

A Grounded Analysis of Career Uncertainty Perceived by College Students in Taiwan

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The authors examined career-related uncertainties perceived by college students in Taiwan. Five hundred thirty-two Taiwanese students responded to a free-response instrument containing 3 questions related to career uncertainties: (a) the sources of career uncertainty; (b) the experiences at the moment of feeling uncertainty; and (c) coping efficacies toward the uncertainty. Responses were sorted into categories within each question based on the grounded theory methodology (B. G. Glaser & A. L. Strauss, 1967). A hypothetical model was developed to describe college students' perceptions of career uncertainties, experiences of feeling uncertainty, and coping-efficacy toward the uncertainty.

Career uncertainty plays an important role in an individual's career decision making process. In Taiwan, the rapid fluctuations in social, economic, and political situations influence the structure of the world of work as well as the career development of individuals. About 2 decades ago, the progress of economics, technology, and social welfare was more stable, and college students had more opportunities to enter the job market. It seemed that they did not have to worry about their future, nor did they encounter the problem of career uncertainty. In the past 7 years, the newfound political power assumed by a different party is not as stable. In addition, many people lost family members and jobs in the earthquake that occurred September 21, 1999. The political issues, social problems, and unstable economic development are interwoven and have influenced the opportunity structure of the work world. Career uncertainty has now become an important issue to be considered during the career planning process of college students. During the 4 years of college, the rapid changes of the external environment force students to modify their decisions from time to time. In addition, environmental changes also influence the development of students' personal values and interests. These interactions between an individual and the environment continue to play an important role in the process of career development.

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Another aspect of the cultural background related to Taiwanese college students' career uncertainty is the educational system in Taiwan. Career counseling in the school setting has been sacrificed to the overemphasis on intellectual learning. During the period of compulsory education, which is from first to ninth grade in Taiwan, most students are encouraged to perform well on a variety of achievement tests in order to earn admission to excellent universities. The students spend too much time in study and do not have enough opportunities for self-exploration, nor do they have the chance to explore the world of work. At the college and university stage, the students suddenly feel uncertain about what they really want to do or what they might be able to do regarding a career. Now, career courses are beginning to be provided in most of the high schools. Career planning courses are also popular in colleges and universities. However, unplanned events often lead many people to alter their career directions. Therefore, it is important to explore the sources of career uncertainty and help college students develop appropriate coping efficacy.

It is clear that uncertainty plays an important role in an individuals' career-decision process. Several studies found that career indecision was prevalent among college students in Taiwan (Lin, 1989; Tien, 2001, 2005; Xie, 1990). In Tien's study, about two thirds of college students were undecided about their career futures. The undecided group, which was defined by the author according to Marcia's (1966, 1980) concept of identity status, included the anxious type of undecided (which was called indecisiveness), the explorative type of undecided, and the career diffusion group. These students were undecided about their career future because of lack of exploration, lack of feeling of crisis and/or commitment to certain job fields, and other varieties of personal or external barriers. These barriers and difficulties were all possible causes of the individuals' career uncertainty.

Betz and Vuyten (1997) believed that decision-making self-efficacy is a major predictor of career uncertainty. The concept of self-efficacy originated from Bandura's (1986) contention that people who believe in their ability to successfully complete the tasks required to achieve an outcome are more likely to engage in and persist at those tasks. Gender role socialization might also influence an individual's career uncertainty, especially for women who intend to pursue positions in traditionally male-dominated fields (Dawson-Threat & Huba, 1996).

Career uncertainty might also be caused by certain barriers perceived by individuals. Gottfredson (1981) emphasized the importance of an individual's recognition of career barriers in three domains: self-concept, socioeconomic environment, and the interaction of self-concept and environment. Russell and Rush (1987) specifically examined women's views of 28 internal and external barriers to management careers. London (1997), on the other hand, stated that career barriers stem from the individual, the work environment, and a combination of the two. He further proposed an emotional and cognitive model of coping with career barriers. In Taiwan, Xie (1990) explored the relationships among career decision-making self-efficacy, sex-role attitude, field independence, decision-making style, and career uncertainty. The results indicated that the variable self-efficacy was highly correlated with the participants' career certainty. In the current study, we also want to explore college students' coping efficacy toward the perceived uncertainty.

