A systems theory approach to career decision making

Angela L. Zimmerman[a,*] and Larry G. Kontosh[b]
[a]*Indiana State University, Terre Haute, IN, USA*
[b]*West Virginia University, Morgantown, WV, USA*

Abstract. Many career development studies have linked career indecision, an inability to make a decision about the vocation one wishes to pursue, to interpersonal and intrapersonal processes. Systems theory can help to explain the processes behind these concepts in a way that other theories have not been able to explain. Systems Theory Framework, (STF, Patton and McMahon, 1997), incorporates both the contextual system, e.g., parents and peers, and the individual system (i.e., STF's *content* component). *Process,* the second component, identifies the presence of recursive interaction processes within the individual and the context, as well as, between the individual and the context. STF brings back the value of interdependence. Specific systemic constructs are useful in career decision-making and can add a practical dimension on to the counseling process.

1. Introduction

Employment choice is a significant decision in people's lives. Many career development studies have linked career indecision, an inability to make a decision about the vocation one wishes to pursue, to interpersonal and intrapersonal processes. Until recently, research has been lacking on how these factors are related to career indecision, only noting that there is an association. For example, Leong and Chervinko [17] found a positive association between career indecision and specific personality traits such as perfectionism, self-consciousness, and fear of commitment. In addition, there were negative correlations with regards to career indecision and the constructs of rational decision-making style [20], self-efficacy beliefs [2], and level of ego identity [6]. The process behind these associations has largely gone unknown.

Contextual factors such as parents and peers have recently been studied to look at how they affect career

decision making, or more specifically, career indecision [11]. Systems Theory Framework (STF) [25] incorporates both the contextual system and the individual system to form the first component of STF's career theory, *Content*. Both systems are key influences on career development.

Process is the second component of STF. This component identifies the presence of recursive interaction processes within the individual and the context, as well as, between the individual and the context. Systems theory helps to explain the processes (i.e., the *how*) behind the concepts in a way that other theories have not been able to explain.

Although developmental theories have provided depth to theories on career development by accounting for specific concepts, systems theory provides the breadth essential to join the plethora of theories. Systems theory provides unity to the field of career development as, by definition, it is open for change, develops from within itself, and is continually changing as it interrelates with other systems [26]. Knowledge of the research showing how relationships with parents, siblings, and peers influence the way a person makes career decisions and his or her commitment to

*Address for correspondence: Angela Zimmerman, Indiana State University School of Education, Department of Counseling, Terre Haute, IN 47809, USA. Tel.: +1 954 464 6024; E-mail: healthy.relationships@hotmail.com.

that decision can aid today's counselors in designing interventions aimed at career planning.

2. Individual system

At the center of STF is the individual [26]. In career development literature, the central role of the individual has been mostly passive. In other words, the individual has been seen as being shaped by outside influences such as ability, gender, socioeconomic status, etc. [10,27]. STF places the individual in a more active role, placing the individual as the locus of regulation of behavior. This idea is consistent with work by Vondracek, Lerner and Schulenberg [34] which emphasizes the uniqueness of the individual and his or her context. Vondracek et al., state that there is a dynamic interaction between the individual and various levels of the environment in which the individual development and behavior are rooted.

Within the individual system there is an assortment of intrapersonal factors which influence career development. Among them include: values, gender, health, beliefs, ability, age, and self-concept [26]. Guay et al. [11] looked at two constructs of self-concept (perceived self-efficacy and autonomy) and their influence on career decision-making. They found that student's level of confidence in career decision-making activities is fostered by the level of autonomous support given by parents and peers. Autonomous support is defined by providing choice, information, and/or involvement. Their study revealed that parental control is not associated with low levels of self-efficacy and autonomy perceptions. In fact, Steinberg and colleagues have found positive results of parental involvement when it has been in the form of authoritativeness (i.e., parental acceptance and involvement or warmth, psychological autonomy granting or democracy, and behavioral supervision or strictness). Such positive results include academic achievement [30,32], prosocial behavior [16, 31], positive mental health [16] and academically supportive peer relations [22]. Contrary to the results found with levels of parental control, Guay et al. [11] did find that peers' controlling behaviors were negatively correlated to perceived career decision-making self-efficacy and career decision-making autonomy. In other words, students whose peers exhibited controlling behaviors were found to have low levels of perceived self-efficacy and autonomy, and, therefore, high levels of career indecision.

