as frequent sources of support during times of career exploration and transition. Goetting (1986) and Cicirelli (1980; 1995) argued that emerging adults turn to siblings for multidimensional support and that the sibling relationship over time increases in warmth and decreases in conflict. Dolgin and Lindsay (1999) found that siblings discussed career plans 70% of the time and cited “to gain information” or “to seek emotional support” as frequent motivations for these discussions. Myers and Bryant (2006) also
found that siblings demonstrate their commitment to each other by offering emotional, informational, and instrumental support in addition to defending each other and interpreting parental behavior.

With Hispanic samples, researchers have found that older siblings who were no more than seven years older (e.g., Hurtado-Ortize & Gauvain, 2006) and had already graduated college (Ceja, 2007) helped younger siblings with decisions related to the college selection, the application process, selecting a major, and tutoring. Given the empirical and theoretical justification for the role of siblings, Tucker, Barber, and Eccles (2001) asserted that research on the content of sibling advice is needed.

**Purpose of Study**

In sum, previous researchers have not drawn a connection between identity formation, specifically in the career or future plans domain, and the role of siblings as identity agents. Furthermore, identity researchers have not examined who emerging adults consult for advice. The purpose of this study was to explore who emerging adults consult regarding their identity issues and the characteristics of emerging adults who consult siblings. Characteristics that are related to emerging adult identity formation were examined such as their level of exploration and commitment, how they have constructed and/or discovered their identity, or if they have avoided exploring their identity. Identifying the prevalence of sibling advice and support in relation to these theoretical constructs was a goal of this study. In addition, another goal was to generate a descriptive account consisting of any discriminating demographic characteristics and identity characteristics of emerging adults who seek advice from siblings. The demographic variables that were explored are the participants’ age, gender, year in college, ethnic/racial background, family size (i.e., number of biological and step/half-siblings), and parents’ marital status and education. Additionally, the sibling gender, birth order, and age spacing were examined as well.

**Research Questions and Hypotheses**

Given the need for exploratory research on who emerging adults consult for advice regarding their identity formation and a literature establishing siblings as an important source of support in emerging adulthood, the following research questions were examined:

1. **Who do emerging adults consult for advice?**
2. **Who is likely to consult a sibling?**
In order to answer the first two research questions, participants completed an online survey with items related to demographic information and identity formation variables.

Overall, participants were expected to report frequently seeking advice from all groups, including parents, siblings, friends, significant others, clergy, and teachers/professors (e.g., Blustein et al., 1997; Sanchez, Reyes, & Singh, 2006). Based on previous research on sibling relationships, it was expected that participants will differ in their use of siblings as identity agents based on ethnic/racial background (Tucker & Updegraff, 2009), family size (Milevsky, Smoot, Leh, & Ruppe, 2005) and parent education (Hurtado-Ortiz & Gauvain, 2007). Specifically, participants from minority families, those who come from smaller families, and those that have parents who are not college educated are more likely to report frequently seeking advice from a sibling over other groups. Given the exploratory nature of this study hypotheses relating identity variables to those who choose to consult siblings over other groups were not proposed.

3. What characterizes the sibling that is contacted to participate?

In order to answer the third research question, siblings completed a brief online survey with only demographic items related to age, gender, level of education, and racial/ethnic background. Based on previous research on sibling relationships in emerging adulthood, it was expected that the sibling contacted would be a biological sibling (White & Reidman, 1992) who is older (on average by five years; Schultheiss et al., 2001; 2002) and female (e.g., Cicirelli, 1980; Tucker, Barber, & Eccles, 1997).

4. What is the content of advice given by siblings?

The sibling’s online feedback to an identity essay posted by the participant was analyzed for emergent themes related to social and identity support.

Definition of Terms

1. Emerging adult - The period from 18 to 25 years (Arnett, 2007).
2. Sibling - Any biological or step/half-sibling identified by the participants.
3. Identity agent - An individual who functions as an active agent in the identity formation of another. Identity agents have a concern for an individual’s identity formation and are aware of their role, theories, goals, and practices related to the individual’s identity formation (Schachter & Ventura, 2008).
4. Identity dimensions - The types of exploration (i.e., exploration in depth, exploration in breadth, and ruminative exploration) and commitment (i.e., commitment making and identification with commitment) reported by the participant using the Dimensions of Identity Development Scale.

Delimitations

This study was limited to participants who were undergraduates taking online courses in the College of Human Sciences. Only online courses were included because the sibling and peer comparison group discussions occurred online. There were no limitations regarding the sibling participants.
CHAPTER TWO

LITERATURE REVIEW

In this chapter, theory is presented along with empirical findings related to emerging adult identity formation processes and the role of siblings as identity agents. Emerging adulthood is defined as the period lasting from age 18 to the mid-twenties (Arnett, 2007). First, identity theory is discussed, specifically identity formation in emerging adulthood, recent expansions to Eriksonian identity theory, and the role of others in identity formation. Next the literature related to the role and characteristics of sibling relationships in emerging adulthood is reviewed, including gender composition, birth order, racial/ethnic background, age spacing, and parental divorce and remarriage.

Emerging Adulthood

Currently, youth in industrialized countries are offered an extended period to explore their identity as adult responsibilities are delayed (Arnett, 1998). Erikson (1968) described this period as a psychosocial moratorium, stating that “during which the young adult through free role experimentation may find a niche in some section of his society” (p. 156). Individuals are delaying marriage and parenthood to explore potential careers, romantic attachments and worldviews (Arnett, 2004). Arnett typified this time as the “most volitional years of life” and described the various and unpredictable demographic characteristics of this period. He distinguished a period he has termed emerging adulthood from adolescence and early adulthood. Unlike adolescence and early adulthood (e.g., late twenties), Arnett stated that emerging adults are less likely to be classified within specific demographic norms and as a group fall within a wide range of possible roles, residential and school/career statuses. Additionally, he argued that few adolescents have a coherent identity by the end of high school and emerging adulthood, offers more opportunities for exploration, especially when an individual is enrolled in college.

In emerging adulthood, explorations related to relationships and career become more serious though still can be characterized by a certain amount of experimentation given the relative absence of adult responsibilities (Arnett). Overall identity issues, especially related to future plans and career aspirations (Danielson, Loren, & Kroger, 2000), become central during the emerging adult period (Arnett, 2004). Erikson (1968) identified work as an important domain of identity development and defined identity as an “inner sense of…sameness and
continuity…matched by the sameness and continuity of one’s meaning to others, as evidenced in the tangible promise of a ‘career’” (p.262).

**Eriksonian and Neo-Eriksonian Identity Theory**

Erikson’s theoretical crisis of identity was further developed and extended by Marcia (1966). Marcia operationalized Erikson’s construct of identity along two orthogonal dimensions: exploration and commitment. Marcia described exploration as the process where individuals sort through numerous alternatives, and commitment as referring to when individuals make a choice to commit to one of the alternatives across domains such as career, romantic attachments, political and religious beliefs to name a few. The two dimensions yield four identity statuses: achievement (high commitment and exploration), diffusion (low commitment and exploration), foreclosure (high commitment and low exploration), and moratorium (low commitment and high exploration). Since Marcia’s conceptualization of identity as the process of exploration with the aim of making commitments, most research has been devoted to validating, exploring, and identifying correlates, such as personality characteristics or family context, of Marcia’s identity statuses (Schwartz, 2001).

**Identity Status Extensions**

Recently, Luyckx and colleagues (2005) have extended Marcia’s identity statuses. They cited the lack of convergent validity among measures related to Marcia’s statuses, especially in assigning the diffused and foreclosed statuses. They have further “unpacked” (Luyckx, Goossens, Soenens, & Beyers, 2006) Marcia’s two dimensions of exploration and commitment. Luyckx and colleagues argued that Marcia’s process of commitment can be divided into two processes: one where commitments are made called *commitment making*, which is similar to Marcia’s construct and another where commitments are evaluated called *identification with commitment*. Likewise, they argued that exploration should be divided into two separate constructs: *exploration in depth* and *exploration in breadth*, the latter being similar to Marcia’s original exploration construct. The added dimensions of identification with commitment and exploration in depth capture the ongoing re-evaluation and certainty related to current commitments and further exploration regarding those choices that is part of a moratorium-achievement cycle of identity formation (Luyckx et al., 2005, 2006).

As a final extension of Marcia’s dimensions, Luyckx, Schwartz, Berzonsky, Soenens, Vandsteenkiste, Smits, and Goossens (2008) distinguished among those who experience
moratorium as part of a natural course and those who experience distress while in moratorium by adding a dimension called *ruminative exploration*. These dimensions when combined produce six identity statuses: achievement, foreclosure, moratorium, ruminative moratorium, carefree diffusion, and diffused diffusion. With the additional statuses, Luyckx and colleagues further captured some of the variability in identity formation processes specifically in pathways to commitment making observed among emerging adults. Kunnen and Bosma (2003) highlighted this variability as a central problem of identity status development models.

**Self-Discovery versus Self-Construction Identity Processes**

An alternative process model has been offered by Schwartz (2002) by combining two mechanisms of identity formation that have traditionally been seen as existing on opposite poles, one based on self-discovery and the other on self-construction. The self-discovery perspective has been put forward by Waterman (1990) where an individual discovers their *daimon* or true self. Waterman based his theory on Aristotle’s concept of *eudaimonia*. *Eudaimonia* is related to an individual’s sense of purposefulness. Waterman asserted that an individual explores and interacts with his or her context in order to determine inner potential or capabilities. They may discover this by experiencing what Czikszentmihályi (1975) called “flow” when they are performing a certain activity. Waterman (2004) summarized the experience listing the following: “having clear goals, feeling in control, losing track of time, having a high level of concentration, and forgetting personal problems” (p. 212). Waterman called these kinds of commitments personally expressive and described them to be driven by intrinsic motivation.

On the other hand, Berzonsky (1989; 1990) advocated for a self-constructive identity formation process. He theorized that adolescents use particular problem-solving or decision making styles in handling identity related information. He argued that personal styles are relatively unchanging and tap the ego synthesis aspect of identity formation often previously neglected by researchers. He described three styles: informational, normative, and diffuse/avoidant. An adolescent who uses an informational style is open to receiving contradictory or incongruent information related to their potential identity commitments. They explore using many sources before committing; whereas adolescents who use a normative style tend to look to those in authority such as parents or ministers for identity related information. Finally, adolescents who use a diffuse/avoidant style tend to be uninterested in identity related information or tend to haphazardly explore.
Schwartz (2002) argued that both the self-discovery and self-construction perspective captures an aspect of the person-context interaction Erikson emphasized. He underscored that though the two perspectives appear to be incompatible on the surface, the underlying processes of rational versus intuitive decision making are not incompatible, stating the following:

A person could easily consider the relative benefits and risks of a given identity alternative while at the same time estimating the degree of fit or meshing that he or she experiences when engaged in activities reflective of that alternative. Using this type of integrative decision-making process, it would seem that options fulfilling both rational and intuitive criteria would have the best chance of being selected and integrated into one’s sense of self (p.322).

Schwartz highlighted that both perspectives share a similar outcome: a coherent identity. Both have been associated in similar patterns with the achieved and diffused statuses, such that an informational style and personal expressiveness were associated with the achieved status and a diffuse/avoidant style and low levels of personal expressiveness were associated with the diffused status in a sample of emerging adults (Schwartz, 2002). Likewise, Schwartz has found that the level of personal expressiveness is highest in those who have an informational style versus among those who have a normative and diffuse/avoidant style. Given their relationship, Schwartz argued that combining the two perspectives better captures Erikson’s dual foci of self and context and provides a mechanism for identity change.

Schwartz (2002) suggested a process model where self-construction is viewed as the path and self-discovery as the destination, stating that “those who have constructed a consistent and effective path and have reached a personally meaningful and self-realized destination would likely be characterized by both stability, based on having followed a steady path, and passion, emanating from having formed an identity consistent with their unique potentials, talents, and skills” (p. 329). He highlighted that one without the other would lead to frustration. Based on his assessment he presented the following model (Figure 1).
Figure 1. *Schwartz’s Identity Change Model*


The first step is based on a distinction in the way emerging adults approach identity formation in most Western cultures where little institutional guidance is offered (Côté & Levine, 2002). Schwartz (2002) distinguished developmental individualization from default individualization. The former describes individuals who choose to be proactive and purposeful in building their identity by exploring the multifarious opportunities available in modern society. Whereas the latter, default individualization, characterizes individuals as taking a passive approach to their identity development. Schwartz, Côté, and Arnett (2005) asserted that those who take a default individualization path may experience distress later when their identity is challenged by stressful events or crises.

Schwartz described the model stating that default individualization is the first category and any steps taken beyond that phase initiate a developmental individualization phase. He theorized that an individual could begin to purposely explore alternatives in building an identity (e.g., self-construction) or serendipitously discover an aspect of his or her daimon (e.g., emergent discovery). Schwartz argued that self-construction processes pave the way to self-realization defining it as consisting of “people who successfully construct an identity path and for whom this path results in actualization of the daimon” (p. 331).

In a preliminary analysis, Schwartz found that the emergent discovery and self-construction groups are similar in level of agency and characterized them respectively as “(a) those who have established identity-related goals but have yet to build a path toward those goals...
and (b) those who have constructed a path but may not be sure what their destination will be” (p.334). Schwartz advocated for interventions that are sensitive to the needs of various groups, for instance arguing that the emergent discovery group would require help with self-construction related skills in order to achieve their goal. Schwartz (2002) concluded with suggestions for designing interventions underscoring the important point that others have a role in stimulating and guiding identity formation. On this point little research has been done until recently on the role of active agents in the identity formation processes of emerging adults. In this study, Schwartz’s model was examined as it relates to what characterizes emerging adults who seek advice from others regarding their identity formation processes.

Identity Formation within a Relational Context

Erikson (1968) emphasized that identity formation occurs in the interaction of person and context, specifically relational contexts. In adolescence, identifications from childhood (i.e., early interactions with parents and other role models) are questioned as physical and cognitive developments spur on both the individual and society to ask: Who are you? What is your role? What do you believe? It is within a relational context that these answers are derived.

Cognitive theorist have emphasized the role of others, for instance both Vygotsky (1978) and Piaget (1965) emphasized others in stimulating cognitive development. Vygotsky devised the concept of a zone of proximal development stating that “potential development [is] determined through problem solving under adult guidance or in collaboration with more capable peers (1978, p. 96). Piaget envisioned cognitive growth occurring through social negotiations with peers where the experience of disequilibrium will stimulate development. Recently, Kunnen and Bosma (2003) cited Fischer’s emphasis on the role of social support in accomplishing cognitive tasks such as identity development. Therefore, given the important role of others in cognitive development a similar level of importance should be seen in identity theory and research.

Identity Agents

Researchers and theorists who have grounded their work in Eriksonian identity theory tend to focus on adolescent cognitive processes and styles related to individuation (Schachter & Ventura, 2008). Schachter and Ventura asserted that “mainstream research…portray adolescents as the sole agents involved in the crucial aspects of their own identity formation, and mostly studies them alone” (p. 451) ignoring the role of identity agents such as parents or teachers.
Identity agent is a concept that “refers to those individuals who actively interact with youth in order to participate in their formation of an identity” (p. 454).

In defining an identity agent, Schachter and Ventura (2008) stressed the reflexive nature of an identity agent asserting that identity agents have a concern for the individual’s identity formation and are aware of their role, theories, goals, and practices related to the individual’s identity formation. Schachter and Ventura illustrated the aspects of an identity agent listed above through in-depth interviews with two fathers.

In a special issue devoted to the topic, Schachter and Marshall (2010) argued that previous research has not treated identity agents such as parents or teachers “as active intentional agents” (p. 73). These studies primarily rely on adolescent perceptions and report of family functioning and identity (e.g., Waterman, 1982). For instance based on adolescent report, researchers have found that parent support (e.g., Meeus, Iedema, Maassen, & Engels, 2005; Sartor & Youniss, 2002); parent-adolescent communication (e.g., Berzonsky, Branje, & Meeus, 2007; Meeus, Oosterwegel, & Vollebergh, 2002); family cohesion (Mullis, Brailsford, & Mullis, 2003); the quality of attachment to parents (Schultheiss & Blustein, 1994); supportiveness of autonomy (Luyckx, Soenens, Goossens, & Vansteenkiste, 2007) are related positively to adolescent identity development.

Identity theorists similarly do not credit others with intentionality in shaping the identity of an adolescent or emerging adult. For instance, Adams and Marshall (1996) included the influence of others in their vision of a micro context where identity is shaped through interpersonal interactions, however an exploration of the micro context members’ awareness of their role as identity agents is missing.

Similarly, Kerpelman, Pittman, and Lamke (1997) emphasized the role of daily interactions and feedback from others that drive the identity formation process. Kerpelman and colleagues argued that the feedback of others influences the process of identity development serving either to reinforce or challenge self-definitions held by the individual. Harrell-Levy and Kerpelman (2010) argued that “the process of forming identity is enhanced when adolescents have others who assist them in finding viable alternatives in their identity exploration and commitment-making processes” (pp. 77-78). Yet the question remains regarding the intentions behind the feedback given. Kerpelman’s program of research has involved experimental conditions where college students are given varying feedback related to their future career,
relationship, and parenting roles (Kerpelman & Pittman, 2001). The assignment of either positive or negative feedback was randomly chosen and sheds light on the microprocesses involved in identity formation, though in naturalistic settings others, such as parents or teachers, who provide feedback tend to have goals related to the individuals’ development (Schachter & Ventura, 2008).

Schachter and Marshall (2010) highlighted identity interventions as examples of “intentional and collaborative attempts at identity development” (p. 73). In identity interventions, with the guidance of researchers the role of peers has primarily been explored in influencing adolescent and emerging adult identity development. Interventions included small group discussion with participatory learning and transformative activities as the main vehicle of the intervention (Berman, Kennerley, & Kennerley, 2008; Ferrer-Wreder, Lorente, Kurtines, Briones, Bussell, Berman, & Arrufat, 2002; Schwartz, Kurtines, & Montgomery, 2005) In the group sessions, students, peers, and facilitators worked together to offer alternative solutions to problems or plans for goals brought to the group by individual students. The overall goal of the interventions was to increase participants’ skills related to identity formation processes, such as weighing the pros and cons of various alternatives. Schachter and Marshall (2010) highlighted that though the researchers and participants were acting as identity agents, their work was informed by identity theory and does not reflect the idiosyncratic identity theories and goals of parents, teachers, ministers, or other potential identity agents that interact daily with emerging adults.

