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

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ABSTRACT

The purpose of the study was to examine career-related uncertainties perceived by college students in Taiwan. Five hundred thirty-two students in the northern area of Taiwan responded to a free-response instrument containing three 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. The resultant responses were sorted into certain 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. The sources of career uncertainty were classified into three categories: internal, external, and the interactions between the two. The experiences of feeling uncertainty included five categories: cognitive, behavioral, emotional, physical, and ultimate concerns. As far as the coping efficacies, there were six main categories: personal/psychological adjustment, physical type of adjustment, social support network, information search, religious beliefs, and acceptance of the current situation. In addition, the coding process and detailed results, including open coding, axial coding, selective coding, and category themes, were elaborated and discussed in this paper.

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

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 the individuals. About two decades ago, the progress of economics, technology, and social welfare were more stable and the college students had more opportunities to enter the job market. It seems that they did not have to worry about their future; neither did they have the chance to encounter the problem of career uncertainty. In the recent seven years, the newly found political power led by different party is not so stable. In addition, many people lost family and job in the earthquake occurred in September 21st, 1999. The political issues, social problems, and unstable economic development all interwove and influenced the opportunity structure of the work world. Career uncertainty has become an important issue during the process of college students career planning. In the four 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/or interests. These interactions between an individual and the environment continue to play an important role in the process of career development.

Another culture background related to college students' career uncertainty is the educational system in Taiwan. Career counseling at school has been sacrificed by the over-emphasis on intellectual learning. During the compulsory education, which is from first to ninth grade in Taiwan, most students are encouraged to perform well at a variety of achievement tests in order to get into excellent universities. The students spent too much time in study and do not have enough chance to do self-exploration, nor do they have the chance to explore the world of work.

At the stage of college and university, the students suddenly feel uncertain about what they really want to do or what they can do. Nowadays, career courses starts 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. It's important to explore the resources 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 defined by the author according to Marcia's (1966, 1980) concept of identity status, included anxious type of undecided (which was so called indecisiveness), explorative type of undecided, and career diffusion group. These students were undecided about their career futures for the reasons of lack of exploration, lack of crisis and/or commitment to certain job fields, and varieties of personal or external barriers. These barriers and difficulties all possibly caused the individuals' career uncertainty.

Betz and Voyten (1997) believe 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. Sex 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 is highly correlated with the subjects' career certainty. In our study, we also want to explore the college students' coping efficacy toward the perceived uncertainty.

To further examine the cross-culture influences on the students' career, we believe that the ecological structures also have to be taken into account. D. W. Sue and Sue (1999) pointed out that some cultural values 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, confirming to authority, and collectivism are most important (Pope, Cheng, & Leong, 1998). To be success means to honor and proud the family. The individuals' 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 negatively with 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 resources related to the individual's career uncertainty and coping efficacy.

To be more specifically, 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 for some of those who have decided what to do in the future, they might still feel uncertain about what wound happen in their career journey. There might always be something out of their control. It is different from the concept of barriers and difficulties in the aspect that career uncertainty is even more subtle. It focuses on the feelings of uncontrollable and sense of efficacy to cope with. To be aware of the uncertainty, an individual will be more comfortable to recognize and cope with the inevitable happenstance. Uncertainty has to 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 toward 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 for 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, 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

Participants were 532 college students (213 males and 319 females; 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 7 different colleges and 32 majors including English, Chinese, History, Music, Civil culture, Accounting, Physics, Applied Math, Electronic Engineering, Medicine, Nursing, Education, etc.

Instrument

The open-ended "Career Uncertainty Questionnaire" (CUQ) was developed by the authors 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 toward 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 that is? (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 the authors believed that the "bottom-up" approach is the best way to explore the college students' feeling of uncertainty. The students can express any feelings and experiences about their futures. 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 in which a hypothetical theory might be constructed. In the research process, data collection, analysis, and theory or concept construction occurred concomitantly and thus stand in "reciprocal relation" (Strauss & Corbin, 1990, p.23) to one another as theoretical constructions repeatedly are 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 were analyzed in the following process: (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, the three authors 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 step (e) and (f), which is the step of "selective coding".

