

DIFFERENTIATION OF SELF, VOCATIONAL IDENTITY, AND CAREER
INDECISION: THE MEDIATING ROLE OF GOAL INSTABILITY
AMONG COLLEGE STUDENTS

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ABSTRACT

Evidence suggests that differentiation of self, a construct from Bowen’s family system’s theory, is predictive of college students’ vocational identity and career indecision (Johnson, Schamuhn, Nelson, & Buboltz, 2014). However, the specific mechanisms within the relationships among differentiation of self and vocational identity as well as career indecision have received minimal attention. I proposed that goal instability, a construct of Kohut’s self-psychology, could further explain the influence of differentiation of self on these career outcomes. I aimed to investigate how differentiation of self related to goal instability and ultimately how both of these influenced vocational identity and career indecision. Two hundred sixty-four traditional-aged (i.e., 18-24 years old) college students participated in the current survey. Participants completed demographic information, Differentiation of Self Inventory-Short Form (DSI-SF; Drake, Murdock, Marszalek, & Barber, 2015), Goal Instability Scale (GIS; Robbins & Patton, 1985), Vocational Identity (VI; Holland, Daiger, & Power, 1980), and Career Indecision Profile-Short (CIP-S; Xu & Tracey, 2017) using an online survey system. A path analysis revealed that goal instability mediated the overall relationships between sub-dimensions of differentiation of self, including emotional

reactivity, emotional cutoff, I-position, and fusion with others, and vocational identity. Likewise, goal instability mediated the overall relationships between sub-dimensions of differentiation of self and four sources of career indecision, such as neuroticism/negative affectivity, choice/commitment anxiety, interpersonal conflict, and lack of readiness. The results provided empirical support for Bowen's proposition that well-differentiated individuals are goal- and principle- oriented (Frost, 2014), and suggested that goal instability functioned as one of the critical mechanisms to explain how differentiation of self related to career indecision issues among traditional-aged college students. Limitations, ideas for future research, and clinical implications were discussed.

APPROVAL PAGE

The faculty listed below, appointed by the Dean of the School of Education, have examined a thesis titled “Differentiation of Self, Vocational Identity, and Career Indecision: The Mediating Role of Goal Instability Among College Students,” presented by Soowhan Choi, candidate for the Doctor of Philosophy degree, and certify that in their opinion it is worthy of acceptance.

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CHAPTER 1

REVIEW OF THE LITERATURE

Traditional college students are defined as post-secondary students who are late teens to under 25 years old, full-time, and do not have significant responsibilities regarding career or family (Terenzini & Pascarella, 1998). As emerging adults, typically, they experience their own transition and challenges as well as go through a crucial time for their personal and vocational development (Arnett, 2000; Carter & McGoldrick, 1999; Gianakos, 1999). They are typically different from adolescents or other young adults (i.e., ages from 18 through 30) regarding residential status, school attendance, career, and marital status (Arnett, 2000). They develop a subjective sense of identity, experience relative independence from social roles, and explore various directions in life (Arnett, 2000). The college environment typically facilitates emerging adults' psychological, relational, financial, and vocational independence from parents (Becvar & Becvar, 2003; Nichols & Schwartz, 2004). Traditional-aged (i.e., 18-24 years old) college students experience decision-making situations regarding their major and a career path. Although some students negotiate these decisions with ease, many others find making these decisions to be challenging.

Parsons (1909) proposed three factors that shape a person's career choice: (a) an individual's knowledge about self concerning interests, abilities, aspirations, personality, resources, and limitations; (b) the knowledge of the world of work such as requirements, expectations for career options, and work environment; and (c) the fit between self and the world of work. Knowledge and careful reasoning about the three factors help college students develop and refine their vocational identity, which is defined as "the possession of a clear and stable picture of one's goals, interests, and talents" (Holland, Gottfredson, & Power,

1980, p. 1199). Vocational identity is considered to be one of the primary sources of *Career indecision* which is the term for difficulties in making career decisions (Holland, Gottfredson, & Power, 1980; Osipow, 1999; Xu & Tracey, 2017) and has been defined as the “inability to make a decision about the vocation one wishes to pursue” (Guay, Sene’cal, Gauthier, & Fernet, 2003, p. 165). Individuals who experience career indecision are typically described as *undecided* over career options (Osipow, Carney, & Barak, 1976; Osipow, 1999; Whiston & Keller, 2004). Duck et al. (2013) reported that much research on career indecision is conducted on college students, a population that particularly experiences issues with vocational identity. Originating from Erikson’s (1959, 1963) identity development model, the concept of vocational identity (Holland, Daiger, & Power, 1980) facilitated research that focused on career decision making and career indecision (Holland & Holland, 1977; Jones & Lohmann, 1998; Osipow, 1999). Recent studies proposed career indecision as a multi-dimensional construct, which consists of four sub-dimensions: neuroticism/negative affectivity, choice/commitment anxiety, interpersonal conflicts and barriers, and lack of readiness (Brown & Rector, 2008; Xu & Tracey, 2017). Research has reported that more than 50 percent of college students experienced issues with career indecision, therefore, making it a common phenomenon (Gianakos, 1999)

To better understand traditional-aged college students’ career indecision issues, it is vital to see them with a developmental lens and consider their relationships with significant others (Vondracek, Lerner, & Schulenberg, 1986). A critical influence on traditional-aged college students’ career development is the family of origin (see Whiston & Keller, 2004, for a review). Given that the college environment makes it natural for traditional-aged students to separate from their parents, it is an excellent opportunity for them to develop their

thoughts and opinions, explore a sense of self which may be different from their parents, and find ideal career options for their lives. In other words, emerging adulthood is an appropriate time for individuals to think about their identities and differentiate themselves in relation to their family of origin. This distinctive period of life helps traditional-aged college students navigate around the influence of family factors on their career development. Indeed, major career theories have incorporated family of origin variables to explain vocational identity and indecision issues (Holland, 1985; Super, 1957, 1980). Holland (1985) emphasized the role of the family environment that affects individuals' personality characteristics, which translate into their vocational identities. Likewise, Super (1957) emphasized the influence of the family of origin on the development of self-concept and career choice. In his life-space approach to career development, Super (1980) indicated that the development of self-concept is facilitated by observing parents working and identifying with the parents as workers.

Because of the fundamental influence of the family of origin on individuals' career development throughout the life span, further empirical research on these constructs is needed (Duck et al., 2013). One study noted that the influence of family relationship variables on vocational identity had more practical implications for college students than for adolescents (Hargrove, Inman, & Crane, 2005). Specifically, only expressiveness (i.e., the degree to which thoughts and emotions are expressed in family environments) was a significant predictor of career planning. Still, no family interaction pattern variables, such as the quality of a family relationship, family goal-orientation, or organization and control in the family system, were significant factors on vocational identity for adolescents in a rural setting (Hargrove et al., 2005). Therefore, more investigation is warranted into the impact family variables have on individuals' career development, so that the relational and

developmental framework can contribute to our understanding of college students' career development processes.

Bowen's family systems theory, one of the most comprehensive family theories of human functioning (Skowron, Van Epps, & Cipriano-Essel, 2014), has theoretical and practical implications for traditional-aged college students' career development processes (Johnson, Schamuhn, Nelson, & Buboltz, 2014). Bowen introduced two important theoretical constructs that relate to career development: family emotional process and differentiation of self. The family emotional process entails how anxiety is transmitted through generations and among family members. Differentiation of self is the individual's ability to balance the opposing forces of individuality and togetherness. Differentiation of self is a multidimensional construct that consists of emotional reactivity, emotional cutoff, I-position, and fusion with others; these sub-dimensions of differentiation of self will be more fully described in the following section (Bowen, 1978; Kerr & Bowen, 1988). These constructs help explain the parents' influence on their children's psychosocial and career development, which is fundamental in the children's adolescence and continues into adulthood. Empirical data support the notion that parents' levels of differentiation of self influence their children's overall psychological health and levels of differentiation of self (O-Yang & Wu, 2012; Peleg, Miller, & Yitzhak, 2015). Further, family systems variables have been shown to be related to career outcomes such as vocational identity, career choice, career indecision, and goal instability (Bratcher, 1982; Johnson et al., 2014; Sandage, Jankowski, Bissonette, & Paine, 2017). The last variable, goal instability, is a concept derived from Kohut's (1971, 1977) self-psychology and is defined as difficulties in setting goals, initiating action, and sustaining goal-directedness (Robbins & Patton, 1985). Sandage et al. (2017) reported that

differentiation of self was negatively related to goal instability among graduate students in helping professions. Further, goal instability was a strong predictor of college students' vocational identity and career indecision (Bertoch, Lenz, Reardon, & Peterson, 2014; Jowdy, 1995). In addition, differentiation of self predicted better vocational identity and less career indecision among college populations (Johnson et al., 2014). However, research on career development using Bowen theory as a framework so far is relatively minimal and limited in regard to its theoretical explanations and practical applications for career counseling. For example, to my knowledge, the association between differentiation of self and goal instability has not yet been studied among traditional-aged college students, particularly regarding their combined effects on career development. In the present study, I propose that empirical support for the theoretical association between differentiation of self and goal instability may expand the theoretical scope of Bowen's family systems theory to include vocational identity and career indecision issues for traditional-aged college students. I hypothesize that sub-dimensions of differentiation of self will influence goal instability, which in turn will influence college students' vocational identity and sub-dimensions of career indecision. In other words, the focus of the current study will be to investigate the role of goal instability as a mediator between differentiation of self, vocational identity, and career indecision.

In the discussion following, I provide a brief summary of Bowen's family systems theory (Bowen, 1978; Kerr & Bowen, 1988) and self-psychology (Kohut, 1971, 1977) as theoretical frameworks for the core constructs of differentiation of self and goal instability. Research findings about differentiation of self and goal instability with regard to their related correlates including family of origin variables will be summarized. In addition, theories and models of vocational identity and career indecision and its correlates focusing on family

variables will be presented.

Bowen's Family Systems Theory and Differentiation of Self

Bowen's family systems theory (Bowen, 1978; Kerr & Bowen, 1988) focuses on the intergenerational process that centers on the construct of differentiation of self, defined as both a person's ability to balance thoughts and emotions (Licht & Chabot, 2006; Skowron, 2000) and the opposing forces of individuality and togetherness (Skowron, 2000).

Differentiation of self has four sub-dimensions: emotional reactivity, emotional cutoff, I-position, and fusion with others (Bowen, 1978; Kerr & Bowen, 1988). Emotional reactivity refers to an individual's emotional arousal in response to the environment, particularly to significant others. Emotional cutoff entails the degree a person isolates himself or herself from others when emotionally distressed. I-position is defined as an individual's ability to maintain a sense of self in relationships with others. Fusion with others entails emotional over-involvement or over-identification with parental figures or significant others. On the intrapsychic level, differentiation of self refers to an individual's ability to distinguish between intellectual and emotional functioning (Licht & Chabot, 2006). Well-differentiated persons can regulate their emotions and think logically under stress, and they have a clear and stable sense of self and their values in life (Bowen, 1978; Kerr & Bowen, 1988). On the other hand, poorly differentiated persons are influenced by their emotions and thus have difficulty in maintaining their objectivity under emotional stress (Bowen, 1978; Kerr & Bowen, 1988). Their sense of self, life goals, values, and the principles of their behavior have not been clearly established and are not well maintained. On the interpersonal dimension, differentiation of self is equivalent to an individual's capacity to maintain intimacy with others while achieving an autonomous self (Bowen, 1978; Licht & Chabot, 2006). Well-

differentiated individuals tend to be interdependent with others, provide necessary emotional support to and respect the autonomy of family members and other people. Conversely, a poorly differentiated person's functioning is easily affected by others, and they tend to have difficulty making their own decisions.

In terms of family functioning, a well-differentiated family is cohesive, and the family members are cooperative. However, in poorly differentiated families, people tend to be emotionally fused with or isolate themselves from each other. Because poorly differentiated family members tend to expend much energy to obtain acceptance and approval from their significant others, their goal-oriented activities are compromised (Bowen, 1978; Kerr & Bowen, 1988). They tend to struggle with identifying long-term goals or identify goals that are vague and unrealistic (Bowen, 1978; Kerr & Bowen, 1988). Conversely, well-differentiated family members engage in more goal-directed behaviors and can be assertive about their beliefs and convictions without worrying about the perceptions of significant others (Bowen, 1978; Kerr & Bowen, 1988). Also, parents with solid levels of differentiation of self are thought to allow their children to be autonomous and do not try to force them to conform to their wishes (Bowen, 1978; Kerr & Bowen, 1988).

Differentiation of self, as an individual personality construct, has been studied extensively with regard to psychological and physiological symptoms, interpersonal relationships, and cultural relevance. However, the literature regarding the impact of differentiation of self on career development is relatively scant. Differentiation of self has been found to relate to stress and coping (Murdock & Gore, 2004; Krycak, Murdock, & Marszalek, 2012; Skowron & Dendy 2004); social, separation, and chronic anxiety (Lee & Johnson, 2017; Peleg & Yitzhak, 2011; Peleg-Popko, 2002; Skowron & Friedlander, 1998);

anger expression (Choi & Murdock, 2017); depression (Choi & Murdock, 2017; Hooper & DePuy, 2010; Sandage et al., 2017); self-esteem (Chung & Gale, 2006), and identity development (Gushue et al., 2013; Johnson, Buboltz, & Seemann, 2003; Johnson et al., 2014; Ragelienė & Justickis, 2016). In addition, differentiation of self is predictive of marital adjustment (Skowron, 2000; Skowron & Friedlander, 1998), family functioning (Chung & Gale, 2009), and interpersonal conflict (Choi & Murdock, 2017).

As previously discussed, individuals with low levels of differentiation of self tend to experience more chronic anxiety (Skowron & Friedlander, 1998). Specifically, Peleg-Popko (2002) found that levels of emotional reactivity and cut-off were predictive of difficulties in handling emotions. In addition, level of differentiation of self was predictive of social anxiety among undergraduate students (Peleg-Popko, 2002). Specifically, college students with low levels of differentiation of self tended to fear being negatively evaluated by others. Among young married adults, males with high levels of fusion with others, as well as females with greater emotional reactivity tended to experience more separation anxiety (Peleg & Yitzhak, 2011). Further, in a study of Asian-American adults, poorly differentiated individuals tended to have more generalized anxiety (Lee & Johnson, 2017). These findings were consistent with Bowen's theoretical conceptualization of differentiation of self and its significant relationship with anxiety (Bowen, 1978; Kerr & Bowen, 1988).

The ability to cope with stress is another aspect of differentiation of self (Bowen, 1978; Kerr & Bowen, 1988). Murdock and Gore (2004), studying a sample of university students, demonstrated that poorly differentiated individuals tended to utilize reactive (i.e., emotion-focused) and suppressive (i.e., denying problems and failing to utilize effective coping skills) coping strategies to address life stressors. Skowron and Dendy (2004) reported

that differentiation of self predicted individuals' ability to regulate negative emotions and promote positive emotions among adults. Skowron (2004) reported that, among ethnic minority adults, poorly differentiated individuals tended to lack social problem-solving skills. Specifically, adults with a better ability to take an I-position tended to be better at generating solutions to problems occurring in their daily lives (Skowron, 2004). In addition, among college students, well-differentiated individuals were better able to obtain emotional support from others than poorly differentiated individuals were (Krycak, Murdock, & Marszalek, 2012).

Further, differentiation of self has been found to predict interpersonal conflicts with significant others and in general (Choi & Murdock, 2017; Jenkins, Buboltz, Schwartz, & Johnson, 2005; Rosen, Bartle-Haring, & Stith, 2001; Skowron, 2000; Skowron, Stanley, & Shapiro, 2009). Skowron (2000) reported that individuals' levels of differentiation of self explained a large amount of variance in marital adjustment. In particular, husbands' levels of differentiation of self accounted for marital discord among partners, and, more specifically, emotional cutoff and reactivity predicted marital distress (Skowron, 2000). Similarly, Rosen et al. (2001) documented a negative relationship between differentiation of self and violence in dating relationships. Furthermore, emotional reactivity, mediated by anger, predicted interpersonal conflicts among college students (Choi & Murdock, 2017).

