대학생의 사회적 지지와 희망이 삶의 만족도에 미치는 영향: 외동자녀 지위의 조절매개 모형

마팅팅*, 이창식** 한서대학교 평생교육학과 박사과정, 한서대학교 사회복지학과 교수*

Effects of Social Support and Hope on Life Satisfaction of College Students: Moderated Mediation Model of Only-Child Status

Ting Ting Ma*, Chang Seek Lee**

Doctoral student, Lifelong Education, Hanseo University & Software Engineering Institute of Guangzhou* Professor, Social welfare, Hanseo University**

요 약 본 연구의 목적은 대학생의 사회적 지지와 삶의 만족도 간의 관계에서 희망의 매개효과를 외동자녀 지위가 조 절 매개하는지를 규명하고자 하였다. 본 연구의 대상은 중국 광둥성의 한 대학에서 의도적으로 표집한 302명의 대학생 이다. 자료는 SPSS PC+ Win ver. 25.0과 SPSS PROCESS macro ver. 4.2를 활용하여 분석하였으며, 적용된 통계 기법 은 빈도분석, 신뢰도분석, 상관관계분석, 조절된 매개효과 분석이다. 연구 결과 첫째, 사회적지지, 희망, 삶의 만족도 간 에 정적인 유의미한 상관관계가 있었다. 둘째, 조절된 매개효과 분석 결과 외동자녀가 그렇지 않은 자녀에 비해 사회적 지지가 희망을 경유하여 삶의 만족도에 미치는 간접효과가 높았다. 이를 바탕으로 삶의 만족도 향상을 위한 제언을 하 였다.

주제어 사회적 지지, 희망, 삶의 만족도, 외동자녀 지위, 조절된 매개

Abstract The purpose of this study is to investigate the moderated mediation effect of an only-child status on the mediating effect of hope in the relationship between social support and life satisfaction of college students. The participants for this study were 302 undergraduates selected from a university in Guangdong province of China under a purposive sampling way. SPSS PC+ Win. ver. 25.0 and SPSS PROCESS macro ver. 4.2 were used to analyze the data. The applied statistical techniques were frequency analysis, reliability analysis, correlation analysis, and moderated mediation effect analysis. The results were as follows: First, there were positive and significant correlations between social support, hope and life satisfaction. Second, as a result of the moderated mediating effect analysis, the indirect effect of social support on life satisfaction through hope was higher for only children than for other children. Based on this, suggestions were made to improve life satisfaction.

Key Words Social support, Hope, Life satisfaction, Only-child status, Moderated mediation

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Corresponding Author: Chang Seek Lee

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1. Introduction

Life satisfaction refers to an individual's global positive evaluation of the quality of his or her life [1]. Positive outcomes including psychological well-being, health and successful life events (marriage and high income) have been found to generated by life satisfaction [2]. In the meantime, low levels of global life satisfaction are deleterious to one's intrapersonal and interpersonal development, predispose people to depression [3], low self-esteem, and maladaptive social interactions [4]. For this reason, the enhancement of students' life satisfaction has been become a paramount concern of educational institutions since 1980s [5]. Therefore, continuous studies is needed to find out the mechanism that improve students' life satisfaction and allow students to thrive mentally and physically.

Prior research suggests that social support is positively related to life satisfaction [6]. The main effect model holds that social support helps maintain positive affect and improve mental health, further increase life satisfaction [7]. While the positive influence of social support on life satisfaction has been attested in myriad of studies, it is necessary to ascertain the mediating variable between these two variables.

Hope is defined as the person's belief in his/her capacity to achieve his/her goals, pondering about his/her goals and proceeding toward them [8]. In the literature, hope was found to be correlated with life satisfaction [9], and predicted by perceived social support [10]. Therefore, this study was to examine whether hope mediates the relationship between social support and life satisfaction targeting college students.

Furthermore, it is reported that only children and non-only children have different levels of life satisfaction. It was concluded in a study that the only children in the family were more satisfied with life than young people living with a brother or sister, while the lowest life satisfaction had been detected among young people who have several siblings [11].

Even though many studies reported the relationship between social support and life satisfaction, scant attention has been paid to investigate the mediating effect of hope and the moderated mediation effect of only-child status between social support and life satisfaction. Therefore, this study aims to present basic data to enhance college students' life satisfaction by identifying the mechanisms in which social support affects life satisfaction through hope and an only-child status, and this paper mainly focused on two questions: First, what are the correlation between social support, hope, life satisfaction and status of only-child? second, does the status of only-child moderate the mediating effect in the link between social support and life satisfaction?