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.

<div align="center">RESULTS</div>

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 environment factors (27%). We adapted the classification of internal versus external because it sounds logic and has

been adapted 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 examine those factors from a more complicated 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.

As a results of the grounded analysis, the internal sources of career uncertainty included abilities (low Learning Ability Test, LAT) scores (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 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 individual and the environment 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 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 at the moment of experiencing uncertainty. Negative self-attitude 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 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 oneself. 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-efficacy perceived by college students in Taiwan. The model is represented in Figure 1.

The Hypothetical Model of Career Uncertainty

As shown in the figure, 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 person-environment interactions. In the middle are feelings of uncertainty perceived by individuals. 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 external/social 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 uncertainty feelings 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.

External/Environmental factors are the most common sources of career uncertainty

Career uncertainty perceived by college student 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 earlier internal-external dichotomous category (Gotfredson, 1981; London, 1997; Swanson & Tokar, 1991; Tien, 1998). External/environmental factors were most frequently reported as causes of uncertainty. Students perceive these factors – which include family expectations, society 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 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, changing oneself or changing the environment, is just like the concept of activeness/reactiveness type of work adjustment proposed by Minnesota Theory of Work Adjustment (Dawis & Lofquist, 1984).

As far as the environment, we divided environment to two categories, objective and subjective. Objective environment is perceived similarly by most people. It's out there and might not influence the individual. The individual won't 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 then important in career planning. In this study, the reality generalization about self and the environment is interpreted as the effects of

an individual's utilization of one or more coping strategies. It's a new status of self separated from the experiences/feelings of uncertainty.

Social/Cultural/Religious influences on individual's career uncertainty

In the category of personal sources of career uncertainty, many students indicated low Learning Ability Test 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. Upon being accepted to 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 forced to relinquish their interests.

Unexpected events, including those originating from personal health problems are additional sources of uncertainty to 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 events may also come from 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 the self and others are intertwined. Collectivists give group goals and needs priority over their own, collectivists' occupational choices should reflect less on their own individual preferences and more on what their in-groups expect of them.

As far as 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, experiences of feeling uncertain is always 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 are negative thoughts but could potentially be positive if the individuals can obtain insights from them. Experiencing such negative thoughts is an important and valuable process for college students to experience.

Coping Efficacy toward the uncertainty could be a three-dimensional framework

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, socio-economic 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 our 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 great 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 the new information and new experiences. This is also a new idea encouraged by positive psychologists nowadays (Seligman & Csikszentmihalyi, 2000).

External/Social supports. Information seeking and social supports are two important sources of coping efficacy. Types of information searching as a coping strategy include reading

literature, magazines, 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 into 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 seek social support by talking to parents, friends, professors, 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 career decision point. Schultheiss et al. (2001) analyzed interview data from a group of urban college students and identified multidimensional aspects of social support and role model influences from their family systems. Such role models included parents, siblings, as well as other relatives. McWhirter, Hackett, and Bandalos (1998) indicated that perceived support from one's 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 (Paa & McWhirter, 2000; Fisher & Stafford, 1999).

The prominent function of relational support and family roles in career development was also supported by Blustein et al. (2001). For individuals from various ethnic groups, family supports were also important sources of the individual's coping efficacy (Juntunen et al., 2001; Gomez et al., 2001; Pearson & Bieschke, 2001).

Implications for Practice and Research

The nature of the working world 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. Young graduates with no job experience often cannot find a job immediately following graduation. Many college students put off their graduations or attempt to enroll in graduate school. The findings in this study hold 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 tells us 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 and occupational knowledge are still three important issues in career counseling.

Gysber 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 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, Levin, and Krumboltz (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 need to develop career programs to encourage college students be open to new experiences, enhance career opportunities, and seek for meaning of work and life.

Conclusions

The 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 "Career Uncertainty Questionnaire". 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 transferred to positive thinking once the individuals attain helpful insights from dealing with such concerns. As far as coping efficacy, it 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 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. As far as in the career counseling practice, it's important not to ignore uncertainty but to incorporate the strategies to cope with the uncertainty.