Recently researchers have responded to Schachter and Ventura’s (2008) call for more focus on identity agents and offered teachers, peers, therapists, and adoptive mothers as possibilities. Harrell-Levy and Kerpelman (2010) suggested that teachers can act as identity agents through the use of transformative pedagogy in the classroom. They argued that the interaction that occurs within the classroom as teachers consciously teach critical thinking causes students to question self-definitions and “to formulate opinions even if they do not fit inside of established norms or mainstream expectations” (p.84).

In the same issue, Sugimura and Shimizu (2010) highlighted how peers can shape each others’ identity formation processes through in-class discussion groups in an introductory transition to college class. They found that peers were concerned about each other’s identity formation, were influenced by each other’s identity goals, benefited from sharing their
experiences and explorations, and were aware of the greater purpose of their exploration, which linked them to their future selves and a future position in society. Von Korff, Grotevant, Koh, and Samek (2010) illustrated, in a series of case study analyses, how the idiosyncratic identity theories and methods of adoptive mothers shaped their children’s adoptive identity. Finally, Blume (2010) described how identity issues can be addressed in counseling. He highlighted Western culture’s “hostile attitude toward relationships” and “media saturation” (pp. 93-94) as leading to extended identity crises, and argued that therapists will need to be familiar with clinical approaches to identity issues.

Côté and Levine (2002) have made similar arguments as Blume, underscoring the decline in institutional norms that shape the transition to adulthood. Schachter (2005) argued for a post modern redefinition of identity formation that idealizes a flexible identity configuration over a stable identity structure. Schachter asserted that identity is co-constructed through person-context interactions and given the lack of societal norms and markers of adulthood, the identity formation path has become more complex. Therefore the role of identity agents has become all the more important in the modern period.

In the research reviewed many potential identity agents were suggested. However, scholars have overlooked the influence of siblings on identity formation. Luyckx, Soenens, Goossens, and Vansteenkiste (2007) have found that parents’ autonomy support is conducive to identity formation and college adjustment, but have overlooked the role siblings play in enhancing identity formation and college adjustment.

**Identity Theory and Sibling Relationships**

Recent work has been done on the specific processes of identity formation, specifically expansions of the processes of exploration and commitment in the work of Luyckx and colleagues (2005, 2006, & 2008). The expansion has better illustrated the commitment evaluation cycle and captured those who experience distress or anxiety. Research has not been done on who emerging adults consult for advice regarding issues related to their identity formation.

Intervention researchers have examined the influence of peers in developing certain skills related to identity formation, such as is used in self-construction or self-discovery processes (Schwartz et al., 2005). Schwartz (2001) offered a process model outlining the path emerging adults take to reach self-realization. Aside from the role of peer feedback during group
discussions in interventions, research on the role of family members as active agents in helping emerging adults along the path drawn by Schwartz has not been done until recently in response to Schachter and Ventura’s (2008) call.

The purpose of the current study was to explore who emerging adults consult regarding their identity and to explore the characteristics of emerging adults who consult siblings. Specifically, the characteristics related to identity formation processes, statuses, and styles, such as whether an emerging adult reports high levels of exploration in depth or using an informational style, were examined as they relate to those emerging adults who reported consulting siblings for advice. Identifying the prevalence of sibling advice and support in the midst of these identity constructs was one of the goals of this study. Therefore, the end goal of the current study was to generate a descriptive account, in terms of demographic and identity characteristics, of emerging adults who seek advice from siblings.

Given the exploratory nature of this study, it was difficult to generate hypotheses relating the identity formation variables and the probable sources of identity support and advice reported by emerging adults. Overall, I expected to find that emerging adults are more likely to report seeking advice from others if they also report high levels of identity confusion, exploration in breadth, ruminative exploration, informational or normative identity styles, and low levels of personal expressiveness. With regard to Schwartz’s (2002) model, it was expected that emerging adults who use both rational (i.e., self-construction group) and intuitive (i.e., emergent discovery group) decision-making strategies would seek the guidance of others unlike those emerging adults who could be classified as being in default individualization or those who have realized their identity. Essentially emerging adults are likely to frequently seek advice and support if they are not in an achieved status of identity development.

**Siblings as Identity Agents**

A recent literature regarding identity agents is emerging, siblings thus far have been not been studied let alone mentioned as potential identity agents. Additionally, with the exception of a few recent studies, the purposes and intentionality of others in the identity formation processes of emerging adults has been overlooked. Therefore, an additional goal of the current study was to examine siblings’ perceptions of their role in the identity formation process.

The lack of research on the role of siblings in identity formation highlighted here is key because of the presence of a body of literature connecting siblings to emerging adult education.
decision making and outcomes, as is reviewed in the next section. Characteristics of and factors that influence sibling relationships are reviewed in the next section so that specific hypotheses could be derived for the current study.

**Sibling Relationships**

Cicirelli (1995) argued that siblings are an important influence given their shared history and values. Crispell (1996) underscored that approximately 95% of adults have a sibling with 85% having a full biological sibling. Sibling relationships can be classified as complementary or reciprocal (Dunn, 1983). Complementary roles consist of an asymmetrical relationship similar to a parent-child relationship. Reciprocal roles are similar to peer relationships. As siblings mature their relationship becomes more egalitarian (Buhrmester, 1992; Dunn, 1983). Siblings play an important role in advancing development because of interactions that can occur as with a peer (Piaget, 1965) or mentor (Vygotsky, 1978).

Theoretical perspectives that have been used to explain sibling influence on development have included social learning theory (Bandura, 1962) and attachment theory (Bowlby, 1973). For instance, Whiteman and Buchanan (2002) cited social learning theory as explaining why they found that younger siblings reported more positive expectations for their experience of adolescence when they have a positive perception of their older sibling’s adolescent experiences. Bandura argued that individuals learn by observing and imitating others; therefore older siblings can serve as role models for younger siblings. In contrast, Seger (1998) cited attachment theory as explaining how siblings develop close relationships. Seger hypothesized and found that positive relationships with parents and peers predicted positive sibling relationships that offer emotional and school-related support among eleventh grade students with an older emerging adult sibling.

With regard to education and career future plans and decisions, Cicirelli (1995) asserted that siblings socialize each other for adult roles in their interactions and modeling. Tucker et al. (2001) found that late adolescents who consulted siblings, in addition to parents, regarding career and education advice were more likely to report positive expectations for college graduation success and a future occupational identity.

Similarly, in a longitudinal study, Melby, Conger, Fang, Wickrama, and Conger (2008) using structural equation modeling identified siblings as having an independent influence on later educational attainment unrelated to the influence of parenting and socioeconomic status with no
significant differences by gender or relative age. Melby et al. found that the initial level of sibling relations reported when the participants were adolescents was significantly related to academic engagement and educational attainment when participants were emerging adults.

Finally, in two qualitative studies, Schultheiss et al. (2001; 2002) asked college students to identify a sibling that is closest to them and discuss the role that sibling has played in influencing their career related decisions. They found that siblings were primarily a source of informational support especially during times of educational and career transition. These studies highlight the important role siblings play in influencing education and career goals. Therefore, in the current study it is expected that emerging adults will report seeking advice from siblings.

**Sibling Relationships in Emerging Adulthood**

Most research has focused on sibling relationships in childhood, early or middle adolescence, and older adulthood with fewer studies on siblings in late adolescence or emerging adulthood (Stewart, Kozak, Tingley, Goddard, Blake, & Cassel, 2001; Tucker et al., 1997). Buhrmester (1992) hypothesized that siblings in adolescence experience a decrease in support and companionship as they spend more time with peers and experience various life transitions related to education, career, or romantic relationships. However, Buhrmester found that in late adolescence siblings remain an important source of emotional support and serve as a source of advice. In emerging adulthood, sibling relationships have been characterized as being warmer and more emotionally supportive than in earlier periods of adolescence (Cicirelli, 1980; Myers & Bryant, 2008; Scharf, Shulman, & Avidga-Spitz, 2005).

With regard to sibling relationship characteristics, Stewart et al. (2001) described emerging adult siblings as “on-call aides and supporters” (p. 301) creating a typology of sibling relationship types, such as supportive, longing, competitive, apathetic, and hostile. Other researchers have focused on how frequently siblings contact each other (White & Riedmann, 1992) or their feelings of closeness and support (Milevsky et al., 2005) and relationship functions (Weaver, Coleman, & Ganong, 2003).

Researchers who have focused on emerging adult sibling relationships have examined the influence of sibling constellation variables and contextual factors such as family size, gender, birth order, racial/ethnic background, age spacing, and parental marital hostility/divorce. Family systems (Minuchin, 1985) and ecological theorists (Bronfenbrenner & Morris, 2006) have emphasized the influence of contextual factors on family relationships. For instance, researchers...
found that emerging adults from smaller families report communicating more frequently with siblings (Milevsky et al., 2005; Newman, 1991) and feel closer to and more supported by their siblings (Milevsky et al., 2005). College students who report having more than one sibling also reported communicating with their siblings for pleasure and relaxation unlike those who reported only having one sibling where communication was more for control (Rocca, Martin, & Dunleavy, 2010). Given these findings, it is expected that emerging adults who report frequently seeking advice from siblings will also report a small family size.

Milevsky and colleagues also asked emerging adults to report on their level of religiosity and economic status. They found that those who reported being nonreligious and under high economic stress also reported lower levels of sibling closeness, support, and warmth. No other studies have examined these contextual variables. More research has been done relating gender, birth order, age spacing, ethnic/racial background, and parental divorce to sibling relationships in emerging adulthood.

**Sibling Gender Composition**

Many researchers have focused on sibling gender composition differences. Cicirelli (1980) found female college students reported feeling that they received as much emotional support from a sibling as from their mother. Clark-Lempers, Lempers, and Ho (1991) found a significant gender difference in sibling reports of affection, reliable alliance, companionship, and nurturance. Females in late adolescence were more likely to attribute these characteristics to their sibling relationships than males. Tucker et al. (1997) found that college females also reported more advice, satisfaction, and influence than male siblings with sisters who reported receiving more advice than other sibling pair types. Similarly, in a sample of college students and emerging adults who chose not to attend college, Milevsky et al. (2005) found that participants who identified their closest sibling as female reported feeling closer to their sibling and receiving more support. In an Israeli sample of adolescents and emerging adult same sex siblings, Scharf et al. (2005) found that emerging adult siblings spend less time in shared activities, but report more warmth and less conflict, with female siblings reporting significantly more emotional exchanges.

Finally, Weaver and colleagues (2003) asked a sample of college students to report on their relationship to a sibling who is closest in age (age range of target sibling was 14 to 35 years). They focused on the function sibling relationships play in the lives of emerging adults and found that sister-sister pairs reported more often identifying with their sisters (identity
formation), giving and receiving feedback about roles and behaviors (mutual regulation), interpreting each others and parental actions and behaviors (interpret), and helping and teaching each other (provide direct services and teach new skills and abilities). Brother-brother pairs reported a similar level of identity formation as sister-sister pairs. Mixed gender pairs reported significantly smaller amounts of the five functions with all pair types reporting relatively similar occurrences of defending and protecting each other.

In contrast, Dolgin and Lindsay (1999) did not find similar gender differences across sibling pairs. They only found that sisters more often than brothers identified seeking emotional support from a sibling. Most of their significant findings were related to birth order differences, which are discussed in more detail in the next section. Given, that the majority of the articles reviewed have found a gender difference in support from siblings, it was hypothesized that emerging adults who list frequently contacting a sibling will identify a female sibling when asked to participate in the online discussion forum.

**Sibling Birth Order**

Dolgin and Lindsay (1999) recruited college students with a biological sibling within 10 years of age to complete the Sibling Disclosure Questionnaire. They asked participants to answer if they discussed and how often they discussed 31 topics ranging from “our parents” to “my sex life.” In addition participants were asked check as many that applied from a list of ten motivations for discussing each topic (i.e., “to feel closer” or “to seek advice”). Participants reported discussing with a sibling, career plans 71% of the time, hopes and aspirations 70% of the time, and a significant success 91% of the time. They identified “to convey information” as the most common motivation for disclosure (69.1%). Dolgin and Lindsay found a significant effect of birth order on reported motivations, for instance “to teach” and “to model disclosure” were more likely targeted at a younger sibling. Whereas younger siblings were more likely to list the following motivations for speaking with an older sibling: “to seek advice”; “for emotional support”; and “to vent.”

Other empirical work also supports Cicirelli’s (1980) emphasis on the important role of older siblings in the lives of younger siblings. Tucker et al. (1997) hypothesized and found that younger siblings received more advice, reported more satisfaction with support, and reported being influenced more by their older siblings. Researchers who have examined late adolescents’ transition to college have found similar results. Shields (2002) found students who had an older
sibling that attended college were more likely to continue in college and earn more credit hours. Similar results have been found among Hispanic samples. Again it is likely that in this study an older sibling is identified as an important source of identity support.

**Racial/Ethnic Background**

Tucker and Updegraff (2009) highlighted the important role of siblings as socializing agents in other racial and ethnic groups. They argued that “siblings may play a particularly important role in navigating school and community organizations…where parents have little experience in the U.S. educational system” (p. 17). Researchers have found support for this argument when researching Hispanic students’ transition to college. Hurtado-Ortiz and Gauvain (2007) identified the attendance of an older sibling in college as explaining 4% of the variance in a younger sibling’s college attendance and 7% of the variance in college GPA of a younger sibling. Ceja (2006) and Perez and McDonough (2008) found that older siblings who attend college provide advice to younger siblings based on personal experience. Younger siblings cited concrete guidance from older siblings as helping them to feel more familiar with the college application/selection process and how to choose a major.

In a qualitative study with a small sample of Mexican American college students, Sanchez and colleagues (2006) asked students to identify a person in their life who provides social support. The students were asked to describe the people who provided guidance and the type of support they received and the related academic areas where support was provided. Participants described siblings as being role models and offering informational support. Sanchez et al. found that siblings provided support related to class work, tutoring, and choosing a major or career. In sum, the role of siblings in providing informational support related to education and career transitions should not be overlooked, especially in ethnically and racially diverse populations. Therefore, emerging adults from an ethnic or racial background or those whose parents are unfamiliar with college are more likely to report frequently seeking advice from a sibling.

**Sibling Age Spacing**

Regarding the effects of birth spacing on sibling relationships, most researchers have focused on younger children (Teti, 2002). Tucker and Updegraff (2009) underscored that complementary sibling relationships, where an older sibling acts as a teacher, are more likely to occur among siblings that are widely spaced though the relationship may become more
reciprocal in adolescence. Siblings who are close in age are more likely to have a reciprocal or peer-like relationship (Tucker et al., 1997).

Most researchers focus on birth order or gender composition, whereas few examine the effect of birth spacing on emerging adult sibling relationships. For instance, researchers have only included siblings that were within a certain age range such as four years (Scharf et al., 2005) or ten years (Dolgin & Lindsay, 1999). Weaver et al. (2003) asked college students to report on relationship with a sibling that is closest in age. The data were not included from those participants who rated siblings who were not within an adolescent to young adult age range. Weaver and colleagues justified this decision emphasizing “the likelihood that siblings with greater age differences would have very different relationships than those who are closer in age” (p. 253). Previous research was not cited.

Few studies have specifically examined age spacing effects among emerging adults. Dolgin and Lindsay (1999) only found one significant effect related to age differences between siblings. They found that siblings closer in age were more likely to check “to vent” as a common motivation for contacting their sibling. Myers and Bryant (2008) asked a sample of college students to report how often they expressed commitment to their sibling and how satisfied they were with the relationship. Myers and Bryant included participant and sibling sex and age in the first block of a hierarchical multiple regression analysis and found that none of the variables significantly predicted sibling relational satisfaction. Milevsky and colleagues (2005) similarly entered participant and sibling age as a first step and found that sibling age significantly mediated the relationship between participant age and sibling conflict. Participants reported significantly more conflict with siblings who were within 2 years of age than with siblings who were greater than 2 years apart. Finally, when college students were asked to identify a sibling that has helped them with their career decisions, participants chose an older sibling who was an average of 5 years older (Schultheiss, et al., 2001; 2002). Therefore, based on previous findings, it is likely that in the current study the siblings that are contacted to participate in the study would be at least 5 years older than the emerging adult participant.

**Parental Divorce and Remarriage**

With regard to the effects of parental divorce on emerging adult sibling relationships, the findings overall have been mixed. Researchers have found that parental divorce is associated with increased warmth and hostility among siblings (Darlington, Feeney, Noller, & Sheehan,
Abbey and Dallos (2004) found that siblings who experience parental divorce more frequently turn to each other for support; whereas, Milevsky (2004) found that siblings from non-divorced families reported greater closeness, communication, and support from their siblings. Tucker et al. (2001) similarly found that late adolescents reported seeking advice from siblings less frequently in divorced versus intact families. Finally, Bush and Ehrenberg (2003) analyzed in-depth interviews from 30 college students. They asked students to describe their current sibling relationships and their relationship before, during, and after their parents’ divorce. They found that many of the participants reported a brief increase in conflict immediately after the separation, but reported a later decline in conflict and an increase in feelings of closeness. In line with these results, Noller and colleagues (2008) and Poortman and Voorpostel (2009) found that the important variable affecting sibling relationships is the level of parental conflict and not parental divorce, relating higher levels of parental conflict to higher levels of sibling conflict and lower reported closeness and communication.

Regarding remarriage, very little research has been done on relationships with step and half siblings in adulthood. More research has been done on adolescent adjustment and education outcomes related to growing up in stepfamilies (e.g., Halpern-Meeker & Tach, 2008; Tillman, 2008). However, White and Riedman (1992) focused on adult step/half- and full siblings. They found adults reported contacting step/half-siblings significantly less than full siblings. Thus in terms of the current study it is unlikely that emerging adults will contact a step/half-sibling to participate in the online discussion. However, given the mixed results, emerging adults from various family backgrounds (i.e., intact versus divorced) are likely to report similar amounts of sibling contact for advice.

**Limitations of Current Literature**

Before Schachter and Ventura (2008) highlighted the function and importance of identity agents, previous identity researchers neglected the goals and intentions of individuals surrounding emerging adults as they explore and make commitments related to their identity. Researchers have explored the family context, but not who emerging adults consult regarding their identity formation. Furthermore, current research on identity agents ignores siblings, a relationship Cicirelli (1995) underscored as being among one of the longest lasting.
Additionally, the majority of identity formation research and sibling relationship research have relied on retrospective reports of adolescents and emerging adults, a limitation that has been emphasized by for instance Schwartz et al. (2005), Tucker and colleagues (2001), and Milevsky (2004). Schwartz (2005) highlighted numerous limitations of the identity research literature such as the reliance on Caucasian college samples. He argued that the identity processes of non-White emerging adults needs to be explored, especially the paths of emerging adults who chose not to attend college. Moreover, he emphasized the need for longitudinal studies and research that focuses on how identity relates to risk behaviors, immigration, and terrorism. Many of these critiques can be applied to the sibling research literature as well.