Finally, the association between differentiation of self and identity development has been studied within the context of family functioning (Gushue et al., 2013; Johnson et al., 2003; Johnson et al., 2014). Gushue et al. (2013) demonstrated that undergraduate and graduate students with better levels of differentiation of self had a more stable sense of identity. According to Johnson et al. (2003), college students who achieved sound identity

had a better ability to take an I-position. College students who have diffuse identity, who struggle with commitment to their own goals and values, tended to be emotionally reactive and isolative from others. Emerging adults with foreclosed identity (i.e., committing to the identities formed by parental beliefs and not exploring alternative options) tended to be over-involved with significant others. In short, core aspects of differentiation of self are closely related to emerging adults' overall identity development (Johnson et al., 2003), and this implies that differentiation of self from the family of origin plays a significant role in the development of college students' identities which include their vocational identities.

Identity Development, Family, and Vocational Identity

Vocational identity, conceptualized as having a clear sense of one's goals, interests, and talents, is an essential factor in career decision making (Holland, Daiger, et al., 1980). The concept of vocational identity originated from Erikson's (1959, 1963) ideas about identity development. In his theory, Erikson (1968) proposed that a healthy identity is achieved when crises are resolved in different developmental stages (e.g., identity vs. role confusion for adolescence and intimacy vs. isolation for early adulthood). Based on the theory, the resolution of crises in each stage may influence the subsequent identity development in either a positive or negative manner. Erikson (1968) considered vocational identity to be a critical aspect of identity development (Duck et al., 2013). Holland, Daiger, et al. (1980) developed an assessment tool for vocational identity, which facilitated the study of its relation to career outcomes such as career decision making and indecision (Holland & Holland, 1977; Holland, Gottfredson, et al., 1980). People with poor vocational identity are characterized by a lack of knowledge about their strengths and weaknesses, lack of awareness about their preferred careers or activities, and limited ability to estimate their

aptitudes realistically (Holland, Gottfredson, et al.). Holland, Gottfredson, et al. noted that when people have a clear view about who they are and what they want out of life, they have less difficulty in making career decisions and are more decided on their career path; nevertheless, there are also obstacles and barriers to pursuing career goals. In research on differences in career decision making (i.e., decidedness) among high school and college students, decided students had better senses of vocational identity and stronger interpersonal competence (Holland & Holland, 1977). Indeed, the vocational identity of undecided students was related to difficulties with feelings about self as well as family situations and problems (Holland & Holland, 1977).

Influence of Family of Origin on Vocational Identity and Career Indecision

Family of origin variables are related to general identity development, which includes the aspect of vocational identity (Erikson, 1968; Jowdy, 1995). Family of origin variables include emotional process, relationship patterns and dynamics, such as independence and interdependence among family members. Specifically, Jowdy (1995), studying junior and senior university students, reported a negative relationship between healthy separation from parents and diffused identity, which was defined as failed resolution of developmental crises and lack of commitment (Marcia, 1966), which in turn was predictive of college students' vocational identity. Johnson, Buboltz, and Nichols (1999) reported that college students who grew up in families that were open to the communication of thoughts and emotions (i.e., expressiveness) regarding career-related topics had better vocational identities. Dodge (2001) reported that personal authority (i.e., ability to maintain autonomy under relational pressure) predicted college students' vocational identity, but dimensions in family of origin, such as expressiveness, conflict, and cohesion, did not. However, Hargrove, Creagh, and Burgess

(2002) reported that a family's focus on achievement orientation in school and work was a significant factor in vocational identity among college students. In contrast, Hargrove, Inman, and Crane (2005) reported that relationship (e.g., emotion expressiveness), personal growth (e.g., independence or achievement orientation), and family system maintenance (e.g., organization and rules in running a family) dimensions did not predict vocational identity among high school students. In conclusion, it seems that some aspects or perceptions of family of origin variables do influence vocational identity; however, some studies have failed to confirm the relationships between family of origin variables and vocational identity (Duck et al., 2013). Duck et al. explained that possible reasons for such inconsistencies in the findings can be because (a) studies utilized different family development theories and the measures employed were different from study to study, and (b) most of the studies were retrospective (i.e., participants reported their perceptions about their family environment in the past as well as the present moment). Therefore, it seems crucial to utilize a comprehensive approach to career outcomes as well as measures of sound psychometric validity (see Whiston & Keller, 2004, for a review). Specifically, the use of a family-oriented developmental personality measure (i.e., differentiation of self) seems appropriate for traditional-aged college students as emerging adults as it reflects their current psycho-social health and their level of identity development that includes vocational identity.

According to Bowen (1978), anxiety between family members influences the emotional involvement among family members. Specifically, family members experience higher anxiety when they are emotionally distant due to the fear of not being accepted or loved. Bowen added that family members also could experience anxiety when they are emotionally too close or dependent on each other due to the lack of autonomy and

independence. In other words, the balance between autonomy and closeness is crucial for optimal psychological functioning. Bratcher (1982) applied Bowen's insight to career decision making, showing how such struggles in emotional boundary issues limit individuals in developing their sense of selves, which are crucial for making effective career decisions. In other words, this emotional immaturity may lead individuals to rely on parents for career decision making in aspects such as motivation, proximity (i.e., where they live and work), and career choice (Bratcher, 1982).

Similarly, Zingaro (1983) posited that emerging adults are indecisive (i.e., unable to make career decisions) because they are not ready to leave their parents. By remaining unprepared and indecisive, they can maintain interdependent relationships with their parents (in contrast, to explore the world, they may need to leave their parents). According to family systems theory, emerging adults who have difficulty differentiating themselves from their family of origin tend to have immature senses of selves. Specifically, undifferentiated individuals have issues related to acceptance, praise, belonging to groups, isolation of themselves from others, and emotional distress (Bowen, 1978; Kerr & Bowen, 1988). Such issues do not allow them to act based on their values, goals, and principles, but instead, they act based on relationship pressures and parents' expectations for them (Zingaro, 1983).

From a family of origin perspective, difficulties in career decision making may follow when college students fail to maintain a balanced state of healthy emotional bonding and psychological independence from parental figures (Johnson et al., 2014; Larson & Wilson, 1998; Lee & Hughey, 2001). Bowen's concept of differentiation of self encompasses both secure parental emotional bonding as well as the facilitation of autonomy in the family (Johnson et al., 2014). Confirming this prediction, Johnson et al. found that college students'

levels of differentiation of self were positively related to vocational identity and negatively to career indecision (i.e., difficulties in career decision making that focused on reasons and feelings about career decidedness; Jones & Lohmann, 1998). Career indecision was predicted by the four sub-dimensions of differentiation of self (Johnson et al., 2014). Vocational identity was predicted by three sub-dimensions of differentiation of self, including emotional reactivity, cutoff, and I position. Johnson et al. added that the quality of the separation process, which influences an individual's experience of emotional reactivity, seemed to have a significant impact on the career development process and, particularly, career indecision. The empirical data support that poorly differentiated persons tend to be indecisive regarding career choice. However, this perspective needs a more nuanced explanation regarding how the family of origin variable and career variables, such as vocational identity and career indecision, are associated because the two variables have theoretically distinct conceptual backgrounds. In other words, it will be useful to explain the relationship between differentiation of self and career variables with a third variable, which includes the shared variance across the family of origin as well as career variables mentioned above.

Because differentiation of self in part represents an ability to understand one's values and set goals in life, this component of Bowen's family systems theory should be related to career outcomes of vocational identity and career indecision (Bowen, 1978; Frost, 2014). Frost elaborated on Bowen's (1978) ideas, speculating that the level of differentiation of self may predict a person's goal-directedness, which is conceptualized as an individual's ability to formulate and maintain realistic goals and direction in life and to manage stress that originates from the pursuit of goals (Bowen, 1978; Frost, 2014). Specifically, people with low levels of differentiation of self will have no specific goals or have difficulties in

maintaining goal-directed behavior (Frost, 2014). Frost added that individuals with low levels of differentiation of self might have some general goals which have been inherited from the environment without critical evaluation or any relationship to personal values. When the environment changes, such goals can be easily forgotten. There is almost no cognitive involvement in determining such goals. People with low levels of differentiation of self exist and function based on their feelings (Frost, 2014). People with moderate levels of differentiation of self will be able to set more specific short- or long-term goals that have reference to personal values (Frost, 2014). However, people at this level are easily distracted when stress interferes. They are influenced by others' opinions and, at times struggle in balancing the pursuit of their goals and maintenance of harmony in their relationships (Frost, 2014). People with moderate to good levels of differentiation of self can establish their personal goals and simultaneously remain responsible to others (Frost, 2014). They can adjust to stressors before losing their focus and maintain their thoughts even when they differ with others' opinions (Frost, 2014). Their thinking system overrules their emotional system most of the time. People with higher levels of differentiation of self rarely compromise or give up their own goals and life directions in response to pressure from others. Even when experiencing significant levels of stress, they persist in the pursuit of their own goals (Frost, 2014). Goal-directedness, which is theorized to be an aspect of differentiation of self in Bowen's systems theory (Bowen, 1978; Frost, 2014), therefore seems related to the concept in self-psychology of goal instability, the inability to have values and set goals in life (Kohut, 1971, 1977; Robbins & Patton, 1985). In the following section, the theoretical concept of goal instability from Kohut's self-psychology and its relation to Bowen's family systems theory, as well as career outcomes, will be presented.

Self-Psychology, Goal Instability, and Career Outcomes

Self-psychology (Kohut, 1971, 1977) is a developmental psychoanalytic theory of self that focuses on a person's subjective experiences in relationships with significant others (Bertoch, 2012). Kohut's theory defines the self as an organization of experiences. This approach emphasizes the context of a person's experience and behavior rather than deterministic or causal explanations. From Kohut's self-psychology perspective, individuals develop and maintain the structure of experiences through relationships between the self and self objects, which are conceptualized as one component of the self that is related to the development and maintenance of self (Kohut, 1971, 1977).

In self-psychology, narcissism and development of self are two closely related core constructs. Specifically, healthy narcissism can be observed in the firm self, whereas pathological narcissism is manifested in the defective self (Robbins, 1989). Self is the core of personality and serves basic needs in two distinct sectors: grandiosity and idealization. A defective self in the grandiose sector seeks to obtain acceptance and admiration from others to achieve a secure and stable sense of self, demonstrating traits of interpersonal control, attention-seeking, and unrealistic ambition (Patton & Robbins, 1982). A firm self in the grandiose sector locates the sense of self-worth and ambition inside the self; therefore, mature individuals are less influenced by external factors such as admiration or approval from others. The defective self in the idealization sector maintains a sense of security and direction in life through merging with powerful figures and demonstrates patterns of hypersensitivity and longing for connection to others (Patton & Robbins, 1982). A firm self has internalized goals and values; therefore, the systems of ideals, values, and principles are not shaken as a result of outside influences (Kohut, 1971, 1977; Robbins, 1989). In sum, self-

psychology explains that an individual develops his or her healthy ambition and ability to set goals and values through the development of self (i.e., mirroring and idealizing experiences with parent figures; Kohut, 1971, 1977). In other words, without optimal mirroring and idealizing experiences in the family environment, one important place where such mirroring and idealizing occurs, individuals may develop narcissistic personality traits such as unrealistic ambition as well as issues of goal instability (Kohut, 1971, 1977).

Sandage et al. (2017) integrated the psychoanalytic basis of Bowen's family systems theory to view its constructs through the lens of Kohut's self-psychology. Sandage et al. explained the theoretical association between differentiation of self and goal instability through their shared aspects of self-cohesion. Sandage et al. noted that differentiation of self and goal instability affect each other and manifest side by side in an individual's development. Sandage et al. empirically studied the relations between differentiation of self and goal instability, reporting a significant negative correlation. Further, Sandage et al. reported differentiation of self as a mediator to explain the relationship between vulnerable narcissism, which included sub-constructs such as idealization needs, goal instability, and hiding the self, and outcome variables of forgiveness, depression symptoms, and humility among graduate students in helping professions in the United States. More specifically, differentiation of self fully mediated the relationships between goal instability and forgiveness and between goal instability and humility (Sandage et al., 2017). In addition, differentiation of self partially mediated the relationship between goal instability and depression (Sandage et al., 2017). However, the majority of participants in the study (i.e., more than 90%) were master's level graduate White Americans students; thus its external validity with regard to the broader traditional-aged college student population is

compromised.

As an individual's general motivation to set goals, initiate actions, maintain energy, and persist until accomplishing the goals (Casillas, Schulz, Robbins, Santos, & Lee, 2006), goal instability has been shown to be predictive of vocational identity and career indecision (Bertoch, Lenz, Reardon, & Peterson, 2014; Jowdy, 1995; Multon, Heppner, & Lapan, 1995; Robbins & Patton, 1985). Bertoch, Lenz, Reardon, and Peterson (2014) reported that college students with higher levels of goal instability were more confused about their career decision making, had difficulties in committing to certain careers, experienced conflicts with significant others and were dissatisfied with their career choice. Goal instability was a strong predictor of vocational identity among college students in some Eastern states of the United States (Jowdy, 1995). High school students with greater goal instability and career indecision had more discomfort in choosing career, lacked career knowledge, and had negative affective dispositions (Multon, Heppner, & Lapan, 1995). Finally, goal instability is associated with low personal competence and self-esteem, as well as with career indecisiveness among college students (Robbins & Patton, 1985). Therefore, the construct of goal instability seems to provide a useful framework for career counselors to help college students to understand their vocational identity and career indecision given the empirical support for its relationship with vocational identity and career decision making difficulties.

Career Indecision

It is often assumed that persons with career indecision are simply undecided regarding their career goals, but multidimensional factors contribute to career indecision (Brown & Rector, 2008; Jones & Lohmann, 1998; Osipow, 1999; Osipow et al., 1976). Holland and Holland (1977) summarized the three typical types of individuals who were

undecided regarding their career choice: (a) those that lack career information and skills, (b) those with interpersonal conflicts and environmental barriers, and (c) those with chronic anxiety, identity confusion, and immaturity. However, career indecision is a complex and multifaceted construct. For example, there are two types of career indecision, namely developmentally appropriate and chronic indecision (Dziuban, Tango, & Hynes, 1994; Hartman, Fuqua, & Blum, 1985). Developmental indecision relates to undecidedness as well as possible temporary anxious reactions to the unknown career world and the lack of skills related to career decision making. In contrast, chronic indecision (i.e., *indecisiveness*) tends to be related to trait anxiety, identity confusion, and externalized locus of control issues (Fuqua, Seaworth, & Newman, 1987; Hartman et al., 1985). Based on clinical experiences, Salomone (1982) described the typical characteristics of individuals who present a chronic inability to perform effective decision making. Salomone (1982) noted that chronically indecisive clients tended to feel helpless, dependent, anxious, and immature, have poor self-esteem, and not able to make important life decisions. In other words, indecision may involve aspects of unclear life goals, directions, and inadequate sense of self-knowledge, as well as negative emotions such as anxiety, lack of self-efficacy, frustration, and ambivalence (Duck et al., 2013).

One recently developed model of career indecision is the four-factor model of career indecision, which was derived from a meta-analysis of 28 studies that reported factors that influence career indecision (Brown & Rector, 2008). Brown and Rector explained that having too many disparate predictors of career indecision found across a range of different studies helped neither researchers nor career counselors to utilize the findings since the factors could not be easily compared and integrated. Out of 50 personal as well as contextual

manifest variables that predicted career indecision, four factors of latent variables on career indecision have been found: negative affectivity/neuroticism, lack of information, interpersonal conflicts and barriers, and lack of readiness (Brown & Rector, 2008).