To further examine the cross-cultural influences on the students' careers, we believe that the ecological structures also have to be taken into account. Sue and Sue (1999) pointed out that some cultural values that are salient to the Asian American group are deference to authority, emotional restraint, and hierarchical family structure. Cultural values common to Asian people include collectivism, conformity to norms, emotional self-control, family recognition through

achievement, filial piety, and humility. This culture is categorized as a group-oriented culture; therefore, issues of family, conforming to authority, and collectivism are most important (Pope, Cheng, & Leong, 1998). To be successful means to honor and proud the family.

The individual's career development does not exist as an individual problem but within an embedded network of family obligations and expectations. Hartung (2002) emphasized that collectivism relates positively and significantly to family expectations of and influences on occupational decision making and planning. Collectivism also relates positively to extrinsic work values stressing relationship to others (e.g., altruism, associates, and supervisory relations) and relates negatively to intrinsic work values signifying personal gains (e.g., achievement, independence, and way of life). In the current study, we also believe that the family issues are important sources related to the individual's career uncertainty and coping efficacy.

To be more specific, the meaning of career uncertainty in the current study was defined as "any factors that make the individuals feel uncertain of their career future." Even some of those who have decided what to do in the future might still feel uncertain about what could happen in their career journey. There might always be something that is not under their control.

The idea of career uncertainty is different from the concept of barriers and difficulties in that career uncertainty is even more subtle. It focuses on the individual's feelings of inability to control a situation and the sense of efficacy to cope with circumstances. If an individual is aware of the uncertainty, he or she will be more comfortable with recognizing and coping with the inevitable occurrence of uncertainty. The reality of uncertainty must be incorporated into the decision process.

The purpose of the present study was to explore the resources and experiences of career uncertainties perceived by college students in Taiwan. Coping efficacy related to uncertainties were also examined. More concretely, we used grounded theory analytic strategies to describe varieties of career uncertainty perceived by college students, their experiences in encountering those uncertainties, and coping efficacies perceived by these college students. We then used our findings to propose a hypothetical model to describe these aspects of college students' career-related uncertainties. As a result of our review of literature and our previous work with this population (Gelatt, 1989; Ito & Brotheridge, 2001; Lin, 1989; Swanson & Tokar, 1991; Tien, 1998, 2001, 2005; Xie, 1990), we had several general expectations regarding the results of our investigation: (a) Career uncertainty is a very typical problem for college students; (b) sources of college students' career uncertainty will be related to the individual, the environment, and the interactions between the two; (c) internal/psychological and external/environmental support will be the two main types of coping efficacies for college students facing career uncertainties.

Method

Participants

The participants were 532 college students (213 men and 319 women; 151 freshmen, 150 sophomores, 121 juniors, and 110 seniors) from seven different colleges in northern Taiwan. All participants were taking career-related courses at the time when they completed the open-ended questionnaire. To invite the participants, the second and third authors visited these career development classes, explained to the students the purpose of the study, and asked for their consent to complete the questionnaire in class. The final sample represented a range of seven different colleges and 32 majors including English, Chinese, history, music, civil culture, accounting, physics, applied math, electrical engineering, medicine, nursing, and education.

Instrument

We developed the open-ended Career Uncertainty Questionnaire (CUQ) to explore career uncertainties perceived by college students. The CUQ included three open-ended questions related to three themes: the sources of feeling uncertain about one's future career; the experiences at the moment of feeling uncertainty; and coping efficacies regarding career uncertainty. More specifically, the main questions were (a) Do you feel uncertain about your career future? What kind of experiences make you feel uncertain about the future? (b) How do you feel about those uncertainties? What kind of experience is that? (c) What did you do or what would you do to cope with those uncertainties? Are you satisfied with the coping results or do you feel confident of coping with those uncertainties?

The CUQ was developed in an open-ended way because we believed that the "bottom-up" approach is the best way to explore the college students' feelings of uncertainty. The students can express any feelings and experiences about their future. This approach of collecting data can provide information indigenous to the student cultures in Taiwan. The questionnaire required approximately 20 minutes to complete.

Data Analyses

The research team for data analysis included the three authors of this article. All the participants' responses were coded and classified into several categories based on the grounded theory method (Strauss & Corbin, 1998). Grounded theory is a comprehensive method of data collection, analysis, and summarization whereby a hypothetical theory might be constructed. In the research process, data collection, analysis, and theory or concept construction occur concomitantly and thus stand in "reciprocal relation" (Strauss & Corbin, 1990, p. 23) to each other as theoretical constructions are repeatedly verified by the data. However, due to time constraints, we did not collect data, analyze data, nor construct theories repeatedly. Instead, we scrutinized the data collected in this study in order to propose a hypothetical model describing the career uncertainties experienced by college students.