**Summary**

The current study addressed a theoretical oversight rather than common methodological limitations by exploring who emerging adults consult for advice and the role of siblings in the identity formation processes of emerging adults. The identity formation process of emerging adults was also assessed with multiple operationalizations of the construct.

Siblings, as seen in the retrospective reports of adolescents and emerging adults, play an important role in supporting academic goals and future plans. They are consulted during times of transition (i.e., college) and are seen as an important source of advice and support. In answer to Tucker and colleague’s (2001) call for more research on the content of advice offered by siblings, this study examined the feedback and advice given by siblings in response to an online identity essay. Further details of the methodology of the study are presented in the next chapter.
CHAPTER THREE

METHODOLOGY

The purpose of this study was to explore who emerging adults consult for advice in their identity formation processes and what demographic and identity formation characteristics describe those who consult a sibling. Finally, the advice offered by siblings was examined.

Instrumentation

Identity dimensions from Marcia’s (1966) model, extended by Luyckx et al. (2005) were assessed using the Dimensions of Identity Development Scale (Luyckx et al., 2008). Erikson’s (1950) theory of identity was captured by the Eriksonian Psychosocial Stage Inventory (Schwartz, Zamboanga, Wang, & Othuis, 2009), which assesses feelings of identity synthesis and confusion. From Schwartz’s (2002) model, identity self-construction processes were tapped with the Identity Style Inventory and the Questionnaire for Eudaimonic Well-Being was used to assess the level of personal expressiveness (e.g., self-discovery process). All of these measures have been used primarily with college samples.

Identity Status

Identity status was assessed using the Dimensions of Identity Development Scale (DIDS; Luyckx et al., 2008). The DIDS is a 25-item scale assessing the identity domain: future plans. It contains five subscales with five items each that are targeted at the dimensions of commitment making, identification with commitment, exploration in breadth, exploration in depth, and ruminative exploration. Students are asked to rate their level of agreement from strongly disagree to strongly agree on a 5-point Likert scale statements such as “Made a choice concerning some of my plans for the future” or “Keep looking for the direction I want to take in my life.” Luyckx and colleagues reported Cronbach alphas ranging from .81 to .93 across the five dimensions. Waterman, Schwartz, Zamboanga, Ravert, Williams, Agocha, Yeong Kim, and Donnellan (2010) reported similar Cronbach’s alphas: .92 for the commitment making dimension, .93 for identification with commitment, .83 for exploration in breadth, .81 for exploration in depth, and .86 for ruminative exploration. In the current study, the following Cronbach’s alphas were found: .88 for the commitment making subscale, .76 for the exploration in breadth subscale, .83 for the ruminative exploration subscale, .90 for the identification with commitment subscale, and .73 for the exploration in depth subscale.
Luyckx et al. (2008) performed a confirmatory factor analysis and found loadings ranging from approximately .60 to .85 for each subscale. The five factor model was demonstrated to have the best fit as opposed to Marcia’s traditional two factor model. Additionally, they tested and found measurement equivalence across genders. Finally, Luyckx and colleagues demonstrated the measure’s internal and external construct validity finding that the dimensions were correlated with each other (i.e., commitment making and identification with commitment were negatively correlated with ruminative exploration) and with measures of adjustment (i.e., self-esteem, depression, and anxiety) in theoretically expected ways (i.e., ruminative exploration was positively correlated with depressive symptoms and anxiety and negatively correlated with self-esteem).

In the current study, a five factor model was also found to have a better fit than a two factor (i.e., commitment and exploration) or three factor (i.e., commitment, adaptive exploration, and ruminative exploration) model. The fit of each model to the data was assessed using the comparative fit index (CFI), non-normed fit index (NNFI), root mean square error of approximation (RMSEA), and standardized root mean square residual (SRMR). According to Kline (2005), the CFI and NNFI indices compare the fit of the model to the fit of the null model (i.e., no relationship among the items and factors) indicating a good fit when greater than or equal to 0.90 (CFI) and between .90 and 1.0 (NNFI). The RMSEA and SRMR indices compare the specified and observed covariance matrix (Kline) and indicate good fit when a value that is less than or equal to .08 (RMSEA) and less than .10 (SRMR).

Results indicated that the five factor model provided a reasonable fit to the data, $\chi^2 (237) = 885.69$, $p < .001$; CFI = 0.89; NNFI = .87; RMSEA = .083; SRMR = .13 than a two factor, $\chi^2 (274) = 2441.52$, $p < .001$; CFI = 0.64; NNFI = .61; RMSEA = .14; SRMR = .22, or a three factor model, $\chi^2 (272) = 1698.79$, $p < .001$; CFI = 0.76; NNFI = .74; RMSEA = .12; SRMR = .15.

In the final five factor model, Item 24 was dropped due to a low standardized loading of 0.29 and five error covariances were added based on the modification indices: Item 6 with Item 7, Item 20 with Item 21, Item 5 with Item 19, Item 10 with Item 11, and Item 2 with Item 5. Cronbach’s alpha of .74 was found for the adjusted exploration in breadth subscale. Finally, the chi-square index was used to compare the models and decreased with each added factor and error covariance, indicating overall model improvement. However, the chi-square index remained
significant indicating that the null hypothesis could not be rejected and that all of the models were not a good fit to the data. A significant chi-square index has been found previously in other factor analyses in the development of this measure (Luyckx et al., 2005; 2006; 2008). Schwartz and colleagues (2009) argued that the chi-square index is “often overpowered” (p. 145) and therefore did not include it in their interpretation. Similar to their results, a significant chi-square test of model fit was also found in the factor analysis of the next measure.

The Eriksonian Psychosocial Stage Inventory as adapted by Schwartz and colleagues (2009) was used, which consists of identity synthesis and identity confusion subscales with six items each. Students were asked to rate their level of agreement from strongly disagree to strongly agree on a 5-point Likert scale statements such as “I’ve got it together” (identity synthesis) and “I feel mixed up” (identity confusion). Schwartz et al. reported Cronbach’s alphas as .83 for the overall identity scale, and .75 for the identity synthesis subscale and .74 for the identity confusion subscale. Similarly, based on the current study’s sample, the Cronbach’s alpha for the overall identity scale was .84, with .76 for the identity synthesis subscale, and .75 for the identity confusion subscale.

Schwartz et al. (2009) found that a bifactor model consisting of an overall identity factor and two factors for identity synthesis and identity confusion was a better fit than single or two-factor solutions. The EPSI subscales also correlated in theoretically predicted ways with measures of identity commitment and identity statuses, which also was found to be equivalent across gender and ethnicity. Finally, Schwartz et al. found the identity synthesis and confusion subscales were differentially correlated with measures of adaptive and maladaptive psychosocial adjustment (i.e., self-esteem, purpose in life, anxiety, and depression). The resulting path model was equivalent across genders and ethnic groups. In the current study, a bifactor model was not attained because it did not converge at 100,000 iterations. A two factor model was found to have the best fit to the data ($\chi^2 = 190.37, df = 52; CFI = 0.91; NNFI = .89; RMSEA = .082; SRMR = .054$) over a one factor model ($\chi^2 = 317.11, df = 54; CFI = 0.83; NNFI = .79; RMSEA = .11; SRMR = .068$).

**Identity Style**

The Identity Style Inventory (ISI3) was used to assess identity processing styles (Berzonsky, 1992). Berzonsky identified three methods used by emerging adults and adolescents in processing identity related information: informational, normative, and diffuse-avoidant.
Participants were asked to rate 1 (not at all like me) to 5 (very much like me) in 40 statements, such as “I’m not really sure what I’m doing in school; I guess things will work themselves out” or “I know what I want to do with my future.” Berzonsky (1992) reported Cronbach’s alphas for the four subscales: informational (11 items, Cronbach’s alpha .70), normative (9 items, Cronbach’s alpha .64), diffuse-avoidant (10 items, Cronbach’s alpha .76), and commitment (10 items, Cronbach’s alpha .71). Luyckx, Soenens, Berzonsky, Smits, Goossens, and Vansteenkiste (2007) reported similar Cronbach’s alphas with a college sample, reporting alphas of .65, .56, .72, and .70 for the informational, normative, diffuse-avoidant, and commitment subscales respectively. Cronbach’s alphas of .64 (informational), .69 (normative), .79 (diffuse-avoidant), and .75 (commitment) were found in the current study and are similar to previous studies.

The validity of the ISI3 has been established through theoretically predicted correlations with the identity statuses (Berzonsky, 1990), coping methods (Berzonsky, 1992) the five personality factors, such as openness to experience (Soenens, Duriez, & Goossens, 2005), and measures of academic autonomy (Berzonsky & Kuk, 2000) to name a few. Finally, the factor structure of the ISI3 has been found to be equivalent across genders (Schwartz & Montgomery, 2002) and ethnic groups (Schwartz, Côté, & Arnett, 2005). The factor structure of the Identity Style Inventory has not been thoroughly validated in the previous literature most likely because each factor would require more than the 5-6 indicators that is recommended by Kline (2005). Given the low Cronbach’s alphas for each of the subscales, it was determined that parceling would not be a viable option (Little, Cunningham, Shahar, & Widaman, 2002) therefore the factor structure of this measure for the current study was not determined.

**Personal Expressiveness**

Waterman’s concept of personal expressiveness was captured through the Questionnaire for Eudaimonic Well-Being (QEWB, Waterman et al., 2010). Participants were asked to rate 1 (strongly disagree) to 7 (strongly agree) 21 statements, such as “I believe it is important to know how what I’m doing fits with purposes worth pursuing” or “As yet, I’ve not figured out what to do with my life.” Waterman et al. (2010) reported a Cronbach’s alpha of .86 and a one factor structure across two large diverse college samples, $X^2 (5) = 22.59, p < .001; CFI = 0.99; NNFI = .98; RMSEA = .065; SRMR = .018$ (for sample 1 with similar results for sample 2). They also reported finding significant differences across demographic variables, such as gender, age, ethnicity, and family structure, but given the small effect size concluded that the variables did
not explain a large portion of the score variance. Finally, Waterman et al. found that QEWB scores correlated in theoretically consistent ways with measures of identity commitment, exploration, well-being, and positive and negative psychological functioning, which provides support for the validity of the measure. In the current study, a Cronbach’s alpha of .84 was found for the QEWB. Using Waterman and colleagues’ method of creating 5 parcels of adjacent items, for the current sample, a one factor structure was found to be a good fit to the data, $X^2 (5) = 4.66, p = .46; CFI = 1.00; NNFI = 1.00; RMSEA = .00; SRMR = .015.$

**Sample**

The sample for this study was drawn from undergraduate students who were enrolled in four online courses offered by the College of Human Sciences. During the fall semester, 522 students were enrolled in the following online courses: Family and Child Public Policy (CHD 4615), two sections of Human Development (FAD 3220), Stress and Resilience (FAD 3432), and Family Relationships (FAD 2230). Students were invited to complete an online survey, which was available for two weeks. They received five points extra credit for participating, which only added a small amount to the total points available in each course (e.g., 600 points). Of the 425 that responded, one only completed the demographic portion of the survey and eight completed the survey twice. The one incomplete and eight repeated surveys were dropped (N = 416) resulting in a response rate of 79.7%. As a final step, 20 participants were dropped from the final sample (N = 396) because they reported being 26 years or older, which was outside the target population age range.

The demographic information of this sample is presented in Table 1. The sample was composed of 359 (90.7%) females and 37 (9.3%) males with a mean age of 20.48 years ($SD = 1.22$). Using the U.S. Census format, participants responded to questions related to their ethnicity and race. Ethnicity was coded into five categories: Not Hispanic, Latino, or Spanish origin; Mexican, Mexican American, Chicano; Puerto Rican; Cuban; and Another Hispanic, Latino, or Spanish origin. Race was coded into fourteen categories: White; Black, African American; American Indian or Alaska Native; Asian Indian; Chinese; Filipino; Japanese; Korea; Vietnamese; Other Asian; Native Hawaiian; Guamanian or Chamorro; Samoan; and Other Pacific Islander. No American Indian, Alaskan Native, or Pacific Islanders participated in the study. Based on participants’ responses, the categories of ethnicity and race were merged and recoded into four groups: Non-Hispanic White, non-Hispanic Black, Hispanic, and Asian.
Accordingly, 71.5% of the sample was non-Hispanic White, 15.2% was non-Hispanic Black, 9.8% was Hispanic, and 3.5% was Asian. In comparison to university statistics on gender, race and ethnic demographics of the undergraduate population (e.g., 57.4% female, 42.6% male, 69.4% White, 10.4% Black, 13.8% Hispanic, 3.5% Asian; http://www.ir.fsu.edu/student/headcount.htm), the final sample had a higher percentage of female participants and a slightly lower percentage of non-Hispanic Black and Hispanic participants than the university population.

Table 1
Demographic Information on Respondents (N = 396)

<table>
<thead>
<tr>
<th>Variable</th>
<th>Categories</th>
<th>Frequency %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td>Male</td>
<td>37 (9.3)</td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>359 (90.7)</td>
</tr>
<tr>
<td>Educational Status</td>
<td>Freshman</td>
<td>0</td>
</tr>
<tr>
<td></td>
<td>Sophomore</td>
<td>88 (22.2)</td>
</tr>
<tr>
<td></td>
<td>Junior</td>
<td>151 (38.1)</td>
</tr>
<tr>
<td></td>
<td>Senior</td>
<td>157 (39.6)</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td>Non-Hispanic White</td>
<td>283 (71.5)</td>
</tr>
<tr>
<td></td>
<td>Non-Hispanic Black</td>
<td>60 (15.2)</td>
</tr>
<tr>
<td></td>
<td>Hispanic</td>
<td>39 (9.8)</td>
</tr>
<tr>
<td></td>
<td>Asian</td>
<td>14 (3.5)</td>
</tr>
<tr>
<td>Parental Marital Status</td>
<td>Married</td>
<td>220 (55.6)</td>
</tr>
<tr>
<td></td>
<td>Remarried</td>
<td>34 (8.6)</td>
</tr>
<tr>
<td></td>
<td>Widowed</td>
<td>6 (1.5)</td>
</tr>
<tr>
<td></td>
<td>Divorced</td>
<td>44 (11.1)</td>
</tr>
<tr>
<td></td>
<td>Separated</td>
<td>4 (1.0)</td>
</tr>
<tr>
<td></td>
<td>Never Married</td>
<td>87 (22.0)</td>
</tr>
<tr>
<td>Mother's Education</td>
<td>Middle School</td>
<td>10 (2.5)</td>
</tr>
<tr>
<td></td>
<td>High School</td>
<td>71 (17.9)</td>
</tr>
<tr>
<td></td>
<td>Some college</td>
<td>103 (26.0)</td>
</tr>
<tr>
<td></td>
<td>College</td>
<td>148 (37.4)</td>
</tr>
<tr>
<td></td>
<td>Grad/Prof School</td>
<td>63 (15.9)</td>
</tr>
<tr>
<td>Father's Education</td>
<td>Middle School</td>
<td>16 (4.0)</td>
</tr>
<tr>
<td></td>
<td>High School</td>
<td>95 (24.0)</td>
</tr>
<tr>
<td></td>
<td>Some college</td>
<td>59 (14.9)</td>
</tr>
<tr>
<td></td>
<td>College</td>
<td>130 (32.8)</td>
</tr>
<tr>
<td></td>
<td>Grad/Prof School</td>
<td>95 (24.0)</td>
</tr>
</tbody>
</table>

Note. N = 395 for Parental Marital Status, Mother's and Father's Education variables.
The sample was composed of 22.2% sophomores, 38.1% juniors, and 39.6% seniors. Freshmen were not included because they are not likely to be enrolled in the online courses surveyed. These courses are also taken by undergraduates from other programs as electives. The number of participants that are majors in the College of Human Sciences and other colleges is presented in Table 2.

Table 2

<table>
<thead>
<tr>
<th>College</th>
<th>Major</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Human Sciences</td>
<td>Dietetics</td>
<td>9</td>
<td>1.8</td>
</tr>
<tr>
<td></td>
<td>Exercise Science</td>
<td>40</td>
<td>9.2</td>
</tr>
<tr>
<td></td>
<td>Family and Child Sciences</td>
<td>205</td>
<td>47.0</td>
</tr>
<tr>
<td></td>
<td>Retail Merchandising</td>
<td>16</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td>Athletic Training</td>
<td>1</td>
<td>0.2</td>
</tr>
<tr>
<td>Arts and Sciences</td>
<td>Biology</td>
<td>9</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>History</td>
<td>3</td>
<td>0.6</td>
</tr>
<tr>
<td></td>
<td>Mathematics</td>
<td>1</td>
<td>0.2</td>
</tr>
<tr>
<td></td>
<td>Religious Studies</td>
<td>1</td>
<td>0.2</td>
</tr>
<tr>
<td></td>
<td>Pre-Health</td>
<td>10</td>
<td>2.2</td>
</tr>
<tr>
<td></td>
<td>Psychology</td>
<td>39</td>
<td>9.0</td>
</tr>
<tr>
<td></td>
<td>Chemistry</td>
<td>2</td>
<td>0.4</td>
</tr>
<tr>
<td>Soc. Sci. and Public Policy</td>
<td>International Affairs</td>
<td>2</td>
<td>0.4</td>
</tr>
<tr>
<td></td>
<td>Political Science</td>
<td>3</td>
<td>0.7</td>
</tr>
<tr>
<td></td>
<td>African American Studies</td>
<td>1</td>
<td>0.2</td>
</tr>
<tr>
<td></td>
<td>Social Science</td>
<td>4</td>
<td>0.9</td>
</tr>
<tr>
<td></td>
<td>Sociology</td>
<td>6</td>
<td>1.4</td>
</tr>
<tr>
<td>Education</td>
<td>Elementary Education</td>
<td>7</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>Sports Management</td>
<td>2</td>
<td>0.4</td>
</tr>
<tr>
<td>Social Work</td>
<td>Social Work</td>
<td>2</td>
<td>0.4</td>
</tr>
<tr>
<td>Business</td>
<td>Professional Sales</td>
<td>1</td>
<td>0.2</td>
</tr>
<tr>
<td></td>
<td>Finance</td>
<td>2</td>
<td>0.4</td>
</tr>
<tr>
<td></td>
<td>Business</td>
<td>8</td>
<td>1.8</td>
</tr>
<tr>
<td></td>
<td>Accounting</td>
<td>4</td>
<td>0.9</td>
</tr>
<tr>
<td></td>
<td>Human Resources</td>
<td>1</td>
<td>0.2</td>
</tr>
<tr>
<td>Criminology</td>
<td>Criminology</td>
<td>6</td>
<td>1.3</td>
</tr>
<tr>
<td>Engineering</td>
<td>Biomedical Engineering</td>
<td>1</td>
<td>0.2</td>
</tr>
<tr>
<td>Nursing</td>
<td>Nursing</td>
<td>41</td>
<td>9.0</td>
</tr>
<tr>
<td>Hospitality</td>
<td>Hospitality</td>
<td>2</td>
<td>0.4</td>
</tr>
<tr>
<td></td>
<td>Recreational Studies</td>
<td>2</td>
<td>0.4</td>
</tr>
<tr>
<td>Communications</td>
<td>Communications</td>
<td>3</td>
<td>0.7</td>
</tr>
<tr>
<td>Online</td>
<td>Interdisciplinary Social Science</td>
<td>2</td>
<td>0.5</td>
</tr>
</tbody>
</table>

Note. Double majors n = 40 with 1 triple major
Participants were also asked questions regarding their parents’ marital status and education. A little over half (55.6%) of the participants indicated that their parents were still married with the other half indicating that their parents were either never married (22.0%), divorced (11.1%), remarried (8.6%), widowed (1.5%) or separated (1.0%). With regard to parent education, approximately a third of the sample indicated that their parents completed college with 15.9% of mothers and 24% of fathers completing a graduate/professional degree. Parent education, which is typically used as a proxy for socioeconomic status (Krieger, Williams, & Moss, 1997), was included in this study to explore if it was associated with whom undergraduates seek advice from regarding their future plans and identity related exploration. Tucker and Updegraff (2009) highlighted the important role siblings play when parents are unfamiliar with higher education or specifically, the U.S. system in the case of first generation parents.