In Brown and Rector's analysis, the first factor, negative affectivity/neuroticism, included aspects of chronic anxiety, depression, fear of commitment, self-esteem, indecisiveness, trait neuroticism, self-criticism, dependent decision-making style, external locus of control, problem-solving confidence, and positive coping skills. The second factor, lack of information, was derived from measures of self, process, and occupational information, as well as conflicts between appealing occupational options. The third factor, interpersonal conflicts and barriers, included aspects of conflicts with significant others due to disagreement, external barriers, and situational constraints. The fourth factor, lack of readiness, reflected identity diffusion, a lack of self-clarity, unstable career goals, lack of motivation to commit to a certain career, and lack of confidence in career decision making (Brown & Rector, 2008). These four factors reduce and consolidate the disparate array of variables discussed in the career indecision literature, helping researchers and career counselors to more easily compare and integrate research findings (Brown & Rector, 2008). The validity of the meta-analytically derived four-factor model has been supported among college students by primary (i.e., scale development) and secondary (i.e., preexisting) data (Brown et al., 2012).

Differentiation of Self, Goal Instability, Vocational Identity, and Career Indecision

According to Bowen's theory, well-differentiated college students are principle-oriented, inner-, goal-directed, and realistic in their expectations of themselves (Bowen, 1978; Kerr & Bowen, 1988). They are committed to their beliefs and convictions, but still

flexible in their approach to accomplishing the goals (Bowen, 1978; Kerr & Bowen, 1988). Well-differentiated college students maintain their composure in stressful situations because they base their actions on their well-defined values and principles in life (Bowen, 1978; Kerr & Bowen, 1988). In contrast, poorly differentiated individuals tend to think and behave following or reacting to significant others' expectations. Their values and convictions are easily compromised depending on how they feel in relationships with significant others (Bowen, 1978; Frost, 2014; Kerr & Bowen, 1988).

As previously discussed, an individual's ability to pursue life goals is considered to be an aspect of their differentiation of self (Frost, 2014). Bowen (1978) would contend that college students with low levels of differentiation of self will spend a significant amount of energy to obtain acceptance and approval from significant others as well as maintain harmony in relationships. Therefore, they may not have ample energy to invest in goal-oriented tasks and activities. In other words, college students' self-report of vague and unrealistic life goals or inability to be engaged in goal-directed activities (i.e., goal instability) can be symptoms of an individual's low level of differentiation of self, given the theoretical association between differentiation of self and goal-directedness (Frost, 2014; Sandage et al., 2017). Similar to Bowen's premise, Kohut would contend that when a healthy self is not developed, college students have difficulty defining their values and goals in life. In other words, a defective self prevents an individual from developing differentiated psychological functioning. In short, differentiation of self and goal instability are theoretically related constructs (Patton et al., 1982; Sandage et al., 2017).

Based on the literature, it is expected that sub-dimensions of differentiation of self will predict vocational identity (Johnson et al., 2014), but it is expected that goal instability

will fully mediate the relationship between sub-dimensions of differentiation of self and vocational identity. Poorly differentiated persons have not established a clear sense of self, goals in life, and values (Bowen, 1978; Frost, 2014; Kerr & Bowen, 1988). Issues related to unclear goals and values predispose college students to experience difficulties with vocational identity. In other words, college students with a high level of goal instability lack the motivation to be engaged in goal-oriented tasks and be less aware of their strengths and limitations for diverse options in the career world. Empirical support for the mediation hypothesis holds that (a) sub-dimensions of differentiation of self, including emotional reactivity, cutoff, and I-position, are positively related to vocational identity (Johnson et al., 2014), (b) differentiation of self is negatively related to goal instability (Sandage et al., 2017), and (c) goal instability is negatively related to vocational identity (Jowdy, 1995). As a construct that relates to goals, values, identities, and directions in life, goal instability is deemed to be more closely related to vocational identity than is differentiation of self.

In terms of career indecision, it is expected that goal instability will mediate the relationships between sub-dimensions of differentiation of self and sub-dimensions of career indecision. Bowen would contend that college students from undifferentiated families are vague in their goals and remain indecisive regarding their career choice (Bowen, 1978; Kerr & Bowen, 1988; Zingaro, 1983). Kohut would relay that college students with goal instability would have difficulties in their career decision making and would remain indecisive (Bertoch et al., 2014). Bowen would add that poorly differentiated college students spend significant energy to maintain harmony with significant others. Therefore, they do not have the energy necessary to invest in goal-oriented tasks and to engage in the career decision making process, which may result in career indecision. Empirical support for

the theoretical explanation holds that (a) sub-dimensions of differentiation of self are negatively related to various sources of career indecision (Johnson et al., 2014), (b) differentiation of self is negatively related to goal instability (Sandage et al., 2017), and (c) goal instability is positively related to career indecision among college students (Bertoch et al., 2014; Robbins & Patton, 1985). As a construct that relates to motivation and making decisions, goal instability is closely related to career indecision. However, as a relational construct, differentiation of self may uniquely relate to the interpersonal conflict dimension of career indecision as Choi and Murdock (2017) reported that differentiation of self, with anger expression as a mediator, predicted interpersonal conflicts among university students. In other words, there might exist direct paths from sub-dimensions of differentiation of self to the interpersonal conflict aspect of career indecision.

In conclusion, given the theoretical and empirical evidence which exists regarding the relationship between differentiation of self and goal instability together with their associations to career outcomes, it makes sense to consider goal instability as a mediator to the preexisting relationship between differentiation of self and vocational identity as well as career indecision. In this mediation model, goal instability explains how differentiation of self relates to vocational identity and career indecision among traditional-aged college students.

The proposed model is developmentally appropriate for traditional-aged college students since they typically face challenges as emerging adults in adjusting to the new environment, refining their identity, and making career decisions in college (Arnett, 2000; Becvar & Becvar, 2003; Carter & McGoldrick, 1999; Nichols & Schwartz, 2004; Skowron et al., 2009). Given the predominant rate of indecision among traditional-aged college students

(Duck et al., 2013; Gianakos, 1999), it is important to assist them in understanding the diverse sources of their indecision issues. Given the profound, overt or covert impact of family dynamics on career development, it is crucial to incorporate the relational sources of career indecision in career counseling. Further, given emerging adults' demographic and developmental conditions, it is useful to approach the vocational identity and career indecision issues from Bowen's family systems perspective. In addition, goal instability is essential to understanding how differentiation of self influences traditional-aged college students' career development issues (Bertoch et al., 2014). Indeed, the variables used in the present study have been frequently investigated among traditional-aged college students (Bertoch et al., 2014; Holland & Holland, 1977; Johnson et al., 2014; Keller & Brown, 2014; Kenny & Medvide, 2013; Larson & Wilson, 1998; Middleton, 2018; Robbins & Patton, 1985; see Duck et al., 2013, for a review; see Whiston & Keller, 2004, for a review; Skowron et al., 2009; Xu & Tracey, 2017). The proposed mediational path model will expand the application of Bowen's theory to career issues so that counselors can help college students see and resolve their vocational identity and career indecision issues from the family systemic perspective.

Purpose Statement and Hypotheses

The purpose of the current study is to investigate how Bowen's family systems theory potentially informs our understanding of vocational identity and career indecision. Goal instability, a construct from the psychoanalytic perspective (i.e., Kohut's self-psychology) will be used to test Bowen's proposition that well-differentiated persons are goal and principle oriented. Based on previous research, I expected that sub-dimensions of differentiation of self would predict vocational identity as well as be negatively related to

goal instability. Further, I expected that goal instability would mediate or explain the relationships between sub-dimensions of differentiation of self and vocational identity. In addition, I expected that goal instability would mediate or explain the relationships between sub-dimensions of differentiation of self and sources of career indecision. Given unique associations between sub-dimensions of differentiation of self and the measure of interpersonal conflicts in career indecision, I expected that there might be direct effects between them after controlling for goal instability. The hypothesized model was tested among traditional-aged college students attending an urban university located in the Midwest of the United States.

Hypothesis 1. Sub-dimensions of differentiation of self (i.e., emotional reactivity, emotional cutoff, I-position, and fusion with others) will predict vocational identity but goal instability will fully mediate the relationship between sub-dimensions of differentiation of self and vocational identity.

Hypothesis 2. Goal instability will fully mediate the relationships between sub-dimensions of differentiation of self and neuroticism/negative affectivity, choice/commitment anxiety, and lack of readiness sub-dimensions of career indecision.

Hypothesis 3. Goal instability will partially mediate the paths between sub-dimensions of differentiation of self and the sub-dimension of interpersonal conflicts in career indecision. The hypothesized mediational path model is presented in Figure 1.

CHAPTER 2

SHORTENED LITERATURE REVIEW, METHOD, RESULTS, AND DISCUSSION

Shortened Literature Review

Differentiation of Self, Vocational Identity, and Career Indecision: The Mediating Role of Goal Instability Among College Students

Career indecision issues are a common phenomenon among traditional-aged college students (Duck et al., 2013). *Career indecision* is the term for difficulties in making career decisions (Osipow, 1999; Xu & Tracey, 2017) and has been defined as “inability to make a decision about the vocation one wishes to pursue” (Guay, Sene’cal, Gauthier, & Fernet, 2003, p.165). Parsons (1909) proposed three factors that shape a person’s career choice: (a) an individual’s knowledge about self; (b) the knowledge of the world of work; and (c) the fit between them. Individuals who manifest career indecision are described as *undecided* or *indecisive* over career options (Osipow, 1999). As a multi-dimensional construct, career indecision consists of four sub-dimensions: neuroticism/negative affectivity, choice/commitment anxiety, interpersonal conflicts and barriers, and lack of readiness (Brown & Rector, 2008; Xu & Tracey, 2017). Much research on career indecision is conducted on traditional-aged college students (see Duck et al., 2013, for a review), a population who particularly experience issues with vocational identity, which is defined as “the possession of a clear and stable picture of one’s goals, interests, and talents” (Holland, Gottfredson, & Power, 1980, p. 1191). Originating from Erikson’s (1959, 1963) identity development model, the concept of vocational identity was followed by research on career decision making and career indecision (Holland, Daiger, & Power, 1980; Holland & Holland, 1977; Jones & Lohmann, 1998; Osipow, 1999).

The family dynamics are one of the vital components to understanding traditional college students' career development issues (Duck et al., 2013). Indeed, major career theories incorporated family of origin variables to explain vocational identity and indecision issues (Holland, 1985; Super, 1957, 1980). Therefore, more investigation is warranted into the impact family of origin variables make on traditional-aged college students' career development.

Bowen's Family Systems Theory and Kohut's Self-Psychology

Bowen's family systems theory, one of the most comprehensive family theories of human functioning (Skowron, Van Epps, & Cipriano-Essel, 2014), has theoretical and practical implications for college students' career development processes (Johnson, Schamuhn, Nelson, & Buboltz, 2014). Bowen introduces two important theoretical constructs that relate to career development: family emotional process and differentiation of self. These constructs help describe parents' influence on their children's psychosocial and career development, which is fundamental in the children's adolescence and continues into adulthood. Empirical data supported the notion that parents' levels of differentiation of self influence their children's levels of differentiation of self and their overall psychological health (O-Yang & Wu, 2012; Peleg, Miller, & Yitzhak, 2015).

Bowen's family systems theory (Bowen, 1978; Kerr & Bowen, 1988) focuses on the intergenerational process that centers on the construct of differentiation of self, defined as both a person's ability to balance thoughts and emotions (Licht & Chabot, 2006; Skowron, 2000) and the opposing forces of individuality and togetherness (Skowron, 2000). Differentiation of self is a multidimensional measure that consists of emotional reactivity, emotional cutoff, I-position, and fusion with others (Bowen, 1978; Kerr & Bowen, 1988).

Emotional reactivity refers to an individual's emotional arousal in response to the environment, particularly to significant others. Emotional cutoff entails the degree a person isolates himself or herself from others when emotionally distressed. I-position is defined as an individual's ability to maintain a sense of self in relationships with others. Fusion with others entails emotional over-involvement or over-identification with parental figures or significant others. On the intrapsychic level, differentiation of self refers to an individual's ability to distinguish between intellectual and emotional functioning (Licht & Chabot, 2006). On the interpersonal dimension, differentiation of self is equivalent to an individual's capacity to maintain intimacy with others while achieving an autonomous sense of self (Bowen, 1978; Licht & Chabot, 2006). In terms of family functioning, poorly differentiated family members tend to struggle with identifying specific and long-term goals (Bowen, 1978; Kerr & Bowen, 1988). Conversely, well-differentiated family members engage in more goal-directed behaviors and are assertive about their beliefs and convictions without worrying about the perceptions of significant others (Bowen, 1978; Kerr & Bowen, 1988).

Differentiation of self has been studied extensively with regard to psychological symptoms and interpersonal relationships. However, the literature regarding the impact of differentiation of self on career development among college students is relatively scant. Differentiation of self has been found to relate to stress and coping (Murdock & Gore, 2004; Krycak, Murdock, & Marszalek, 2012; Skowron & Dendy 2004); social, separation, and chronic anxiety (Lee & Johnson, 2017; Peleg & Yitzhak, 2011; Peleg-Popko, 2002; Skowron & Friedlander, 1998); and identity development (Gushue et al., 2013; Johnson, Buboltz, & Seemann, 2003; Johnson et al., 2014; Ragelienė & Justickis, 2016). In addition, differentiation of self is predictive of family functioning (Chung & Gale, 2009) and

interpersonal conflict (Choi & Murdock, 2017). The association of differentiation of self and identity development has been studied within the context of family functioning (Gushue et al., 2013; Johnson et al., 2003; Johnson et al., 2014; Ragelienė & Justickis, 2016). Gushue et al. demonstrated that undergraduate and graduate students with better levels of differentiation of self had a more stable sense of identity.

As one critical aspect of an individual's identity development (Erikson, 1959, 1963), vocational identity is an essential factor in career decision making (Holland, Gottfredson, et al., 1980). Holland, Gottfredson, et al. noted that when people have a clear view about who they are and what they want out of life, they have less difficulty in making career decisions and are more confident about their career paths. Indeed, the vocational identity of undecided students was related to difficulties with feelings about self as well as family dynamics (Holland & Holland, 1977). Recent studies about family of origin and career development supported the position that a balanced state of healthy emotional bonding and psychological independence from parental figures facilitated the career decision making process of college students (Johnson et al., 2014; Keller & Brown, 2014; Larson & Wilson, 1998; Lee & Hughey, 2001). Bowen's concept of differentiation of self encompasses both secure parental emotional bonding as well as the facilitation of autonomy in the family (Johnson et al., 2014). Confirming this prediction, Johnson et al. found that college students' levels of differentiation of self were positively related to vocational identity and career decision status (i.e., decidedness, comfort, self-clarity, knowledge, decisiveness, and choice importance; Jones & Lohmann, 1998). However, contrary to Bowen's theoretical perspective (Johnson et al., 2014; Zingaro, 1983), fusion with others was not predictive of vocational identity. Furthermore, the result may require a more nuanced explanation with regard to how family

relational variables and career outcomes are associated because the two variables have theoretically distinct conceptual backgrounds.

Because differentiation of self in part represents an ability to understand one's values and set goals in life, this component of Bowen's family systems theory should relate to career outcomes of vocational identity and career indecision (Bowen, 1978; Frost, 2014). Frost elaborated on Bowen's (1978) ideas, speculating that the level of differentiation of self may predict a person's goal-directedness, which is conceptualized as an individual's ability to formulate and maintain realistic goals and direction in life, and to manage the stress that originates from the pursuit of goals (Bowen, 1978; Frost, 2014).

Goal-directedness, which is theoretically a function of differentiation of self in Bowen's systems theory (Bowen, 1978; Frost, 2014), relates to the concept in self-psychology of goal instability, a measure of the inability to have values and set goals in life (Kohut, 1971, 1977; Robbins & Patton, 1985). Sandage, Jankowski, Bissonette, and Paine (2017) explained the theoretical association between differentiation of self and goal instability through their shared aspects of self-cohesion. Sandage et al. noted that differentiation of self and goal instability affect each other and manifest side by side in an individual's development. Indeed, Sandage et al. empirically studied the relations between differentiation of self and goal instability, reporting a significant negative correlation among graduate students in helping profession.

