

The Relationship between Negative Life Events and Depression in Vocational Undergraduates: The Chain Mediating Role of Intolerance of Uncertainty and Career Decision-making Difficulty

Zhi Jing^{1,2}, Fengqin Ding^{1,*}

¹*Department of Psychology, Ningxia University, Yinchuan, China*

²*Department of Mental Health Education, Ordos Institute of Technology, Ordos, China*

**Corresponding Author.*

Abstract: Depression has become a major burden of mental illness in our young people, and shows an increasing trend year by year. Relevant research has demonstrated that adverse life events serve as significant risk factors for depression among college students. Few research has been conducted on the underlying mechanisms through which negative life events influence depression in college students, and no relevant researches have been carried out for vocational undergraduates. A survey was conducted among 1457 vocational undergraduates using four instruments: The Adolescent Self-Rating Life Events Checklist (ASLEC), Intolerance of Uncertainty Scale-12(IUS-12), The Career Decision-making Difficulties Questionnaire (CDDQ), and Patient Health Questionnaire-9 (PHQ-9). Findings showed that the depression detection rate of vocational undergraduates was 53.6%. The findings suggest that negative life events have a dual impact on depression, both directly and indirectly through three distinct pathways: (1) the independent mediation of intolerance of uncertainty(IU), (2) the independent mediation of career decision-making difficulty(CDD), and (3) the serial mediation of IU and CDD. Increasing their tolerance to uncertainty and resolving difficulties in making career decisions may help to alleviate their depression symptoms.

Keywords: Negative Life Events; Depression; Vocational Undergraduates; Intolerance of Uncertainty; Career Decision-making Difficulty

1. Introduction

Depression is a commonly experienced mental health problem and has become a major contributor to the disease burden of young people worldwide, which was further increased by the COVID-19 pandemic [1]. College and university students, as a segment of the young adult population, are in the midst of switching to adulthood from the childhood, and several are no more in parent's custody, many for the first time in their lives. Alongside this new self-autonomy, they also experience numerous important life adjustments, extreme push to be successful and increased financial stress because of tuition and living expenses. This is also the age when certain mental disorders are likely to first present themselves. Coping with new and intense stressors such as academic demands, relationships, finances, and employment, depression is one of the riskiest psychiatric problems among college and university students during this transition from adolescence to adulthood. In fact, the incidence of mental illnesses, including depression and suicidal ideation, has been shown to be higher in undergraduates than in the general population. Analysis and evaluation of students in China has found that the incidence of depression was 46.40%, which is broken down as 28.5%,10.1%,7.3%, and 0.6% being mild, moderate, moderate-to-severe, and severe depression were categorized in ascending order of severity [2].

Negative life events have already attracted much attention in previous studies exploring the factors affecting depression in undergraduate students, with consistent findings in numerous countries and cultures that Adverse life events constitute a significant risk factor for the development of depression among undergraduate students. Undergraduates are in a particularly critical

period in life, transitioning from campus life to adult society, and making major decisions about their personal, academic, and work lives. A cross-sectional survey of 39,573 Chinese university students found that the stresses of adjusting to university life and of academic study had a greater impact on the incidence of mental illness among students [3]. Particularly as undergraduates, students may experience a variety of negative life events including changes in daily routines, problems in interpersonal relationships, pressure to perform in academic studies, economic stress, and struggling to make life-changing decisions. With so many pressures, negative life events are understandably the vital risks in depression. For this reason, we expected that increased levels of negative life events faced by vocational undergraduates, increases incidence of depression. Therefore, we proposed our Hypothesis 1 as follows:

H1: Negative life events experienced by vocational undergraduates significantly predict their degree of depression.