The data was analyzed using the following process: (a) creation of a transcription derived from the open-ended questionnaire and scrutiny, (b) identification of irrelevant or contextual material, (c) identification of meaningful units and coding, (d) assimilation of meaningful units coding into conceptual categories, (e) grouping of conceptual categories into domain categories, and (f) development of core categories (Frontman & Kunkel, 1994). In the (a), (b), (c), and (d) steps of the process, the three of us each read the responses and generated themes independently. We refer to step (c) as "open coding." In step (d), similarity comparison, categorization, and definition for each of the conceptual categorization were processed. We denote this step as "axial coding." After open coding and axial coding, we then worked together to discuss and agree on specific category themes in steps (e) and (f), which is the step of "selective coding."

To describe this more specifically, we scrutinized the meanings of each participant's answers in the CUQ and recorded each meaningful unit on separate cards (open coding). We then compared these units, classifying them into different types. We then provided a name for each type (axial coding). The similarities among the category names were further examined and sorted into the core categories (selective coding). Each core category was given a "category theme." The hypothetical model was then established, based on these themes, to describe the career uncertainties and coping efficacies perceived by the participants.

During the process of data analysis, the three CUQ questions were analyzed separately. For

the first question, which focused on identifying sources of career uncertainty, we collected approximately 248 meaningful response units (open coding procedure). These units were then compared with one another for similarities and subsequently grouped into 23 categories (axial coding procedure). A new name was given to each of the 23 categories. This process of comparing, categorizing, and providing names for categories was repeated until the core categories (selective coding) were created and considered saturated.

Results

Sources of Career Uncertainty

After the procedure of open coding, axial coding, and selective coding, the sources of career uncertainty were ultimately classified into three main categories: internal/personal (26.2%), external/environmental (46.8%), and the interactions between personal and environmental factors (27%). We adopted the classification of internal versus external because it sounds logical and has been adopted by previous studies related to career barriers or career decision difficulties (Crites, 1969; Farmer, 1976; Harmon, 1977; Russell & Rush, 1987). We added the category of interaction between internal and external because recent studies have examined those factors in a more complex way (Gottfredson, 1981; Swanson & Tokar, 1991). We agreed that the sources of career-related uncertainties are complicated and need to be examined from a more detailed viewpoint.

The result of the grounded analysis showed that the internal (personal) sources of career uncertainty included abilities (e.g., low scores on the Learning Ability Test [LAT]; 21.45%), changes in interest (21.5%), personal health problems (18.5%), ability and performance in students' respective majors (15.4%), ambiguous goal setting (12.3%), lack of long-term time frames (4.6%), unfamiliarity with personal interests (3.1%), and religious beliefs (3.1%). External (environmental) sources of career uncertainty consisted of the following factors: unexpected events (24.1%), rapid changes in the social environment and labor market (19.8%), high unemployment rate (19%), family expectations/pressure (15.5%), difficulties in choosing an ideal major (7.8%), changes in the educational system (7.8%), unfamiliarity with the future job market (3.4%), and peer competition (2.6%).

The categories of interactions between the personal and the environmental include influence from significant others (26.9%), learning experiences (23.9%), career information processing (20.9%), misperceptions of the working world (11.9%), role model change (9%), do not know how to make a decision (4.5%), and multiple role conflict (3%).

Experiences at the Moment of Feeling Uncertainty

The experiences at the moment of feeling uncertainty included five categories: physical (5.2%), behavioral (9.9%), emotional (76.3%), cognitive (3.6%), and ultimate concerns (5%). Almost all of the feelings experienced by the college students in this study at the moment of uncertainty were negative.

Physically, students reported feeling tired, dizzy, numb, sleepless, and unable to think. Behavioral responses included not knowing what to do, feeling inappropriate doing anything, and avoiding action. Feelings of helplessness, fearfulness, anxiousness, depression, loss, nervousness, unhappiness, emptiness, discouragement, and disturbance are several main types of emotional responses that students stated they experienced at the moment of experiencing uncertainty. Negative self-attitudes included lack of confidence, insecurity, powerlessness,

self-doubt, and identity failure. In addition, some participants mentioned existential ultimate concerns, such as the meaningless of life, isolation, irrelevance of one's existence, death, and end of the world.