Turning to studies focused on career indecision, Holland and Holland (1977) summarized the types of individuals who were typically undecided regarding their career choice: (a) those that lack career information and skills, (b) those with interpersonal conflicts and environmental barriers, and (c) those with chronic anxiety, identity confusion, and

immaturity. However, career indecision is a complex and multifaceted construct. For example, there are two types of career indecision: developmentally appropriate and chronic (Dziuban, Tango, & Hynes, 1994; Hartman, Fuqua, & Blum, 1985). Developmental indecision relates to undecidedness as well as possible temporary anxious reactions to the unknown career world and the lack of skills related to career decision making. Conversely, chronic indecision (i.e., *indecisiveness*) tends to be related to trait anxiety, identity confusion, and externalized locus of control issues (Fuqua, Seaworth, & Newman, 1987; Hartman et al., 1985). Based on clinical experiences, Salomone (1982) noted that chronically indecisive clients tended to feel helpless, dependent, anxious, and immature, have poor self-esteem, and not able to make important life decisions.

One currently developed model of career indecision is the four-factor model, which was derived from a meta-analysis of 28 studies that reported factors which influence career indecision (Brown & Rector, 2008). In Brown and Rector's analysis, the first factor, neuroticism/negative affectivity, was composed of aspects of chronic anxiety, depression, fear of commitment, self-esteem, indecisiveness, trait neuroticism, self-criticism, dependent decision-making style, external locus of control, problem-solving confidence, and positive coping skills. The second factor, lack of information, was derived from measures of lack of information on self, occupational information, as well as conflicts between vocational options. The third factor, interpersonal conflicts and barriers, included aspects of conflicts with significant others due to disagreement, external barriers, and situational constraints. The fourth factor, lack of readiness, reflected identity diffusion, a lack of self-clarity, unstable career goals, and lack of confidence in career decision making (Brown & Rector, 2008). These four factors reduce and consolidate the disparate array of variables discussed in the

career indecision literature, helping researchers and career counselors to more easily compare and integrate research findings (Brown & Rector, 2008).

Differentiation of Self, Goal Instability, Vocational Identity, and Career Indecision

According to Bowen's theory, well-differentiated college students are principle-oriented, inner-, and goal-directed, as well as realistic in their expectations of themselves (Bowen, 1978; Kerr & Bowen, 1988). Well-differentiated individuals know who they are and what they are going to do in stressful situations because they maintain a well-defined sense of self, goals, convictions, and life principles on which they base their actions (Bowen, 1978; Kerr & Bowen, 1988). Bowen (1978) would contend that college students with low levels of differentiation of self may not have ample energy to invest in goal-oriented tasks and activities. Kohut would contend that when a healthy self is not developed, college students will have difficulty defining values and goals in life. In other words, college students with a defective self would have difficulties in making independent and autonomous decisions based on their goals and values. Sandage et al. (2017) reported a negative relationship between differentiation of self and goal instability among graduate students in helping professions. In short, differentiation of self and goal instability are theoretically as well as empirically related constructs (Patton et al., 1982; Sandage et al., 2017). The present study attempted to examine how differentiation of self and goal instability relate to career outcomes.

Based on the literature, it is expected that sub-dimensions of differentiation of self will predict vocational identity (Johnson et al., 2014), but it is expected that goal instability will fully mediate the relationship between sub-dimensions of differentiation of self and vocational identity among traditional-aged college students. Poorly differentiated persons

have not clearly established a sense of self, goals in life, and values (Bowen, 1978; Frost, 2014; Kerr & Bowen, 1988). Issues related to unclear goals and values predispose college students to experience difficulties with vocational identity. In other words, college students with a high level of goal instability lack the motivation to be engaged in goal-oriented tasks and are less aware of their strengths and limitations for diverse options in the career world. Empirical support for the mediation hypothesis holds that (a) sub-dimensions of differentiation of self, including emotional reactivity, cutoff, and I-position, are positively related to vocational identity (Johnson et al., 2014), (b) differentiation of self is negatively related to goal instability (Sandage et al., 2017), and (c) goal instability is negatively related to vocational identity (Jowdy, 1995). As a construct that relates to goals, values, identities, and directions in life, goal instability is deemed to be more closely related to vocational identity than is differentiation of self.

In terms of career indecision, it is expected that goal instability will mediate the relationships between sub-dimensions of differentiation of self and sub-dimensions of career indecision. Bowen would contend that college students from undifferentiated families are less engaged in goal-directed activities and remain indecisive regarding their career choice (Bowen, 1978; Kerr & Bowen, 1988; Zingaro, 1983). Bowen would argue that poorly differentiated college students spend significant energy attempting to obtain acceptance from and maintain harmony with significant others. Therefore, they do not have the energy necessary to invest in goal-directed tasks and to engage in the career decision making process, which may result in career indecision. Empirical support for the theoretical explanation holds that (a) sub-dimensions of differentiation of self are negatively related to various sources of career indecision (Johnson et al., 2014), (b) differentiation of self is

negatively related to goal instability (Sandage et al., 2017), and (c) goal instability is positively related to career indecision among college students (Bertoch et al., 2014; Robbins & Patton, 1985). As a construct that relates to motivation and making decisions, goal instability is closely related to career indecision. However, as a relational construct, differentiation of self may uniquely relate to the interpersonal conflict dimension as Choi and Murdock (2017) reported that differentiation of self, with anger expression as a mediator, predicted interpersonal conflicts among university students.

In conclusion, given the theoretical and empirical evidence which exists regarding the relationship between differentiation of self and goal instability together with their associations to career outcomes, it makes sense to consider goal instability as a mediator between differentiation of self and vocational identity as well as career indecision (Johnson et al., 2014). In this mediational model, goal instability explains how differentiation of self relates to vocational identity and career indecision among traditional-aged college students.

The proposed model is developmentally appropriate for traditional-aged college students since they typically face challenges as emerging adults in adjusting to the new environment, refining their identity, and making career decisions in college (Arnett, 2000; Becvar & Becvar, 2003; Carter & McGoldrick, 1999; Nichols & Schwartz, 2004; Skowron et al., 2009). Given emerging adults' demographic and developmental conditions, differentiation of self in Bowen's family systems theory is a useful construct to consider for career development among traditional-aged college students. In addition, goal instability is essential to understanding how differentiation of self influences college students' career development issues (Bertoch et al., 2014). Indeed, the variables used in the present study have been frequently investigated among traditional-aged college students (Bertoch et al.,

2014; Holland & Holland, 1977; Johnson et al., 2014; Keller & Brown, 2014; Kenny & Medvide, 2013; Larson & Wilson, 1998; Middleton, 2018; Robbins & Patton, 1985; see Duck et al., 2013, for a review; see Whiston & Keller, 2004, for a review; Skowron et al., 2009; Xu & Tracey, 2017). The proposed mediational path model will expand the application of Bowen's family systems theory to career issues so that career counselors can help college students to see and resolve their vocational identity and career indecision issues from the family systemic perspective.

Purpose Statement and Hypotheses

The purpose of the current study was to investigate how Bowen's family systems theory potentially informs our understanding of vocational identity and career indecision. Goal instability, a construct from the psychoanalytic perspective (i.e., Kohut's self-psychology) was used to test Bowen's proposition that well-differentiated persons are goal and principle oriented. Based on previous research, I expected that sub-dimensions of differentiation of self would predict vocational identity as well as goal instability. Further, I expected that goal instability would mediate or explain the relationships between sub-dimensions of differentiation of self and vocational identity. In addition, I expected that goal instability would mediate or explain the relationships between sub-dimensions of differentiation of self and sources of career indecision. Given unique associations between sub-dimensions of differentiation of self and the measure of interpersonal conflicts in career indecision, it was expected that there might be direct effects between them after controlling for goal instability. The hypothesized model was tested among traditional-aged college students attending an urban university located in the Midwest of the United States.

Hypothesis 1. Sub-dimensions of differentiation of self (i.e., emotional reactivity, emotional

cutoff, I-position, and fusion with others) will predict vocational identity, but goal instability will fully mediate the relationships between sub-dimensions of differentiation of self and vocational identity.

Hypothesis 2. Goal instability will fully mediate the relationships between sub-dimensions of differentiation of self and neuroticism/negative affectivity, choice/commitment anxiety, and lack of readiness sub-dimensions of career indecision.

Hypothesis 3. Goal instability will partially mediate the paths between sub-dimensions of differentiation of self and the sub-dimension of interpersonal conflicts in career indecision. The hypothesized mediational path model is presented in Figure 1.

Method

Participants

Two-hundred eighty students participated in the current survey using an online research participant recruitment system run by the Psychology Department at a medium-sized urban university located in the Midwest region of the United States. Participants were enrolled in at least one psychology course, and the criteria for participation in the survey were (a) at least 18 and under 25 years old (Gianakos, 1999), (b) undergraduate students, and (c) fluent in English. The total participant number used in the data analysis was reduced to 264 after screening for recruitment criteria, missing values, and outliers. The current study utilized a path analysis, for which the minimum ratio between cases and the number of model parameters is 5:1 (Kline, 2011). Given there were 264 total participants and 39 free parameters, the current ratio of cases and the number of model parameters was 6.8:1.

Participants provided information about their gender identity, sexual orientation, age, ethnic background, year in school, major declaration, family income, relationship status, and

current living situation. For gender identity, 213 (80.7%) participants described themselves as female, 48 (18.2%) as male, and 3 (1.1%) as nonbinary. For sexual orientation, 222 (84.1%) participants reported their sexual orientation as heterosexual, 10 (3.8%) as Gay or Lesbian, 29 (11.1%) as Bi-sexual, and 3 (1.1%) as Pansexual or Regular. The participants' mean age was 19.94 ($SD = 1.53$). For ethnic background, 150 (56.8%) participants identified as White/European American, 41 (15.5%) as Black/African American, 28 (10.6%) as Asian/Asian American, 23 (8.7%) as Hispanic/Latino(a), 16 (6.1%) as Bi-racial, 4 (1.5%) as international students, 1 (.4%) as Haitian, and 1 (.4%) as Indian. For education, 73 (27.7%) were first-year students, 65 (24.6%) were sophomores, 69 (26.1%) were juniors, and 56 (21.2%) were seniors. Most students ($n = 247, 93.6%$) had declared their major. About half of the participants ($n = 116, 44%$) indicated that they majored or minored in psychology, and the other half ($n = 148, 56%$) indicated they studied an array of other majors. For relationship status, 159 (60.2%) students indicated that they were single; 99 (37.5%) indicated that they were in a relationship; 3 (1.1%) indicated that they were married/partnered; and 3 (1.2%) indicated that they were divorced, dating, or engaged. For living conditions, 98 (37.1%) reported that they were living with parents. A summary of the participants' demographic information is presented in Table 1.

Procedure

The current survey is non-experimental and used self-report questionnaires for data collection. After Institutional Review Board approval was received, data were collected through an online participant recruitment system from September 2018 to February 2019. In the online survey, participants were presented with the informed consent and filled out questionnaires that included demographic information, Differentiation of Self Inventory-

Short Form (Drake, Murdock, Marszalek, & Barber, 2015), Goal Instability Scale (Robbins & Patton, 1985), My Vocational Situation (Holland, Daiger, & Power, 1980), and Career Indecision Profile-Short (Xu & Tracey, 2017). Participants received research credits, required to pass the psychology courses, for their time and effort in the current study.

Instruments

Differentiation of Self Inventory-Short Form. The Differentiation of Self Inventory-Short Form (DSI-SF; Drake, Murdock, Marszalek, & Barber, 2015) is a 20-item questionnaire which originated out of the Differentiation of Self Inventory-Revised (DSI-R; Skowron & Schmitt, 2003). DSI-SF measures the level of differentiation of self in relation to the family of origin and is composed of four subscales: Emotional Reactivity (ER), Emotional Cut-off (EC), I-Position (IP), and Fusion with Others (FO). All four subscales were used in data analysis. Each item uses a six-point scale, which ranges from 1 (*not at all characteristic of me*) to 6 (*very characteristic of me*). Sample items include "At times my feelings get the best of me and I have trouble thinking clearly," for ER; "I'm often uncomfortable when people get too close to me," for EC; "I tend to feel pretty stable under stress," for IP; and "When my spouse/partner criticizes me, it bothers me for days," for FO. The scores for some items were reversed and then the scores for the entire set of items in each subscale, including the reversed scores, were averaged. Higher scores indicate higher level of differentiation of self for each sub-scale.

The internal consistency reliability for the DSI-SF was established to be good with Cronbach's alpha of .88 for the total score, with subscale coefficients of .80 for ER, .79 for EC, .70 for IP, and .68 for FO among college students (Drake et al., 2015). Choi and Murdock (2017) reported that Cronbach's alpha was .88 for the total score, .83 for ER, .77

for EC, .73 for IP, and .70 for FO among a college and graduate-level student sample. Drake (2011) reported that structural validity for the subscales of DSI-SF was supported (i.e., the unidimensionality for each subscale of DSI-SF was inferred), such that factor loadings for ER, EC, and FO subscales were adequate (i.e., greater than .40), and factor loadings for IP subscale were adequate (i.e., greater than .40 with a parallel analysis of two scales). Concurrent validity has been established by the positive relationship between DSI-SF and self-esteem and by the negative correlation between DSI-SF and stress, depression, state- and trait-anxiety, and anger expression (Choi & Murdock, 2017; Drake et al., 2015). The convergent validity of the DSI-SF was supported by the correlation between DSI-SF and the Level of Differentiation of Self Scale (Haber, 2003). In the present study, the four sub-scale scores of DSI-SF were used and their internal consistencies were similar to the previous results (Cronbach's $\alpha = .84$ for ER, .81 for EC, .76 for IP, and .73 for FO).

Goal Instability Scale. The Goal Instability Scale (GIS; Robbins & Patton, 1985) is a ten-item self-report measure of goal instability, which is defined as an inability to set and maintain goals and values in life. Item responses utilize six-point scales ranging from 1 (*strongly agree*) to 6 (*strongly disagree*). The scores for the entire set of items were reversed and then averaged. The higher the total score, the more difficulty in setting goals and values in life. A sample item is "After a while I lose sight of my goals."

The GIS is reported to be a psychometrically sound measure of goal instability based on its good level of internal consistency as indicated by a Cronbach's alpha of .81 and test-retest reliability coefficient of .76 (Robbins & Patton, 1985). Unidimensionality was supported in confirmatory factor analysis (Robbins & Patton, 1985; Robbins, Payne, & Chartrand, 1990). Convergent validity of GIS was established by its correlation with college

students' plans for future careers and levels of career decidedness after completing career education classes (Robbins & Patton, 1985). In the present study, the internal consistency was adequate (Cronbach's $\alpha = .89$).

Vocational Identity: My Vocational Situation. My Vocational Situation (MVS; Holland, Daiger, & Power, 1980) measures factors such as personality, occupational information, and personal as well as environmental barriers that affect career decision making. The current study used the Vocational Identity (VI) scale, one of the three subscales of MVS, which consists of 18 items and measures the degree to which a person has a clear and persistent idea about their goals, interests, sense of self, and strengths. Items are answered with dichotomous responses of true or false. Sample items include "I need reassurance that I have made the right choice of occupation," and "I don't know what my major strengths and weaknesses are" (Holland, Daiger, et al., 1980). The false responses were tallied to serve as the total score for the current data analysis. Higher scores indicate higher levels of vocational identity.

The internal consistency of the VI subscale, as measured by Kuder-Richardson 20, was .88 for female and .89 for male college students and adult workers outside of college (Holland, Gottfredson, et al., 1980). Test-retest reliability for VI ranged from .52 to .84 with intervals of 1 to 7 weeks (Holland, Gottfredson, et al., 1980). Construct validity was supported by VI's positive correlations with occupational commitment for high school students (Grotevant & Thorbecke, 1982), full-time workers and homemakers (Hughey, Heppner, Johnston, & Rakes, 1989). The internal consistency for VI for the current study was assessed to be adequate (Cronbach's $\alpha = .90$).