2. Theoretical background

2.1 Relationship between social support and life satisfaction

Social support generally refers to the course by which the individuals use the psychological and material resources provided by their social networks to deal with stressful events, satisfy their social needs, and fulfill their goals [12]. Among the various constructs of social support, perceived social support was more beneficial in relation to health behaviors than actual social support [13]. If the resources of support are not perceived by the individuals, they cannot be utilized for building a level of well-being and life satisfaction. Moreover, social support mitigates the depressive symptoms and makes individuals feel supported by others and connected to the social networks, thus ameliorate the psychological quality of life [14].

On the other hand, life satisfaction was conceptualized as the global subjective evaluation that people make of their lives based on comparing their expectations and what they achieved [15].

A causality between positive life satisfaction and multifarious positive behaviors and attitudes (e.g. taking pleasure in life, finding life meaningful, consistency at the matter of reaching goals, positive individual identity) were revealed in [16,17].

Social support and life satisfaction has been proved to be closely related. There is considerable evidence that social support from family, teachers, and peers is related to perceived life satisfaction [18], and social support could positively impact life satisfaction in adolescents and college students [19,20]. In other words, higher levels of perceived social support from family and friends are indicators of higher life satisfaction [21].

Since the direct effect of perceived social support on life satisfaction is robust to date, it is necessary to identify the mechanism of this effect and prepare a plan to further reinforce it.

2.2 Mediating effect of hope

Hope is a general disposition to engage in conscious efforts to obtain goals, pathway thinking, and agency thinking [22].

While a high level of hope indicates good health and full functioning, its low level is pertinent to personal sadness and distress [23].

In terms of the relationship between social support and hope, a longitudinal study of older-aged adolescents in China reported that perceived social support significantly predicted levels of hope, and it strongly influenced the developmental track of hope [24]. Moreover, hope pathways were found significantly related to social support. Hope agency, however, was not the case [25].

While in other studies on adolescents, hope and optimism was found strongly related to life satisfaction [26][27]. According to [28], individuals have to self-motivate, lead their lives despite unfortunate events, think positively, always be hopeful in order to maintain a high life satisfaction level.

Therefore, it can be inferred that social support affects hope, and hope affects life satisfaction, so it is predicted that hope plays a mediating role in the relationship between social support and life satisfaction.

2.3 Moderating effect of only-child status

In China, due to the one-child policy, only children are more likely to be born in city, and their parents were more likely be educated. Therefore, it is possible that only children have more parental resources than non-only children [29]. As a result, the social support that they received might be lesser.

Meanwhile, evidence has been found that only children and children with siblings have very distinctive differences in psycho-behavioral characteristics in a multitude of research. One study carried out in Hong Kong showed that the only children have higher satisfaction in most aspects of life like overall life, family life, friendships, school experience, and living place [30].

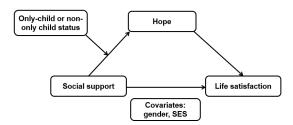
In addition, an only-child status has been verified to play a moderation and moderated mediating role in a number of previous studies. In a study of 4402 adolescents, the interaction effect of depressive symptoms, negative life events and only-child status reduced post-traumatic stress disorder symptoms [31]. Another study conducted in China also revealed that the interaction of social support and the only-child status was a significant predictor of mental health [32].

Considering these preceding studies, an only-child status was predicted to play a role in moderating the effects of social support on life satisfaction through hope, and this study aims to confirm it.

3. Research methods

3.1 Research model

The conceptual model of the moderated mediation effect of only-child status on hope between social support and life satisfaction was established in Figure 1 using the Model No.7 developed by Hayes (2017) [33] in SPSS PROCESS macro ver.4.2.



[Figure 1] Research model

3.2 Participants and data collection

Participants were purposively sampled from a college in Guangzhou, Guangdong Province, China. After explained the research aim and guaranteed the confidentiality, the researcher distributed an online questionnaire to the participants. 302 students responded to the questions and the data were collected and used for the following analysis.

The sample was made up of 74~(24.5%) males and 228~(75.5%) females, aged between 18 to 24, (M=21.6), of which 17.9% of them were only children, while 82.1% had siblings.