One limitation of the Guay et al. [11] study is that the measures used were self-report scales. Parents and peers could have been consulted to add depth to the measures. Data was cross sectional which limits understanding of causality. Also, a longitudinal design could help to distinguish between "momentarial" indecision and chronic indecision. Nonetheless, parents' and peers' behavior do have an important influence on career indecision.

3. The contextual system

3.1. Social system

It has only been since the 21st Century that researchers have begun to focus on the importance of the relational context of career development. Multidimensional social support is one factor associated with relational influence.

3.1.1. Siblings and social support

Siblings are often overlooked as a significant source of relational security and support which continues throughout a person's lifespan [23]. In particular, adult siblings can provide each other with various forms of support and caretaking that is independent of parents and the family system as a whole. Siblings provide each other with a source of security and affection [5]. STF adds to the field of career development by acknowledging the ongoing decision making as a person continues to develop through all stages of the lifespan. It is a nonlinear process of the individual and his or her particular systems moving as a broader system of time. STF acknowledges the role of past, present, and future influences. A study by Palladino Schultheiss et al. [23] found that the impact of sibling relationships on an individual's career path confirms the STF's belief of ongoing change and recursiveness. Their study looked at four dimensions of social support: emotional support, social integration, esteem support, and information support. Participants distinguished between siblings in general and the most important sibling. Findings revealed that the most important sibling influenced each of the four aspects of social support. *Emotional support* was the only dimension identified as influential by other siblings. The emotional support provided was seen in emotional closeness and encouragement. Participants described their siblings' support of *social integration* as having someone to talk things over with, having similar personality characteristics and interests,

and sharing common friends. *Esteem support* was given in the form of the most important sibling's confidence in the participant's abilities and encouragement to make his or her own decision. Lastly, *information support* by the most important sibling pertained to the times when he or she was a source of career information (e.g., occupational information, experience, advice, and opinions). Some participants did not feel the influence on career exploration or decision making was recursive with regards to their older siblings (who were also typically identified as their most important siblings). In other words, the participants felt older siblings influenced them. However, participants did not feel this was reciprocal. They did not believe they influenced the career exploration or decision making of their older sibling. These supportive functions are thought to be essential for well-being, especially when faced with stressful situations such as exploring and deciding on a career path.

3.1.2. Siblings and identification

Palladino Schultheiss et al. [23] found that the sibling social system influenced the participants' exploration and decision making via positive and negative role modeling as well as via personality and ideology. The influence of positive role modeling was measured by the degree that the participants looked up to their siblings and aspired to be like them. Negative role modeling occurred when the sibling provided a bad example, something to be avoided, or when they desired to achieve beyond their siblings aspirations. Personality and ideology are defined by personality characteristics (e.g., being patient and understanding) or ideas (e.g., the importance of living close to family). These two factors were important in the participants' career decision-making when the participant found his or her sibling influential. They found a reciprocal influence that was true for the most important sibling as well as the other siblings. Participants reported that their sibling relationship was most important during times in their career development where there were transitions. This category included "transitioning into and out of high school, changing careers, deciding to go or return to college, deciding on a college major, and persisting in high school or in challenging courses" [23, p. 10].

One major limitation to the study was the participant selection process. By interviewing only urban commuter college students who had ongoing local connections to their families, the study's generalization is limited and its findings may be difficult to apply to other populations. The index of enmeshment could be highly represented due to the possible pull felt by the college students who stayed close to home. Replica studies would need to be done with a different population to ensure the ability to generalize results. In addition, quantitative data would have provided more information on the degree to which participants had explored or committed to career choice. This could be an area of further study.

3.2. Family System

3.2.1. Parental relationships

Psychological separation difficulties alone is not a predictor of career indecision. In addition, attachment level to parents alone is not indicative of career indecision. Although the individual contributions of separation and attachment are inconsequential, the combination of parental attachment and separation seems to provide the most supportive family conditions in regards to the commitment to career choices process. Blustein et al. [3] found that both variables provided significant means of predicting variations in both progress in and method of committing to career choices. Parental attachment influence in the commitment process is most prominent when combined with some degree of psychological separation. They used two constructs to define separation: conflictual independence and attitudinal independence. *Conflictual Independence* refers to the psychological separation process with parents where there is an absence of guilt, anxiety, mistrust, responsibility towards, or resentment of one's parents. *Attitudinal Independence* refers to the maintenance of attitudes, values, and beliefs that differ from those of one's parents. In general, the separation-individuation process results in a clear, stable identity. In dysfunctional families, independence of thought and feeling are seen as a threat to the integrity of the family. In these families, they are likely to discourage the adolescent or young adult from developing a sense of psychological separateness. *Attachment* is defined by the perception of feelings of connectedness and closeness.