Career Indecision Profile-Short. Career Indecision Profile-Short (CIP-S; Xu &

Tracey, 2017) is a 21-item self-report measure of career indecision. CIP-S is an abbreviated version of Career Indecision Profile-65 (CIP-65; Hacker et al., 2013), which was originally developed based on the four-factor model of career indecision (Brown et al., 2012). CIP-S consists of one item that measures difficulty in making a career decision as well as 20 items that measure reasons for the decision making difficulty, including Neuroticism/Negative Affectivity (NNA; 5 items), Choice/Commitment Anxiety (CC; 5 items), Lack of Readiness/Immaturity (LR; 5 items), and Interpersonal Conflict (IC; 5 items). NNA is intended to measure indecisiveness and negative affect (e.g., “I really have a hard time making decisions without help” and “I am easily embarrassed”). CC is designed to measure reluctance in committing to a career choice due to multiple options or lack of information (e.g., “It’s difficult for me to choose a career because I like so many different things” and “I need to learn more about myself before I can make a good career decision”). LR is intended to measure barriers to making career decisions due to lack of planning, goal-directedness, and confidence to make career decisions (e.g., “I am quite confident that I will be able to overcome obstacles to getting the career I want”). IC is intended to measure interpersonal conflicts that affect career decision making (e.g., “I’d be going against the wishes of someone important to me if I follow the career path that most interests me”). The item that measured general career decision making difficulty is rated on a 7-point scale ranging from 1 (*low*) to 7 (*high*). Each item of the four sub-scales is rated on a 6-point scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). After some items (i.e., that measure LR) are reverse coded and then the scores for the entire set of items in each subscale, including the reversed scores, were summed. Higher scores indicate higher levels of career indecision issues for each sub-scale.

The internal reliability was good (i.e., Cronbach's $\alpha = .84$ for NNA, $.85$ for CC, $.86$ for LR, $.88$ for IC among a college population; Xu & Tracey, 2017). All the correlations between CIP-65 and CIP-S were above $.90$, which means a significant amount of information is being shared, demonstrating high convergent validity (Xu & Tracey, 2017). Xu and Tracey reported that the structural validity of the CIP-S was confirmed with a CFA model based on the global fit indices (i.e., CFI = $.94$, RMSEA = $.054$, and SRMR = $.069$). In addition, the reliability for CIP-65 was good (i.e., Cronbach's $\alpha = .94$ for NNA, $.96$ for CC, $.92$ for LR, and $.87$ for IC; Hacker et al., 2013). The concurrent validity of CIP-65 was demonstrated by the significant negative correlations between the subscales of CIP-65 and career decidedness (Hacker et al., 2013). For the current data, the subscale level internal consistencies were consistent with the previous results (Cronbach's $\alpha = .85$ for NNA, $.85$ for CC, $.82$ for LR, and $.90$ for IC). The subscales of CIP-S were valid measures of career indecision evidenced by their positive correlations with the one criterion item that measured career decision making difficulty (i.e., Pearson's $r = .36$ for NNA, $.73$ for CC, $.35$ for IC, and $.33$ for LR, $p < .001$, two-tailed).

Results

Data Screening

Initially, 280 participants filled out the online survey questionnaires. However, 16 survey participants were excluded from the initial data set for reasons such as respondent ages older than or equal to 25 (5 cases), univariate outliers, whose standardized scores (i.e., z-scores) were greater than 3 (2 cases), monotonous answers without variation (2 cases), and significantly incomplete responses (i.e., 100% missing, 6 cases; 50%, 1 case). Thus, a total of 264 cases was used for the main analysis. Missing value analysis was conducted using SPSS,

and one case had missing data (21 items, 30.4%). There was no pattern of missingness based on the Little's MCAR test ($\chi^2(48) = 51.85, p = .33$). Data were assessed to be missing completely at random based on the follow-up t-tests, non-significant at the $p < .01$ level, between all variables of interest. The missing data were replaced using the Estimation Maximization (Cheema, 2014; Enders & Peugh, 2014). With the final data set of 264 cases, there was no evidence for multivariate outlier violations as there was no statistically significant Mahalanobis D value (i.e., the cutoff $p = .001$), and no leverage score exceeded .2 (Field, 2005). All variables were acceptable regarding univariate normality except for IC and LR (i.e., the skewness critical index for IC = 5.54, and for LR = 3.72. For all the other variables, the absolute values of skewness critical indices were less than 3, and the absolute values of kurtosis critical index were less than 10; Byrne, 2010; Kline, 2011). A visual inspection of the distributions for IC and LR confirmed that the two variables were right-skewed. Therefore, scores on these two variables were log-transformed (i.e., the skewness critical index for IC, log-transformed = .97, for LR, log-transformed = -1.35). Multivariate kurtosis was acceptable (i.e., multivariate kurtosis critical index = 1.25, Byrne, 2010; Kline, 2011).

Unidimensionality for each variable was assessed by conducting an exploratory factor analysis using the Principal Axis Factoring (PAF) method. ER, EC, GIS, NNA, CC, IC, and LR met the criteria for unidimensionality. For each scale, only one factor was extracted based on Kaiser's criterion (i.e., retaining factors with eigenvalues greater than 1). The PAF results revealed that the first factor of each scale accounted for more than 50 % of the variance. The first eigenvalues were greater than the second eigenvalues by factors of more than three or four. Factor loadings were greater than .40 for each item. There were sudden changes in

slope in the scree plots. However, IP, FO, and VI did not meet some of the criteria for unidimensionality. For IP subscale, two factors were extracted based on Kaiser's criterion. The PAF results revealed that the first factor of the IP subscale accounted for 47.63% of the variance, whereas the second factor accounted for 17.55% of the variance. The first eigenvalue was 2.71 times larger than the second value. There was a sudden change in slope in the scree plots. Factor loadings were greater than .40 for the first factor. For the FO subscale, one factor was extracted based on Kaiser's criterion (i.e., retaining factors with eigenvalues greater than 1). In addition, the PAF results revealed that the first factor of the FO subscale accounted for 48.46% of the variance, whereas the second factor accounted for 19.52% of the variance. The first eigenvalue was 2.48 times larger than the second value. There was a sudden change in slope in the scree plot. Factor loadings were greater than .40. For VI scale, two factors were extracted based on Kaiser's criterion. The PAF results revealed that the first factor of the VI scale accounted for 38.49% of the variance, whereas the second factor accounted for 6.84% of the variance. The first eigenvalue (6.93) was 5.63 times larger than the second value (1.23). There was a sudden change in slope at the second factor in the scree plots. Factor loadings were greater than .40 for the first factor except for the item, "I have known what occupation I want to follow for less than one year." (i.e., factor loading =.37). For the current study, IP, FO, and VI were considered unidimensional based on theoretical support (Drake et al., 2015; Holland, Gottfredson, Power, 1980; Skowron & Schmitt, 2003), the appearance of a first factor that accounted for a dominant proportion of variance in each scale, the ratio between the first and second eigenvalues that was greater than 5 for VI scale, the assessment of scree plots, and factor loadings. However, caution is warranted when interpreting results based on these variables due to their limitations.

There existed minimal evidence for multicollinearity among predictors, such as ER, EC, IP, FO, and GIS, on predicted variables, such as VI, NNA, CC, IC, and LR. (i.e., $VIF \leq 10$ and $Tolerance \geq .1$). Scatterplots were used to assess the linearity of bivariate correlations among target variables. The visual assessment of each of the bivariate scatterplots confirmed no identifiable violation of linearity.

Controlling for Demographic Variables

In order to verify that there were no systematic differences among observed variables in the proposed model, demographic variables, including gender (male vs. female, transgender, etc.), sexual orientation (heterosexual vs. LGBT+), ethnic background (White vs. students of color), major declaration (yes vs. no), relationship status (single vs. non-single), and current living situation (living with parents vs. not living with parents), were dummy coded for statistical convenience. Pearson's correlations, two-tailed, were calculated among demographic and related variables used in the proposed model. Education level (i.e., coded as 1 = first year, 2 = sophomore, 3 = junior, 4 = seniors) was found to have significant relationships with IP ($r = .17, p = .006$), FO ($r = .17, p = .006$), GIS ($r = -.16, p = .01$) and NNA ($r = -.22, p = .001$). Major declaration was found to have significant relationships with GIS ($r = .17, p = .007$), VI ($r = -.16, p = .01$), CC ($r = .15, p = .02$), and LR ($r = .15, p = .01$). Age (i.e., 18-24 years, raw data were used for analysis) was found to have significant relationships with IP ($r = .19, p = .003$), FO ($r = .14, p = .02$), and NNA ($r = -.14, p = .03$). Ethnic background (i.e., coded as 0 = White/European American students, and 1 = Students of Color) was found to have a positive relationship with FO ($r = .14, p = .03$). There was no other demographic variable that had a global impact on the proposed model (i.e., having both associations with the exogenous as well as endogenous variables) other than the amount of

education. Therefore, the amount of education was added to the alternative path model and controlled to see if there existed any effect created by the variable within the path model. However, none of the direct paths between education level and outcome variables were statistically significant. Therefore, education level was excluded from the final model. The bivariate correlations among observed variables are presented in Table 2.

Test of the Proposed Model

The proposed path model was assessed for its goodness of fit against the data. Kline (2011) suggested several criteria for a good global model fit, that include: (a) the Chi-square value being not significant, (b) the Comparative Fit Index (CFI) being greater than .95, and (c) the Root Mean Squared Error of Approximation (RMSEA; .08 is acceptable, and .05 is good), as well as (d) the Standardized Root, Mean square Residual (SRMR; good when less than .08, Hu & Bentler, 1999). The proposed model was not a good fit to the data ($\chi^2 (16) = 224.48, p = .000, CFI = .85, SRMR = .10, RMSEA = .22, 90\% \text{ confidence interval [CI] [.20, .25]}$). Therefore, an alternative model was devised based on Bowen's family systems theory, Kohut's self-psychology, previous research, and the modification indexes of the Amos program. Direct paths (i.e., I-position to vocational identity; emotional reactivity, I-position, and fusion with others to neuroticism/negative affectivity; emotional reactivity and I-position to lack of readiness) were added to the initial model. The theoretical rationale for the additions to the initial model is as follows. Goal instability is thought to have several facets, including an inability to identify goals, make decisions, and maintain motivation (Robbins & Patton, 1985). It is possible that emotional aspects of sub-dimensions of differentiation of self (i.e., primarily emotional reactivity and I-position), vocational identity, and sources of career indecision may not relate to the aforementioned cognitive and

behavioral aspects of goal instability. First, individuals with a high level of I-position would be better at regulating fear of making career decisions. As such, Bowen's concept, I-position, defined as a degree to which an individual maintains a sense of self and emotional composure under stress, may be directly related to the affective aspect of vocational identity. Johnson et al. (2014) observed moderate to large associations between I-position and vocational identity. Second, the emotional aspects of differentiation of self, including emotional reactivity, I-position, and fusion with others, may be directly related to negative affectivity as a source for chronic indecisiveness (Bowen, 1978; Johnson et al., 2014; Kerr & Bowen, 1988). For example, individuals with higher levels of emotional reactivity and low levels of I-position tend to experience higher levels of emotional distress than others. Also, emotional cutoff and fusion with others represent individuals' maladaptive relationship patterns, which involve emotional distress. For example, individuals tend to distant themselves from others when they are emotionally distressed in relationships. Also, individuals tend to experience more emotional distress in an overly involved relationship with significant others. Johnson et al. reported moderate size associations between emotional reactivity, I-position, and fusion with others and chronic indecision, as well as a small size association between emotional cutoff and chronic indecision. The modification indices did not suggest the direct path from emotional cutoff to neuroticism/negative affectivity to improve the model fit. Finally, the intrapersonal aspects of differentiation of self (i.e., emotional reactivity and I-position that together measure the balance between thoughts and emotions) seem to relate to lack of readiness because career decision making and planning require a comprehensive intellectual ability. It is possible that college students who struggle with balancing thoughts and emotions would experience difficulties in career decision

making because their intellect is likely to be compromised by their heightened emotionality. Consistent with this assumption, Johnson et al. reported emotional reactivity and I-position both predicted emotional confidence in career decision making, implying the possible direct paths from emotional reactivity and I-position to lack of readiness after controlling for goal instability in the path model.

After the direct paths were added to the initial model (See Figure 2), the path analysis was conducted again. Each additional direct path was found to be statistically significant (See Table 3). The alternative model was a good fit to the data ($\chi^2(10) = 14.20, p = .16, CFI = .99, SRMR = .03, RMSEA = .04, 90\% CI [.00, .08]$). The local fit was assessed to be adequate as all the absolute values of the standardized residual covariances among variables were less than 2.

Test of Hypotheses

To test the mediation hypotheses, a path analysis, with nonparametric 200 bootstrap samples, and a 90 % bias-corrected confidence interval, was conducted using the AMOS 26.0.0 program. Path analysis is preferred to test mediation because multiple predictors can be tested simultaneously, and the significance tests of indirect effect are feasible using bootstrapping (Warner, 2013). At the same time, the interpretation of mediation using the path model warrants careful attention because each and every path was not tested for its significance, each predictor variable was controlled for each other, and the primary goal for path analysis was to find the overall fit between the model and the data.

Hypothesis 1. The first hypothesis, that sub-dimensions of differentiation of self will predict vocational identity (VI) but goal instability (GIS) will fully mediate the relationship between sub-dimensions of differentiation of self and vocational identity, was partially

supported. On a bivariate level, sub-dimensions of differentiation of self predicted vocational identity (i.e., $r = .42$ for ER, $.32$ for EC, $.45$ for IP, $.40$ for FO and VI, $p < .01$). Further, the relationships between emotional cutoff (EC) and VI, as well as fusion with others (FO) and VI were fully mediated by GIS (the standardized indirect effects for EC to VI via GIS = $.16$, and FO to VI via GIS = $.14$). The relationship between I-position and VI was partially mediated by GIS (the standardized direct effect for IP to VI = $.12$; and the standardized indirect effect for IP to VI via GIS = $.16$). However, the relationship between emotional reactivity (ER) and GIS was not statistically significant. Therefore, the mediational hypothesis between ER and VI via GIS was not supported. The small and medium sizes, as well as positive standardized indirect effects, supported the hypothesized predictions. Overall, sub-dimensions of DSI-SF and GIS explained a large amount of variance in VI ($R^2 = .41, p = .01$).

Hypothesis 2. The second hypothesis, that goal instability (GIS) will fully mediate the relationships between sub-dimensions of differentiation of self and neuroticism/negative affectivity (NNA), choice/commitment anxiety (CC), and lack of readiness (LR) sub-dimensions of career indecision, was partially supported. Specifically, the relationship between EC and NNA was fully mediated by GIS (the standardized indirect effect = $-.07$), but the relationships between I-position (IP) and NNA, as well as fusion with others (FO) and NNA, were partially mediated by GIS (standardized direct effects for IP to NNA = $-.34$, and for FO to NNA = $-.26$; standardized indirect effects for IP to NNA via GIS = $-.07$, and for FO to NNA via GIS = $-.06$). However, the relationship between emotional reactivity (ER) and GIS was not statistically significant. Therefore, the mediational hypothesis between ER and NNA via GIS was not supported. Instead, ER had a direct effect on NNA (the standardized

direct effect = -.16). The negative as well as small-size indirect effects from IP and FO to NNA via GIS partially supported the initial prediction. Overall, the sub-dimensions of DSI-SF and GIS explained a large amount of variance in NNA ($R^2 = .67, p = .01$). Likewise, the overall relationships between three sub-dimensions of DSI-SF, including emotional cutoff (EC), I-position (IP), and fusion with others (FO), and Choice/Commitment Anxiety (CC) were fully mediated by GIS (the standardized indirect effects for EC to CC via GIS = -.16, for IP to CC via GIS = -.16, and for FO to CC via GIS = -.14). Due to the non-significant relationship between ER and GIS, the mediational hypothesis between ER and CC via GIS was not supported. The negative and small indirect effect sizes supported the initial prediction. Overall, sub-dimensions of DSI-SF and GIS explained a large amount of variance in CC ($R^2 = .35, p = .01$). Similarly, the relationships between emotional cutoff (EC) and lack of readiness (LR), as well as fusion with others (FO) and LR were fully mediated by GIS (the standardized indirect effects for EC to LR via GIS = -.13, and for FO to LR via GIS = -.11). The relationship between IP and LR was partially mediated by GIS (the standardized direct effects for IP to LR = -.31; the standardized indirect effects for IP to LR via GIS = -.13). Due to the non-significant relationship between ER and GIS, the mediational hypothesis between ER and LR via GIS was not supported. Instead, ER had a direct effect on LR (the standardized direct effect = .17). The overall inverse relationships between variables, except for a positive direct path between ER and LR, and small to medium effect sizes partially supported the initial prediction. Overall, the sub-dimensions of DSI-SF and GIS explained a large amount of variance in LR ($R^2 = .37, p = .03$).

