

Influences of Mindfulness on Career Exploration Behaviors: Exploration of Mediating Role of Career Worry and Procrastination

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ABSTRACT

Background/Objectives: The purpose of this study is to investigate whether the effects of mindfulness on career exploration behaviors are mediated by personal tendency of career worry and procrastination.

Method/Statistical analysis: To accomplish this research purpose, we surveyed four hundred and forty-four students of a university in Asan, Chungnam, Korea. They were asked to indicate their level of mindfulness, career worry, procrastination, and career exploration behaviors on a seven-point Likert-type scale. First, the validities of each measure was examined by performing exploratory factor analysis. Next, mediated moderation analysis was performed using Model 4 of the SPSS Process macro developed by Hayes.

Findings: The results of the analysis showed that the direct effect of mindfulness on career exploration behaviors was not significant. And the indirect relationships mediated by career worry and procrastination were significant. Intuitively, mindfulness was expected to have a direct impact on career exploration, but the results of this study did not confirm such an impression. The result of this study can be deduced that mindfulness represents a comprehensive psychological state, while career exploration represents a behavioral state in a limited domain of career.

Improvements/Applications: One of the main implications of this study is that college students can improve their career exploration behaviors by receiving a mindfulness training program.

Keywords: *Career anxiety, Career exploration, Career worry, Delayed behavior, Mindfulness, Procrastination*

Introduction

Many scholars in the career field have long emphasized the importance of career exploration ^[1]. However, the fact that many college students are not actively pursuing career exploration is also a long-standing problem ^[2]. There will be many factors that promote or inhibit career exploration behaviors.

The exploration for career is an activity that plans for future employment and practices actions related to it. Therefore, it is expected that some negative psychological states will act to suppress career exploration. One is career worry. Because career exploration behaviors are actions to prepare for the future, college students will have to feel uncertainty. Therefore, although there may be differences in that degree, college students will feel worried about their career. Studies of anxiety show that

the higher the level, the weaker the cognitive, emotional, and behavioral problem-solving abilities ^[3]. However, except for Lee & Woo ^[4], it is difficult to find a study on the effects of career worry on career exploration. Another psychological state is procrastination. Although the behavior of exploring for one's own career is triggered by self-motivation, attitude variables such as an individual's will may play an important role in maintaining such behavior. Therefore, failing to set goals and plan to achieve them properly can be seen as a lack of self-regulation. From this point of view, it is necessary to deal with procrastination as a factor that can negatively affect career exploration, but it is difficult to find a study that examines the relationship between these two variables.

Researches on career exploration show that this variable consists of two attributes: exploration for oneself and

exploration for environment [5]. To do this exploration, they should be able to perceive their current situation as it is. The related constructive concept is mindfulness [6]. However, no studies have examined the relationship between mindfulness and career exploration.

As a result, the purpose of this study is to determine the relevance of mindfulness, career anxiety and procrastination to career exploration.

Literature Review

Mindfulness and Career Exploration: Mindfulness is a term from the Buddhist tradition and is a translation of ‘sati’ in the Pali language of ancient India. Sati has the meaning of full awareness (sampajanna). The full awareness here means that the mind recognizes clearly and correctly about the object without missing the attention to that. Modern researchers define mindfulness in a variety of ways. For example, by Kabat-Zinn [6p145], “An operational working definition of mindfulness is: the awareness that emerges through paying attention on purpose, in the present moment, and nonjudgmentally to the unfolding of experience moment by moment.” Based on this definition, he proposed the Mindfulness-Based Stress Reduction (MBSR) program. In addition, Baer et al. [7] conducted a psychometric study integrating five existing mindfulness questionnaires. The results showed that the factors of mindfulness were ‘Nonreactivity to inner experience’, ‘Observing/noticing/attending to sensations/perceptions/thoughts/feelings’, ‘Acting with awareness/automatic pilot/concentration/nondistracted’, ‘Describing/labeling with words’, and ‘Nonjudging of experience.’