Results from Blustein et al. [3] revealed gender differences. They found that women who experience conflictual independence from their parents in conjunction with a moderate degree of attachment to each of their parents also tend to evidence greater commitment to their career choices and less of a tendency to foreclose on their career choices. *Foreclosure* refers to a closed, dogmatic, and dualistic approach to the commitment process versus an open approach to the commitment process. This was not the case with the men in the sam-

ple in regards to no association between psychological separation and parental attachment with the tendency to foreclose. They found that men's commitment process was based on some degree of attachment to their fathers coupled with conflictual independence from their father. In addition, those men that experienced greater attitudinal independence from their fathers were more uncommitted in their career choices. Therefore, some level of dependence on fathers was helpful in the commitment to a career choice. Results indicate that the father-son relationship is more influential with regards to career choices than the mother-son relationship. For both men and women, the absence of guilt, anxiety, mistrust, responsibility towards, or resentment of one's parent(s) was significant in their ability to commitment to a career choice. Some degree of attachment to parents was also a contributing factor. For men, though, what is most important is their attachment to their fathers. The major difference is that men's commitment to career choice was deepened by having similar beliefs and values of their father's attitudes.

The cross-sectional nature of the study lends to a lack of causal influences. The use of self-report also lends to some limitations. Also, the ability to generalize may be limited to undergraduate students with two living parents. Despite the limitations, the researchers outline a theoretical foundation which enhances our understanding of career development in terms of the complex relationship between parents and adolescents.

3.2.2. Family enmeshment

Many studies have confirmed the influence of family of origin on an individual's career development and choice [10,28,33], but the question of *how* familial dynamics affect the decision making process is less often answered in research. Kinnier et al. [15] examined the link between enmeshment and career indecision. Specifically, they looked at the degree of indecision regarding career choice and two scales of self-differentiation (intergenerational fusion/individuation, intergenerational triangulation) to define enmeshment. Results pertaining to family dynamics revealed that those who were more decided tended to be more individuated and less triangulated within their families. Although the results are statistically significant, they are weak (total variance was 11%). This may have to do with the instrument that was used (which was relatively new at the time). Also, there was low test-retest reliability (0.55) of the Individuation Scale and a positive correlation with social desirability. In addition, there was a skewed distribution of the subjects' ages in that

the range was 17 to 54 yet 90% of the subjects were under 24. The link between enmeshment and indecision may be strengthened in the future when a better measure of enmeshment is developed. The researchers felt the instrument used was the best available at the time of the study but acknowledged that refinement is needed. The indecision may be partly due to the over involvement of parents (enmeshment or fusion) or to triangulation where each parent gives conflicting information, resulting in the subject feeling pressure.

4. Relationships

4.1. Family

Guay et al. [11] found that parental control was not indicative of indecision; Steinberg and colleagues [30, 32] confirm that parental involvement actually produces positive results. More specifically, authoritativeness and autonomous support are associated with higher levels perceived self-efficacy and autonomy, which is linked with high levels of confidence in career decision making activities. So, although Kinnier et al. [15] found enmeshment to be linked (although weak) with career indecision, it is apparent that parents' involvement does produce positive results. Kinnier and colleagues emphasize that, "Enmeshment, of course, should never be confused with emotional closeness. Emotional closeness (but not enmeshment) within families appears to promote high self-esteem, assertiveness, and a sense of well-being with children" (p. 311). Psychological separation was positively associated with vocational identity in a study by Lopez [16]. This is consistent with Blustein et al.'s [3] findings which reveal that adolescents are less likely to foreclose and make progress in committing to career choices if the adolescents are closely attached to their parents and more conflictually independent from them. However, they found no significant relationship between psychological separation from parents and career indecision and career decision making self-efficacy. Eigen et al. [8] identified no significant association between family adaptability, cohesion, and career indecision. Santos and Coimbra [29] also found no significant relationship between psychological separation and either developmental career indecision or generalized indecision.