Hypothesis 3. The third hypothesis, that goal instability would partially mediate the paths between sub-dimensions of differentiation of self and the sub-dimension of

interpersonal conflicts (IC) in career indecision, was partially supported. The relationship between emotional cutoff (EC) and IC was partially mediated by GIS (the standardized direct effect for EC and IC = .15, standardized indirect effect for EC to IC via GIS= -.11). However, the relationship between I-position (IP) and IC, as well as fusion with others (FO) and IC were fully mediated by GIS (the standardized indirect effects for IP to IC via GIS = -.11; and for FO to IC via GIS= -.10). The overall inverse relationships between variables, except for the positive direct path between EC and IC, and small-size indirect effects partially supported the initial hypothesized prediction. Due to the non-significant relationship between ER and GIS, the mediational hypothesis between emotional reactivity (ER) and IC via GIS was not supported. Overall, the sub-dimensions of DSI-SF and GIS explained a medium-sized amount of variance in IC ($R^2 = .17, p = .03$). The bootstrap analysis of direct and indirect effects in the alternative model is presented in Table 3.

Discussion

The current study demonstrated the effect of differentiation of self, with goal instability as a mediator, on vocational identity and sources of career indecision for college students. The results empirically supported the association between differentiation of self, vocational identity, and career indecision (Johnson et al., 2014; Larson & Wilson, 1998). The results also validated goal instability as a mediator of the relationship between several dimensions of differentiation of self, vocational identity, and career indecision among traditional-aged college students. The analysis of the path model partially supported the first hypothesis, which predicted the full mediation of goal instability to explain the relationships between the sub-dimensions of differentiation of self and vocational identity. The results demonstrated that the relationships between emotional cutoff and vocational identity, as well

as fusion with others and vocational identity, were fully mediated by goal instability.

However, I-position was predictive of vocational identity both directly and indirectly via goal instability.

Bowen's family systems theory as well as Kohut's self-psychology may shed light on understanding the results for the first hypothesis. To explain the indirect relationships between emotional cutoff, fusion with others, and vocational identity via goal instability, Bowen would suggest that emotional connection and interpersonal boundaries would facilitate the acquisition of clear goals and values on the part of college students. With emotional support and personal boundaries in place, college students would be able to better address anxiety, depression, and anger issues (Choi & Murdock, 2017; Peleg-Popko, 2002; Skowron & Friedlander, 1998), utilize energy for task-oriented behaviors, and remain motivated to explore career options based on goals and values (Frost, 2014; Jowdy, 1995; Sandage et al., 2017). In addition, emotional isolation or fusion with others would impede college students from clarifying a sense of self and goals because they lose the opportunity to compare their goals to those of others (Festinger, 1954; Gerber, Wheeler, & Suls, 2018). Therefore, goal instability seems to explain the indirect relationship between emotional cutoff, fusion, and vocational identity. On the other hand, in order to explain the indirect relationship between I-position and vocational identity via goal instability, Kohut might argue that college students' level of goal instability is influenced by their sense of self and values in life (i.e., I-position from Bowen's perspective) because an individual with a low level of I-position has difficulty in internalizing goals, values, and principles in life. In addition, goal instability would explain college students' ability to make career decisions based on their goals and values (Bertoch et al., 2014; Jowdy, 1995; Sandage et al., 2017).

With regard to the direct relationship between I-position and vocational identity, Bowen might suggest that college students with higher levels of I-position deal with challenges of career decision-making effectively due to their mature sense of self. Specifically, individuals with healthy self-esteem characterized by higher I-position (e.g., “my self-esteem really depends on how others think of me.” This item was reverse coded, which means the lower the number, the better the I-position.) may demonstrate better adaptability to deal with unpredictable situations during the career development process (Santos, 2003; Savickas, 1997). Previous research has supported that both self-esteem and goal instability uniquely predicted vocational identity among high school students (Santos, 2003) and that I-position and self-esteem were positively correlated among South Korean and U.S. college students (Chung & Gale, 2006; Drake et al., 2015). Therefore, I-position may relate to vocational identity via self-esteem other than through the pathway of goal instability, explaining the direct path between I-position and vocational identity.

The second hypothesis concerning the full mediation by goal instability of the relationships between the sub-dimensions of differentiation of self and three subdimensions of career indecision, neuroticism/negative affectivity, choice/commitment anxiety, and lack of readiness, was partially supported. The path model supported the full and partial mediation by goal instability to explain the relationship between sub-dimensions of differentiation of self and neuroticism/negative affectivity. Specifically, goal instability fully mediated the relationship between emotional cutoff and neuroticism/negative affectivity. Goal instability partially mediated the relationship between fusion with others and neuroticism/negative affectivity, as well as I-position and neuroticism/negative affectivity.

The full and partial mediations described above are consistent with Bowen’s theory

because lower levels of differentiation of self are thought to be highly related to neuroticism/negative affectivity, which represents an emotional source of career indecision (Frost, 2014; Johnson et al., 2014; Xu & Tracey, 2017). Bowen would contend that undifferentiated college students would either be emotionally cut off or emotionally over-involved with others. As previously discussed, emotionally isolated individuals would have difficulties in developing clear goals and values as well as maintaining motivation to resolve career-related issues due to the lack of emotional support from significant others.

Emotionally over-involved individuals (i.e., high levels of fusion with others) would be expected to have difficulty in autonomous career decision making (e.g., “I really have a hard time making decisions without help,” an item measuring neuroticism/negative affectivity) perhaps because they tend to seek the approval of others and therefore adopt others’ goals and values. Vague or compromised goals and values would possibly increase emotional discomfort in career decision making because of the possible discrepancy between their career personality and compromised career based on others’ expectations toward them.

Therefore, goal instability explains the indirect relationship between emotional cutoff, fusion, and neuroticism/negative affectivity. To explain the direct relationship between fusion with others and neuroticism/negative affectivity, Bowen would argue that undifferentiated college students with heightened emotional involvement with significant others would generally experience emotional difficulty such as insecurity and anxiety, which may become sources of neuroticism/negative affectivity (e.g., “I often feel fearful and anxious.”). In other words, college students with undifferentiated, or fused relational dynamic with their parents or significant others may suffer from difficulty in making career decisions because of their chronic anxiety.

The full mediation of the relationship between emotional cutoff and neuroticism/negative affectivity via goal instability, compared to the partial mediation of fusion with others might be due to the nature of emotional cutoff, which functions as a way to cope with emotional distress in relationships. In other words, college students remove themselves from the relational sources of their anxiety, fear, insecurity, and embarrassment by cutting themselves off emotionally from significant others. However, college students with heightened emotional involvement with their parents or significant others would still experience emotional difficulties due to fusion.

To explain the indirect relationship between I-position and neuroticism/negative affectivity, Bowen might suggest that college students with higher levels of I-position would have a clear sense of self, goals, and make reasoned decisions, thus having lower levels of goal instability. These lower levels of goal instability would then be related to lower levels of neuroticism and negative affectivity as it relates to career decision making. Kohut might add that an individual with a defective self will develop a higher level of goal instability and experience negative emotions such as anxiety, fear, and insecurity, which become emotional sources of career indecision (Bertoch, 2012; Xu & Tracey, 2017). To explain the direct relationship between I-position and neuroticism/negative affectivity, Bowen might argue that college students with higher levels of I-position would be better at maintaining healthy self-esteem (Chung & Gale, 2006) and emotional composure under stress; thus, experience less negative emotional distress, which is a source of career indecisiveness (Xu & Tracey, 2017). In other words, college students with low levels of I-position would experience general anxiety related to low self-esteem, which is then directly related to aspects of general emotional distress in neuroticism/negative affectivity, explaining the direct relationship

between I-position and neuroticism/negative affectivity. Contrary to the initial prediction, goal instability did not mediate the relationship between emotional reactivity and neuroticism/negative affectivity. However, emotional reactivity was directly related to neuroticism/negative affectivity. Bowenian concept of emotional reactivity that includes heightened emotional distress and insecurity in relationships with others seems to be closely related to emotional sources of career indecision, which include emotional distress, insecurity, and resilience (Xu & Tracey, 2017).

The current path model supported the full mediation by goal instability of the relationships between emotional cutoff, I-position, fusion with others, and choice/commitment anxiety. This pattern is consistent with Bowen theory because choice/commitment anxiety addresses difficulties in decision making due to the lack of exploration of the self and the world of work (Xu & Tracey, 2017). To explain the indirect relationship between emotional cutoff, fusion with others, I-position and choice/commitment anxiety via goal instability, Bowen might suggest that college students who are emotionally cutoff would find it difficult to make their career choices and commit to them because they could have vague goals and values due to the lack of comparison of their goals with others.’ Bowen might suggest that college students who are fused with others would compromise their goals and values because they fear separation from their significant others (Zingaro, 1983). As noted earlier, Bowen would expect I-position to be related to goal instability because the lack of sense of self would negatively influence the individuals’ autonomous decision-making, resulting in higher levels of anxiety to commit to a career choice.

The current path model supported the full and partial mediation of goal instability between sub-dimensions of differentiation of self and lack of readiness, which measured an

individual's goal-directedness, motivation, and confidence in career decision making based on the fit between the self and career options. Specifically, goal instability fully mediated the relationship between emotional cutoff and lack of readiness, as well as fusion with others and lack of readiness. Goal instability partially mediated the relationship between I-position and lack of readiness. To explain these indirect relationships, Bowen might contend that students experiencing emotional cutoff and fusion with others would have problems identifying their ideal careers due to their unclear or unstable goals and values possibly because they did not have chances to compare their goals to others,' or prioritized their parents' or other significant individuals' expectations over their own. The indirect relationship between I-position and lack of readiness via goal instability can be understood based on Kohut's contention that goal instability includes the maintenance of motivation for task-oriented activities (Bertoch, 2012). As previously discussed, individuals with a better sense of self have the energy to continue the pursuit of task-oriented behaviors, which help students make confident career decisions based on their clear goals, identity, and career knowledge. To explain the direct relationship between I-position and lack of readiness, Bowen might suggest that students with a better self-esteem would feel emotionally confident and make nuanced judgment to identify a fit between the self and career opportunities. As previously discussed, students with healthy self-esteem would better adapt to the challenging career development process (Santos, 2003; Savickas, 1997). Contrary to the initial prediction, emotional reactivity had a direct positive impact on lack of readiness. Lower levels of emotional reactivity (higher scores on ER scale) predicted higher levels of lack of readiness. One possible explanation for this finding is that emotionally reactive students who are sensitive to criticism might work harder and spend more time focusing on career decision making (e.g.,

“I try to excel at everything I do,” which was reverse coded and measured lack of readiness). Thus, their hard work can help them be ready to make a better career choice.

The third hypothesis predicting partial mediation of goal instability between sub-dimensions of differentiation of self and interpersonal conflict of career indecision was partially supported. Goal instability partially mediated the relationship between emotional cutoff and interpersonal conflict. Goal instability fully mediated the relationships between fusion with others, I-position, and interpersonal conflict. A possible reason for the direct positive relationship between emotional cutoff and interpersonal conflict could be that college students who isolate themselves from others (lower scores on EC scale) will generally experience less contact and conflict with their significant others because they are simply not in contact with them either physically or psychologically. In other words, when college students are in close contact with their significant others, it would increase the possibility that they would hear and need to respond to their significant others' career expectations for them. This situation might raise conflict between them because the significant others have different ideas of what career the individual should choose or are disappointed that their career identity is not clear. But at the same time, the indirect relationship between emotional cutoff and interpersonal conflict via goal instability can suggest that physical or emotional isolation would get in the way of students defining their goals because they would not have the opportunity to compare their ideas and goals with those of others. The indirect relationship between fusion with others, I-position, and interpersonal conflict via goal instability can be understood using Bowen's theory. Emotionally over-involved college students would lack the motivation to navigate the career decision making process due to their need for approval from significant others. They may

experience conflicts with significant others because of different expectations. In addition, it is possible that college students with lower levels of I-position would struggle to navigate between their own and their significant others' career expectations because of their vague goals and values which become barriers when making conversation about career options.

Contrary to the initial prediction, the path analysis revealed that emotional reactivity did not exert a unique effect on goal instability. The interpretation of this non-significant association in the path model warrants careful attention because the two variables are thought to be related (Bowen, 1978; Frost, 2014; Kerr & Bowen, 1988; Sandage et al., 2017). Empirically, the simple correlation between the two variables was found to be significant, and the effect size was large (see Table 2). The non-significant direct path between emotional reactivity and goal instability in the presence of the other elements of differentiation of self in the path model seems to mean the primary components of the two constructs are different in nature. In other words, emotional reactivity represents an individual's emotional arousal including anxiety and sensitivity to others' criticism. However, goal instability represents an individual's level of motivation based on an unclear sense of self and goals. The discrepancy between the significant bivariate correlation and the non-significant direct path between emotional reactivity and goal instability could mean that emotional cutoff, I-position, and fusion with others may explain the relationship between emotional reactivity and goal instability. Theoretically, Bowen would suggest that college students with high emotional reactivity would be emotionally aroused and distressed in relationships with others. When emotionally aroused, it is possible that in response, individuals would seek to decrease the distress, potentially isolating themselves, or agreeing with others. The energy spent on managing the distress, including emotional cutoff or fusion in relationships, would detract

from focus on the exploration of personal goals (Frost, 2014). Specifically, an individual's level of goal instability does seem to be affected by the level of emotional cutoff. For example, when an individual is isolated, it might be difficult to define clear goals and direction in life due to the lack of communication with others (Festinger, 1954; Gerber, Wheeler, & Suls, 2018). Without emotional support, an individual may have a hard time maintaining motivation and the energy needed to pursue goals. Without clear boundaries in relation to significant others, an individual's goals can be compromised due to the emotional over-involvement. An individual with high levels of I-position would be better at setting goals and maintaining motivation based on their clear sense of self. Further reasoning, analyses, and alternative designs may clarify this unexpected finding. In the following section, some important patterns about goal instability as a full or partial mediator will be summarized.

Goal instability fully mediated the relationship between the interpersonal dimensions of differentiation of self, vocational identity, and career indecision. Specifically, goal instability fully mediated the relationship between emotional cutoff (EC) and fusion with others (FO), and most of the sub-dimensions of career indecision (e.g., full mediations, EC and VI, NNA, CC, LR via GIS; FO and VI, CC, LR, via GIS). As previously discussed, this pattern implies the close relationship between differentiation of self and goal instability as developmental constructs that can explain relational and psychological sources of career indecision among college students. In extrapolating from Kohut's theory, college students' goal-directedness is developed when they idealize their significant others (Robbin & Patton, 1985). When they emotionally isolate (i.e., cut off) themselves from their significant others, they are unable to experience the valuable interpersonal contact that leads to idealization.