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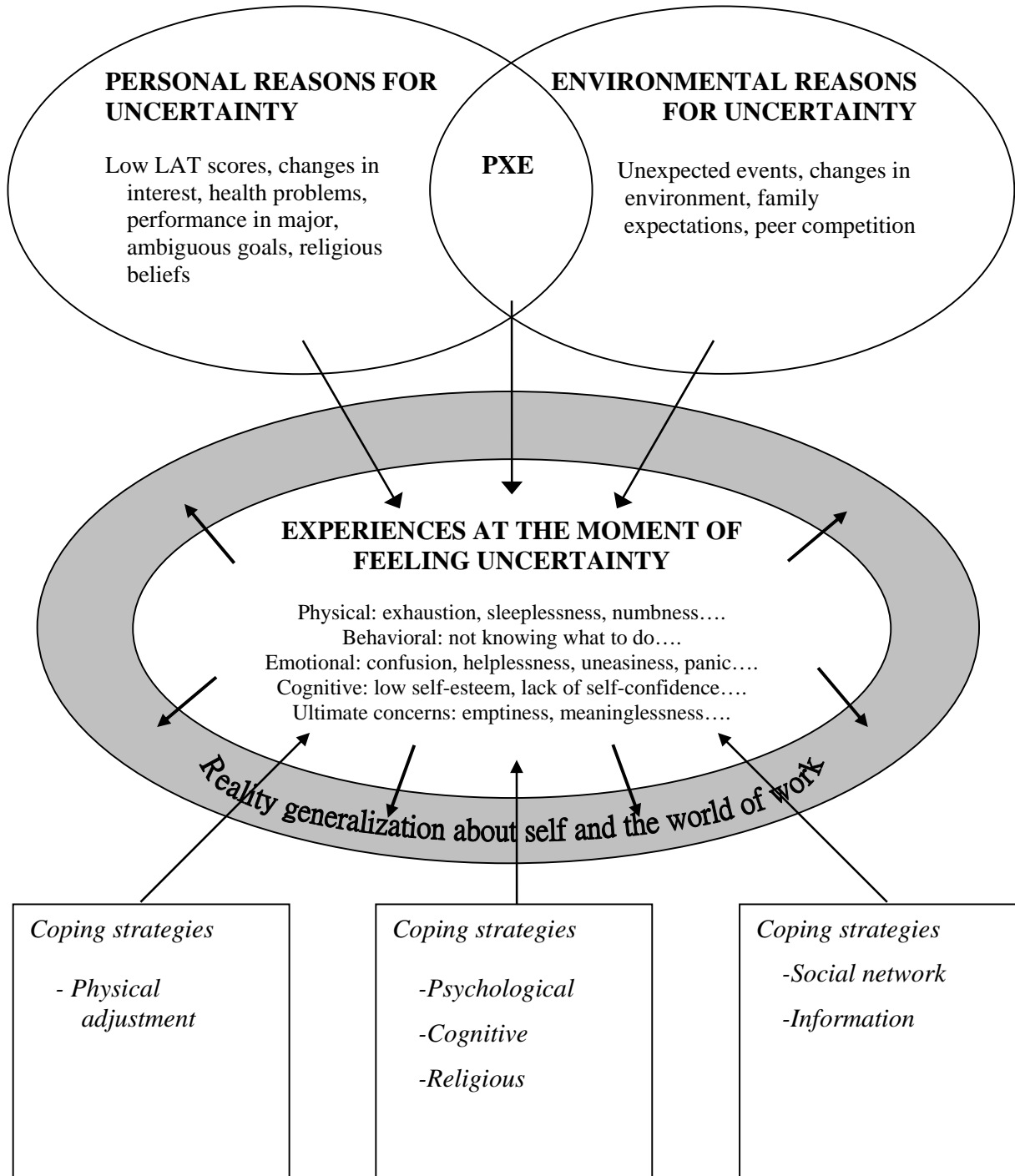
Figure 1   Career Uncertainty Model: Sources, experiences, and coping strategies