**Sources of Advice**

Students were asked to answer seven questions using a 5-point Likert scale ranging from 0 (*not at all*) to 4 (*very often*) how frequently they talk to a parent, sibling, step/half-sibling, friend, boyfriend/girlfriend/spouse, clergy, teacher/professor, or other person about the following identity domains: long term goals (e.g., finding a good job, being in a romantic relationship, etc.), career choice (e.g., deciding on a trade or profession, etc.), friendships (e.g., experiencing a loss of friends, change in friends, etc.), sexual orientation and behavior (e.g., feeling confused about sexual preferences, intensity of sexual needs, etc.), religion (e.g., stopped believing, changed your belief in God/religion, etc.), values or beliefs (e.g., feeling confused about what is right or wrong, etc.), and group loyalties (e.g., belonging to a club, school group, gang, etc.). The seven questions across eight sources of advice result in a total of 56 items for the measure.

The measure was adapted from Berman, Montgomery, and Kurtines’ (2004) Identity Distress Measure. In creating the measure, they chose the identity domains listed under Identity Disorder in the *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed., rev., American Psychiatric Association, 1987, as cited by Berman et al., 2004). Given that emerging adults may experience distress related to any one or all of these identity domains, the measure seemed best suited to be adapted to tap who emerging adults would consult regarding each of these identity domains. The individuals listed as possible sources of advice were included based on previous
social support research and feedback from Seth Schwartz who suggested adding clergy members and professors/teachers to the measure (personal communication, July 28, 2010).

Participants were asked to specify the “other” person or people they talk with regarding each identity domain. The majority of participants did not list another source of support, but those participants who chose to list an “other” person listed aunts, cousins, grandparents, unspecified extended family members, counselors, therapists, academic advisors, bosses/co-workers, to name a few. The full list is summarized in Table 3.

Table 3

<table>
<thead>
<tr>
<th>Source of Advice</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aunt/Uncle/Cousin</td>
<td>6</td>
<td>3</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Grandmother</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Other Relatives</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Counselor/Therapist</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Mentor</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Academic Advisor</td>
<td>1</td>
<td>6</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>God</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Self</td>
<td>3</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Internet/Literature</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Boss/Co-workers</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>29</td>
<td>23</td>
<td>15</td>
<td>5</td>
<td>9</td>
<td>11</td>
<td>7</td>
</tr>
</tbody>
</table>

Note. 1 = Long Term Goals, 2 = Career, 3 = Friendships, 4 = Sexual Orientation/Behavior, 5 = Religion; 6 = Values; 7 = Group Loyalties.

Participants who indicated that they seek advice from a sibling about long term goals or career plans were asked to participate in an online discussion about their future plans with a sibling. Once they expressed interest in participating, they were asked to send the target sibling’s name and email address. An electronic survey was sent to the target siblings asking them for an informed consent to participate and demographic items related to their age, gender, ethnicity/race, and educational background. The student and sibling participants were added to a private group discussion board. Participants who did not report seeking advice from a sibling were asked to participate in an online peer discussion. They were added to a peer discussion board. An additional five points extra credit was offered to student participants and siblings were given a $25 gift code to Amazon.com for their participation.
A Blackboard organization site titled Survey Groups was used to provide an online discussion forum for participants. Students were asked to write two or more paragraphs per question:

What are your future plans?
How did you determine them?
How are your future plans related to who you are as a person?
How do you feel about your future plans? What are your concerns?
What steps do you plan to take this semester to achieve your future plans?

Target siblings and peers were asked to respond with the following prompts: “Read the essay posted by your peer/sibling. In a few paragraphs, please respond with feedback and advice.”

The identity essay is a rhetorical activity called a “mediated action” (Penuel & Wertsch, 1995, p.90), which is the unit of analysis for the qualitative portion of this study. Penuel and Wertsch argued that “identity [should] be conceived as a form of action that is first and foremost rhetorical, concerned with persuading others (and oneself) about who one is and what one values to meet different purposes…it is always addressed to someone, who is situated culturally and historically and who has a particular meaning for individuals” (p. 91). Furthermore, other scholars such as Josselson (1996) have similarly argued that identity narratives are an essential way to trace developmental pathways. Kunnen and Bosma (2003) underscored the limitations of paper and pencil surveys asserting that “the quality of commitments” (p.267) can only be ascertained through an examination of narratives, such as those generated from semistructured interviews or diaries.

Additionally, similar to observing family interactions, an online discussion forum provides a way of observing an interaction between a participant and a sibling or peer. Lindahl (2001) highlighted the unreliability of retrospective reports and participants’ inability to adequately describe interactions, but also emphasized the importance of using an externally valid task. Given the large number of emerging adults who participate and are comfortable communicating through social networking sites, text messages, or other online forums (e.g., Ellison, Steinfield, & Lampe, 2007; Pempek, Yermolayeva, & Calvert, 2009) or are taking online classes, participating in an online discussion regarding their future plans would not appear on the surface to be an abnormal activity for this population.
As a final step, participants were asked to provide reflective comments. They were asked to respond to the following questions:

For students: What role do you see your sibling/peer playing in how you make decisions about your future plans?
For siblings/peers: What role do you see yourself playing as your sibling/peer makes decisions about his/her future plans?
How is the advice you received/gave online similar or different than the advice you usually receive/give your sibling/peer?
How do you feel about the experience of receiving/giving advice in an online discussion forum?
What comments or concerns do you have about this experience?

Therefore, participants were included in the analysis if they completed the following: informed consent, identity essay (for students), feedback post (for siblings/peers), sibling demographic survey, and reflection survey. Table 4 contains the counts of which steps or surveys were not completed.

<table>
<thead>
<tr>
<th>Groups</th>
<th>Informed Consent</th>
<th>Identity Essay</th>
<th>Feedback</th>
<th>Sibling Demographic Survey</th>
<th>Final Survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sibling</td>
<td>16</td>
<td>6</td>
<td>10</td>
<td>12</td>
<td>19</td>
</tr>
<tr>
<td>Peer</td>
<td>10</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>10</td>
</tr>
</tbody>
</table>

*Note.* Many participants were missing more than one item.

Table 5 below contains the number of participants who were invited and those who participated and completed all parts of the study. Of the 83 who responded to the invitation to the sibling discussion, only 57 completed all parts of the study. Similarly, 90 students responded to the peer discussion invite, but only 26 completed the identity essay, feedback, and final survey. Of those that completed everything, one sibling discussion student and two peer discussion students were dropped because they were older than 25 years. In addition to students who were older than the specified target population age range, 10 underage (age range: 15-17 years; half
male) sibling participants were dropped from the analysis though they completed the informed consent, which indicated 18 years as being the minimum age for participation.

Table 5
**Final Sample Selection for Online Discussion Activity (N = 393)**

<table>
<thead>
<tr>
<th>Groups</th>
<th>Invited</th>
<th>Participated</th>
<th>Completed</th>
<th>Final Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sibling</td>
<td>309</td>
<td>83</td>
<td>54</td>
<td>43</td>
</tr>
<tr>
<td>Peer</td>
<td>84</td>
<td>36</td>
<td>26</td>
<td>24</td>
</tr>
</tbody>
</table>

*Note. Three participants completed the survey too late to be invited.*

The students who were invited to participate in an online discussion with a sibling significantly differed from those invited to the online peer discussion group on a number of variables. Table 6 contains the results of a series of t-tests and chi-square tests that demonstrated that the two groups significantly differed. Given that the majority of participants reported not having step/half-siblings and also that half reported their parents’ marriage as still intact, both of these variables were recoded into dummy variables.

Table 6
**Sibling versus Peer Discussion Group Comparisons across Demographic and Identity Support Variables (total scores)**

<table>
<thead>
<tr>
<th></th>
<th>Sibling Mean/SD</th>
<th>Peer Mean/SD</th>
<th>t</th>
<th>df</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. Biological Siblings</td>
<td>1.74 (1.11)</td>
<td>0.82 (1.03)</td>
<td>6.85**</td>
<td>391</td>
<td>0.86</td>
</tr>
<tr>
<td>Normative Id Style</td>
<td>30.36 (5.18)</td>
<td>28.84 (5.41)</td>
<td>2.20*</td>
<td>391</td>
<td>0.28</td>
</tr>
<tr>
<td>Parent Support</td>
<td>16.79 (5.77)</td>
<td>13.90 (6.33)</td>
<td>3.97***</td>
<td>391</td>
<td>0.47</td>
</tr>
<tr>
<td>Sibling Support</td>
<td>13.13 (6.19)</td>
<td>0.98 (2.18)</td>
<td>28.57***</td>
<td>368</td>
<td>2.90</td>
</tr>
<tr>
<td>Friend Support</td>
<td>17.14 (4.88)</td>
<td>15.90 (5.79)</td>
<td>1.98*</td>
<td>391</td>
<td>0.24</td>
</tr>
<tr>
<td>Prof/Teacher Support</td>
<td>4.66 (3.77)</td>
<td>3.38 (2.98)</td>
<td>2.86*</td>
<td>391</td>
<td>0.37</td>
</tr>
<tr>
<td>Long Term Goals</td>
<td>13.15 (3.41)</td>
<td>10.38 (3.07)</td>
<td>6.74***</td>
<td>391</td>
<td>0.84</td>
</tr>
<tr>
<td>Career</td>
<td>12.39 (3.91)</td>
<td>9.01 (3.22)</td>
<td>7.28***</td>
<td>391</td>
<td>0.94</td>
</tr>
</tbody>
</table>
As show in Table 6, those invited to the online sibling group discussion reported higher numbers of biological siblings, overall higher levels of seeking identity support across almost all categories, and scored higher on the normative identity style index. Regarding, the presence of step/half-siblings, 23.9% of those invited to the sibling group discussion reported having step/half-siblings, whereas, 50% reported them in the group invited to the peer discussion. Furthermore, 60.4% and 38.1% of participants who were invited to the sibling and peer discussion groups, respectively, reported that their parents were still married. This result falls in line with previous research, especially given that participants in the sibling discussion group reported seeking advice from siblings. White and Riedman (1992) found that adults are less likely to contact step/half-siblings. Furthermore, Tucker et al. (2001) similarly found that late adolescents reported seeking advice from siblings less frequently in divorced versus intact families.

In contrast, no significant differences were found between those who chose to participate versus those who did not in the online discussion and also between those who completed all parts of the study versus those who did not.

### Table 6 -continued

<table>
<thead>
<tr>
<th></th>
<th>Sibling Mean/SD</th>
<th>Peer Mean/SD</th>
<th>t</th>
<th>df</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friendships</td>
<td>11.13 (3.50)</td>
<td>8.30 (3.06)</td>
<td>6.75***</td>
<td>391</td>
<td>0.86</td>
</tr>
<tr>
<td>Sex Orient/Behavior</td>
<td>5.27 (4.03)</td>
<td>3.94 (3.04)</td>
<td>3.28*</td>
<td>170</td>
<td>0.38</td>
</tr>
<tr>
<td>Religion</td>
<td>8.45 (5.56)</td>
<td>5.82 (4.19)</td>
<td>4.72**</td>
<td>170</td>
<td>0.52</td>
</tr>
<tr>
<td>Values</td>
<td>11.25 (4.84)</td>
<td>8.15 (3.50)</td>
<td>6.57***</td>
<td>178</td>
<td>0.74</td>
</tr>
<tr>
<td>Group Loyalties</td>
<td>9.64 (4.92)</td>
<td>6.10 (4.06)</td>
<td>6.06***</td>
<td>391</td>
<td>0.80</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>X²</th>
<th>Φ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step/Half Sibs (1,0)</td>
<td>74 (42)</td>
<td>21.55***</td>
</tr>
<tr>
<td></td>
<td>(-4.60) (4.60)</td>
<td>-0.23</td>
</tr>
<tr>
<td>Parents Married (1,0)</td>
<td>186 (32)</td>
<td>13.29***</td>
</tr>
<tr>
<td></td>
<td>(3.60) (-3.60)</td>
<td>-0.18</td>
</tr>
</tbody>
</table>

*Note. Standard Deviations and adjusted standardized residuals appear in parentheses below means.  
* = p < .05, ** = p < .01, *** = p < .001*
As a final step, participants who completed all parts were compared to those who were dropped because of being too young or old for the study. The dropped group reported greater total parent support $t(77) = -2.00, p = .049, d = -0.74$ and greater total friendship choice support $t(77) = -2.33, p = .022, d = -1.36$. Additionally, a significant difference was found related to education level, $\chi^2(2, N = 79) = 9.14, p < .05, \Phi = .34$, resulting in fewer sophomores included in the analysis most likely because the sibling they contacted to participate was underage (64.3% sophomores, 96.7% juniors, and 88.6% seniors included in the study). The use of an underage sibling as the target sibling for the study may also explain the greater parent and friend support reported by the dropped group.

**Online Discussion Groups**

In order to answer Research Question 3, information regarding who emerging adults contacted to participate came from the online demographic survey (with items asking for age, gender, education level, racial/ethnic background) that was sent to sibling participants. Overall, 83 siblings completed the demographic survey though only 43 completed all parts of the study. Of the 83 who completed the survey, 68.7% were female, 31.3% were male, 73.2% had at least some college, and were 72% non-Hispanic White, 12% non-Hispanic Black, and 16% Hispanic.

The demographic information of the 43 sibling discussion participants is presented in Table 7. The sample was composed of 43 sibling pairs with a mean age difference of 3.05 years ($SD = 2.51$). The majority of siblings was non-Hispanic White (72.1%) and completed some college or higher (90.7%). Of the 43 sibling pairs, 72.2% of them were sister-sister pairs and none were brother-brother pairs (one brother-brother pair was dropped for not completing parts of the study).

<table>
<thead>
<tr>
<th>Variable</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sibling Age</td>
<td>18</td>
<td>35</td>
<td>23.53</td>
<td>3.43</td>
</tr>
<tr>
<td>Student Age</td>
<td>19</td>
<td>23</td>
<td>20.65</td>
<td>1.07</td>
</tr>
<tr>
<td>Sibling Age Difference</td>
<td>0</td>
<td>14</td>
<td>3.05</td>
<td>2.51</td>
</tr>
<tr>
<td>No. Biological Siblings*</td>
<td>1</td>
<td>5</td>
<td>1.98</td>
<td>1.06</td>
</tr>
<tr>
<td>No. Step/Half-Siblings*</td>
<td>0</td>
<td>8</td>
<td>0.67</td>
<td>1.6</td>
</tr>
</tbody>
</table>
Table 7 – continued

<table>
<thead>
<tr>
<th>Categories</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Dyad Type</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Older Female-Female</td>
<td>19</td>
<td>44.2</td>
</tr>
<tr>
<td>Younger Female-Female</td>
<td>10</td>
<td>23.3</td>
</tr>
<tr>
<td>Older Male-Male</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Younger Male-Male</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Older Female-Male</td>
<td>2</td>
<td>4.7</td>
</tr>
<tr>
<td>Older Male-Female</td>
<td>9</td>
<td>20.9</td>
</tr>
<tr>
<td>Younger Female-Male</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Younger Male-Female</td>
<td>1</td>
<td>2.3</td>
</tr>
<tr>
<td>Same age Female-Female</td>
<td>2</td>
<td>4.7</td>
</tr>
<tr>
<td><strong>Sibling Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle School</td>
<td>1</td>
<td>2.3</td>
</tr>
<tr>
<td>High School/GED</td>
<td>2</td>
<td>4.7</td>
</tr>
<tr>
<td>Some College</td>
<td>17</td>
<td>39.5</td>
</tr>
<tr>
<td>College</td>
<td>17</td>
<td>39.5</td>
</tr>
<tr>
<td>Graduate/Prof School</td>
<td>5</td>
<td>11.6</td>
</tr>
<tr>
<td><strong>Sibling Race/Ethnicity</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic White</td>
<td>31</td>
<td>72.1</td>
</tr>
<tr>
<td>Non-Hispanic Black</td>
<td>7</td>
<td>16.2</td>
</tr>
<tr>
<td>Asian</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Hispanic</td>
<td>5</td>
<td>11.6</td>
</tr>
<tr>
<td><strong>Student Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freshman</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Sophomore</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>Junior</td>
<td>16</td>
<td>37.2</td>
</tr>
<tr>
<td>Senior</td>
<td>21</td>
<td>48.8</td>
</tr>
<tr>
<td><strong>Parental Marital Status</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>25</td>
<td>58.1</td>
</tr>
<tr>
<td>Remarried</td>
<td>2</td>
<td>4.7</td>
</tr>
<tr>
<td>Widowed</td>
<td>2</td>
<td>4.7</td>
</tr>
<tr>
<td>Divorced</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>Separated</td>
<td>2</td>
<td>4.7</td>
</tr>
<tr>
<td>Never Marr</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td><strong>Mother's Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>High School</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>Some college</td>
<td>13</td>
<td>30.2</td>
</tr>
<tr>
<td>College</td>
<td>12</td>
<td>27.9</td>
</tr>
<tr>
<td>Grad/Prof School</td>
<td>12</td>
<td>27.9</td>
</tr>
<tr>
<td><strong>Father's Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle</td>
<td>5</td>
<td>11.6</td>
</tr>
<tr>
<td>High School</td>
<td>9</td>
<td>20.9</td>
</tr>
<tr>
<td>Some college</td>
<td>5</td>
<td>11.6</td>
</tr>
<tr>
<td>College</td>
<td>11</td>
<td>25.6</td>
</tr>
<tr>
<td>Grad/Prof School</td>
<td>13</td>
<td>30.2</td>
</tr>
</tbody>
</table>

* Data based on student reports.