The global outbreak of COVID-19 in 2020 has led to a period of time in which many people have experienced higher rates of negative impacts and uncertainty. Elevated levels of intolerance of uncertainty (IU) have exerted a more pronounced detrimental impact on psychological distress throughout the course of the pandemic [4]. Carleton defines IU as "an individual's temperamental inability to tolerate aversive responses triggered by a perceived lack of significant, critical, or sufficient information and sustained by associated perceptions of uncertainty." IU refers to an individual's tendency to excessively worry about the unknown and possible negative outcomes in the future, regardless of their probability. Grupe and Nitschke, measuring skin conductivity and behavior in college students, found that the negative impact of aversive events was amplified when the events occurred in a context of uncertainty. Another study found that the association between IU and poor mental health was found to be significant, with a stronger relation to depression specifically; furthermore, they found that people with elevated IU respond more adversely to stressful events in life, and reducing IU may reduce the adverse impacts of depression. IU was also found to be strongly correlated with

depressive symptoms in normal participants, and strongly correlated with depressive symptoms in normal participants. From the literature noted above, then, we developed our Hypothesis 2, as follows:

H2: The effect of negative life events on depression is mediated by IU

Regarding the ongoing negative effect of the COVID-19 pandemic and increased career challenges, the present research analyzed the mechanisms by which negative life events affect the undergraduate students pertaining to their career decisions and thus cause depression. As one of the myriad difficulties that individuals encounter as they enter adulthood, The difficulties in making career decisions can be categorized into 3 main areas: (1) lack of preparedness, (2) insufficient access to information, and (3) conflicts between available information and personal ideas during the decision-making process. The two scholars then proposed a classification model for career decision difficulties related to emotional and personality factors. Negative life events, particularly those encountered during one's studies and job hunt, will reduce undergraduates' sense of professional identity and self-efficacy, and bring about emotional problems. Gati and Ram suggest that negative life events such as professional learning difficulties may be a cause of professional indecision. Meanwhile, the association between self-efficacy and career indecision has been found to be negative. Negative emotion is one of the reasons difficulties in making career decisions. Considering all of these influences, the probability of decision-related stress and career decision difficulties is therefore high.

Negative life events greatly impact undergraduate students' career decision-making difficulties. The research findings indicate that elevated levels of occupational indecision and dysfunctional thoughts related to one's occupation, as well as reduced levels of solidifying one's occupational identity, are positively correlated with increased depressive symptoms. Undergraduates who were more determined about their career choices demonstrated individuals with higher levels of determination exhibited lower depressive symptoms. Difficulty making career decisions and a person's level of professional recognition have both been well documented in relation to depression. Emerging adulthood, the point in

life in which one is making the initial selection of significant career paths, is also a period in the prevalence of depression is particularly high, which indirectly supports the notion that career decision-making may serve as a potential stressor contributing to the development of depression. consideration of this, we formulated our Hypothesis 3 as follows:

H3: CDD mediates the impact of negative life events on depression.

According to the hierarchical model proposed by Carleton, IU is likely to influence depressive symptoms through maladaptive metacognitive beliefs. During the decision-making process regarding their career paths, college and university students may experience uncertainty about their future occupational prospects as well as the development and evolution of their own interests and capabilities, findings regarding the association of IU to career growth propose a positive correlation between IU and difficulties in career decisions. It is thus realistic that those with increased IU levels would encounter escalated difficulties in career decisions than the ones having skills to cope with ambiguity. Two studies of university students in Korea revealed positive relationships between the tolerance of uncertainty in relation to career identity and career decision-making self-efficacy has been extensively examined [5]. Previous research has consistently demonstrated a strong association between both career identity and career decision self-efficacy with the level of certainty in one's chosen career path. The literature mentioned above suggests that our Hypothesis 4 was formulated as follows:

H4: Negative life events effect an individual's depression via chain intermediary role of IU and CDD.