Thus, due to the awareness that is the goal of mindfulness, we are able to have the ability not to be caught up in our internal experience by stopping the automatic and reflexive reactions triggered by our current experience and by having a psychological space to choose new reactions. This characteristic of mindfulness will enable college students to prevent themselves from reacting automatically to their needs in the present situation, to be aware of their own needs, and to make intentional and conscious decisions. As a result, it can be expected that the higher the level of mindfulness, the less anxious mind to capture in the chaos of uncertainty, the more disappearing the mind will be to delay action until you feel uncomfortable, and the career exploration behaviors will increase.

The influence of career worry and mindfulness on career exploration: The career worry in this study is conceptualized by limiting general worry to the field of career. The most common definition of worry is a series of thoughts and images that are somewhat uncontrollable related to negative emotions [8]. Thus, career worry can be referred to a series of uncontrollable thoughts and images associated with negative emotions within the boundaries of the career domain.

According to Borkovec [9], worried people tend to cognitively avoid problems rather than confront them, not only because they feel threatening and make a cognitively distorted assessment about external factors, but also because they perceive that they cannot exercise proper control when dealing with incidents. Lee & Woo [4] showed that the higher the level of career worry, the lower the career exploration. However, except for these studies, it is difficult to find a study on the role of career worry on career exploration.

On the other hand, mindfulness allows people to see the difference between ‘objective reality’ and ‘self-constructed reality’ by making a step back from experiences that induce immediate reactions, and let them observe that they are intervening in the process of constructing the experience. Mindfulness enables these cognitive processes to distance themselves from negative thoughts and emotions without identifying them with oneself [10]. Therefore, mindfulness can be assumed to be a negative relationship with anxiety. However, it is still difficult to find a study that directly proves the relationship between mindfulness and career worry. And if there is a negative relationship between mindfulness and career worry, career worry is expected to serve as a mediator in the process from mindfulness to career exploration. However, it is difficult to find a research that directly proves whether career worry plays such a role.

Procrastination and career exploration: Procrastination means self-defeating behavior that has difficulty in achieving the goal by failing to start or complete the task within the required timeframe due to the failure of self-regulation [11]. Considering that the chronic procrastination of college students may be a function of motivational as well as intentional factors and that some researchers suggest that procrastination is contrary to the characteristics of a high self-regulated learner, we can predict the relationship between procrastination and career

exploration. In general, self-regulated learners adjust their goal-setting process by setting self-initiated goals, motivating oneself, and evaluating progress information toward the goal. On the other hand, procrastinators are known to invest less time in preparing tasks for success, underestimate the total time spent completing tasks, and invest less time in finding the information they need [12]. These characteristics ultimately explain the dysfunctional relevance of procrastination in career exploration behaviors. Therefore, it can be expected that the higher the level of procrastination, the lower the level of career exploration.

On the other hand, as mentioned above, mindfulness stops the automatic and reflexive reactions induced by the current experience so that people do not depend on internal experience. During goal-striving activities, people experience not only the desire to achieve the initial goal, but also additional needs. Mindfulness not only keeps you from paying attention to your initial goals, but also makes you realize that your mind is moving from one desire to another. In other words, when people are tempted to move away from their initial career exploration behaviors and try to postpone it, mindfulness will recognize such a mind and bring it back to its initial behavior. Therefore, mindfulness will play a role in lowering the level of procrastination. It will also serve as a mediator in the process from mindfulness to career exploration. However, it is difficult to find a study that examines this relationship.

Method

Participants: Four hundred forty-four students from a university in Asan, South Korea responded to a self-report questionnaire. The distribution of the participating students is as follows: male 228(51.4%), female 210(47.3%), no response on sex 6(1.4%), the minimum age 18 years, the highest age 29 years, the mean age 21.2 years (SD=1.91).

Measures

Mindfulness: For the measure of mindfulness, this study used the scale that Park [13] produced for Koreans. This is a 20-item measure consisting of four dimensions of present-moment awareness, concentration, acceptance without judging, and decentered attention.

Career worry: The PSWQ (Penn State Worry Questionnaire) with 16 items of Molina & Borkovec [14]

was modified to measure career worry. We measured the level of career worry by adding 'career' to each of the items.