** The dyad type category is ordered as follows: sibling participant-student.

As previously discussed (i.e., Table 6), the peer discussion group was demographically similar to the sibling discussion group except in number of biological siblings, in the presence of
step/half-siblings, and in the parental marital status reported. Those invited to participate in the peer group discussion reported a significantly lower mean number of biological siblings than those invited to the sibling discussion group. Furthermore, the peer discussion group had higher numbers of participants reporting the presence of step/half-siblings and separated parents than the sibling discussion group. A summary of the demographic information of the peer discussion group is presented in Table 8.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>19</td>
<td>23</td>
<td>20.29</td>
<td>0.91</td>
</tr>
<tr>
<td>No. Biological Siblings</td>
<td>0</td>
<td>3</td>
<td>0.96</td>
<td>0.91</td>
</tr>
<tr>
<td>No. Step/Half-Siblings</td>
<td>0</td>
<td>4</td>
<td>1.00</td>
<td>1.25</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Categories</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>3</td>
<td>(12.5)</td>
</tr>
<tr>
<td>Female</td>
<td>21</td>
<td>(87.5)</td>
</tr>
<tr>
<td>Educational Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freshman</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Sophomore</td>
<td>3</td>
<td>(12.5)</td>
</tr>
<tr>
<td>Junior</td>
<td>12</td>
<td>(50)</td>
</tr>
<tr>
<td>Senior</td>
<td>9</td>
<td>(37.5)</td>
</tr>
<tr>
<td>Race/Ethnicity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-Hispanic White</td>
<td>19</td>
<td>(79.2)</td>
</tr>
<tr>
<td>Non-Hispanic Black</td>
<td>3</td>
<td>(12.5)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>2</td>
<td>(8.3)</td>
</tr>
<tr>
<td>Asian</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Parental Marital Status</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>12</td>
<td>(50)</td>
</tr>
<tr>
<td>Remarried</td>
<td>5</td>
<td>(20.8)</td>
</tr>
<tr>
<td>Widowed</td>
<td>2</td>
<td>(8.3)</td>
</tr>
<tr>
<td>Divorced</td>
<td>2</td>
<td>(8.3)</td>
</tr>
<tr>
<td>Separated</td>
<td>1</td>
<td>(4.2)</td>
</tr>
<tr>
<td>Never Married</td>
<td>2</td>
<td>(8.3)</td>
</tr>
<tr>
<td>Mother's Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>High School</td>
<td>6</td>
<td>(25)</td>
</tr>
<tr>
<td>Some college</td>
<td>3</td>
<td>(12.5)</td>
</tr>
<tr>
<td>College</td>
<td>11</td>
<td>(45.8)</td>
</tr>
<tr>
<td>Grad/Prof School</td>
<td>4</td>
<td>(16.7)</td>
</tr>
<tr>
<td>Father's Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle</td>
<td>1</td>
<td>(4.2)</td>
</tr>
<tr>
<td>High School</td>
<td>8</td>
<td>(33.3)</td>
</tr>
<tr>
<td>Some college</td>
<td>4</td>
<td>(16.7)</td>
</tr>
<tr>
<td>Father’s Education</td>
<td></td>
<td></td>
</tr>
<tr>
<td>College</td>
<td>7</td>
<td>(29.2)</td>
</tr>
<tr>
<td>Grad/Prof School</td>
<td>4</td>
<td>(16.7)</td>
</tr>
</tbody>
</table>
Missing Data

Based on Dillman’s (2000) recommendation, participants were not required to answer every question. As a result, each variable had a relatively small amount of missing data. However, all independent variables have data from over 94% of the sample with the largest number of missing items occurring with the Questionnaire for Eudaimonic Well-Being (i.e., 23 out of 396 responses missing items). Given that the majority of data were complete, mean substitution was used. Acock (2005) argued that mean substitution is problematic when 30% or more of the data are missing. Therefore, using mean substitution was not likely to affect the variance of the variables given the low incidence of missing data.

Data Analysis Plan

In an effort to answer the first research question, a mean score for each identity domain and source of advice was computed and the highest mean scores by domain and source were highlighted. Regarding the second research question, multiple regression was used to examine the relationship among the demographic and identity variables and total sibling support. The third research question regarding the siblings who were contacted to participate was answered in the current chapter in Table 7.

Finally, regarding the fourth research question, a qualitative analysis was done on the sibling feedback from a constructivist epistemological position. Using this orientation I recognized my potential biases and theoretical sensitivity (Strauss & Corbin, 1998) in collecting and analyzing the data and did not assume an objective reality. Daly (2007) summarizing the position stated that constructivists emphasize that “there is shared construction of knowledge that occurs between the researcher and participants...[and] the meanings that are articulated as theory represent a hybrid of meanings consisting of a researchers’ observations and related experiences and participants’ expressions of their perceived reality” (p. 48-50). In designing the task, I maintained a certain level of theoretical sensitivity by exploring “existing concepts and theories, the empirical literature, and personal experience” (Daly, 2007, p.104), but was attentive to any emergent ideas in the data. Daly argued that one strength of using a qualitative approach is the ability to generate hypotheses from theory, but to also allow for the unexpected. Finally, I did not let my personal experience as an older biological sister in a White middle class in-tact family bias my analysis. I did this by following Berg’s (2007) prescription of “never assum[ing] the analytic relevance of any traditional variable such as age, sex, social class, and so on until the
data show it to be relevant” (p. 319). Once the codes and definitions were generated I compared my findings across sibling pairs and peer groups to explore which demographic characteristics may be relevant.

My goal was to explore the content of advice given by siblings and peers. I used a constant comparative method (Glaser & Strauss, 1967) to examine the participants’ words and phrases for patterns and themes related to the types of informational support given by siblings and peers or other emergent themes that were part of the sibling/peer interaction. Initially, the data were open coded and related criteria for selection (i.e., category definition/rule) were developed (Strauss & Corbin, 1998). Analytic categories (Berg, 2007) such as those related to social support informed my initial reading of the data; however, I decided that my early social support codes were not answering the fourth research question. Therefore, I focused on informational support, which has been equated with advice (Cutrona, 1996). In an attempt to answer the fourth research question, the lens was focused on the content of advice offered by siblings and peers to elucidate any potential dimensions or patterns in the informational support offered. Two types of advice given by siblings and peers emerged from the data and are presented in the next chapter along with the frequency of specific topics discussed related to future plans.

The list of codes and definitions generated from the sibling feedback were compared to codes generated from pilot data collected from a peer discussion group in the previous school year. After the codes and definitions were adjusted and refined, the peer comparison group discussion was analyzed to identify if any additional themes emerged from the data and no additional themes were found, which indicated theoretical saturation (Glaser & Strauss, 1967). After consulting literature focused on social support and specifically informational support, the sibling and peer feedback data were recoded to determine if different themes were present and were more compelling than the previous findings. However, the coding scheme was determined to be the best way to capture the data and answer the research question.
CHAPTER FOUR

RESULTS

The purpose of this study was to explore who emerging adults consult regarding their identity issues and to explore the characteristics of emerging adults who consult siblings. In this chapter, first preliminary analyses are discussed. Descriptive statistics (i.e., frequencies, range, means, standard deviations, skewness, kurtosis, and bivariate correlations) were computed as a first step to get a sense of the relationships among the variables, and a zero-order correlation matrix was generated to identify any issues related to multicollinearity among the independent variables. Next the results of statistical analyses are presented in answer to the four research questions of the study.

Scoring Subscales

To obtain the observed variables, the items from the subscales of each measure were summed. Then the mean, standard deviation, range, skewness, and kurtosis statistics were computed for each subscale. Subscales were judged to be normally distributed after a visual inspection of their histograms and also if the skew index is less than three and the kurtosis index is less than 10 (Kline, 2005).

For the Eriksonian Psychosocial Stage Inventory, the six items of each subscale were summed to produce the identity synthesis and confusion variables. Both subscales were found to be normally distributed with a mean of 19.01 (SD = 3.02) on the identity synthesis subscale and a mean of 15.82 (SD = 3.99) on the identity confusion subscale.

The Dimensions of Identity Development Scale has five subscales consisting of five items each, which when summed produce the five identity dimensions of commitment making, exploration in breadth, ruminative exploration, identification with commitment, and exploration in depth. Each subscale was found to be normally distributed. The means, standard deviations, range, skewness, and kurtosis values can be found in Table 9 below.

The Questionnaire for Eudaimonic Well-Being is a univariate measure that consists of 21 items that are summed to produce an overall score of personal expressiveness. The total score was similarly found to be normally distributed.

The Identity Style Inventory consists of four subscales: informational identity style (11 items), normative identity style (9 items), diffuse/avoidant identity style (10 items), and
commitment (10 items). The items for each subscale were summed. Four negatively worded items of the commitment subscale were first reverse coded then added to the other six items.

Finally, total identity support across the seven identity domains (e.g., long term goals, career, religion, etc.) were summed to determine the overall mean level of support from parents, siblings, professors/teachers, and so on. All totals for each source of support were normally distributed with the exception of total step/half-sibling support and other support where 77% and 88.6% of participants indicated that they never seek advice from these sources, respectively. The two skewed sources of support totals were not adjusted because they were not used in further analyses other than presenting their means and standard deviations as comparisons to other sources of support for emerging adults.

Table 9
Means, Standard Deviations, Ranges, Skewness and Kurtosis Values on Identity Observed Variables and Total Identity Support Scores (N = 396)

<table>
<thead>
<tr>
<th></th>
<th>Mean</th>
<th>SD</th>
<th>Min.</th>
<th>Max.</th>
<th>Skewness</th>
<th>Kurtosis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identity Synthesis</td>
<td>19.01</td>
<td>3.02</td>
<td>6.00</td>
<td>24.00</td>
<td>-0.41</td>
<td>0.53</td>
</tr>
<tr>
<td>Identity Confusion</td>
<td>15.82</td>
<td>3.99</td>
<td>1.00</td>
<td>24.00</td>
<td>-0.61</td>
<td>0.65</td>
</tr>
<tr>
<td>Commit. Making</td>
<td>15.36</td>
<td>3.51</td>
<td>5.00</td>
<td>20.00</td>
<td>-0.64</td>
<td>0.07</td>
</tr>
<tr>
<td>Expl. in Breadth</td>
<td>15.48</td>
<td>3.07</td>
<td>5.00</td>
<td>20.00</td>
<td>-0.50</td>
<td>0.13</td>
</tr>
<tr>
<td>Ruminative Expl.</td>
<td>9.12</td>
<td>4.54</td>
<td>0.00</td>
<td>20.00</td>
<td>0.23</td>
<td>-0.58</td>
</tr>
<tr>
<td>Id. with Commit.</td>
<td>14.55</td>
<td>3.76</td>
<td>0.00</td>
<td>20.00</td>
<td>-0.48</td>
<td>0.10</td>
</tr>
<tr>
<td>Expl. in Depth</td>
<td>13.85</td>
<td>3.22</td>
<td>4.00</td>
<td>20.00</td>
<td>-0.18</td>
<td>-0.14</td>
</tr>
<tr>
<td>QEWB</td>
<td>61.92</td>
<td>8.15</td>
<td>42.00</td>
<td>84.00</td>
<td>0.16</td>
<td>0.09</td>
</tr>
<tr>
<td>Informational Style</td>
<td>36.95</td>
<td>5.14</td>
<td>24.00</td>
<td>51.00</td>
<td>-0.08</td>
<td>-0.42</td>
</tr>
<tr>
<td>Normative Style</td>
<td>30.03</td>
<td>5.24</td>
<td>14.00</td>
<td>43.00</td>
<td>-0.17</td>
<td>-0.19</td>
</tr>
<tr>
<td>Diffused Style</td>
<td>22.59</td>
<td>6.07</td>
<td>10.00</td>
<td>40.00</td>
<td>0.27</td>
<td>-0.56</td>
</tr>
<tr>
<td>Commitment</td>
<td>39.56</td>
<td>5.72</td>
<td>20.00</td>
<td>50.00</td>
<td>-0.47</td>
<td>-0.40</td>
</tr>
<tr>
<td>Parent Support</td>
<td>16.20</td>
<td>6.00</td>
<td>0.00</td>
<td>28.00</td>
<td>-0.28</td>
<td>-0.49</td>
</tr>
<tr>
<td>Sibling Support</td>
<td>10.52</td>
<td>7.48</td>
<td>0.00</td>
<td>28.00</td>
<td>0.23</td>
<td>-0.86</td>
</tr>
<tr>
<td>Step/Half-Sib Supp.</td>
<td>1.61</td>
<td>4.11</td>
<td>0.00</td>
<td>24.00</td>
<td>3.20</td>
<td>10.57</td>
</tr>
<tr>
<td>Friend Support</td>
<td>16.91</td>
<td>5.11</td>
<td>0.00</td>
<td>28.00</td>
<td>-0.42</td>
<td>0.19</td>
</tr>
<tr>
<td>Sig. Other Support</td>
<td>12.87</td>
<td>9.73</td>
<td>0.00</td>
<td>28.00</td>
<td>-0.20</td>
<td>-1.46</td>
</tr>
<tr>
<td>Prof/Teach. Support</td>
<td>4.38</td>
<td>3.64</td>
<td>0.00</td>
<td>21.00</td>
<td>1.30</td>
<td>2.53</td>
</tr>
<tr>
<td>Minister Support</td>
<td>3.96</td>
<td>5.53</td>
<td>0.00</td>
<td>24.00</td>
<td>1.41</td>
<td>1.06</td>
</tr>
<tr>
<td>Total Other Support</td>
<td>0.77</td>
<td>2.82</td>
<td>0.00</td>
<td>24.00</td>
<td>5.03</td>
<td>29.61</td>
</tr>
</tbody>
</table>

Note. Standard error skewness: .12; standard error kurtosis: .25.

Bivariate correlations were examined as a first step in detecting multicollinearity among the observed variables (see Table 10 in Appendix A). Correlations above .70 were noted as
indicating collinearity (Tate, 1998). The correlation between the DIDS subscales of commitment making and identification with commitment was .795 (p < .01). A high correlation was expected given that they both tap different aspects of the process of making commitments. For instance, Luyckx et al. (2008) reported a correlation of .67 (p < .001).

Lewis-Beck (1980) suggested that the best method to assess multicollinearity involves regressing each independent variable on all the other independent variables. This was done twice with commitment making ($R^2 = .68$) and identification with commitment ($R^2 = .71$) as the independent variable. The $R^2$ value was less than 1.0 for both regression models and was acceptable given that a value of 1.0 indicates high multicollinearity (Lewis-Beck). As an additional step in detecting multicollinearity, Tolerance and Variance Inflation Factor indices were examined to determine if multicollinearity was an issue in the multiple regression models. It was demonstrated that multicollinearity was not present among the independent variables in any of the regression models. The Tolerance was less than .01 and the Variance Inflation Factor was less than 10 as specified by Pedhazur (1997).

**Quantitative Data**

**Research Question 1.** Who do emerging adults consult about identity related issues?

Information regarding who emerging adults consult came from their answers to the identity support measure and was collected from each participant at the beginning of the study in an online survey. Table 11 in Appendix B provides the means and standard deviations for each of the 56 items of the identity support measure.

Overall, participants reported seeking the most advice from friends ($M = 16.91, SD = 5.11$). Total support from parents was the next highest total ($M = 16.20, SD = 6.00$). Regarding, total mean support for specific identity domains, participants sought the most support related to their long term goals, such as finding a good job, being in a romantic relationship, and so on ($M = 12.56, SD = 3.52$) followed by career ($M = 11.68, SD = 4.01$). Parents are consulted the most regarding long term goals, career, and values. Friends are consulted the most regarding friendships, sexual orientation/behavior, religion, and group loyalties. Participants reported seeking advice from siblings the most regarding long term goals.

**Research Question 2.** Who is likely to consult a sibling?

A multiple regression was used to analyze the variance in the dependent variable of total sibling identity support. Multiple regression allows for multiple independent variables to be
examined at once. The effect of each variable is statistically controlled and standardized so that the effects can be compared and the unique effect of each independent variable on the dependent variable can be determined (Licht, 1995). Residuals and measures of influence were examined and no outliers were found. Additionally, in an effort to determine if some of the key assumptions of multiple regression were met, the residuals were found to be normally distributed and scatterplots of standardized residuals against the dependent variable demonstrated homoskedasticity (Lewis-Beck, 1980).

Information related to demographics and identity variables was collected from each participant at the beginning of the study in an online survey. Demographic variables that were entered into the regression equation are the participant’s age (continuous), gender (dummy coded: 0 = female, 1 = male), ethnicity/race (categorical: 1 = White, 2 = African American, 3 = Asian, 4 = Hispanic and dummy coded: 0 = White, 1 = Non-White were both tested separately in the model, both not significant), number of biological siblings (continuous), number of step/half-siblings (dummy coded: 0 = zero, 1 = any number of step/half-siblings), parental marital status (dummy coded: 0 = intact, 1 = separated), and maternal/paternal education (dummy coded: 0 = middle school, high school, and some college, 1 = college and graduate/professional school).

Identity variables that were included are as follows: the five dimensions from the Dimensions of Identity Development Scale (exploration in breadth, exploration in depth, ruminative exploration, commitment making, and identification with commitment); the two dimensions of the Eriksonian Psychosocial Stage Inventory (identity synthesis and identity confusion); the four dimensions of the Identity Style Inventory (informational, normative, diffusion/avoidance, and commitment); and finally the total score from the Questionnaire for Eudaimonic Well-Being (personal expressiveness).

As a first step, only demographic variables were entered. Age, gender, ethnicity/race, parental marriage, maternal and paternal education were not significant predictors of total sibling support. Only biological siblings ($p < .001$) and step/half-siblings ($p < .001$) were significant predictors. The overall model explained 13.6% of the variance in total sibling support (see Table 12). As a next step, the identity variables were added to the model explaining an additional 7.5% variance in total sibling support. The sibling variables remained significant and only the normative style ($p = .011$) and diffused/avoidant style ($p = .038$) variables were significant predictors of total sibling support (see Table 12).
Participants who scored one standard deviation above the mean on the number of biological siblings also scored .267 standard deviation units higher than the mean on total sibling support, yet those who reported having step/half-siblings scored .167 standard deviation units lower on total sibling support than the mean of those who reported not having step/half-siblings, controlling for the other predictors. Therefore, participants who reported having biological
siblings were also likely to report consulting them for advice on various identity related topics. These predictors had a stronger relationship to the dependent variable than any of the identity variables.