3,3 Research tool

3.3.1 Social support

A Chinese version [34] of the scale of Perceived Social support (MSPSS) [35] was used to test the amounts of social support received by undergraduate students. The MSPSS has three sub-scales with 4 items for each type. All three sub-scales of the MSPSS: significant other, family, and friends were used in the analysis. Respondents use a 7-point Likert-type scale (very strongly disagree to very strongly agree) with each item, and possible scores ranging from 12 to 84. In the current study, the Cronbach's α internal consistency reliability was .935.

3,3,2 Hope

Hope was measured using the modified version of the Hope Scale(K-DHS) [36] originated from Synder [37]. An expert in this field translated the scale into Chinese and was applied in the present study. Each item is on a 5-point Likert scale ranging from 1 "strongly disagree" to 5 "strongly agree", with higher scores indicating higher hope. In this study, Cronbach's a of reliability was .838.

3.3.3 Life satisfaction

Life Satisfaction was assessed using the Satisfaction with Life Scale (SWLS) by Diener et al. [38]. This five-item instrument is rated on a seven-point Likert scale, ranging from (1) very strongly disagree to (7) very strongly agree, where a higher score indicates higher life satisfaction. The Cronbach's a internal consistency reliability for this study was .866.

3.3.4 Others

Information about the status of only-child or non-only child was collected.

3.3.5 Covariates

Among the demographic characteristics that predicted to affect variables, gender and socioeconomic status were controlled.

3.4 Data analysis

The data was analyzed using SPSS PC+ Win. Ver. 25.0 and SPSS PROCESS macro Ver. 4.2. For basic analysis, frequency analysis was performed, and Cronbach's a's value, an internal consistency reliability coefficient, was calculated to determine reliability. Pearson's bivariate correlation analysis was conducted to identify the correlation between major variables, and model 7 of the SPSS PROCESS macro was performed to analyze the moderated mediating effect. For the verification of the mediating effect, bootstrap method was used, and the confidence level was 95%, number of samples was set to 5,000. In the analysis of moderated mediating effects, independent variables and moderating variables were mean—centered.

4. Results

4.1 Correlations between main variables

The results of Pearson's bivariate correlation analysis was shown in Table 1. Social support had a positive correlation with hope (r=.502, p<.01) and with life satisfaction (r=.691, p<.01). Hope is positively correlated with life satisfaction (r=.520 p<.01). The status of only-child or non-only child has no significant associations with social support(r=-.0191, p>.05), hope(r=.036, p>.05) and life satisfaction(r=-.098, p>.05). Overall, the correlation coefficients were all lower than .7, and no multicollinearity problems were found.

As a result of descriptive statistics, hope was higher than the median value (3 points), and social support and life satisfaction were also higher than the median value (4 points).

(Table 1) Correlation and descriptive statistics analysis results

	1	2	3	4
1. Social support	1			
2. Hope	.502**	1		
3. Life satisfaction	.691**	.520**	1	
4. Only-child or non-only child	019	.036	098	1
M	5.0433	3.6697	4.2377	-
SD	.9144	.51912	.62588	_

4.2 Moderated mediation effect of onlychild status on the relationship between social support, hope, and life satisfaction

In order to verify whether only-child and non-only child status moderates the mediating effect of social support on life satisfaction through hope, it was analyzed using Model 7 of the SPSS PROCESS macro which was proposed by [33], and the results are shown in Table 2, Figure 2 and Figure 3.

(Table 2) Analysis of moderated mediation effect of only-child status in the relationship between social support, hope and life satisfaction

Variables			Mediating variable model (DV: hope)		Dependent variable model (DV: life satisfaction)			
			Coeffec t	SE	t value	Coeffect	SE	t value
Constant			3,6228	.2609	13,8857***	40943	,5428	7,5437***
IV	Social support		.7496	.1309	5,7274***	,6567	.0558	11,7627***
M	Hope		-	-	-	.4765	,0956	4,9833***
MV	Only-child status		,0759	.0675	1,1250			
Int	Social support x Only-child status		-,2574	,0706	-3,6471***			
Covariates	Gender		-,0214	,0607	-,3521	-,1474	.1011	-1,4573
	SES		-,0039	.0660	-,0584	-,3727	.1108	-3,3647***
Model Summary R2		,2869		.5434				
		19,7823***		70,4510***				
Direct effect of X on Y Social support→Life satisfaction		Effect		SE	Confidence interval			
					LLCI*		ULCI**	
		.6567		.0558	.5468		.7665	
Conditional indirect effect of X on Y: Social support →Hope →Life satisfaction		Effect		BootSE	BootLLCI	I	BootULCI	
1: only-child		.23	15	,0654	.1165		.3709	
2: non-only child		.1119		,0383	,0505		,1990	
Index of moderated mediation			Inde	×	BootSE	BootLLCI	I	BootULCI
Only-child status			13	26	.0514	-,2299		-,0290