Currently, higher vocational undergraduate education is a new type of education that is rapidly developing in China. Vocational undergraduate education focuses primarily on the cultivation of high-level technical skills connecting research and development roles with production roles. While it is still under development, a fully comprehensive vocational education system is expected to be established in China by 2025, and with the goal of being ranked among the best programs of this type globally by 2035, as per the guidelines of

general offices of the Communist Party of China Central Committee and the State Council (State Council of the People's Republic of China, 2021). the number of professional HEIs (Higher Education Institutions) is 32 in China (Ministry of Education of the People's Republic of China, 2022). Previous studies on the impact of negative events on depression have largely focused on university students. However, no relevant studies investigating the underlying mechanisms by which negative life events influence depression among vocational undergraduates have been conducted.

The present research focuses on vocational undergraduates as the research subjects and aims to investigate the internal mechanism underlying the impact of negative life events on individual depression. Specifically, we will primarily examine the independent and sequential mediating effects of intolerance of uncertainty (IU) and career decision difficulty. The present research provides a reference value for interventions vocational undergraduates depression and provides theoretical support for depression defense and employment guidance for vocational undergraduates in the future.

2. Materials and methods

2.1 Participants

Sample students from two vocational schools in western China was selected using the cluster sampling method. None of the participants had previously taken part a study similar to this, and each one was rewarded after completing the survey. This study was authenticated by the Ethics Committee of Science and Technology of Ningxia University (Number: NXU-23-051), and the study commenced only after obtaining written informed consent from each participant. A total of 1495 questionnaires were collected. Participants were of 20.06 years average age (SD = 1.56), while age distribution ranged 18 to 26 years old.

2.2 Measures

2.2.1 The Adolescent Self-Rating Life Events Checklist (ASLEC)

The Adolescent Self-Rating Life Events Check List (ASLEC) is a self-evaluation inventory used frequently to measure life negative events during the past year among adolescents. The

ASLEC consists of 27 items examining five factors with relevant examples in parentheses: study pressure, adaptability, interpersonal relationships, bereavement, and punished. Each item references a negative life event, and the respondent rates each using a six-point Likert scale. The respondent's stress levels are stronger with the higher total score because of negative life events. Many studies have used this tool to successfully measure the stress levels of life negative events among adolescents. In present study, the scale demonstrated better psychometric properties having McDonald's ω of .96,95% confidence interval is [0.95,0.97].

2.2.2 Intolerance of Uncertainty Scale—Short Form (IUS-12)

The Intolerance of Uncertainty Scale—Short Form (IUS-12) is a self-report scale made up of 12 items that assess respondents' cognitive, emotional, and negative behavioral responses to expected unpredictability and their avoidance responses in the face of uncertainty. Scale measures 2 factors with examples in parentheses: inhibitory anxiety, and prospective anxiety. Each item is scored as per the Likert scale from 1 (“ Not at all characteristic of me ”) to 5 (“ Entirely characteristic of me ”). Higher IU is reflected by the higher total scores. The McDonald's ω of the IUS-12 in present investigation was .90,95% confidence interval is [0.89,0.91].

2.2.3 The Career Decision-making Difficulties Questionnaire (CDDQ)

The Career Decision-Making Difficulties Questionnaire (CDDQ) identifies causes of difficulties faced by individuals when deciding upon a career, specifically assessing lack of readiness, lack of information, and inconsistent information. The current study adopted the revised version of the measurement, which has 34 items instead of the original 44. Each item is rated on nine-point scale from 1 (“Does not describe me at all”) to 9 (“Describes me well”). The career decision-making difficulty is stronger with the higher total score. The McDonald's ω of the CDDQ in this study was .98,95% confidence interval is [0.98,0.99].

2.2.4 Patient Health Questionnaire (PHQ-9)

The PHQ-9 is a self-report questionnaire that consists of nine items based on the DSM-IV criteria for assessing symptoms of depression. The measure assesses whether the respondent

has been bothered by various symptoms during the previous two weeks, specifically, anhedonia, thoughts of suicide, psychomotor agitation or retardation, concentration difficulties, feelings of worthlessness, appetite changes, fatigue, sleep difficulties, and depression/sad mood. Each symptom is scored from 0 to 3. The severity of a depressive episode is assessed by adding together each response. PHQ-9 shows good psychometric properties, with a McDonald's ω in the current study of .93,95% confidence interval is [0.92,0.94].