Coping Efficacies Toward the Uncertainty

Coping efficacies reported by participants included the following core categories: personal/psychological adjustments (45.8%), physical adjustments (9.6%), social support networks (25.8%), searching for information (10.3%), religious beliefs (0.5%), and cognitive changes in attitude, such as acceptance of the current situation (8%). Most of the reported coping efficacies were reactive types of adjustment, that is, adjustments to change self. Only a few participants actively changed their environment, such as changing their majors. Participants believed that exploring one's interests, abilities, values, and beliefs is important for self-adjustment at the personal/psychological level. To achieve self-adjustment at the physical level, most participants mentioned exercising, taking a walk, going shopping, traveling, and sleeping.

Discussion

The focus of this study was to investigate the career-related uncertainties perceived by college students. The results emerged to form a hypothetical model to describe the sources of career uncertainty, experiences of uncertainty, and coping efficacies perceived by college students in Taiwan. The model is represented in Figure 1.

The Hypothetical Model of Career Uncertainty

As shown in Figure 1, the hypothetical model consists of three parts. At the top of Figure 1 are sources of career uncertainties, which include personal factors, environmental factors, and personal–environmental interactions. In the middle are experiences at the moment of feelings of uncertainty. These feelings include five core categories: physical, behavioral, emotional, cognitive, and existential concerns. At the bottom are three core categories of coping efficacy: physical, psychological, and social support network.

The interactions between the three levels of this theory are relatively complex.

As indicated in Figure 1, “Experiences at the Moment of Feeling Uncertainty” is the central part of the model. Those uncertainty feelings stem from different sources of problems such as personal and external barriers. Interactions between feelings of uncertainty and coping efficacies results in “Reality Generalization about Self and the World of the Work,” the outside circle around the uncertainty experience circle in Figure 1.

Career uncertainty perceived by college students results from three core categories: internal, external, and interactions between the two. As asserted by previous studies, this three-group categorization is more prevalently used than the earlier internal–external dichotomous category (Gottfredson, 1981; London, 1997; Swanson & Tokar, 1991; Tien, 1998).

External/Environmental Factors Are the Most Common Sources of Career Uncertainty

External/environmental factors were most frequently reported as causes of uncertainty by participants in the current study. Students perceive these factors—which include family expectations, societal change, public policy, political issues, labor market, and learning environment—as significant sources of career uncertainties. Most of these factors are similar to

career barriers and difficulties perceived by college students in making career-related decisions (Tien, 2005). Interactions among these factors are also important and may be related to changes in career plans. The need to change career plans may suggest even more types and sources of career uncertainty.

There are two ways to change one's career plans: change oneself and/or change the environment. In recent years, political and economic problems in Taiwan have significantly interfered with the career development of many students. More than 10% of college students delayed their graduation in 2004 (Ministry of Education, 2004). Many of them attended graduate schools immediately following completion of their undergraduate studies. One reason for this trend is that it is very difficult for the "fresh graduate" to find a job. They are forced to change themselves, learn more about the working world, become more self-aware, and/or earn another degree or certificate to find a job. This idea of coping with uncertainty—either changing oneself or changing the environment—is just like the concept of the activeness/reactiveness type of work adjustment proposed by the Minnesota Theory of Work Adjustment (Dawis & Lofquist, 1984).

In our consideration of the environment, we divided it into two categories, objective and subjective. Objective environment is perceived similarly by most people. It is out there and might not influence the individual. The individual will not change it. Subjective environment, on the other hand, is perceived differently from individual to individual and could influence a given individual's decision-making process. In many cases, the external environment is genuinely out of the individual's control. The reality generalization about self and environment, the outside circle around the uncertainty feelings circle in Figure 1, is therefore important in career planning. In this study, the reality generalization about self and the environment is interpreted as the effects of an individual's use of one or more coping strategies. It is a new status of self separated from the experiences/feelings of uncertainty.

Internal/Personal Influences on Career Uncertainty

In the category of personal sources of career uncertainty, many students indicated low LAT scores as the cause of uncertainty. The LAT is an important admissions factor for high school students hoping to enter a certain college department in Taiwan. Students risk being denied admission to the department of their choice if their LAT scores are not sufficiently high. Once one is accepted to a college, changing majors is a very difficult process. The difficulty in studying in the department of their choice might also be a reason why students report feeling ambiguous about their current major or are forced to relinquish their interests.