The two identity variables that were significant predictors of total sibling support were normative and diffuse/avoidant identity styles. Participants who scored one standard deviation above the mean on total sibling support also scored .166 and .118 standard deviation units above the mean on the normative and diffuse/avoidant identity style subscales, respectively, after controlling for all other predictors. Participants who reported a normative identity style are more likely to consult parents or other authoritative figures to gain information related to their identity. On the other hand, participants who reported a diffuse/avoidant identity style are likely to be uninterested in forming their identity or have approached the identity exploration process in a haphazard manner. Potentially, consulting siblings for advice may be part of the haphazard exploration process of those who report this identity style. They may be talking with others about their identity, but not seriously exploring or making commitments.

Qualitative Data

**Research Question 4.** What is the content of advice given by siblings?

In this section the results from the sibling discussion groups and the comparison peer discussion group are presented. In their feedback, 43 sibling and 24 peer group discussion participants provided multidimensional support by providing informational support after empathizing with and validating the student participants’ experiences and future plans. The average length of feedback given by siblings was 665 words ($SD = 241$, Range $= 97$ to 1222 word), as compared to the feedback posts of peers, which was 554 words ($SD = 267$, Range $= 155$ to 962 words). For the purpose of this study, only informational support was examined, which on average comprised 30% of a sibling’s post and 24% of a peer’s post with the remaining majority of the post devoted to providing other forms of social support, such as esteem or emotional support. The average length of sibling informational support was 198 words ($SD = 157$, Range of 9 to 610 words) and for peers 144 words ($SD = 181$, Range $= 0$ to 797 words). Both groups showed a large amount of variability in the amount of advice given with the ratio of advice to other types of support ranging from zero to one with posts consisting only of advice.

Regarding informational support, two dimensions emerged from the data: cognitive-emotional and behavioral advice. In the sibling discussion groups, 12 (27.9%) siblings and 3
(12.5%) peers gave only feedback and advice that was focused on influencing the way a student participant thought or felt about their future plans. Likewise, 5 (11.6%) siblings and 5 (20.8%) peers gave only behavioral suggestions or specific actions to take to achieve the student participant’s goals. Finally, 26 (60.5%) siblings and 16 (66.7%) peers provided both types of advice. The category definitions and examples can be found in Table 13. The counts are approximate and are presented to give the reader a sense of the magnitude of findings.

Table 13

<table>
<thead>
<tr>
<th>Categories, Definitions, and Examples from Sibling Discussion Posts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Categories</td>
</tr>
<tr>
<td>Cognitive-Emotional Advice</td>
</tr>
<tr>
<td>Definition: Ways of thinking and feeling about future plans</td>
</tr>
<tr>
<td>Behavioral Advice</td>
</tr>
</tbody>
</table>
Based on the frequency of the dimensions found in the data, a larger percentage of siblings gave only cognitive-emotional advice and a larger percentage of peers gave only behavioral advice. No other patterns or differences emerged regarding the quantity or quality of advice among sibling dyad types or between siblings and peers.

To further dissect the cognitive-emotional and behavioral advice given by siblings and peers, the frequency of specific topics is highlighted in Table 14. Most of the topics could be easily classified as cognitive-emotional or behavioral, however, a few required context to be classified. For instance, the following quote: “Go to graduate school, if it’s loans your worried about you will be able to pay them off when you have a higher paying career” was classified as cognitive-emotional because the goal was to influence the student’s way of thinking in seeing student loans as a barrier to going to graduate school, whereas, advice such as “budget, budget, budget and save, save, save” was classified as behavioral because it was related to the student’s goal to travel. Similarly, related to graduate school plans, advice such as “Stop worrying about when you will be able to take the GRE. You’ll take it when you can take it and as of now, there is nothing you can do about it” was coded as cognitive-emotional advice, whereas “If something changes in the next couple of months, you will need to get your application in. It might be a good idea to begin working on some parts of it that can be accomplished ahead of time” was coded as behavioral advice. The topics in Table 14 are presented primarily to highlight the specific content of advice given by siblings and peers.

<table>
<thead>
<tr>
<th>Table 14</th>
<th>Frequency of Specific Topics Found in Sibling and Peer Advice</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Siblings Frequency %</td>
</tr>
<tr>
<td>Internships</td>
<td>3 (.07)</td>
</tr>
<tr>
<td>Volunteering</td>
<td>4 (.09)</td>
</tr>
<tr>
<td>Travel</td>
<td>7 (.16)</td>
</tr>
<tr>
<td>Studying</td>
<td>17 (.40)</td>
</tr>
<tr>
<td>Networking</td>
<td>2 (.05)</td>
</tr>
<tr>
<td>Flexibility in Plans</td>
<td>7 (.16)</td>
</tr>
<tr>
<td>Motivation</td>
<td>16 (.37)</td>
</tr>
<tr>
<td>Work-Life Balance</td>
<td>7 (.16)</td>
</tr>
<tr>
<td>Money/Loans</td>
<td>10 (.23)</td>
</tr>
<tr>
<td>Career Advice/Resumes</td>
<td>5 (.12)</td>
</tr>
<tr>
<td>Marriage/Kids/Dating</td>
<td>10 (.23)</td>
</tr>
<tr>
<td>Have Fun</td>
<td>3 (.07)</td>
</tr>
</tbody>
</table>
The majority of siblings and peers began their response posts by validating the students’ future plans and empathizing with their concerns. One key difference was found in that unlike peers, siblings were more likely to provide support by describing the attributes or past behaviors of the student participant as a way of validating their future plans. This aspect of the data was noted, but not thoroughly analyzed given that it fell beyond the scope of the research question. A peer most likely could not post comments regarding a student’s attributes or personal history because he or she did not know the student personally. The peer discussion group consisted of students from the four online courses who reported that they did not seek advice from siblings. However, the pattern of couching informational support between other types of support such as emotional and esteem support was found in the feedback posts of both siblings and peers. Therefore, the majority of siblings and peers, with a few exceptions where only informational support was provided, found it important to provide multidimensional support in their feedback posts.

**Reflection Survey Results**

In response to the first reflection question regarding the role participants see their sibling playing in how they make decisions about their future plans, participants described their siblings as being a role model or mentor (33%), a source of multidimensional support (51%), and a best friend (7%). Approximately 9% of participants assigned a less influential role to their sibling stating for instance, “Though it is helpful to know how my brother feels, ultimate decisions regarding my future plans rest upon my new nuclear family: my husband and I” or “Now they [siblings] still play a role because I still want to make them proud and not do anything they wouldn’t approve, just not as large of a role.” In addition to mentioning a husband as a source of advice, a few participants (7%) compared sibling informational support to support received from parents and friends, stating “They [siblings] are the supportive ones even when my parents and friends don’t seem to understand [sic]” or “She does not try to change my mind or talk me out of

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>%</th>
<th>Frequency</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific Courses to Take</td>
<td>2 (.05)</td>
<td></td>
<td>1 (.04)</td>
<td></td>
</tr>
<tr>
<td>Grad School Prep Advice</td>
<td>24 (.56)</td>
<td></td>
<td>4 (.17)</td>
<td></td>
</tr>
<tr>
<td>Use Support Network</td>
<td>9 (.21)</td>
<td></td>
<td>4 (.17)</td>
<td></td>
</tr>
</tbody>
</table>
decisions that I make, like my parents might try to. If she does not agree with a decision she tells me and explains why, but always supports me no matter what.”

In response to the same question regarding their role, sibling participants saw their role as a mentor or role model (14%) because they were older and “have been through similar experiences” or are “currently going through the obstacles she will be facing soon.” In contrast, a few (7%) specifically described their relationship as a close friendship with reciprocal roles, such as “I was used to thinking of [sibling name] as my kid sister. Now that we are older and we both have plans for our futures, we can exchange ideas on how we're doing more as equals.” Only one sibling mentioned that their role was limited because he was younger and not closer in age, stating “I see myself playing only a little part. Maybe if I was older than her or closer in age I would have a bigger part.” Overall, the majority of siblings (91%) felt that they play a significant role in their siblings’ lives and that they are a good listener and a source of support, advice, encouragement, and motivation. A few (9%) indicated that his or her sibling is not likely to use his or her advice, for instance stating, “I feel like she comes to me for advise [sic] and help sometimes but she is trying to do her own thing and make her own path and she doesn't ever want to follow in my shadow. So I feel like I am a good friend to her and I can give advice but she doesn't want to do everything just like me so she takes my advice or leaves it.”

In contrast to the sibling discussion group participants, half of the peer group participants noted that peers do not play a significant role stating “I do not see as much of my peers influencing my future, rather more of myself and close family members/friends” whereas the other half saw peers differently writing” I see my peers as who I turn to for acceptance and challenge. I see my peers as people who will push me to become the best I can be in my career.”

In response to the second reflection question about whether the advice received/given online was similar or different than the advice usually received/given, the majority of the peer discussion group participants (67%) felt that the advice was different from the advice they normally receive from their peers. A quarter of the peer group participants used the word unbiased to describe the advice stating for instance, “The advice I received online is different in that I know it was unbiased and honest and you can never really tell from people who actually know you.”

Of the participants in the sibling discussion group, 79% of siblings stated the advice they gave online was similar to the advice they normally give and 53% of student participants stated it
was similar to the advice they normally receive from their sibling. The siblings who indicated that their advice was different stated for instance that their advice online was “more serious and honest rather than the advice [given] in real life” or “It's different because it is more about future goals unlike usually it is about smaller everyday things.” Student participants responded similarly underscoring the difference stating “Usually we don’t go into things so deeply” or that “online made the advice giving very direct and to the point, where as normally it would be less direct.” In contrast, one student participant noted that she could hear her sibling saying the same advice, for instance stating, “He normally always tells me advice in the same tone of voice and he types in that same tone of voice it seems like so it's pretty much the same” or another student noted that the advice was similar, but that “it just lacks the voice inflections and laughs that normally go with our conversations.” Furthermore, regarding the online format, a few participants noted that they usually communicated with their siblings via email and described the online format for instance as “more formal in nature, but similar in general message because we usually correspond through email.” Similarly, a few student participants compared the online discussion to chatting online stating the activity was similar to “talking on aim” or “chatting…on instant message online” with their siblings.

In response to the reflection questions regarding the experience overall and the experience of receiving/giving advice in an online discussion forum, the majority of participants in the sibling and peer discussion groups enjoyed the experience, stating for instance, “I enjoyed it. I think people can be more open and honest and up for discussion on discussion boards and they aren't afraid to give their real opinion. If only parents could have discussion boards with children!” Others similarly described it as enjoyable, but expressed a preference from other modes of communication stating, “I am not too much of a fan because I like talking in person just because it is a lot more personable” or “when I personally communicate i'd [sic] rather pick up the phone or drive my car to her house.” All of the student participants liked the experience of writing out their future plans stating for instance, “it was interesting to actually write about my goals it actually motivated me to want to achieve them more” or “I actually found it very therapeutic. It's nice to be able to write about something that you are familiar with -- yourself, as well as get advice from someone else. I am glad that I did it, it helped me to reevaluate my own future, values, and direction that I see for myself.” Other than a few who complained about having to write two paragraphs per question, everyone wrote that they enjoyed the experience of
writing about their future plans and receiving feedback. For example, the peer group participant who commented that the experience was therapeutic described the feedback as helpful saying, “It's nice to have an outside perspective on behalf of someone that may or may not be like you, however they are probably going through similar life changing experiences. Its [sic] overall beneficial.”

**Summary**

In sum, the purpose of this study was to explore who emerging adults consult regarding their identity issues and the characteristics of emerging adults who consult siblings. Participants reported seeking the most advice from friends, parents, significant others, and siblings regarding long term goals and careers. Participants reported seeking advice from siblings the most regarding long term goals. Regarding the demographic and identity formation characteristics of participants who consult siblings, the number of siblings reported was the strongest predictor followed by the normative and diffuse-avoidant identity styles. Related to patterns found in sibling and peer advice, no differences were found. Both groups provided cognitive-emotional and behavioral advice that was preceded and followed by emotional and esteem support. In their reflection posts participants and related siblings ascribed a more important role to siblings over peers in determining their future plans.
CHAPTER FIVE

DISCUSSION

The primary goal of the current study was to explore who emerging adults consult for advice while they are forming their identities. The developmental period of emerging adulthood is characterized as a time where decisions are made related to relationships, belief systems, education, and occupations (Arnett, 2007). Scholars have highlighted the supportive network of relationships that provides the context for decision making. Schachter and Ventura (2008) formulated the concept of identity agents as individuals who actively participate in the identity formation of a youth. For instance, recent research has suggested teachers (Harrell-Levy & Kerpelman, 2010), peers (Sugimura & Shimizu, 2010), therapists (Blume, 2010), and parents (Schachter & Ventura, 2008; Von Korff et al., 2010) as potential identity agents. Furthermore, scholars have emphasized the role of siblings in career decisions (Blustein et al., 1997; Schultheiss et al., 2001; 2002). However, the role of siblings in the identity formation processes of emerging adults has not been explored. Therefore, the main objectives of the study were to explore who emerging adults consult for advice, what role siblings play, and the characteristics of the emerging adults who consult siblings for advice regarding their identity. A final goal was to explore the characteristics of the siblings who were contacted to participate in the online discussion and dissect the content of their advice.

Research Question 1

It was expected that participants would report frequently seeking advice from all groups, including parents, siblings, friends, significant others, clergy, and teachers/professors (e.g., Blustein et al., 1997; Sanchez et al., 2006). Participants responded to the identity support measure indicating how frequently they seek advice regarding the seven identity domains of long term goals, career, friendships, sexual orientation/behavior, religion, values, and group loyalties. Participants reported seeking advice in total across all the seven domains most frequently from peers, followed by parents, significant others, siblings, professors/teachers, and ministers with very few utilizing step/half-siblings or listing other sources of support. These results support the findings of previous research. Buhrmester (1992) found that siblings remain an important source of emotional support and serve as a source of advice in late adolescence even though adolescents and emerging adults spend more time with peers and experience various life transitions related to
education, career, or romantic relationships. Therefore, it is reasonable that peers and significant others would be consulted more often than siblings, but that siblings would also remain a relatively important source of support. Additionally, participants reported most frequently seeking advice from siblings regarding their long term goals, which is similar to the results of Tucker et al. (2001) and Schultheiss et al. (2001; 2002), who highlighted the important role siblings play in influencing education and career goals. Schultheiss and colleagues found that siblings were primarily a source of informational support especially during times of educational and career transition. Moreover, Tucker and colleagues found that late adolescents who consulted siblings, in addition to parents, regarding career and education advice were more likely to report positive expectations for college graduation success and a future occupational identity.

In sum, the results of the identity support measure are similar to the findings from previous research on the role of siblings in emerging adulthood.

**Research Question 2**

Regarding the demographic and identity formation characteristics of emerging adults who reported frequently seeking advice from siblings, results indicate that the strongest explanatory variable is the number of biological siblings, which is positively related to the amount of sibling contact for advice. These results are contrary to what was expected as Milevsky et al. (2005) found that emerging adults from smaller families report communicating more frequently with siblings and feel closer to and more supported by their siblings. Although, the results may correspond more with the findings of Rocca and colleagues (2010) who found that students who reported having more than one sibling also reported communicating with their siblings for pleasure and relaxation unlike those who reported only having one sibling where communication was more for control. Therefore, based on the findings of this study in concert with previous research on sibling relationships in emerging adulthood, biological siblings are viewed by emerging adults as a source of informational support and are consulted regarding identity issues.

In contrast, the presence of step/half-siblings is negatively related to the amount of sibling contact for advice, which is an expected finding based on previous research. White and Riedman (1992) found that adults reported contacting step/half-siblings significantly less than biological siblings. Though the presence of step/half-siblings was related to significantly less sibling support sought, parental marital status did not significantly predict the frequency of
sibling contact for advice. This result was not expected given the mixed results in previous research regarding sibling relationships after divorce (e.g., Milevsky, 2004; Tucker et al., 2001).

No other demographic variables were found to significantly explain how often emerging adults seek informational support from their siblings. Based on previous research on sibling relationships, it was expected that participants would differ in their use of siblings as identity agents based on ethnic/racial background (Tucker & Updegraff, 2009) and parent education (Hurtado-Ortiz & Gauvain, 2007). Specifically, participants from minority families and those that have parents who are not college educated are more likely to report frequently seeking advice from a college educated sibling.

Finally, it was expected that emerging adults would be more likely to report seeking advice from siblings if they also reported high levels of identity confusion, exploration in breadth, ruminative exploration, informational or normative identity styles, and low levels of personal expressiveness. Only the normative and diffuse-avoidant identity styles are found to be significant predictors of sibling contact for advice. Emerging adults who report a normative identity style are less likely to explore using many sources, but instead prefer to consult authority figures such as parents regarding identity related information. Those who use a normative identity style may see siblings as representing parental or familial values. For example, Park and Ecklund (2007) found that with regard to religious exploration and identity, emerging adult siblings were described as acting as reinforceers, substitutes, or contrasts to parents in socializing younger siblings.

Emerging adults who use a diffuse/avoidant style are characterized as being uninterested in identity related information or are haphazardly exploring. For this group of emerging adults, their sibling relationship may be reciprocal (Dunn, 1983) or similar to a peer relationship. For instance based on the reflective comments, these may be the emerging adults who commented that they frequently talk to their siblings about their plans, but not normally as in depth as the essay required. Potentially, the findings of Rocca and colleagues (2010) may be related in that emerging adults who are avoiding or haphazardly exploring their identity may communicate with their siblings for pleasure and relaxation and avoid consulting other more authoritative figures, such as parents or professors. Further research is needed to explore the causal direction and the circumstances when a sibling would be consulted over parents or peers.
Research Question 3

Regarding the type of sibling contacted to participate in the online discussion, it was expected that the sibling contacted would be a biological sibling (White & Reidman, 1992) who is older (on average by 5 years; Schultheiss et al., 2001; 2002) and female (e.g., Cicirelli, 1980; Tucker et al., 1997). Of the siblings contacted, 76.9% were female and 69.8% were older, which corresponds with previous research. The mean number of step/half-siblings in the sibling discussion group is 0.67, therefore it was unlikely that a non-biological sibling was contacted to participate. Additionally, a step/half-sibling relationship was not mentioned in any of the sibling discussion posts, therefore, biological siblings were most likely contacted to participate.