2.3 Analytical Method

The correlation analysis and descriptive statistics were performed for every variable by employing IBM SPSS 27.0 software. Mplus 8 was used to validate the measurement model for our study. The PROCESS 4.1 program developed by Hayes [6] and the non-parametric percentile bootstrap method were used to examine the chain mediating role of IU and CDD in the relationship between negative life events and depression.

3. Results

3.1 Common Method Bias

The common method deviation was tested by using Harman single factor method. Findings depicted that first factor explained 38.13% of the variation for nine components greater than one, which was <40%, i.e., the critical standard. The measurement model was tested by employing Mplus 8 to perform confirmatory factor analysis (CFA). Four-factor model in study fit the data well, and was the best compared to the other models. The results indicated that measurements were reliable, and that although there was a certain degree of common method bias in this study, it did not significantly impact our findings.

3.2 Descriptive Statistics and Correlation Analysis

Results of PHQ-9 showed that the participants' average depression score was 20.05 (SD = 1.56). Depression was detected in 800 patients (53.6%), of which 474 (31.7%) with mild depression, 173 (11.6%) moderate depression, 125 (8.4%) moderately severe depression, and 28 (1.9%) severe depression. Results of the ASLEC survey showed that

participants' mean number of negative life events experienced (\pm SD) was 16.13 ± 8.99 . More than 50% of participants reported that they had experienced multiple events including "misunderstood by others," "heavy study load," "in conflict with others," "failing an exam," "pressure to be accepted to a prestigious school," and "public humiliation." As expected, negative life events, IU, and CDD were significantly and positively correlated with depression in the vocational school participants; however, negative life events, IU, and CDD were also significant positively correlated with one another. The results of the correlation analysis met the statistical requirements to identify a mediation effect.

3.3 Chained Mediating Analyses

Studies have shown that gender and place of birth can be related to the occurrence and degree of depression in individuals, so in this study, age, gender, and place of birth were used as control variables [7]. The mediating role of IU and CDD in association of negative life events with depression was analyzed by employing SPSS PROCESS Model 6. To maintain consistency, all variables were

converted into standard scores for analysis. Regression analysis outcomes propose several relations (see Table 1). When gender and birthplace were controlled: (1) The regression coefficient was significant pertaining to negative life events on depression ($\beta = 0.58$, $p < .001$), suggesting that negative life events positively predict depression; (2) the regression coefficient was significant regarding negative life events on IU ($\beta = 0.36$, $p < .001$), suggesting that negative life events positively predicted IU. Furthermore, the regression coefficient of IU was significant in link to depression ($\beta = 0.19$, $p < .001$), proposing that IU positively predicts depression. The outcomes reveal that negative life events affect depression through mediation effect of IU. We also found that (3) the regression coefficients of negative life events were significant regarding CDD ($\beta = 0.25$, $p < .001$), suggesting that negative life events positively predict CDD. Moreover, regression coefficient of CDD was significant pertaining to depression ($\beta = 0.27$, $p < .001$), indicating that CDD positively predicts depression. It follows from these results that negative life events affect depression through the mediation effect of CDD.

Table1.Regression Analysis of Variables in the Model.

variable	depression		IU		CDD		depression	
	β	t	β	t	β	t	β	t
Gender	-0.02	-1.08	-0.06	-2.56*	0.08	3.33***	-0.03	-1.42
Birthplace	0.03	1.42	-0.03	-1.16	0.03	1.47	0.03	1.48
NLE	0.58	27.20***	0.36	14.93***	0.25	10.07***	0.41	19.33***
IU					0.29	11.82***	0.19	8.85***
CDD							0.27	12.80***
R	0.58		0.40		0.45		0.68	
R ²	0.34		0.14		0.20		0.46	
F(df)	251.73*** ₍₃₎		78.44*** ₍₃₎		95.51*** ₍₄₎		252.55*** ₍₅₎	

Note: Negative life events (NLE), Intolerance of Uncertainty (IU), Career decision-making difficulty (CDD), * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$.