Unexpected events, including those originating from personal health problems, are additional sources of uncertainty for the future. Some careers require physical strength, such as civil engineering. Unstable health might interfere with students' future career plans and thus influence their current short-term goal setting.

Sometimes the unexpected events may also have their source in the family and thus force individuals to compromise and/or give up personal career plans. In Taiwan, family expectations have always played an important role in the individual's career decision. As a part of the Eastern culture, we emphasize the importance of the self in relation to others. We also encourage and value an interdependent self-construal. According to Sharkey and Singelis (1995), an interdependent self-construal can be defined as a flexible and variable self. Central to the interdependent self is that the self and others are intertwined. Collectivists give priority to the goals and needs of the group rather than to their own goals and needs; collectivists' occupational choices should reflect less on their own individual preferences and more on what their in-groups

expect of them.

Regarding the influence of religion, only two students referred to their religious beliefs as sources of career uncertainty. For those who are in the process of identity formation, religious beliefs might be a significant cause of career uncertainty (Marcia, 1980).

Existential Concerns Could Be a Positive Aspect of Experiencing Uncertainty

For college students, the experience of feeling uncertain might always be negative, such as physical exhaustion, psychological powerlessness, low self-esteem, and the inability to accomplish any goals. Very few students mentioned emptiness, meaningless of life, or the irrelevance of one's existence, the ultimate concerns proposed by Yalom (1980). Ultimate concerns often result in negative thoughts but could potentially be a positive force if the individuals who experience them can gain insights from them. Experiencing such negative thoughts is an important and valuable process for college students to go through.

Coping Efficacy Toward the Uncertainty

As indicated in Figure 1, coping efficacy toward career uncertainty could be threefold: physical, psychological/cognitive/spiritual, and external/ social network.

Physical adjustment. Physical types of coping strategies include exercising, taking part in leisure activities, sleeping, singing, and crying. This type of coping serves primarily as a short-term adjustment by helping individuals relax and re-energize.

Psychological adjustment. Psychological types of coping, which consist of psychological/cognitive adjustment and seeking support through religion, are the primary strategies adapted by students. In this study, psychological types of adjustment included increasing cognitive awareness and task-approach skill exploration. It is likely that students would benefit from developing positive psychological attitudes such as tolerance for ambiguity, resilience, and openness toward new experiences. Lee and Johnston (2001) emphasized that diversity factors such as gender, race, socioeconomic status, and religion are also important to consider in the process of career counseling. Seeking support through religion and acceptance of one's current situation are basically cognitive types of coping. Gelatt (1989) sees positive uncertainty as one of the alternatives to rational decision making. However, the nature of rational or linear decision making does not fit the nature of the contemporary work environment. In addition, such decision making may not be consistent with actual human experience. How does one cope with perceived uncertainties, which could potentially occur at any point during one's career development? Our findings suggested that positive thoughts, such as viewing uncertainty as a kind of challenge, could be a good chance for the college students to create a meaningful career. Career uncertainty would become an opportunity for them to set a new goal. A certain degree of uncertainty would then be a positive facilitator for their career development. In the Chinese language, the word *crisis* consists of two characters. The first one means "dangerous," and the second one means "opportunity." Positive cognition as a reaction to uncertainty can help students calm down, create problem-solving strategies, and lead them to a new career direction. Career uncertainty would be a very positive turning point in such a scenario.

Counselors should also consider encouraging students to be flexible with their goals so that they can be open to new information. Students are often able to successfully attain their original career goals. In many cases, however, students can benefit from reassessing their goals if they keep themselves open to new information and new experiences. This is also a new idea currently encouraged by positive psychologists (Seligman & Csikszentmihalyi, 2000).

External and social supports. Information seeking and social support networks are two important sources of coping efficacy. Types of information searching as a coping strategy include reading literature, magazines, and self-help books; attending lectures; and finding electronic resources.

Interpersonal skills and resources are becoming increasingly critical for career development. The current study found that interpersonal networks serve as important resources of coping efficacy when students encounter uncertainty. In the contemporary world, people develop competency within the context of collaboration with others. Communication skills learned are transferable to different job environments and are therefore valuable.