Procrastination: The measure of Lay [11] was used to measure procrastination. This measure only includes items that measure behavioral aspects of delayed behavior. That is, it does not include questions related to academic procrastination, and cognitive reasons or emotional consequences of delayed behaviors. Therefore, this scale is effective to measure delayed behavior stably in various scenes.

Career exploration behaviors: In order to measure career exploration behaviors, the 28-item scale of Choi [15] was used that was applied to Koreans by combining several previous studies. This measures the frequency of various career exploration behaviors of college students. However, some of the items are not frequently performed by college students, and it will be unreasonable to ask for the level of such behaviors on a Likert-type scale. Therefore, we selected 16 questions and asked how often they have done career exploration behaviors that correspond to the contents of the question in past 12 months.

Seven-point Likert-type scale (1 = strongly disagree, 7 = strongly agree) was used to measure all the concepts used in this study.

Results

Validation of scales: Because mindfulness and career exploration behaviors consist of multidimensional scales, it was necessary to confirm whether or not to maintain such a structure in this study. Career worry levels of respondents were measured by adding 'career' to each item in the measure of Molina & Borkovec [14], which was designed to measure general worry. Since this measure was originally produced as a single-dimensional scale, it was necessary to confirm whether the same structure was maintained in this study as well. In the case of career exploration, this study only adopted a part (16 items) of the 28 items in the original scale of the Choi [15] a result, exploratory factor analysis was conducted to examine the dimensionality of the variables (mindfulness, career worry, and career exploration) used in this study. The principle axis factoring was used the factor extraction method and the number of factors was determined using scree plot and eigenvalues (> 1.0). The extracted factors were rotated using the Varimax method.

Factor analysis results of mindfulness scales show that four factors are appropriate as well as the original scale. The four factors accounted for 49.86% of the total variance. The percentage of variance of individual factors are as follows: decentered attention 16.59%, acceptance without judging 11.97%, concentration 11.09%, present-moment awareness 10.21%.

The factor analysis of career worry showed that 11 items of single factor were appropriate. Coincidentally, in Molina & Borkovec’s PSWQ [14], all reverse items were removed. The single factor accounted for 50.95% of the total variance.

Factor analysis of career exploration behaviors shows that three factors are appropriate. The original

scale of Choi [15] was composed of two factors (self-exploration and environment-exploration). However, the results of this study show that it is appropriate to divide self-exploration into two factors, self-seeking and advice-seeking. As a result, the three factors accounted for 48.41% of the total variance, and the percentage of variance of individual factors are as follows: information-seeking 25.58%, self-seeking 12.84%, and advice-seeking 1.60%.

Table 1 shows the basic statistics and Pearson correlation coefficients of the main variables used in this study. Unlike the initial expectation, career exploration did not have a significant correlation with career worry ($r=.088$, n.s.) as well as mindfulness ($r=.024$, n.s.).

Table 1: The basic statistics and Pearson correlation of the main variable

	M(SD)	A	B	C	D
A. mindfulness	4.506(1.032)	.920			
B. career worry	3.831(1.231)	-.565***	.915		
C. procrastination	3.994(.801)	-.461***	.230***	.843	
D. career exploration	3.651(.972)	.024	.088	-.214***	.869

Note: Italics are Cronbach’s α coefficients. *** $p < .001$

The relationships among variables: The purpose of this study is to investigate whether career worry and procrastination function as mediating variables in the relationship between mindfulness and career exploration. For this, mediated moderation analysis was performed using Model 4 of the SPSS Process macro developed by Hayes [16].

Table 2 shows the results of mediated regression analysis for career exploration. First, regression model ($R=.565$, $F(1, 442)=206.874$, $p < .001$) with career worry as a dependent variable and regression coefficient ($B=-.674$, $SE=.047$, $t=-14.383$, $p < .001$, $LLCI=-.766$, $ULCI=-.582$) of mindfulness on career worry were significant. Second, regression model ($R=.461$, $F(1, 442)=119.249$, $p < .001$) with procrastination as a dependent variable and regression coefficient ($B=-.358$, $SE=.033$, $t=-10.920$, $p < .001$, $LLCI=-.422$, $ULCI=-.293$) of mindfulness on career worry were significant.