Only two studies have found a link between career indecision and family variables. Whiston [35] discovered that only women's career indecision is negatively

related to the degree of control and organization with the family. Whiston's study also revealed that both gender's career decision-making self-efficacy is positively related to the degree to which families encourage and support independence and participation in a variety of activities. Guerra and Braungart-Rieker [12] discovered that students' perceptions of the parental relationships are related to career indecision over and above their year in school and identity formation. They found that students were less career indecisive when their mothers were more encouraging of their independence in childhood than those who described their mothers as overprotective. This inconsistency in the research could be due to the constructs measuring vocational identity being different than the constructs measuring indecision. Thus, it does not mean that there is a true absence of relationships. It could be that there are mediating factors operating. The lack of significant effect could also be due to small number of participants involved in the studies, the magnitude of the effect size, and the variance heterogeneity.

4.2. Peer

As noted earlier, Guay et al. [11] looked at the role of peers on career decision making. They found that when the peers gave autonomous support, the students were more likely to have career decision-making self-efficacy and career decision-making autonomy. Peers' control had a negative correlation to the two constructs. This observation was similar to the findings by Felsman and Blustein [9]. They revealed that adolescents who reported greater attachment to peers were more likely to explore their career environment. In addition, those same adolescents made greater progress in committing themselves in making career choices. These similar findings among peer influence may be a result of the fact that close relationships help individuals to learn more about themselves. Close relationships also provide security and psychological support, both of which foster commitment to a career plan.

5. A non-judgmental approach

Traditionally, career theory has placed value on independent thought and judgment with regards to career choice. Those who utilize others in career decision making were thought to be dependent [13] or compliant [7]. The use of others was thought to be a hindrance to effective career decision making. The newer approach (e.g. STF, MST, DST, and LSF) which looks at the recursiveness of contextual influences, in particular family and peers, is much less judgmental. It returns to the idea of seeing value in relationships. It acknowledges and normalizes an individual's need for dependence on others while at the same time learning to be responsible for one's self. Melody [21] found differences in healthy attachments with caregivers compared with dysfunctional attachments (or lack of). She describes the three messages learned in a healthy connection with a caregiver: I am precious; Relationships are about give and take; I am responsible for myself. Melody's work reflects the value of interdependence which is also seen in STF. As stated previously, a systems look at career development takes the strengths of the existent theories and combines them in a way that is less judgmental and more accepting. Patton and McMahon [26] point out that, from a systems theory perspective,

> It is less relevant to make value judgments about part-time work, job sharing, homemaking, casual work, and unemployment because a STF graphically illustrates the current constellation of influences that account for the present status of an individual's career development. Thus, all career options can be validated and explained in terms of systems influences (pp. 169–179).

The value of attachment theory is that it suggests that some degree of attachment facilitates risk-taking and exploration. The balance of independent thought and dependence on others can be promoted.

6. Interventions for career decision making using systems theory

STF states that career development is a lifespan phenomenon and involves ongoing decision making. It is a process of sorting information which is constantly being received throughout the system, consciously and unconsciously. The cognitive functions involved cause the individual to make evaluations subjectively and objectively. Some of the evaluations are articulated while some may not be able to be articulated. STF states that practitioners may assist the individual in articulating his or her evaluations by helping the individual make links between the influences of the different systems and between the past, present, and future [26]. Family genograms can be used as one such tool. Family genograms can be used to facilitate exploration of the family's influence on career decision mak-

ing. Practitioners can creatively assess familial work, economic expectations, family work values, perceptions of family roles and view of the world [14]. Information can be illuminated in ways that may not be considered with standardized interviews or questionnaires. The information gained may help generate options for change [24]. Although usually used in family therapy, Malott and Magnuson [19] used the genograms in a five session group experience in a university career exploration class designed for undergraduate students who were seeking to formulate career plans. The self-report of students' level of satisfaction showed the group experience to have been an efficient and profitable experience. However, self-report of satisfaction are only limited aspects of a program's effectiveness. Pre and post measures could be used in future studies to study effectiveness and its impact on career indecisiveness, clarity of career goals, decision-making strategies, and personal insight. In addition, follow-up studies could be done in order to examine longitudinal effects of the group experience/class.