***p<<001, IV: Independent variable, DV: Dependent variable, M: Mediating variable, MV: Moderated variable, Int interaction terms of variables

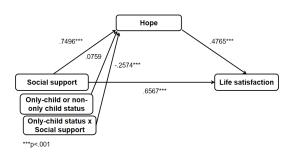
*LLCI = lower bootstrap value within 95% confidence interval **ULCI=Upper Bootstrap value with 95% confidence interval

The independent variable, social support, had a significant positive effect on hope (.7496, p<.001), while only-child or non-only child status had no significant effect on hope (.0759, p>.05). The interaction term between social support and only-child or non-only child status had a statistically significant negative effect on hope (-.2574, p<.001), and therefore had a moderating effect. In other words, higher levels of social support were associated with higher hope. Particularly, the association was stronger for students who are the only-children compared with students who have siblings.

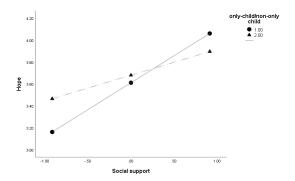
The direct effect, conditional indirect effect, moderated mediation effect of the path from social support to life satisfaction via hope were analyzed. Unlike the total effect, the direct effect refers to the effect of an independent variable on the dependent variable in the presence of a mediating variable and a moderating variable. The direct effect between social support and life satisfaction was .6567 (.5468 to .7665),

which was significant as 0 was not included between the lower limit (BootLLCI) and the upper limit (BootULCI) of the bootstrap within the 95% confidence interval.

For the conditional indirect effect, zero was not included between the bootstrap lower bound (BootLLCI) and the upper bound (BootULCI) within the 95% confidence interval for the two conditions: only-child status (.1165 to .3709), non-only child status (.0505 to .1990). A significant and moderated mediating effect was verified. In view of these results, the moderated mediating effect of only-child or non-only child status was verified in the path from social support to life satisfaction through hope. In addition, the moderated mediating index was -1226 (-.2299 to -.0290), which was significant as 0 was not included between the lower limit (BootLLCI) and the upper limit (BootULCI) of the bootstrap within the 95% confidence interval.



[Figure 2] Statistical model of the moderating effect of only-child status in the moderated mediating effect model



[Figure 3] Moderating effect of only-child status in moderated mediation model

5. Discussion and conclusion

This study aims to present basic data for the verification of whether an only-child status has a moderated mediation effect on the relationship between social support and life satisfaction via hope. The discussion and conclusions of this study are as follows.

To start with, the correlation analysis of the main variables shows a positive correlation among social support, hope and life satisfaction, which is consistent with the previous researches claiming that social support is positively correlated with life satisfaction [6,7], that social support has a positive effect on hope [10], that hope has a positive relationship with life satisfaction [9]. As a result, in order to improve the life satisfaction of college students, it is a necessity to provide more social support and stimulate students' hope for higher life satisfaction.

Secondly, the moderated mediation analysis results show that, the moderated mediation effect of only-child status are testified. Specifically, students who are only children show a high life satisfaction, comparing to students who have siblings. Therefore, more social support should be provided to non-only children.

To sum up, this study confirmed that life satisfaction can be promoted by providing sufficient social support as well as a higher level of hope and a single child status.

Findings of this study should also be considered in the light of a few methodological limitations. First, self-reported measure was used to collect data, so future research should examine the variables using different data collection approaches, such as qualitative method. Second, participants are college students, further studies could be conducted using diverse and large samples. Despite the above limitations, this study is of significance as it identified a moderated mediating effect of an only-child status between social support and life satisfaction through hope in college students.

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마팅팅(Ting Ting Ma)



- · 2013년 3월~2014년 7월: University of Queensland (Master of Commerce)
- · 2021년 10월~현재: Software Engineering Institute of Guangzhou (Teacher)
- · 2022년 2월~현재: Hanseo University (Doctoral Student)
- ·관심분야: Lifelong education
- · E-Mail: mtt_career@163.com

이 창식 (Chang Seek Lee)



- ·1993년 2월~현재: Prof., Hanseo University
- ·2010년 3월~현재: Head, Multicultural Education and Welfare Institute
- ·관심분야: Lifelong Education, Slow Lerner
- · E-Mail: lee1246@hanmail.net