Finally, we found that (4) the regression coefficient of IU was significant on CDD ($\beta = 0.294$, $p < .001$), implying that IU positively forecasts CDD. Combined with findings (2) and (3), it can be seen that negative life events affect depression via CDD and serial mediating effect of IU. Figure 1 presents the specific path through which depression is affected by negative life events in vocational undergraduate students.

Mediation effect analysis of IU and CDD exhibits the CDD and mediating effect of IU

on depression and negative life events. Total indirect impact was 0.166, and indirect to total effect was 28.8%; moreover, three paths indirectly affected the impact of negative life events on depression. Indirect Effect 1 (0.069, indirect to total effect was 11.9%) was "negative life events \rightarrow IU \rightarrow depression", and had 95% confidence interval of [0.049,0.090] which excluded 0, indicating that IU mediating effect was substantial. Indirect Effect 2 (0.069, indirect to total effect was 11.9%) was "negative life events \rightarrow CDD \rightarrow

depression”, and had 95% confidence interval of [0.051,0.087] which excluded 0, again indicating that mediating effect of CDD was substantial. Indirect Effect 3, was composed of “negative life events → IU → CDD → depression” (0.029, indirect to total effect was 5%), and had a 95% confidence interval of [0.021,0.038] which did not contain 0, indicating that IU and CDD had large chain intermediary function for negative life events and one’s sense of meaning in life. Chain mediating impact of expression suppression strategy with depression was also significant. The specific paths through which students’ negative life events were shown to affect depression are shown in Figure 1.

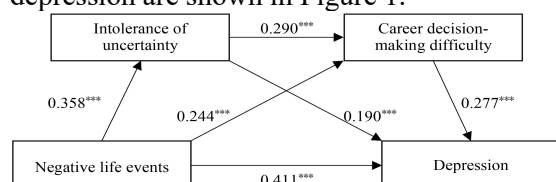


Figure 1. Path Diagram of Negative Life Events Affects Depression (Note: *** $p < 0.001$)

Regarding Indirect Effect 1 minus Indirect Effect 2 (0.0003), the 95% confidence interval [-0.0296, 0.0322] did contain 0, indicating that Indirect Effect 1 did not differ significantly from Indirect Effect 2. Regarding Indirect Effect 1 minus Indirect Effect 3 (0.0390), the 95% confidence interval [0.0199, 0.0594] did not contain 0, indicating that Indirect Effect 1 was significantly different from Indirect Effect 3. Finally, regarding Indirect Effect 2 minus Indirect Effect 3 (0.0387), the 95% confidence interval [0.0189, 0.0588] did not have 0, reflecting that Indirect Effect 1 was significantly different from Indirect Effect 3. Specific mediating effects and comparative analysis.

4. Discussion

This study investigated the relationship between negative life events and depression in these vocational undergraduate students. Our findings showed that the depression detection rate of vocational undergraduates was 53.6%, which is higher than that of general Chinese undergraduate students [2]. These results provide further evidence that vocational undergraduate students do suffer more psychological pressures than other undergraduate students. The subsequent analysis revealed a significant regression

coefficient between negative life events and depression, thereby confirming the validation of Hypothesis 1. Our results further confirmed a positive association between negative life events and depression, which is consistent with the findings of Stikkelbroek. Negative life events directly affect the appearance of individual depression [8]. As a result of vocational undergraduates experiencing more negative life events, then, they can experience more severe depression. Therefore, the mental health of vocational undergraduates in particular requires more attention and support. The mediation analysis showed that IU and CDD partially mediate the relationship between negative life events and depression, with the mediation effects were examined through 3 pathways: the individual mediating effects of both IU and CDD, as well as the sequential mediating effect of IU and CDD. Therefore, Hypotheses 2, 3, and 4 were confirmed.