Therefore, emotionally isolated college students would have difficulties in defining their goals and direction in life. Further, isolative college students would not have the opportunity to examine the differences between their ideas and others,' which might then translate into unclear goals and direction in life. Likewise, college students with interpersonal boundary issues (high fusion) might incorporate their significant others' career expectations into their own. The adoption of others' goals due to emotional involvement with them would cause discomfort partly because giving up their own goals, and perhaps lead one to be less motivated to engage in career exploration. The lack of career exploration would detract from the development of vocational identity and confidence in career decision making. Therefore, my results add support to the notion that goal instability partially explains the relationship between two specific family dynamics, healthy emotional bonding and separation among family members, and college students' career indecision issues (Bratcher, 1982; Holland & Holland, 1977; Johnson et al., 2014; Larson & Wilson, 1998; Patton & Robbin, 1982; Zingaro, 1983).

Goal instability partially mediated the relationships between several dimensions of differentiation of self, and vocational identity and career indecision. Particularly, goal instability partially mediated the relationships between I-position and vocational identity, neuroticism/negative affectivity, as well as lack of readiness. The partial mediations imply that aspects of I-position have both direct and indirect, via goal instability, influences on college students' vocational identity and career indecision issues. Initially, I hypothesized that I-position and most indecision constructs would be fully mediated by goal instability based on the theoretical association between differentiation of self and goal-directedness (Frost, 2014). Frost described goal-directedness as an individual's ability to formulate and

maintain realistic goals and direction in life and to manage the stress that originates from the pursuit of goals (Bowen, 1978; Frost, 2014). However, Kohut's conceptualization of goal instability seems to focus on an ability to set goals, make decisions, and maintain motivation for task-oriented activities based on the development of self through mirroring ideal self-objects (Bertoch, 2012). Given the nature of goal instability, distress management and self-esteem aspect in I-position from Bowen's perspective may directly explain sources of career indecision after controlling for goal instability. For example, I-position measures an individual's ability to maintain emotional composure under stress as exemplified by the items, "I tend to remain pretty calm even under stress," and "I tend to feel pretty stable under stress." Theoretically, the ability to maintain a clear sense of self in relationships will help college students stay emotionally composed; thus, adding to their senses of vocational identity beyond what is explained by the clarity of personal goals. In fact, the healthy self-esteem represented by I-position may relate to aspects of vocational identity that are perhaps more peripheral to vocation, but still captured with career indecision when measured. For example, one of the items on the vocational identity scale is "I am concerned that my present interests may change over the years." Perhaps higher levels of I-position allow individuals to be more confident in the stability of their interests, which may reflect their stable and healthy self-esteem. Further, one of the items on the neuroticism/negative affectivity scale is "I often feel fearful and anxious." Individuals with lower levels of I-position seem to feel more anxious, and the emotional negativity may increase the difficulties in career decision making. Finally, one of the items on the lack of readiness scale is "I am quite confident that I will be able to find a career in which I'll perform well." As in the case of vocational identity, high I-position seems to allow individuals to be more confident in their decision making due to their

healthy self-esteem and clear goals and values. This result is consistent with the findings of Johnson et al., who demonstrated that I-position was one of the most significant predictors of vocational identity and career indecision (Osipow, 1999), including decidedness, comfort, self-clarity, knowledge, and decisiveness, for college students.

In sum, the current study provided empirical evidence to support the inverse relationship between differentiation of self and goal instability among traditional-aged college students (Sandage et al., 2017). Further, the current study clarified the relationship between sub-dimensions of differentiation of self and goal instability. Goal instability explained the shared variance of some dimensions of differentiation of self and career indecision. The patterns found in the path analysis suggest that goal instability explains the relationship between the interpersonal aspects of differentiation of self and sources of career indecision (Zingaro, 1983). Self-esteem and distress management aspects of differentiation of self seemed to be directly related to sources of career indecision above and beyond the degree to which goal instability explained the relationships between them. Meaningful direct, and indirect via goal instability, influences of differentiation of self on career indecision may emphasize the importance of incorporating the family systems perspective in understanding the multi-faceted aspects of career indecision issues among college students.

Limitations

The current study utilized a mediational path model to test the theoretically predicted relationships between differentiation of self as an exogenous variable and goal instability, vocational identity, and sub-dimensions of career indecision as endogenous variables. Given that differentiation of self from the family of origin is a developmental and process-oriented concept that is achieved throughout one's life, differentiation of self is expected to influence

college students' career indecision issues. However, the cross-sectional nature of the survey design by no means provides any empirical evidence for causation between variables utilized in the study. Thus, caution is warranted in interpreting the current data as a basis for the causal relationship between differentiation of self, goal instability, vocational identity, and career indecision outcomes. Another limitation is the multidimensionality issues that were observed related to the measurement of I-position, fusion with others, and vocational identity. The three scales did not meet some of the criteria for unidimensionality. For example, the ratios between the first and second eigenvalues for I-position and fusion with others were less than three. The first factor of vocational identity scale accounted for only 38.49% of the variance. Due to the limitation, caution is warranted in the interpretation of results as the multidimensionality could create a complicated picture among the variables, possibly raising a validity issue and increasing the number of partial mediations in the model. For example, goal instability was theoretically expected to fully mediate the relationship between I-position and vocational identity. However, a direct path (i.e., possibly self-esteem as discussed in the previous section) between I-position and vocational identity helped find the alternative model that fits the data. The other limitation of the current study concerns its use of a convenience sample, which can compromise the generalizability of the current results. For example, the data used in the current study do not seem to accurately represent the targeted urban university population based on a comparison between the sample data and the current demographics of the institution where the data were collected. The majority of participants in the current study were female students (80 %) and studied psychology as major or minor (44 %). The majority of participants were White/European American students (56.8%) followed by Black/African American students (15.5%), Asian/Asian American

students (10.6%), and Hispanic/Latino(a) students (8.7%). However, the university's statistics showed that female students ($n = 5161$) were 56.9 % and psychology majors ($n = 372$) were 4.1 % of the total undergraduate students ($N = 9076$) enrolled in spring 2019 (UMKC Data Warehouse, 2019). White/European American students were 59.8% of the total undergraduate students enrolled in spring 2019, followed by Black/African American students (10.9%), Asian/Asian American students (7.5%), and Hispanic/Latino(a) students (8.8%) (UMKC Data Warehouse, 2019). Given the differences in the ratios of certain demographic variables between the current data and the school, careful attention is needed when generalizing the results to the target institution or urban universities in general.

Future Research

As previously discussed, emotional reactivity did not predict goal instability in the current path model. Therefore, all the mediational hypotheses that included the relationship between emotional reactivity and goal instability were not supported. The current findings suggest that emotional reactivity may be related to goal instability through other sub-dimensions of differentiation of self, including emotional cutoff, I-position, and fusion with others. Further theoretical and empirical investigations may explain the findings in the future. In addition, emotional reactivity was directly related to neuroticism/negative affectivity and the lack of readiness dimension of career indecision in the path model. The current findings of no or partial mediation suggest a possibility that sub-dimensions of differentiation of self might relate to sources of career indecision through another variable than goal instability. For example, the distress management, self-esteem, and anxiety that are related to differentiation of self may explain the direct relationship between differentiation of self and career indecision issues. Therefore, further investigation is warranted around the other mediators

that explain the relationship between differentiation of self and career indecision issues.

Further, the conceptualization of goal-directedness from Bowen theory described by Frost (2014) includes an individual's ability to manage stress that originates from the pursuit of goals. This contrasts with Kohut, whose conceptualization of goal instability focuses generally on decision making based on a clear sense of self and goals and maintaining energy for goal-oriented tasks. In addition, the goal-directedness from Bowen's theory (Frost, 2014) would define goal-directedness with details including specific, realistic, short- and long-term goals, which were not observed in the construct of goal instability from Kohut's perspective. There is no published goal-directedness scale from Bowen's theoretical perspective (Frost, 2014). Therefore, the development of a goal-directedness scale seems to be a worthwhile endeavor to clarify the relationship between differentiation of self and goal-directedness. The goal-directedness scale may enhance our understanding of the relationship between differentiation of self and career indecision issues.

Given the limitation of the current study in regard to external validity due to the use of a convenience sample, future research can recruit participants that adequately represent the target population using purposive or quota sampling methods. Further, given that the majority of participants were White American in the current study, future research can focus on students of color to increase the relevance of the model to ethnically diverse populations. For example, students from Asian backgrounds who are highly influenced by their parents' expectations for their career goals can be the target population to test the current model (Leong & Hardin, 2002; Leong & Serafica, 1995; Mau, 2004). Finally, expanding participants to include emerging adults without a college education may increase the generalizability of the proposed model to more diverse populations.

Clinical Implications

The current findings supports the notion that family of origin influences college students' career development, and particularly, demonstrate the roles differentiation of self plays in explaining sources of career indecision via goal instability. Therefore, the findings support that Bowen's family systems perspective is crucial for career counseling. Because family dynamics and the emotional process often operate without conscious awareness (Bowen, 1978; Kerr & Bowen, 1988), career counselors need to help students understand how family of origin variables (i.e., differentiation of self and family emotional process) influence their ability to set and pursue goals, which predict their vocational identity and indecision issues (Bratcher, 1982; Johnson et al., 2014; Zingaro, 1983). It seems helpful to utilize the Bowenian three-step intervention: (a) exploring the family relationship and emotional patterns through the use of genogram and lifelines, (b) identifying clients' roles that add to the family dynamic, and, (c) helping clients to define their own goals and values toward differentiation of self in personal and career realms (Brown & Brooks, 1991; Bowen, 1978; Kerr & Bowen, 1988; Zingaro, 1983).

Applying the current model to career indecision issues for students from different cultural backgrounds seems to warrant careful attention. For example, the relationship between differentiation of self and college students' self-esteem was more pronounced for American students than Korean students (Chung & Gale, 2006). As discussed in the future research section, further investigation may clarify the relevance and application of the current model to students with collectivistic worldview.

Given the direct effects of emotional reactivity on negative affectivity and lack of readiness, it seems crucial for counselors to address the emotional regulation of anxiety for

college students. When students understand and address their unmet needs from their family of origin, they would be able to utilize their energy to explore the self and career world. Students need be encouraged to define their values and career goals while working toward differentiation of self. Particularly, counselors can focus on assisting students in cultivating their own autonomous sense of selves from the family of origin as well as facilitate supportive, rather than controlling, relationships with significant others to address their indecision issues effectively.

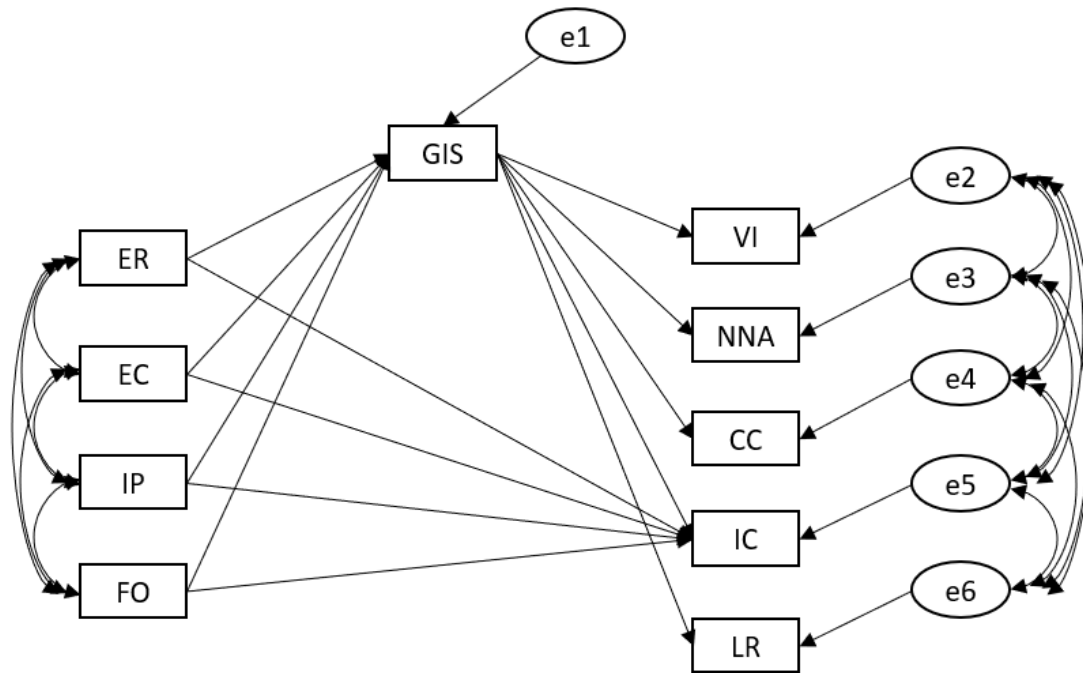
Conclusion

The current research suggests that the family's influence on traditional-aged college students' vocational identity and career indecision issues is a legitimate topic for career development research and counseling. The current study contributes to the existing theory and research with its empirical support for the association between differentiation of self and goal instability, as well as their explanations for career indecision issues among traditional-aged college students. The path model between differentiation of self and vocational identity and indecision via goal instability can serve as a framework to understand poorly differentiated college students' career indecision issues. Further research might be needed to clarify and diversify the specific mechanism of the model as well as to increase the generalizability of the model to populations of different developmental contexts and cultural backgrounds.

Appendix A

Figure 1

Theoretical Mediation Model of the Relationship between Sub-dimensions of Differentiation of Self, Goal Instability, Vocational Identity, and Sub-dimensions of Career Indecision

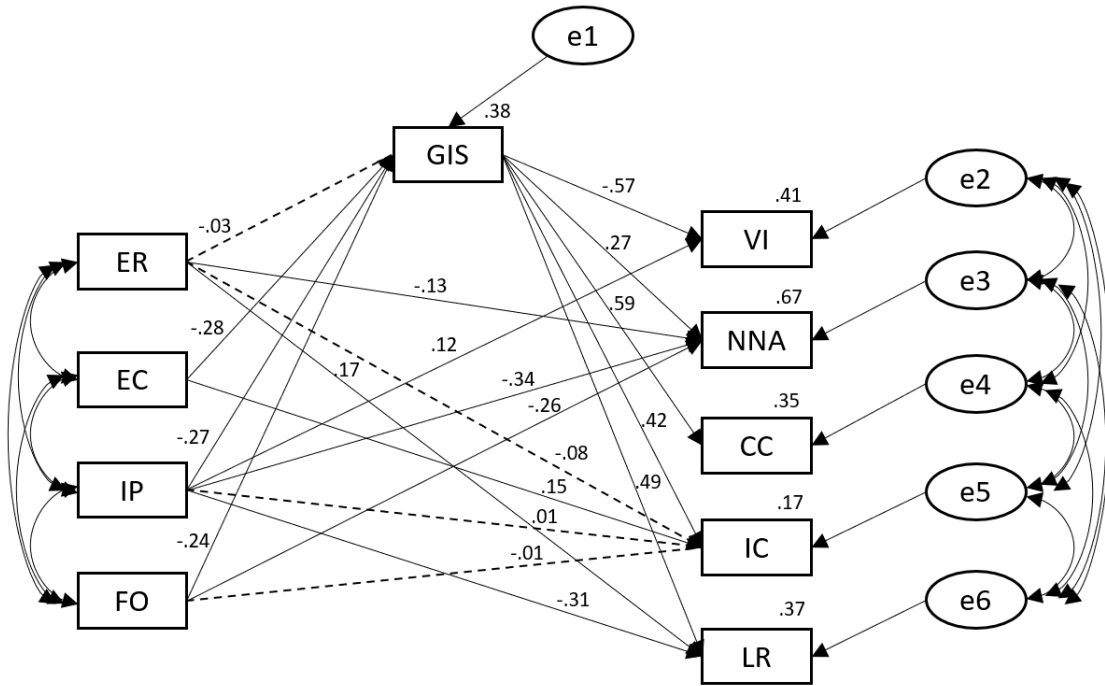


Note. ER = Emotional Reactivity, EC = Emotional Cutoff, IP = I-position, FO = Fusion with Others, GIS = Goal Instability Scale, VI = Vocational Identity, NNA = Neuroticism/Negative Affectivity, CC = Choice/Commitment Anxiety, IC = Interpersonal Conflict, and LR = Lack of Readiness.