As noted above, _authoritativeness_ (i.e., parental acceptance and involvement or warmth, psychological autonomy granting or democracy, and behavioral supervision or strictness) combined with parents promoting _autonomous support_ (defined by providing choice, information, and/or involvement) are key concepts for clinicians to promote in family therapy. The key for clinicians is to identify the difference in positive, healthy involvement and over involvement. Family therapy can be used to promote more authoritativeness and autonomous support by parents. Clinicians can be attentive to the degree of support and conflict within the family and offer alternative interactions when necessary. Modeling by the family therapist can be utilized to teach the new techniques. Family therapy can teach the three messages learned in healthy connections with caretakers [21]: "I am precious; Relationships are about give and take; I am responsible for myself". These messages can also be taught in individual therapy or in group therapy, both process groups and psycho-educational. School systems in addition to mental health clinics and residential, dual diagnosis treatment centers are great venues to teach these messages to help promote more self-efficacy, more autonomous thought, and greater commitment in the process of career decision making. Improving perceptions of self-efficacy should also be taught and enhanced.

Attachment theorists, e.g., [1,4] have brought attention to the helpfulness of a secure base in exploring the environment. The therapeutic relationship can be used for those clients seeking counseling for difficulties pertaining to adolescent development and, more specifically, career development. It is the therapeutic relationship that is at the core of what makes counseling effective. Through this relationship, individuals can be led to identify their strengths and attempt to reshape destructive behaviors, instilling a message of hope. The relationship can model healthy attachment as well as healthy conflict. The therapeutic relationship, used as an agent of change, reinforces the value of interdependence.

7. Future study

There is a great opportunity and much to be learned by continuing exploration of how individuals learn about and prepare for work. It is known that some young adults learn from their siblings by using them as a source of career information (i.e., information support). They turn to their siblings for advice and opinions as well as for role models. If we could learn _how_ individuals internalize information from siblings into personal images and expectations of work, we would be more equipped at the level of intervention. Quantitative systemic studies are needed to assess the degree to which sibling support and identification are connected with success in career exploration, progress toward commitment to a career choice, occupational goals, and future expectations work.

In addition, behavioral observation could be used to measure, quantitatively, the relationship between family environment and successful negotiation of young adult career progress and satisfaction. Research is also lacking in how other contextual factors (e.g., sociocultural and socioeconomic) are associated with career development and decision making.

As noted above, due to the conflictual findings of familial influences on career decision making, better constructs need to be designed and used. For example, it has been suggested by Kinnier et al. [15] that a better measure of enmeshment is needed. They stated that PAFS-Q appears to be the best available though they believe that it is not as clear and measurable as it could be. Blustein et al. [3] suggest that the construct for career indecision may be too ambivalent, lending to the conflictual findings in the research. By refining the research, STF returns to the idea of seeing value in relationships, contributing to the field of career decision making and complying with the ethical principle of beneficence.

References

[1] M.D.S. Ainsworth, Attachments beyond infancy, *American Psychologist* **44** (1989), 709–716.

[2] N.E. Betz and D.A. Luzzo, Career assessment and the Career Decision Making Self-Efficacy Scale, *Journal of Career Assessment* **4** (1996), 413–428.

[3] D.L. Blustein, M.M. Walbridge, M.L. Friedlander and D.E. Palladino, (1991), Contributions of psychological separation and parental attachment to the career developmental process, *Journal of Counseling Psychology* **38**(1) (1996), 39–50.

[4] J. Bowlby, *Attachment and Loss: Volume I, Attachment*, (2nd ed.), New York: Basic Books, 1982.

[5] V.G. Cicirelli, *Sibling Relationships Across the Lifespan,* New York: Plenum, 1995.

[6] C.R. Cohen, J.M. Chartrand and D.P. Jowdy, Relationships between career indecision subtypes and ego identity development, *Journal of Counseling Psychology* **42** (1995), 440–447.

[7] L.B. Dinklage, *Decision Strategies of Adolescents*, Unpublished doctoral dissertation, Harvard University, 1968.

[8] C.A. Eigen, B.W. Hartman and P.T. Hartman, Relations between family interaction patterns and career indecision, *Psychological Reports* **60** (1987), 87–94.

[9] D.R. Felsman and D.L. Bluestein, The role of peer relatedness in late adolescent career development, *Journal of Vocational Behavior* **54** (1999), 279–295.

[10] L.S. Gottfredson, Circumscription and compromise: A developmental theory of occupational aspirations, *Journal of Counseling Psychology* **28** (1981), 545–579.

[11] F. Guay, C. Senecal, L. Gauthier and C. Fernet, Predicting career indecision: A self-determination theory perspective, *Journal of Counseling Psychology* **50**(2) (2003), 165–177.