4.1 The Mediating Role of CDD

Our findings suggest that CDD mediates the relationship between negative life events and depression. Therefore, difficulties in making career decisions may be seen as an important factor leading to depression among Chinese vocational undergraduate students, which is consistent with the findings of Rohde. The learning mode of the vocational undergraduate program is a combination of practical production and conceptual teaching. In addition to acquiring fundamental vocational knowledge and skills in the classroom, students are also expected to develop normative operational skills through practical work experience, which may result in increased academic pressure and challenges. They therefore face increased possibility of adjustment problems and learning difficulties, and are likely to encounter an increased number of negative life events such as interpersonal relationship issues, study pressures, or being misunderstood in daily life. These negative life events lead to internal and external occupational cognitive conflicts, both of these factors can impede individuals in their career decision-making process, either due to difficulties in reaching decisions or making suboptimal choices that lead to diminished career decision determination. Higher CDD and lower career decision determination are

both related to depression. For vocational undergraduates, increased counseling support and guidance both during and after career decision-making, rather than before career decision-making takes place, may be an effective way to help them in their career decisions, thus reducing their incidence of depression.

4.2 The Mediating Role of IU

The study also confirms the mediating role of IU in the relationship between negative life events and depression. This is consistent with the findings of Ciarroch. Our findings show that vocational undergraduates face increased learning difficulties and greater interpersonal stress. These difficulties and setbacks increase the students' worries about their future and increase their fear of the unknown, thus exacerbating their IU which in turn can lead to higher levels of depression. At the same time, we found that vocational undergraduates have more financial difficulties and experience greater study pressures, as well as being more prone to worry about and fear the future, which strengthens irrational beliefs regarding potential futures, also leading to increased depression. One effective way to mitigate this could be to increase financial support for vocational undergraduates and expand tertiary admission opportunities to improve the mental health of vocational undergraduates and again reduce their risk of depression.

4.3 Chain Mediating Effect of IU and CDD

Notably, this study found that negative life events also influence individuals' depression through the serial mediating effects of IU and CDD. This finding not only enriches the broader research understandings of depression, but also reveals the internal psychological mechanism of IU in negative life events influencing CDD, which then influences depression via career decision-making difficulties. Previous research has also shown that individuals with a high intolerance for uncertainty may come up with fewer solutions when trying to solve their problems, therefore making it more unlikely that they will find an ideal solution. Difficulties in career decision-making are more likely to occur when facing the challenges of career transition and technological changes. Difficulties in career decision-making leads to individuals

experiencing great feelings of pressure and increased negative emotions, which can then induce dysfunctional attitudes and depression. In addition, further influenced by increased negative life events such as study pressures or interpersonal relationship issues, vocational undergraduates feel less confident in their own abilities and less tolerant of the uncertainty of the external career environment, so they tend to feel dominated by external factors when making career decisions. However, studies show that individuals with more external control points tend to experience more challenges and encounter more career decision-making difficulties than those with more internal control points [9]. Through this process, they experience higher levels of pain and may exhibit psychological and behavioral problems such as excessive negative emotions and avoidance, leading to increased depressive emotions.

5. Conclusion

The findings of this study show that negative life events serve as a significant positive predictor of depression in vocational undergraduates, affect their depression through the chain mediating effect of IU and CDD. Increasing their tolerance to uncertainty and resolving difficulties in making career decisions may help to alleviate their depression symptoms.

6. Implications and Limitations

The findings of this study have several implications. First, negative life events are strong influencing factors in the occurrence and development of depression in vocational undergraduates, and the negative life events of these students are more than those of general undergraduates, seriously affecting their mental health and employment opportunities. Therefore, the development of vocational undergraduates should be supported by providing them with more financial aid, richer teaching resources, and wider access to a better higher education. Furthermore, systematic psychological training in interpersonal relations should also be provided to help them improve their interpersonal skills.