The siblings contacted are on average 3.05 years apart in age with a range of 0 to 14 years and standard deviation of 2.51 years, which is similar to the findings of previous research. For instance, Dolgin and Lindsay (1999) found that siblings closer in age are more likely to contact each other to discuss daily stressors, and Milevsky et al. (2005) found that siblings reported less conflict when greater than 2 years apart. Moreover, Schultheiss et al. (2001; 2002) found that when college students were asked to identify a sibling that has helped them with their career decisions, participants chose a sibling who was an average of 5 years older. In summary, participants in the current study chose a sibling for feedback and advice who was female and close in age with the majority of siblings being older than the student participant.

Research Question 4

The findings of the qualitative analysis allowed the content of sibling advice to be further elucidated. In line with previous research, the current study found that sibling advice is composed of multidimensional support (Cicirelli, 1980; 1995; Goetting, 1986) where siblings respond with emotional and informational support (Dolgin & Lindsay, 1999). Siblings provided specific cognitive-emotional and behavioral advice to help students achieve their goals. For instance, scholars have found that Hispanic students reported receiving concrete guidance from older siblings regarding the college application/selection process, choosing a major, and future career plans (Ceja, 2006; Perez & McDonough, 2008; Sanchez et al., 2006).

The current study used an online discussion forum to explore the sibling interaction and the content of advice provided by siblings unlike previous studies which are based on retrospective reports of college students regarding sibling informational support. Given the unreliability of retrospective reports and participants’ limited ability to adequately describe
interactions (Lindahl, 2001) the use of an online discussion format is one strength of the study. Likewise, approximately half of the student participants and the majority of sibling participants indicated the online advice was similar to the advice they would normally receive/give. Moreover, some participants noted that they frequently communicate with their siblings via email or instant message. These comments provide evidence to support the external validity of the activity. Further limitations and strengths of the study are discussed in the next section.

In sum, the current study explored an understudied area within identity research, namely, who emerging adults consult for advice while they are forming their identities. Additionally, previous researchers have highlighted the supportive network available to emerging adults, but have overlooked the role of siblings. The current study shed light on the demographic and identity characteristics of emerging adults who consult siblings and the content of advice they provide. Given that only the self-construction aspects of identity were found to be related to sibling support, further research is needed on how emerging adults view the role of others in their identity formation process.

Limitations and Strengths of the Current Study

The current exploratory study addressed a theoretical oversight rather than common methodological limitations by exploring who emerging adults consult for advice and the role of siblings in the identity formation processes of emerging adults. However, the findings of the study need to be interpreted in light of limitations related to the study design, sampling, and data collection. The study design was cross-sectional though no significant differences were found in the identity scores or total sibling support among sophomores, juniors, and seniors. Additionally, the study was partially retrospective in that participants were asked to recall who they frequently consulted for advice, which could vary greatly from participant to participant depending on the method they used to recall that information (e.g., Bradburn, Rips, & Shevell, 1987).

A convenience sampling method was used for the larger sample, which was then followed by a purposeful sampling method to select the participants who reported seeking advice from siblings regarding the long term goals and career domains of identity development. Though the main sample was similar to the university population, it was not representative of the theoretical population of emerging adults. The current sample is primarily composed of non-Hispanic White female college students whose identity formation experiences are different from non-White emerging adults or emerging adults who choose not to attend college (Schwartz,
Furthermore, the larger sample and the discussion group sample were composed of self-selected participants. The relatively high response rate was most likely due to extra credit though the amount of extra credit given added only a small amount to the total points available in each course. However, the conclusions drawn have limited generalizability beyond the study due to the sampling method.

With regard to the data collection method, the self-report online surveys and online discussions provide another limitation because there is no control of how the surveys and discussions were completed and by whom (Dillman, 2000). Additionally, the length of the online survey or the number of steps required in the online discussion may have influenced the responses of participants and who completed all parts of the study. Approximately one half of the sibling discussion participants and one third of the peer group participants failed to complete all parts of the study, though no significant differences were found between the participating and dropout groups.

Additionally, though multiple measures were used to assess the identity formation process of emerging adults, limitations were associated with the instruments. For instance, the bifactor model (Schwartz et al., 2009) for the Eriksonian Psychosocial Stage Inventory could not be reproduced in the current sample. However, similar results were found regarding the internal consistency and factor structures of the other measures. The inclusion of demographic variables, such as the number of biological and step/half-siblings, served as a methodological strength of the study. These variables when included in a regression model explained most of the variance in total sibling support scores.

Another methodological strength can be found in the use of triangulation to understand the relationship between sibling support and the identity formation processes of emerging adults. Measures were included that captured the identity formation constructs of the process of exploration and commitment (Marcia, 1966), identity synthesis versus confusion (Erikson, 1950), identity self-construction (Berzonsky, 1989; 1990) and finally identity self-discovery (Waterman et al., 2010). Schwartz’s model (Figure 1) provided justification for the inclusion of these constructs in the study so that the relationship between sibling support and these identity constructs could be explored. Triangulation was also used to explore the role of siblings as potential identity agents. The Identity Support measure was created to tap the amount of sibling contact for advice in comparison to other potential sources of support. Also, as previously
mentioned, an online discussion activity and the reflection survey provided information on the content of sibling advice and how siblings and participants view the role of siblings in supporting their goals. This method yielded a large amount of information regarding the sibling relationship in emerging adulthood, which adds to the identity and sibling literature given that few studies focus on the sibling relationship in emerging adulthood or acknowledge siblings as identity agents. The concept of an identity agent is relatively new in the field of identity research and siblings have not been mentioned by identity scholars as potential identity agents. Additionally, the individuals who emerging adults use as sources of support during the process of identity formation have not been explored. The findings of this study provide some evidence of the role of siblings in the identity formation processes of emerging adults and will hopefully stimulate further research.

**Implications**

Though a main goal of the study was to explore the content of advice offered by siblings, the findings demonstrate that the role of siblings as identity agents should be further explored. The majority of siblings felt that they played a significant role in providing feedback, support, advice, and encouragement. In their feedback posts, siblings set goals (Schachter & Ventura, 2008) for student participants, but also recognized the bidirectional nature of their relationship acknowledging that the student participant may not follow their advice. Additionally, similar to Sugimura and Shimizu (2010) siblings also worked to “motivate and stimulate identity formation by serving as a source of sympathy and confirmation” (p. 116). More research is needed on the characteristics of siblings as identity agents, the nature and frequency of their interventions, and their theories and practices. For instance, do they function as on-call support or used for continuous support? Also, how are their goals, theories, and practices related to the identity development of an emerging adult different from those of peers, parents, and other identity agents? Ministers and teachers have been frequently mentioned in the identity literature as playing an important role in the identity formation processes of youth; however, based on the findings of the current study, emerging adults reported consulting them less frequently than peers, parents, significant others, and siblings. Therefore, further research on the role of siblings as identity agents is warranted.

Additionally, further research is needed on the facility of online discussion forums as a venue for identity interventions, especially among emerging adults and adolescents who are
increasingly comfortable communicating through social networking sites, text messages, or other online forums (e.g., Ellison, Steinfield, & Lampe, 2007; Pempek, Yermolayeva, & Calvert, 2009). An online intervention is an economical way to reach emerging adults using online group discussions with methods from face-to-face interventions such as participatory learning and transformative activities (e.g., Berman, Kennerley, & Kennerley, 2008; Ferrer-Wreder, Lorente, Kurtines, Briones, Bussel, Berman, & Arrufat, 2002; Schwartz, Kurtines, & Montgomery, 2005). Through online discussions, siblings and other family members can potentially act as or be empowered to become identity agents in an intervention. In addition to identity interventions, this study demonstrates that online discussions are useful in collecting qualitative data, especially when sampling the emerging adult population.

Finally, this research also has implications for those who work with families to provide recommendations with regard to identity formation and also how they might help youth determine career and educational goals. Ministers, teachers, and therapists for instance should acknowledge the role siblings may play in the lives of emerging adults and help strengthen that relationship. Similarly, regarding career development, guidance counselors, career counselors, and university advisors who mentor students should also acknowledge and help students utilize their support network as they explore, discover, and construct their identity.
## APPENDIX A

### Bivariate Correlations among the Identity Measures

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>-.67**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>.60**</td>
<td>-.59**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>.14**</td>
<td>.08</td>
<td>.12*</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>-.41**</td>
<td>.63**</td>
<td>-.54**</td>
<td>.36**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>.66**</td>
<td>-.59**</td>
<td>.80**</td>
<td>.14**</td>
<td>-.49**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>.25**</td>
<td>.02</td>
<td>.20**</td>
<td>.57**</td>
<td>.32**</td>
<td>.28**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>.70**</td>
<td>-.59**</td>
<td>.57**</td>
<td>.18**</td>
<td>-.37**</td>
<td>.64**</td>
<td>.29**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>.32**</td>
<td>-.15**</td>
<td>.21**</td>
<td>.25**</td>
<td>.02</td>
<td>.26**</td>
<td>.38**</td>
<td>.47**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>.40**</td>
<td>-.25**</td>
<td>.31**</td>
<td>.09</td>
<td>-.15**</td>
<td>.35**</td>
<td>.22**</td>
<td>.46**</td>
<td>.43**</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>-.33**</td>
<td>.42**</td>
<td>-.30**</td>
<td>-.03</td>
<td>.33**</td>
<td>-.29**</td>
<td>.01</td>
<td>-.33**</td>
<td>-.02</td>
<td>.01</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>.61**</td>
<td>-.57**</td>
<td>.56**</td>
<td>.06</td>
<td>-.43**</td>
<td>.57**</td>
<td>.14**</td>
<td>.63**</td>
<td>.43**</td>
<td>.59**</td>
<td>-.43**</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>.06</td>
<td>.03</td>
<td>.01</td>
<td>.06</td>
<td>.11*</td>
<td>.05</td>
<td>.10</td>
<td>.12*</td>
<td>.18**</td>
<td>.26**</td>
<td>.15**</td>
<td>.10</td>
<td>1</td>
</tr>
</tbody>
</table>

* = p < .05, ** = p < .01

### Variable Numbers for Table 10

1. Identity Synthesis (66-items summed)
2. Identity Confusion (66-items summed)
3. Commitment Making (5-items summed)
4. Exploration in Breadth (5-items summed)
5. Ruminative Exploration (5-items summed)
6. Identification with Commitment (5-items summed)
7. Exploration in Depth (5-items summed)
8. QEWB (21-items summed)
9. Informational Style (11-items summed)
10. Normative Style (9-items summed)
11. Diffused Style (10-items summed)
12. Commitment (10-items summed)
<table>
<thead>
<tr>
<th>Long-term</th>
<th>3.06</th>
<th>1.98</th>
<th>1.85</th>
<th>2.17</th>
<th>0.20</th>
<th>0.37</th>
<th>0.10</th>
<th>10.54</th>
</tr>
</thead>
<tbody>
<tr>
<td>Career</td>
<td>3.05</td>
<td>2.72</td>
<td>0.29</td>
<td>0.17</td>
<td>1.89*</td>
<td>1.55</td>
<td>0.05</td>
<td>0.13</td>
</tr>
<tr>
<td>Friendship</td>
<td>2.51</td>
<td>2.17</td>
<td>0.27</td>
<td>0.12</td>
<td>0.63</td>
<td>0.61</td>
<td>0.09</td>
<td>1.89*</td>
</tr>
<tr>
<td>Sex Orient</td>
<td>1.69</td>
<td>1.31</td>
<td>0.17</td>
<td>1.68*</td>
<td>1.37</td>
<td>0.19</td>
<td>1.09**</td>
<td>0.08</td>
</tr>
<tr>
<td>Religion</td>
<td>2.02</td>
<td>1.31</td>
<td>0.17</td>
<td>1.68*</td>
<td>1.37</td>
<td>0.19</td>
<td>1.09**</td>
<td>0.08</td>
</tr>
<tr>
<td>Values</td>
<td>2.76</td>
<td>2.52</td>
<td>0.31**</td>
<td>2.52</td>
<td>1.91</td>
<td>0.38</td>
<td>0.78</td>
<td>0.10</td>
</tr>
<tr>
<td>Group Loy</td>
<td>2.16</td>
<td>1.45</td>
<td>0.20</td>
<td>2.38*</td>
<td>1.70</td>
<td>0.60</td>
<td>0.35</td>
<td>0.07</td>
</tr>
<tr>
<td>Total</td>
<td>16.20</td>
<td>10.52</td>
<td>1.61</td>
<td>16.91**</td>
<td>12.87</td>
<td>4.38</td>
<td>3.96</td>
<td>0.77</td>
</tr>
<tr>
<td></td>
<td>(6.00)</td>
<td>(7.48)</td>
<td>(4.11)</td>
<td>(5.11)</td>
<td>(9.73)</td>
<td>(3.64)</td>
<td>(5.53)</td>
<td>(2.82)</td>
</tr>
</tbody>
</table>

Note: Standard deviations appear in parentheses below means.

* Indicates highest mean score across the identity domain.

** Indicates highest mean score across source of support.

Bold numbers indicate that the number is the highest mean score across both the identity domain and source of support.

Table 11

Appendix B
APPENDIX C

SURVEY

Below are a few questions about your background. Please, try to answer them to the best of your ability.

1. Age _____

2. Sex
   ___ Male
   ___ Female
   ___ Transgender

3. What is your current educational status?
   ___ Freshman
   ___ Sophomore
   ___ Junior
   ___ Senior
   ___ Other (please specify) ____________

4. Please specify your major: _____________

5. Using the US Census Bureau ethnicity categories, your ethnicity is:
   ___ Not Hispanic, Latino, or Spanish origin
   ___ Mexican, Mexican Amer., Chicano
   ___ Puerto Rican
   ___ Cuban
   ___ Another Hispanic, Latino, or Spanish origin (please specify) ___________

6. Using the US Census Bureau ethnicity categories, your race is:
   ___ White
   ___ Black, African American
   ___ American Indian or Alaska Native (please specify) ____________
   ___ Asian Indian
   ___ Chinese
   ___ Filipino
   ___ Japanese
   ___ Korean
   ___ Vietnamese
   ___ Other Asian (please specify) __________
   ___ Native Hawaiian
   ___ Guamanian or Chamorro
   ___ Samoan
___ Other Pacific Islander (please specify) __________

7. Which best describes your biological parents’ current marital status:
   ___ Married
   ___ Remarried (at least one of your parents)
   ___ Widowed
   ___ Divorced
   ___ Separated
   ___ Never Married
   ___ Other (please specify)

8. How many biological siblings do you have? __________

9. How many step/half siblings do you have? __________

10. What level of education did your MOTHER complete?
    ___ Middle school
    ___ High school
    ___ Some college
    ___ College
    ___ Graduate/Professional School

11. What level of education did your FATHER complete?
    ___ Middle school
    ___ High school
    ___ Some college
    ___ College
    ___ Graduate/Professional School

### Dimensions of Identity Development Scale

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td>Strongly Agree</td>
</tr>
</tbody>
</table>

1. I have decided on the direction I want to follow in life.
2. I know what I want to do with my future.
3. I have a clear view on my future.
4. I have made a choice concerning some of my plans for the future.
5. I know what I want to achieve in my life.
6. I think a lot about the direction I want to take in my life.
7. I think a lot about how I see my future.
8. I regularly try to figure out which lifestyle would suit me.
9. I spend time thinking about what to do with my life.
10. I am trying to find out which lifestyle would be good for me.
11. I keep looking for the direction I want to take in my life.
12. I am doubtful about what I really want to achieve in life.
13. I keep wondering which direction my life has to take.
15. It is hard for me to stop thinking about the direction I want to follow in life.
16. My plans for the future offer me a sense of security.
17. My future plans give me self-confidence.
18. Because of the path of life I have mapped out, I feel certain about myself.
19. I sense that the direction I want to take in life will really suit me.
20. I value my plans for the future very much.
21. I think a lot about the future plans I have made.
22. I talk regularly with other people about the plans I have made for the future.
23. I am working out for myself whether the goals I have put forward in life really suit me.
24. I regularly try to find out what other people think about the specific direction I want to take in my life.
25. I think a lot about the future plans I strive for.

Erikson Psychosocial Stage Inventory

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Strongly Disagree</strong></td>
<td>Disagree</td>
<td>Neutral</td>
<td>Agree</td>
<td><strong>Strongly Agree</strong></td>
</tr>
</tbody>
</table>

26. I change my opinion of myself a lot.
27. I've got a clear idea of what I want to be.
28. I feel mixed up.
29. The important things in life are clear to me.
30. I've got it together.
31. I know what kind of person I am.
32. I can't decide what I want to do with my life.
33. I have a strong sense of what it means to be male/female.
34. I like myself and am proud of what I stand for.
35. I don't really know who I am.
36. I work to keep up a certain image when I'm with people.
37. I don't really feel involved.

Questionnaire for Eudaimonic Well-Being

This questionnaire contains a series of statements that refer to how you may feel things have been going in your life. Read each statement and decide the extent to which you agree or disagree with it. Try to respond to each statement according to your own feelings about how things are actually going, rather than how you might wish them to be.
Please use the following scale when responding to each statement.

Strongly Disagree  0  1  2  3  4  Strongly Agree

1. I find I get intensely involved in many of the things I do each day.
2. I believe I have discovered who I really am.
3. I think it would be ideal if things came easily to me in my life.
4. My life is centered around a set of core beliefs that give meaning to my life.
5. It is more important that I really enjoy what I do than that other people are impressed by it.
6. I believe I know what my best potentials are and I try to develop them whenever possible.
7. Other people usually know better what would be good for me to do than I know myself.
8. I feel best when I’m doing something worth investing a great deal of effort in.
9. I can say that I have found my purpose in life.
10. If I did not find what I was doing rewarding for me, I do not think I could continue doing it.
11. As yet, I’ve not figured out what to do with my life.
12. I can’t understand why some people want to work so hard on the things that they do.
13. I believe it is important to know how what I’m doing fits with purposes worth pursuing.
14. I usually know what I should do because some actions just feel right to me.
15. When I engage in activities that involve my best potentials, I have this sense of really being alive.
16. I am confused about what my talents really are.
17. I find a lot of the things I do are personally expressive for me.
18. It is important to me that I feel fulfilled by the activities that I engage in.
19. If something is really difficult, it probably isn’t worth doing.
20. I find it hard to get really invested in the things that I do.
21. I believe I know what I was meant to do in life.

IDENTITY STYLE INVENTORY (ISI3)

INSTRUCTIONS

You will find a number of statements about beliefs, attitudes, and/or ways of dealing with issues. Read each carefully, then use it to describe yourself. On the answer sheet, bubble in the number which indicates the extent to which you think the statement represents you. There are no right or wrong answers. For instance, if the statement is very much like you, mark a 5, if it is not like you at all, mark a 1. Use the 1 to 5 point scale to indicate the degree to which you think each statement is uncharacteristic (1) or characteristic (5) of yourself.