Support from family members, friends, professors, and counselors plays a vital role for college students coping with the career uncertainty. Palmer and Cochran (1988) emphasized the importance of strengthening family bonds to support adolescents as they make the transition to the adult world, noting that the support from family members and friends was an important source of college students' coping efficacy. In our study, some participants indicated that they sought social support by talking to parents, friends, professors, and counselors as well as by reading about the successful stories of others. In the career domain, some of the findings suggested that siblings provide essential supportive functions for an individual's career development (Blustein et al., 2001). Some siblings even serve as role models for the individuals in the process of their career exploration. Given their relative proximity in age and the high likelihood of being involved in each other's career development process, a sibling relationship could serve as an important source of support when an individual feels uncertainty in facing the career decision point. Schultheiss, Kress, Manzi, & Glasscock (2001) analyzed interview data from a group of urban college students and identified multidimensional aspects of social support and role model influences within their family systems. Such role models included parents, siblings, and other relatives. McWhirter, Hackett, and Bandalos (1998) indicated that perceived support from their father was directly associated with positive effects on educational plans and career expectations for Mexican American high school girls. Other studies also demonstrated the importance of supportive influences from parents, friends, and teachers (Fisher & Stafford, 1999; Paa & McWhirter, 2000). The prominent function of relational support and family roles in career development was also supported by Blustein et al. (2001). Family supports were also important sources of coping efficacy for individuals from various ethnic groups (Gomez et al., 2001; Juntunen et al., 2001; Pearson & Bieschke, 2001).

Implications for Practice and Research

The nature of the working world has changed considerably over the last two decades due to the political and economic instability in Taiwan. These changes have caused more career uncertainties for college students there. Young graduates with no job experience often cannot find a job immediately following graduation. Many college students put off their graduation or attempt to enroll in graduate school. The findings in this study have a number of implications for the future of career counseling.

It is conceivable that the students' perception of career uncertainty may reflect the Chinese culture's emphasis on collectivistic rather individualistic orientation in decision making. Cross-cultural psychology posits that culture imperceptibly, yet powerfully and pervasively, influences human behavior and interaction (Markus & Kitayama, 1991). Interpersonal resources such as social skills and contacts will be increasingly important for college students. Inaccurate

or incomplete perspective of oneself, lack of occupational knowledge, and difficulties in knowing how to combine self-knowledge and occupational knowledge are still three important issues in career counseling.

Gysbers et al. (1998) provided the holistic model for career counseling. Building strengths is an important focus of that model, which emphasized that career counselors have to go beyond assessing students' current statuses and consider how to develop their potential. Mitchell, Levin, and Krumboltz (1999) argued that the nature of the work environment is no longer compatible with the kinds of linear, rational planning approaches that have traditionally been used by counselors to help clients make decisions and plan their future. They have assumed that chance plays an important role for an individual's career development. Helping the clients learn to turn chance events into productive opportunities would therefore be an important task for contemporary counselors. Dealing with chance events is also related to clients' coping efficacy. Counselors can also help students understand the benefits of mentoring and encourage them to seek out such relationships.

Miller (1995), on the other hand, suggested that a career counseling framework based on chaos theory may help clients accept uncertainty. Mitchell et al. (1999) also elaborated the idea of planned happenstance and asserted that unplanned events are both inevitable and desirable. Openness to experiences is believed to be an important attitude that could lead to positive outcome. We, in the field of career counseling and development, need to develop career programs to encourage college students to be open to new experiences, enhance career opportunities, and seek for meaning of work and life.

Conclusion

The current study examined college students' perceptions of career uncertainties. Sources of uncertainty, experiences right at the moment of feeling uncertain, and coping efficacy are three important issues in analyzing the obtained data from the open-ended CUQ developed for this study. To summarize, types of career uncertainty sources included internal/personal, external/environmental, and interactions between the two.

Experiences of uncertainty consist mainly of negative emotional feelings. However, existential concerns perceived by the individuals could potentially be transformed into positive thinking once the individuals attain helpful insights from dealing with such concerns. Coping efficacy is represented by a threefold framework. To facilitate college students' career development, it is important to help them explore feelings of uncertainty and learn how to cope with such feelings. Facilitative programs of this kind could be developed in future studies.