Appendix B

Figure 2

Alternative Mediation Model of the Relationship between Sub-dimensions of Differentiation of Self, Goal Instability, Vocational Identity, and Sub-dimensions of Career Indecision



Note. ER = Emotional Reactivity, EC = Emotional Cutoff, IP = I-position, FO = Fusion with Others, GIS = Goal Instability Scale, VI = Vocational Identity, NNA = Neuroticism/Negative Affectivity, CC = Choice/Commitment Anxiety, IC = Interpersonal Conflict, and LR = Lack of Readiness.

Appendix C

Table 1

Demographics

Characteristics	N (%)	Min	Max	M	SD
Gender Identity					
Female	213 (80.7%)				
Male	48 (18.2%)				
Nonbinary	3 (1.1%)				
Sexual Orientation					
Heterosexual	222 (84.1%)				
Gay or Lesbian	10 (3.8%)				
Bi-sexual	29 (11.1%)				
Pansexual, Regular	3 (1.1%)				
Age	264 (100%)	18	24	19.94	1.53
Ethnic Background					
White/European American	140 (56.8%)				
Black/African American	41 (15.5%)				
Asian/Asian American	28 (10.6%)				
Hispanic/Latino(a)	23 (8.7%)				
Bi-racial	16 (6.1%)				
International student	4 (1.5%)				
Hatian, Indian	2 (.8%)				
Education					
First-year	73 (27.7%)				
Sophomore	65 (24.6%)				
Junior	69 (26.1%)				
Senior	56 (21.2%)				
Declaration of Major (yes)	247 (93.6%)				
Major					
Psychology	116 (44%)				
Others	146 (56%)				
Family Income					
More than \$75,000	106 (40.2%)				
B/w \$51,000 & \$75,000	55 (20.8%)				
B/w \$26,000 & \$50,000	66 (25.0%)				
Below \$25,000	37 (14.0%)				
Relationship Status					
Single	159 (60.2%)				
Single/In a relationship	99 (37.5%)				
Married/Partnered	3 (1.1%)				
Divorced, Dating, Engaged	3 (1.2%)				

Living Condition

With Roommates	112 (42.4%)
With Parents	98 (37.1%)
With Spouse/Partner	25 (9.5%)
Alone	23 (8.7%)
Others (e.g., grandparents)	6 (2.3%)

Note. $N = 264$

Appendix D

Table 2

Descriptive Statistics and Pearson Correlation Matrix Among Differentiation of Self, Goal Instability, Vocational Identity, and Career Indecision

	ER	EC	IP	FO	GIS	VI	NNA	CC	IC*	LR*
ER	1									
EC	.37**	1								
IP	.62**	.27**	1							
FO	.69**	.29**	.57**	1						
GIS	-.48**	-.44**	-.50**	-.50**	1					
VI	.42**	.32**	.45**	.40**	-.65**	1				
NNA	-.69**	-.41**	-.73**	-.68**	.65**	-.55**	1			
CC	-.41**	-.35**	-.37**	-.33**	.62**	-.78**	.58**	1		
IC*	-.27**	-.09	-.25**	-.27**	.40**	-.37**	.32**	.43**	1	
LR*	-.23**	-.20**	-.44**	-.32**	.56**	-.50**	.41**	.39**	.26**	1
M	3.22	4.07	3.74	3.79	3.27	9.34	17.76	15.97	1.00	1.02
SD	1.13	1.39	1.00	1.08	1.09	5.39	6.19	6.50	.24	.19
Min	1.00	1.00	1.00	1.00	1.00	.00	5.00	5.00	.70	.70
Max	6.00	6.00	6.00	6.00	5.70	18.00	30.00	30.00	1.48	1.41

Note. $N = 264$. ER = Emotional Reactivity; EC = Emotional Cutoff; IP = I-Position; GIS =

Goal Instability; VI = Vocational Identity; NNA = Neuroticism/Negative Affectivity; CC =

Choice/Commitment Anxiety; IC* = Interpersonal Conflict, Log-transformed; LR* = Lack of

Readiness, Log-transformed.

** $p < .01$

Appendix E

Table 3

Bootstrap Analysis of Direct and Indirect Effects in The Alternative Model

Path		Outcome	R^2	Standardized		Unstandardized		
				B	SE	β	SE	p
		GIS	.38 ($p = .02$)					
ER	GIS			-.03	.08	-.27	.76	.72
EC	GIS			-.28	.05	-2.18	.40	.01
IP	GIS			-.27	.07	-2.93	.73	.01
FO	GIS			-.24	.07	-2.39	.66	.01
		VI	.41 ($p = .01$)					
GIS	VI			-.57	.04	-.28	.03	.02
IP	VI			.12	.04	.64	.20	.02
ER	GIS	VI		.02	.05	.08	.22	.74
EC	GIS	VI		.16	.03	.62	.13	.01
IP	GIS	VI		.16	.04	.83	.22	.01
FO	GIS	VI		.14	.04	.68	.20	.01
		NNA	.67 ($p = .01$)					
GIS	NNA			.27	.04	.16	.03	.01
ER	NNA			-.13	.05	-.72	.28	.01
FO	NNA			-.26	.05	-1.48	.28	.01
IP	NNA			-.34	.05	-2.12	.30	.01
ER	GIS	NNA		-.01	.02	-.04	.12	.72
EC	GIS	NNA		-.07	.02	-.33	.09	.01
IP	GIS	NNA		-.07	.02	-.45	.14	.01
FO	GIS	NNA		-.06	.02	-.37	.12	.01
		CC	.35 ($p = .01$)					
GIS	CC			.59	.04	.35	.03	.01
ER	GIS	CC		-.02	.05	-.10	.27	.72
EC	GIS	CC		-.16	.03	-.76	.15	.01
IP	GIS	CC		-.16	.04	-1.03	.27	.01
FO	GIS	CC		-.14	.04	-.84	.24	.01
		IC*	.17 ($p = .03$)					
EC	IC*			.15	.06	.03	.01	.01
ER	IC*			-.08	.09	-.02	.02	.39
FO	IC*			-.01	.09	-.01	.02	.86

GIS		IC*	.42	.07	.01	.00	.01
IP		IC*	.01	.08	.00	.02	.91
ER	GIS	IC*	-.01	.03	-.00	.01	.71
EC	GIS	IC*	-.11	.03	-.02	.01	.01
IP	GIS	IC*	-.11	.04	-.03	.01	.01
FO	GIS	IC*	-.10	.03	-.02	.01	.01
		LR*	.37 ($p = .03$)				
GIS		LR*	.49	.05	.01	.00	.01
ER		LR*	.17	.06	.03	.01	.01
IP		LR*	-.31	.06	-.06	.01	.01
ER	GIS	LR*	-.01	.04	-.00	.01	.72
EC	GIS	LR*	-.13	.03	-.02	.00	.02
IP	GIS	LR*	-.13	.03	-.02	.01	.01
FO	GIS	LR*	-.11	.04	-.02	.01	.01

Note. $N = 264$. Maximum Likelihood. Principle Axis Factoring. Number of nonparametric bootstrap sample = 200. ER = Emotional Reactivity; EC = Emotional Cutoff; IP = I-Position; GIS = Goal Instability; VI = Vocational Identity; NNA = Neuroticism/Negative Affectivity; CC = Choice/Commitment Anxiety; IC* = Interpersonal Conflict, Log-transformed; LR* = Lack of Readiness, Log-transformed.

Appendix F

Consent for Participation in a Research Study

Differentiation of Self, Vocational Identity, and Career Indecision: The Mediating role of Goal Instability Among College Students

Nancy Murdock, Ph.D and Soowhan Choi, M.A.

You are being asked to take part in a research study, of which purpose is to better understand the relationship between differentiation of self, goal instability, and career outcomes among traditional-aged college students. This study is being conducted using the Psychology Department's online research participant recruitment system at University of Missouri-Kansas City.

The researcher in charge of this study is Dr. Nancy Murdock. While the study will be run by her, other qualified persons who work with her may act for her. The study team is asking you to take part in this research study because you are (a) at least 18 and under 25 years old, (b) undergraduate students, and (c) fluent in English. Participation for this survey is voluntary and you may choose to withdraw from the study by exiting the online survey at any time during the survey. There will be no individually identifying information being asked on the survey, so your responses will be completely anonymous.

If you agree to take part in this study, you will be involved in this study for approximately 10-15 minutes. Participants recruited from the Psychology Department courses may, at the discretion of the instructor, receive extra course credit for participating in the study. Participants who sign up using the online recruitment system will be credited using that system.

No foreseeable risks are involved in this study. However, you may feel discomfort from the nature of the questions in the survey. If you experience any adverse effects from participating in the study, please contact the UMKC counseling center at 816-235-1635.

This study is not expected to be of any direct benefit to you, but the study will help further understand the family of origin influence on career development issues among traditional-aged college students. The study can benefit university educators and counselors to develop interventions to better assist traditional-aged college students' career development.

You should contact the Office of UMKC's Institutional Review Board at 816-235-5927 if you have any questions, concerns or complaints about your rights as a research subject. You may contact the principal investigator Dr. Nancy Murdock at Murdockn@umkc.edu or student researcher Soowhan Choi, M.A. at 816-501-6069 or scvcd@mail.umkc.edu if you have any questions about this study.

By continuing on to the survey, you indicate that you have read the informed consent and agree to participate in the study.

Appendix G

Demographic Questionnaire

1. Please indicate your gender identity.
 - 1) Male
 - 2) Female
 - 3) Transgender
 - 4) If not listed, please, specify _____
2. Please indicate your sexual orientation.
 - 1) Heterosexual
 - 2) Gay/Lesbian
 - 3) Bisexual
 - 4) If not listed, please, specify _____
3. Please indicate your age (in number format): _____
4. Please indicate your race/ethnicity.
 - 1) White/European American
 - 2) Black/African American
 - 3) Asian/Asian American
 - 4) Hispanic/Latino(a)
 - 5) American Indian/Alaskan Native
 - 6) Biracial
 - 7) International student
 - 8) If not listed, please, specify _____
5. Please indicate your educational level in your undergraduate program.
 - 1) First year
 - 2) Sophomore
 - 3) Junior
 - 4) Senior
 - 5) If not listed, please, specify _____
6. Please indicate whether or not you declared your major study of interest.
 - 1) Yes _____ If yes, what is your major? _____
 - 2) No _____
7. Please indicate your family income.
 - 1) Under \$ 10,000
 - 2) \$10,000 -\$25,000
 - 3) \$26,000-\$50,000
 - 4) \$51,000-\$75,000
 - 5) Over \$75,000
8. Please indicate your relationship status.
 - 1) Single
 - 2) Single, in a committed relationship
 - 3) Married/Partnered

- 4) Divorced
 - 5) Widowed
 - 6) If not listed, please, specify _____
9. Please indicate your current living situation.
- 1) Living with parents
 - 2) Having roommate(s)
 - 3) Living with spouse/partner
 - 4) Alone
 - 5) If not listed, please, specify _____

Appendix H

Differentiation of Self-Short Form (Drake, Murdock, Marszalek, & Barber, 2015)

These are questions concerning your thoughts and feelings about yourself and relationships with others. Please read each statement carefully and decide how much the statement is generally true of you on a 1 (*not at all characteristic of me*) to 6 (*very characteristic of me*) scale. If you believe that an item does not pertain to you (e.g., you are not currently married or in a committed relationship, or one or both of your parents are deceased), please answer the item according to your best guess about what your thoughts and feelings would be in that situation. Be sure to answer every item and try to be as honest and accurate as possible in your responses.

	Not at all characteristic of me.					Very characteristic of me.
	1	2	3	4	5	6
I tend to remain pretty calm even under stress.	1	2	3	4	5	6
I usually need a lot of encouragement from others when starting a big job or task.	1	2	3	4	5	6
No matter what happens in my life, I know that I'll never lose my sense of who I am.	1	2	3	4	5	6
I tend to distance myself when people get too close to me.	1	2	3	4	5	6
When my spouse/partner criticizes me, it bothers me for days.	1	2	3	4	5	6
At times my feelings get the best of me and I have trouble thinking clearly.	1	2	3	4	5	6
I'm often uncomfortable when people get too close to me.	1	2	3	4	5	6
I feel a need for approval from virtually everyone in my life.	1	2	3	4	5	6
At times, I feel as if I'm riding an emotional roller-coaster.	1	2	3	4	5	6
There's no point in getting upset about things I cannot change.	1	2	3	4	5	6
I'm overly sensitive to criticism.	1	2	3	4	5	6
I'm fairly self-accepting.	1	2	3	4	5	6
I often agree with others just to appease them.	1	2	3	4	5	6
If I have had an argument with my spouse/partner, I tend to think about it all day.	1	2	3	4	5	6
When one of my relationships becomes very intense, I feel the urge to run away from it.	1	2	3	4	5	6
If someone is upset with me, I can't seem to let it go easily.	1	2	3	4	5	6
I often feel unsure when others are not around to help me make a decision.	1	2	3	4	5	6

Appendix I

Goal Instability Scale (Robbins & Patton, 1985)

Directions: Following are a number of statements that reflect various ways in which we can describe ourselves. After reading each statement, one at a time, circle a number along the scale which ranges from 1, Strongly Agree, to 6, Strongly Disagree. There are no right or wrong answers so please just make your best judgment. Simply try to rate the extent to which you agree with each statement. Do not spend too much time with any one statement. Circle the number which best fits for each statement and do not leave any unanswered.

Please Circle A Number For Each Statement, Along:

	Strongly Agree 1	Moderately Agree 2	Slightly Agree 3	Slightly Disagree 4	Moderately Disagree 5	Strongly Disagree 6
				<u>Agree</u>		<u>Disagree</u>
1. It's hard to find a reason for working.	1	2	3	4	5	6
2. I don't seem to make decisions by myself.	1	2	3	4	5	6
3. I have confusion about who I am.	1	2	3	4	5	6
4. I have more ideas than energy.	1	2	3	4	5	6
5. I lose my sense of direction.	1	2	3	4	5	6
6. It's easier for me to start than to finish projects.	1	2	3	4	5	6
7. I don't seem to get going on anything important.	1	2	3	4	5	6
8. I wonder where my life is headed.	1	2	3	4	5	6
9. I don't seem to have the drive to get my work done.	1	2	3	4	5	6
10. After a while I lose sight of my goals.	1	2	3	4	5	6
				<u>Agree</u>		<u>Disagree</u>

Appendix J

Vocational Identity: My Vocational Situation (Holland, Daiger, & Power, 1980)

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

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

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

Appendix K

Career Indecision Profile-Short (Xu & Tracey, 2017)

In general, how would you rate the degree of your difficulty in making a career decision?

Low 1 2 3 4 5 6 7 High

Directions:

Read each statement carefully and indicate how well it describes you

Fill in the appropriate circle following each statement

Use the disagree/agree scale above the circles to select your answer

Although some items may seem similar, try to answer each without considering your other answers

Strongly disagree	Moderately disagree	Slightly disagree	Slightly agree	Moderately agree	Strongly agree
<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>

1. When I experience a setback, it takes me a long time to feel good again.
2. I'd be going against the wishes of someone important to me if I follow the career path that most interests me.
3. I am easily embarrassed.
4. I really have a hard time making decisions without help.
5. I often feel discouraged about having to make a career decision.
6. I need to learn more about myself before I can make a good career decision.
7. It's difficult for me to choose a career because I like so many different things.
8. People who are important to me give me contradictory information about the career I should pursue.
9. Important people in my life do not support my career plans.
10. I often feel fearful and anxious.
11. Important people in my life disagree about the career I should pursue.
12. I often feel insecure.
13. I am quite confident that I will be able to overcome obstacles to getting the career I want.
14. I am not sure I can commit to a specific career because I don't know what other options might be available.
15. I'm concerned that my goals may change after I decide on a career.
16. I try to excel at everything I do.
17. Important people in my life have discouraged me from pursuing the career I want.
18. I will be able to find a career that fits my interests.
19. I always work productively to get the job done.
20. I am quite confident that I will be able to find a career in which I'll perform well.

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Vita

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