1. Regarding religious beliefs, I know basically what I believe and don't believe.
   (NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

2. I've spent a great deal of time thinking seriously about what I should do with my life.
   (NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

3. I'm not really sure what I'm doing in school; I guess things will work themselves out.
   (NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

4. I've more-or-less always operated according to the values with which I was brought up.
   (NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

5. I've spent a good deal of time reading and talking to others about religious ideas.
   (NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

6. When I discuss an issue with someone, I try to assume their point of view and see the problem from their perspective.
   (NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)
7. I know what I want to do with my future.

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

8. It doesn't pay to worry about values in advance; I decide things as they happen.

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

9. I'm not really sure what I believe about religion.

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

10. I've always had purpose in my life; I was brought up to know what to strive for.

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

11. I'm not sure which values I really hold.

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

12. I have some consistent political views; I have a definite stand on where the government and country should be headed.

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

13. Many times by not concerning myself with personal problems, they work themselves out.

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)


(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

15. I'm really into my major; it's the academic area that is right for me.

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

16. I've spent a lot of time reading and trying to make some sense out of political issues.

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

17. I'm not really thinking about my future now; it's still a long way off.

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

18. I've spent a lot of time and talked to a lot of people trying to develop a set of values that make sense to me.
<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>19.</td>
<td>Regarding religion, I've always known what I believe and don't believe; I never really had any serious doubts.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOT AT ALL LIKE ME</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>20.</td>
<td>I'm not sure what I should major in (or change to).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOT AT ALL LIKE ME</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>21.</td>
<td>I've known since high school that I was going to college and what I was going to major in.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOT AT ALL LIKE ME</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>22.</td>
<td>I have a definite set of values that I use in order to make personal decisions.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOT AT ALL LIKE ME</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>23.</td>
<td>I think it's better to have a firm set of beliefs than to be openminded.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOT AT ALL LIKE ME</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>24.</td>
<td>When I have to make a decision, I try to wait as long as possible in order to see what will happen.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOT AT ALL LIKE ME</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>25.</td>
<td>When I have a personal problem, I try to analyze the situation in order to understand it.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOT AT ALL LIKE ME</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>26.</td>
<td>I find it's best to seek out advice from professionals (e.g., clergy, doctors, lawyers) when I have problems.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOT AT ALL LIKE ME</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
27. It's best for me not to take life too seriously; I just try to enjoy it.

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

28. I think it's better to have fixed values, than to consider alternative value systems.

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

29. I try not to think about or deal with problems as long as I can.

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

30. I find that personal problems often turn out to be interesting challenges.

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

31. I try to avoid personal situations that will require me to think a lot and deal with them on my own.

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

32. Once I know the correct way to handle a problem, I prefer to stick with it.

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

33. When I have to make a decision, I like to spend a lot of time thinking about my options.

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

34. I prefer to deal with situations where I can rely on social norms and standards.

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

35. I like to have the responsibility for handling problems in my life that require me to think on my
own.

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

36. Sometimes I refuse to believe a problem will happen, and things manage to work themselves out.

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

37. When making important decisions I like to have as much information as possible.

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

38. When I know a situation is going to cause me stress, I try to avoid it.

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

39. To live a complete life, I think people need to get emotionally involved and commit themselves to specific values and ideals.

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

40. I find it's best for me to rely on the advice of close friends or relatives when I have a problem.

(NOT AT ALL LIKE ME) 1 2 3 4 5 (VERY MUCH LIKE ME)

**Identity Support Measure**

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Rarely</th>
<th>Sometimes</th>
<th>Very Often</th>
<th>Always</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

How frequently do you seek advice from the following people about your long term goals? (e.g., finding a good job, being in a romantic relationship, etc.)

_____ Parent(s)
How frequently do you seek advice from the following people about your career choice? (e.g., deciding on a trade or profession, etc.)

___ Parent(s)
___ Sibling(s)
___ Step/Half-Sibling(s)
___ Friend(s)
___ Boyfriend/Girlfriend or Spouse
___ Professor/Teach
___ Minister/Priest
___ Other (please specify, ____________ )

How frequently do you seek advice from the following people about your friendships? (e.g., experiencing a loss of friends, change in friends, etc.)

___ Parent(s)
___ Sibling(s)
___ Step/Half-Sibling(s)
___ Friend(s)
___ Boyfriend/Girlfriend or Spouse
___ Professor/Teach
___ Minister/Priest
___ Other (please specify, ____________ )

How frequently do you seek advice from the following people about your sexual orientation and behavior? (e.g., feeling confused about sexual preferences, intensity of sexual needs, etc.)

___ Parent(s)
___ Sibling(s)
___ Step/Half-Sibling(s)
___ Friend(s)
___ Boyfriend/Girlfriend or Spouse
___ Professor/Teach
___ Minister/Priest
___ Other (please specify, ____________ )

How frequently do you seek advice from the following people about your religion? (e.g., stopped believing, changed your belief in God/religion, etc.)

___ Parent(s)
___ Sibling(s)
___ Step/Half-Sibling(s)
___ Friend(s)
___ Boyfriend/Girlfriend or Spouse
___ Professor/Teach
___ Minister/Priest
___ Other (please specify, ____________ )
How frequently do you seek advice from the following people about your values or beliefs? (e.g., feeling confused about what is right or wrong, etc.)

___ Parent(s)
___ Sibling(s)
___ Step/Half-Sibling(s)
___ Friend(s)
___ Boyfriend/Girlfriend or Spouse
___ Professor/Teach
___ Minister/Priest
___ Other (please specify, ____________ )

How frequently do you seek advice from the following people about your group loyalties? (e.g., belonging to a club, school group, gang, etc.)

___ Parent(s)
___ Sibling(s)
___ Step/Half-Sibling(s)
___ Friend(s)
___ Boyfriend/Girlfriend or Spouse
___ Professor/Teach
___ Minister/Priest
___ Other (please specify, ____________ )
Hello, my name is Mercedes Nalls and I am conducting a research study called “The Identity Formation Process of Emerging Adults” at Florida State University.

If you are interested in participating, you will be asked to follow the web link below and answer a background questionnaire, and several questions about your identity and who you talk to about your future plans. This should not take more than 30 minutes of your time.

You will be asked to disclose only your name and email address for the purpose of assigning extra credit and in case I need to contact you. All your answers to the questions will be kept confidential and your confidentiality will be protected to the full extent allowed by law. Data collected from this study will be stored in my personal computer with a password only known to me. No individual responses will be reported. Only group findings will be reported.

There is a minimal level of risk involved if you agree to participate in this study. You might experience distress while answering questions about your identity and future plans. Please remember that your participation is voluntary, and you can stop the survey or interview at any time without any penalty to you. Although there are no direct benefits associated with this study, there may be societal benefits for participating such as increasing the scientific community’s knowledge of how college students’ determine their identity and make decisions regarding their future plans.

You will receive extra credit for participating.

Again, if you would like to participate in this study please follow the web link below.

http://www.surveymonkey.com/.....

If you have any questions or concerns about the research, please feel free to contact me, the Principal Investigator: A. Mercedes Nalls, Florida State University, Family and Child Sciences or my Faculty Advisor: Dr. Ron Mullis for answers to questions about this research or my rights. Group results will be sent to you upon you request.

If you have questions regarding your rights as a research subject, contact the FSU IRB at 850-644-8633 or Ms. Julie Cooper at jjcooper@admin.fsu.edu.

Thank you for your participation.
Dear Participant:

Thank you very much for completing my online survey! In the survey you indicated that you frequently seek advice from a sibling. As part of my dissertation research project, I’m interested in learning more about how your relationship with your sibling influences future plans. So I need your help to further explore the role of siblings in the lives of college students.

Would you be willing to contact your sibling to participate in an online discussion? It should take no more than an hour of you and your sibling’s time. If you and your sibling are interested in participating, please go to the following address to complete the informed consent (web address).

The discussion forum is private and would only be available to the three of us. You can go to the following site: (web address).

Once there, please write a few paragraphs that answer the following questions:

*What are your future plans?
*How did you determine them?
*How are your future plans related to your identity?
*How do you feel about your future plans?
*What steps do you plan to take this semester to achieve your future plans?
*Do you have any concerns related to your future plans?

I would like your sibling to respond to your essay with feedback and advice. If your sibling agrees to participate, will you please forward this email to them or have them contact me.

All your answers to the questions will be kept confidential and your confidentiality will be protected to the full extent allowed by law. Data collected from this study will be stored in my personal computer with a password only known to me. No individual responses will be reported. Only group findings will be reported.

You will receive extra credit for participating.

If you have any questions or concerns about the research, please feel free to contact me, the Principal Investigator: A. Mercedes Nalls, Florida State University, Family and Child Sciences or my Faculty Advisor: Dr. Ron Mullis for answers to questions about this research or my rights. Group results will be sent to you upon you request.

If you have questions regarding your rights as a research subject, contact the FSU IRB at 850-644-8633 or Ms. Julie Cooper at jjcooper@admin.fsu.edu.

Thank you for your participation.
Peer Discussion Invite

Hello, my name is Mercedes Nalls and I am conducting a research study called “The Identity Formation Process of Emerging Adults” at Florida State University.

If you are interested in participating, in your online discussion group you will be asked to answer a series of questions and your peers will be asked to give feedback. This should not take no more than an hour of your time.

Your answers will be available to your fellow group members. Aside from those enrolled in your group and the course instructor, all your answers to the questions will be kept confidential and your confidentiality will be protected to the full extent allowed by law. Data collected from this study will be stored in my personal computer with a password only known to me. No individual responses will be reported. Only group findings will be reported.

There is a minimal level of risk involved if you agree to participate in this study. You might experience distress while answering questions about your identity and future plans or while reading your peer’s feedback. Please remember that your participation is voluntary, and you can stop the survey or interview at any time without any penalty to you. Although there are no direct benefits associated with this study, there may be societal benefits for participating such as increasing the scientific community’s knowledge of the type of advice given by peers.

You will receive extra credit for participating.

Again, if you would like to participate in this study please go to your Blackboard group discussion page.

If you have any questions or concerns about the research, please feel free to contact me, the Principal Investigator: A. Mercedes Nalls, Florida State University, Family and Child Sciences or my Faculty Advisor: Dr. Ron Mullis for answers to questions about this research or my rights. Group results will be sent to you upon you request.

If you have questions regarding your rights as a research subject, contact the FSU IRB at 850-644-8633 or Ms. Julie Cooper at jjcooper@admin.fsu.edu.

Thank you for your participation.
APPENDIX E

INFORMED CONSENT FORM

“The Identity Formation Process of Emerging Adults”

Principal Investigator: A. Mercedes Nalls, M.S., MAR

I, _______________________________________________, being 18 years of age or older, freely and voluntarily and without undue inducement or any element of force, fraud, deceit, duress, or other form of constraint or coercion, consent to be a participant in the above named research project, to be conducted at the Florida State University. Listed below are the procedures to be followed in this research and their purposes, any risks, discomfort, and benefits associated with participation in this study, and the measures which will be taken to ensure confidentiality of the information obtained.

Purpose of the research: I understand that the purpose of this research project is to better understand how undergraduates make decisions about their future plans, which will help guidance counselors and university advisors mentor students.

Procedures for the research: I understand that participation in this project involves usual procedures; (i.e., signing this informed consent form and filling out an online questionnaire). I understand that by agreeing to participate in this project, I consent to fill out questionnaires about my background and identity. The total time commitment for this study will be approximately 30 minutes.

OR

I understand that by agreeing to participate in this project, I consent to participating in an online discussion forum with a sibling or peer. The total time commitment for this study will be approximately an hour. I understand that I may be contacted after participating in the discussion to reflect on the experience.

Potential risks or discomforts: I understand there is a minimal level of risk involved if I agree to participate in this study. I might experience distress while answering questions about my future plans. I am able to stop my participation at any time I wish. In case of distress, I can contact the person conducting the study to offer referrals for psychological support.

Potential benefits to you or others: I understand there may be societal benefits for participating in this research project such as increasing the scientific community’s knowledge of behaviors and feelings of college students as they explore and making future plans in college.

Compensation: This study is based on a voluntary participation and extra credit will be given for participation.

Confidentiality: All my answers to the questions will be kept confidential and my
confidentiality will be protected to the full extent allowed by law. No individual responses will be reported. Only group findings will be reported. Any identifying information will only be accessed by the primary investigator, will be kept on a password protected computer, and will be shredded after the completion of the study.

I understand that this consent may be withdrawn at any time without prejudice or penalty. I have been given the right to ask any question I have concerning the study. Questions, if any, have been answered to my satisfaction.

I understand that I may contact the Principal Investigator: A. Mercedes Nalls, Florida State University, Family and Child Sciences or her Faculty Advisor: Dr. Ron Mullis for answers to questions about this research or my rights. Group results will be sent to me upon my request.

**Statement of Consent:**
I have read the above information. I have asked questions and have received answers. I consent to participate in the study.

Accept ________

Do not accept ________

Need further information, would like to email the investigator ________

If you have questions regarding your rights as a research subject, contact the FSU IRB at 850-644-8633 or Ms. Julie Cooper at jjcooper@admin.fsu.edu.
APPENDIX F

IRB APPROVAL

Office of the Vice President For Research
Human Subjects Committee
Tallahassee, Florida 32306-2742
(850) 644-8673, FAX (850) 644-4392

APPROVAL MEMORANDUM

Date: 9/15/2010

To: Ali Nalls
Address: 1491
Dept.: FAMILY & CHILD SCIENCE

From: Thomas L. Jacobson, Chair

Re: Use of Human Subjects in Research
The Identity Formation Process of Emerging Adults

The application that you submitted to this office in regard to the use of human subjects in the proposal referenced above have been reviewed by the Secretary, the Chair, and two members of the Human Subjects Committee. Your project is determined to be Expedited per 45 CFR 46.110(7) and has been approved by an expedited review process.

The Human Subjects Committee has not evaluated your proposal for scientific merit, except to weigh the risk to the human participants and the aspects of the proposal related to potential risk and benefit. This approval does not replace any departmental or other approvals, which may be required.

If you submitted a proposed consent form with your application, the approved stamped consent form is attached to this approval notice. Only the stamped version of the consent form may be used in recruiting research subjects.

If the project has not been completed by 9/14/2011 you must request a renewal of approval for continuation of the project. As a courtesy, a renewal notice will be sent to you prior to your expiration date; however, it is your responsibility as the Principal Investigator to timely request renewal of your approval from the Committee.

You are advised that any change in protocol for this project must be reviewed and approved by the Committee prior to implementation of the proposed change in the protocol. A protocol change/amendment form is required to be submitted for approval by the Committee. In addition, federal regulations require that the Principal Investigator promptly report, in writing any
unanticipated problems or adverse events involving risks to research subjects or others.

By copy of this memorandum, the Chair of your department and/or your major professor is reminded that he/she is responsible for being informed concerning research projects involving human subjects in the department, and should review protocols as often as needed to insure that the project is being conducted in compliance with our institution and with DHHS regulations.

This institution has an Assurance on file with the Office for Human Research Protection. The Assurance Number is IRB00000446.

Cc: Ronald Mullis, Advisor
HSC No. 2010.4767
REFERENCES


85


90


BIOGRAPHICAL SKETCH

Office Address
Florida State University
Department of Family & Child Sciences
242 Sandels Building
Tallahassee, Florida 32306-1491

Licensures/Certifications

Online Instructional Development Certificate Fall 2010

Academic Background

Ph.D. 2011 Florida State University, Child Development
M.S. 2008 Florida State University, Child Development
M.A.R. 2004 Yale Divinity School
B.S. 2002 Vanderbilt University, Biological Sciences and Religious Studies (Cum Laude)

Professional Positions

January 2011 to Present
Instructor, Embry-Riddle Aeronautical University Worldwide Online
Duties: Teach online SOCI 310 Personality Development

May 2010 to August 2010
Instructor, Department of Distance Learning, FSU
Duties: Teach online CHD 4615 Family Public Policy, maintain electronic office hours, evaluate assignments, and facilitate discussion for 30-60 undergraduate students.

May 2007 to Present
Graduate Teaching Assistant, Department of Distance Learning, FSU
Duties: Developed online versions of an undergraduate and graduate family policy course. Assisted with online instruction, maintained electronic office hours, and assisted in evaluating assignments of approximately 60 undergraduate students, in CHD 4615, Family Public Policy and FAD 3220, Individual and Family Life Span Development.
Supervisors: Drs. Ann Mullis, Thomas Cornille

Duties: Assisted with online instruction, maintained electronic office hours, and
assisted in evaluating assignments of approximately 60 undergraduate students, in FAD 3432, Stress and Resilience in Families and Children.
Supervisor: Dr. Thomas Cornille

Duties: Developed online versions of an undergraduate human development course. Assisted with online instruction, maintained electronic office hours, and assisted in evaluating assignments of approximately 100 undergraduate students, in FAD 3220, Individual and Family Life Span Development.
Supervisors: Drs. Ann Mullis, Thomas Cornille

August 2009—December 2009
Office of Early Learning Internship
Duties: Analyzed and synthesized data from survey responses of Voluntary Pre-Kindergarten Center Directors.
Supervisors: Dr. Lisette Levy

August 2006—December 2008
Graduate Research Assistant, Department of Family and Child Sciences, FSU
Duties: Identifying funding sources and assisting with preparation of grant applications; preparing presentations and materials for family and childcare service providers; preparing manuscripts for publication.
Supervisors: Drs. Ann Mullis, Ron Mullis, Thomas Cornille

May 2005—August 2006
Faculty Support Specialist, Embry-Riddle Aeronautical University Worldwide Online
Duties: Managed terms by responding to instructor queries and facilitating quality teaching methods.

June 2003—May 2004
Research Assistant, Yale Child Study Center
Duties: Scored the standardized measures given to clients and their families as an evaluation tool.

Summer 2003
Research Assistant, Yale Divinity School
Duties: Assisted Professor Margaret Farley with her Women’s Initiative on AIDS in Africa project.

Publications


**Presentations**


**Professional Associations**

National Council on Family Relations (student member since 2006)

Society for Research on Child Development (student member since 2008)

**Professional Fellowships, Awards, and Recognition**

College Teaching Fellow, College of Human Sciences, Florida State University, 2006

Kappa Omicron Nu, National Honor Society for Human Sciences, 2007

Golden Key International Honors Society, International Honor Society for Graduate Studies, 2007 (invited)

Savannah Day Scholarship, Florida State University, 2010

New Initiatives Grant, Kappa Omicron Nu, 2010

Best Student Paper Award, Education and Enrichment Section, National Council on Family Relations, 2010

Outstanding Teaching Assistant Award Nomination, Florida State University, Award Announced March 2011

**Service**

**Graduate Student Advisory Council**

Family and Child Sciences Student Representative 2008-2009

President 2009-2010