Second, interventions on IU and CDD can effectively reduce the level of depression among vocational undergraduates. Our findings show that tolerance of uncertainty and

difficulty in making career decisions are the important mediating factors affecting depression in vocational undergraduates. It can be seen that depression among vocational undergraduates can be mitigated to some extent by effective interventions on uncertainty tolerance and career decision making difficulties. The chaos theory of careers (CTC) proposed by Pryor and Bright provides us with enlightenment. CTC sees fuzziness as the normal presence of an objective environment and as an opportunity for college students to recognize the diversity and flexibility of career options, this theory incorporates and standardizes uncertainty in the career development process which can promote the ability of vocational undergraduate students to manage the uncertainty of their external environment. Under the guidance of the CTC, we can conduct systematic vocational psychological intervention training for Chinese vocational undergraduates to help improve their tolerance for uncertainty and decision-making ability in their careers, and thus help them better adapt to life in higher education and the future job market.

The study has some limitations. First, this study is a cross-section study, which is not conducive to the causal relationship between the negative life events IU CDD and depression. Second, the research subjects of this study are limited to the group of special college students in China, and have certain promotion limits. Finally, in this study, the chain intermediary effect is weak and the explanatory power is not high, so it must be further verified and discussed. Despite the noted shortcomings of this study, our research results did verify our hypotheses, and explain to a certain extent the mechanism of how negative life events affect depression in the special group of vocational undergraduate students. Our findings enrich the existing literature, and provide strong support the development and implementation of improved, targeted educational activities educational practitioners specifically for vocational undergraduates, and for the provision of counseling services for these students.

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References

- [1] Santomauro DF, Herrera AMM, Shadid J, Zheng P, Ashbaugh C, Pigott DM, et al. Global prevalence and burden of depressive and anxiety disorders in 204 countries and territories in 2020 due to the COVID-19 pandemic. *Lancet*. 2021;398(10312):1700-12.
- [2] Gao DW, Xiang QZ, Lu GH, Tong JY, Jiang W, Yu XQ, et al. Evaluation and analysis of anxiety and depression symptoms for college students during COVID-19 pandemic. *Bmc Psychology*. 2022;10(1).
- [3] Zhang YZ, Coid J, Liu X, Zhang YM, Sun H, Li XJ, et al. Effects of Stress in Adaptation to Undergraduate Life on Psychiatric Morbidity: Mediating Effects of Early Trauma and Adverse Family Factors. *Frontiers in Psychiatry*. 2022;13.
- [4] Wang T, Jiang LW, Li TT, Zhang XH, Xiao SR. The relationship between intolerance of uncertainty, coping style, resilience, and anxiety during the COVID-19 relapse in freshmen: A moderated mediation model. *Frontiers in Psychiatry*. 2023;14.
- [5] Kim B, Rhee E, Ha G, Yang J, Lee SM. Tolerance of Uncertainty: Links to Happenstance, Career Decision Self-Efficacy, and Career Satisfaction. *Career Development Quarterly*. 2016;64(2):140-52.
- [6] Hayes AF. An Index and Test of Linear Moderated Mediation. *Multivariate Behavioral Research*. 2015;50(1):1-22.
- [7] Knox J, Morgan P, Kay-Lambkin F, Wilson J, Wallis K, Mallise C, et al. Male involvement in randomised trials testing psychotherapy or behavioural interventions for depression: a scoping review. *Current Psychology*. 2022.
- [8] Oei TPS, Kwon SM. Evaluation of the integrated cognitive model of depression and its specificity in a migrant population. *Depression and Anxiety*. 2007;24(2):112-23.
- [9] Millar R, Shevlin M. The development and factor structure of a career locus of control scale for use with school pupils. *Journal of Career Development*. 2007;33(3):224-49.