In conclusion, the results of the present study are only generalizable to the college students in Taiwan. Further and deeper exploration through other qualitative methods such as narrative analysis could be conducted to understand the detailed coping mechanism toward career uncertainty. Future studies can also be conducted to further examine the gender differences or cultural differences. Respecting career counseling practice, it is important not to ignore uncertainty but to incorporate the strategies to cope with the uncertainty.

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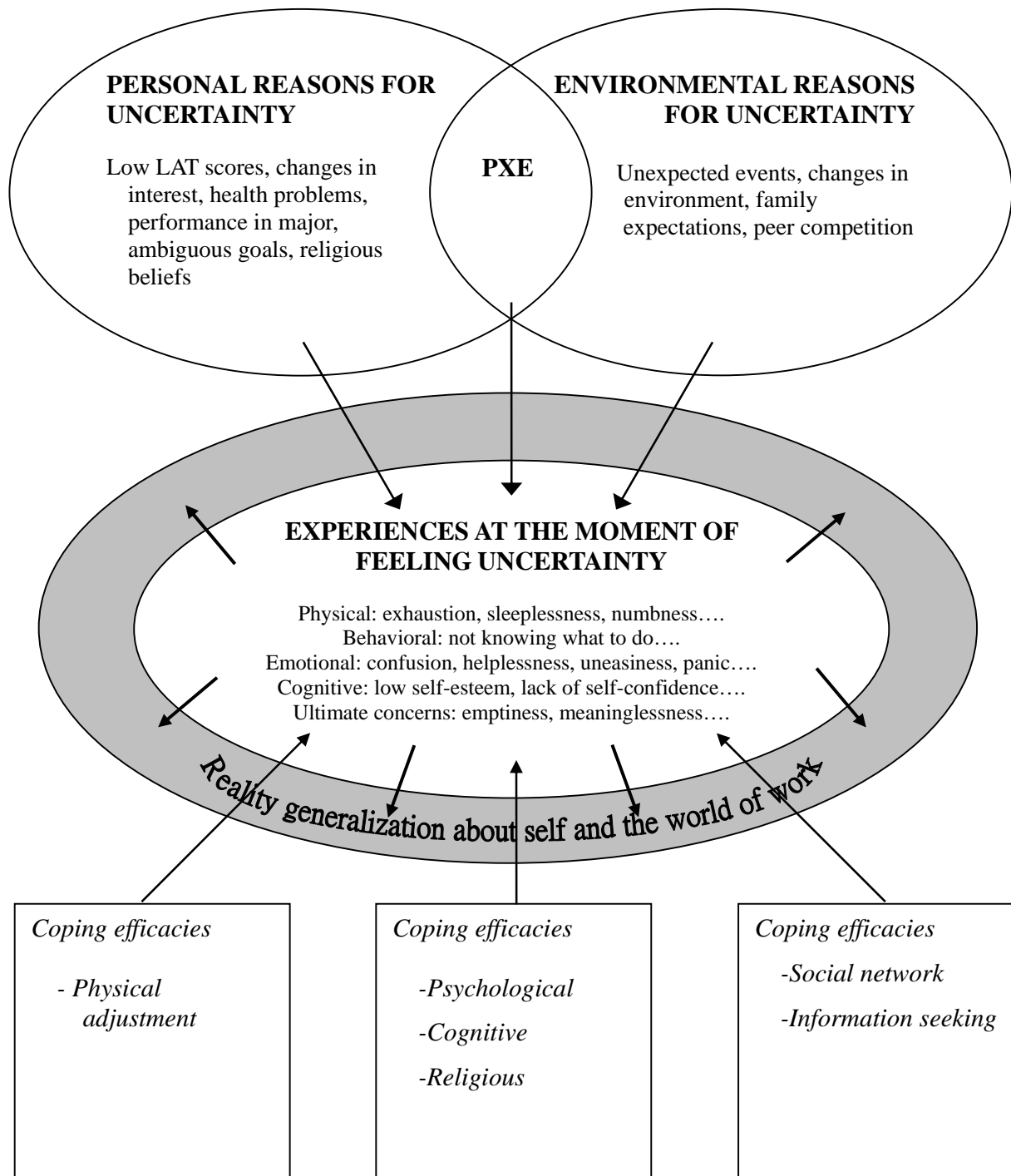


FIGURE 1
Career Uncertainty Model: Sources, Experiences,
and Coping Efficacies
 Note. P · E = personal and environmental interactions.