Third, regression model ($R=.257$, $F(1, 440)=10.337$, $p < .001$) with career exploration as a dependent variable was significant. The effect of the individual regression coefficient on the career search and the influence of the anxiety on career search was significant.

When we examine the effect of individual regression coefficients, the influences of career worry ($B=.108$, $SE=.044$, $t=2.458$, $p < .05$, $LLCI=.022$, $ULCI=.195$) and procrastination ($B=-.307$, $SE=.063$, $t=-4.864$, $p < .001$, $LLCI=-.431$, $ULCI=-.183$) on career exploration were significant. However, the effect of mindfulness on career exploration ($B = -.014$, $SE = .058$, $t = -.249$, n.s., $LLCI = -.128$, $ULCI = .099$) was not significant.

Table 2: Mediated regression analysis on career exploration

IVs	B	SE	t	LLCI	ULCI
DV = career worry					
Mindfulness	-.674	.047	-14.383***	-.766	-.582
DV = procrastination					
Mindfulness	-.358	.033	-10.920***	-.422	-.293
DV = career exploration					
Mindfulness	-.014	.058	-.249	-.128	.099
Career worry	.108	.044	2.458*	.022	.195
Procrastination	-.307	.063	-4.864***	-.431	-.183

Note: * $p < .05$; *** $p < .001$

The above results only provide information about each step from mindfulness through career worry to career exploration. This does not say whether the relationship between mindfulness and career exploration is direct or indirect. Therefore, we examined the direct effect and indirect effect of mindfulness on career exploration. First, the direct effects of mindfulness on career exploration were not significant (direct effect=-.014, SE=.058, t=-.249, n.s., LLCI=-.128, ULCI=.099). On the other hand, indirect effects (i.e, mindfulness → career worry or procrastination → career exploration) were significant, and the results are shown in Table 3. In summary, mindfulness influences career exploration indirectly through career worry and procrastination, but the direct effect of not mediating these two variables is not significant.

Table 3: Indirect effect of mindfulness on career exploration

Mediators	Indirect effect	Boot SE	LLCI	ULCI
Career worry	-.073	.032	-.136	-.010
Procrastination	.110	.027	.058	.166

Discussion

The purpose of this study was to investigate whether the effects of mindfulness on career exploration behaviors were mediated by career worry and procrastination. The results of the analysis show that mindfulness does not directly affect career exploration. In other words, the effect of mindfulness on career exploration was significant only in the indirect effect of career worry or procrastination. Intuitively, mindfulness is expected to have a direct impact on career exploration, but the results of this study did not confirm such an impression. The result of this study can be deduced that mindfulness represents a comprehensive psychological state, while career exploration represents a behavioral state in a limited domain of career.

This study will have theoretical implications in some aspects. First thing is that the effect of mindfulness on career exploration was verified. Second thing is that the effect of procrastination on career exploration was examined. Although some variables were identified that could influence career exploration, no research has yet revealed the effect of mindfulness or procrastination on

career search. Third, it is that the effect of mindfulness on career exploration was only indirect effect mediated by two variables, career worry and procrastination. In other words, the state of mind that focuses on the present state shows the fact that it increases the level of career exploration behaviors by lowering the worry and making any action at the same time.

This theoretical implications will provide the following practical implications. First of all, it is possible to implement a program to raise the level of mindfulness to college students. In this study, mindfulness has been treated as a trait, but it can be also conceptualized as a state that can be changed to some extent through a program such as MBSR. Therefore, it will be necessary to prepare mindfulness training to improve college students' career exploration behaviors by lowering the levels of their career worry and procrastination. This study will serve as a basic study to understand why college students who take their first steps into society do not actively pursue career exploration behaviors.

Limitations of this study suggest some future studies. The first limitation of this study is that measure of an existing general worry was applied to the career domain. Though this scale can measure one side of the career anxiety, elaborate measurement will be difficult. Future research is needed to make a measure that enables sophisticated measurement of career worry. The second limitation is that only students at one university participated in the study. Therefore, it is difficult to completely rule out that the results of this study reflect the characteristics of the students attending the university. In the future, it will be necessary to engage university students from various universities in different regions.

Ethical Clearance: Not required

Source of Funding: Self

Conflict of Interest: Nil

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