[12] A.L. Guerra and J.M. Braungart-Rieker, Predicting career indecision in college students: The roles of identity formation and parental relationship factors, *The Career Development Quarterly* **47** (1999), 255–266.

[13] V.H. Harren, A model of career decision-making for college students, *Journal of Vocational Behavior* **14** (1979), 119–133.

[14] M.J. Heppner, K.M. O'Brien, J.M. Hinkelman and C.F. Humphrey, Shifting the paradigm: The use of creativity in career counseling, *Journal of Career Development* **12**(2) (1994), 77–86.

[15] R.T. Kinnier, S.L. Brigman and F.C. Noble, Career indecision and family enmeshment, *Journal of Counseling and Development* **68**(3) (1990), 309–312.

[16] S.D. Lamborn, N.S. Mounts, L. Steinberg and S.M. Dornbusch, Patterns of competence and adjustment among adolescents from authoritative, authoritarian, indulgent, and neglectful families, *Child Development* **62** (1991), 1049–1065.

[17] F.T.L. Leong and S. Chervinko, Construct validity of career indecision: Negative personality traits as predictors of career indecision, *Journal of Care Assessment* **4** (1996), 315–329.

[18] F.G. Lopez, Current family dynamic, trait anxiety, and academic adjustment: Test of a family-based model of vocational identity, *Journal of Vocational Behavior* **35** (1989), 76–87.

[19] K.M. Malott and S. Magnuson, Using genograms to facilitate undergraduate students' career development: A group model, *The Career Development Quarterly* **5**(2) (2004), 178–187.

[20] W.C. Mau, Decision-making style as a predictor of career decision making status and treatment gains, *Journal of Career Assessment* **3** (1995), 89–99.

[21] P. Melody, A.W. Miller and J.K. Miller, *Facing Love Addiction: Giving Yourself the Power to Change the Way You Love,* New York: Harper Collins, 1992.

[22] N.S. Mounts AMD L. Steinberg, An ecological analysis of peer influence on adolescent grade point average and drug abuse, *Developmental Psychology* **31** (1995), 915–922.

[23] D.E. Palladino Schultheiss, T.V. Palma, K.S. Predragovich and J.M. Glasscock, Relational influences on career paths: Siblings in context, *Journal of Counseling Psychology* **49**(3) (2002), 302–310.

[24] P. Papp and E. Imber-Black, Family themes: Transmissions and transformation, *Family Process* **35** (1996), 5–20.

[25] W. Patton and M. McMahon, *Career Development in Practice: A Systems Theory Perspective*, Sydney, Australia: New Hobsons Press, 1997.

[26] W. Patton and M. McMahon, *Career Development and Systems Theory: A New relationship*, Paris: Brooks/Cole Publishing, 1999.

[27] K. Roberts, The social conditions, consequences and limitations of career guidance, *British Journal of Guidance and Counseling* **5** (1977), 1–9.

[28] A. Roe, *Psychology of Occupations*, New York: Harper & Brothers, 1956.

[29] P.J. Santos and J.L. Coimbra, Psychological separation and dimension of career indecision in secondary school students, *Journal of Vocational Behavior* **56** (2000), 346–362.

[30] L. Steinberg, J.D. Elmen and N.S. Mounts, Authoritative parenting, psychosocial maturity, and academic success among adolescents, *Child Development* **60** (1989), 1424–1436.

[31] L. Steinberg, S.D. Lamborn, N. Darling, N.S. Mounts and S.M. Dornbusch, Over-time changes in adjustment and competence among adolescents from authoritative, authoritarian, indulgent, and neglectful families, *Child Development* **65** (1994), 754–770.

[32] L. Steinberg, S.D. Lamborn, S.M. Dornbusch and N. Darling, Impact of parenting practices on adolescent achievement: Authoritative parenting, school involvement, and encouragement to succeed, *Child Development* **63** (1992), 1266–1281.

[33] D.E. Super, *The Psychology of Careers,* New York: Harper & Brothers, 1957.

[34] F.W. Vondracek, R.M. Lerner and J.E. Schulenberg, *Career Development: A Life-Span Developmental Approach,* Hillsdale, NJ: Erlbaum, 1986.

[35] S.C. Whiston, The relationship among family interaction patterns and career indecision and career indecision-making self-efficacy, *Journal of Career Development* **23** (1996), 137–149.