



What Matters for Life Satisfaction of University Students: The Role of Social Capital and Self-efficacy?

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ABSTRACT

The purpose of this article is to look at the life satisfaction of university students in the Chinese city of Ji'nan. Because of the vital importance of university students, their life satisfaction is valuable and should be investigated. The literature on students' life satisfaction leaves the three factors in the study unexplored. As a result, this research attempts to explain the relationship between university students' life satisfaction and individual social capital through the mediating influence of self-efficacy, which may be a novel conceptual model rarely used in prior studies, particularly in Ji'nan, China. The results indicate that the significant positive association of individual social capital with life satisfaction for university students with the mediating effect on self-efficacy. As a non-experimental descriptive study approach, a quantitative (deductive reasoning) technique was utilized to quantify the issue, in which a survey questionnaire was used to collect numerical data, which was then converted into a table.

Keywords: social capital, individual social capital; self-efficacy; life satisfaction; university students

INTRODUCTION

University students must strike a balance between their personal expectations and those of others (friends and family) and have to attempt to discover themselves. During this period of discovery, there may be ups and downs as they adapt to shifting environments and conditions such as living place (BABAYİĞİT, 2019; Marquez et al., 2022). Accordingly, students at universities are increasingly recognized as a vulnerable demographic population (Browning et al., 2021). However, students are prepared to take responsibility for a country's destiny (Saad, 2020). And there is an urgent need to investigate life satisfaction in the context of collectivistic culture, especially among university students (Ain, Munir, & Suneel, 2021). Although the life satisfaction, as a subjective concept, seems impossible to be researched, it is advisable to examine its determining factors.

Additionally, different independent variables related to life satisfaction have been put into investigation. There have been studies focusing on the positive association of individual social capital with life satisfaction among different populations (Yeo & Lee, 2019; Spottswood & Wohn, 2020; Hirooka et al., 2021; Lu & Wu, 2022; Kong & Liu, 2023). And some other scholars have proved that self-efficacy can positively affect the life satisfaction (Moksnes, Eilertsen, Ringdal, Bjornsen, & Rannestad, 2019; Kim & Park, 2020; Deniz, 2021; Tian, Zhou, Qiu, & Zou, 2022; (Zammitti Moreno-Morilla, Romero-Rodriguez, Magnano, & Marcionetti, 2023). In addition, there also have been researchers conducting studies, demonstrating the positive association of individual social capital with self-efficacy (Andersson, 2021; Hasani Moghadam, Yousefi Abdolmaleki, Alijani, Bagherian Afrakoti, & Ganji, 2020; Hudson, Hagedoorn, & Bubeck, 2020; Liu & Ngai, 2020). Nevertheless, the relationship among the three above constructs remains unclear, and the aim of this study tries to bridge the gap by jointing them collaboratively.

LITERATURE REVIEW

Individual Social Capital and Life Satisfaction

Life satisfaction is defined by Diener and the other scholars (1985) as an individual's favorable judgment of the quality of life, according to which subjective well-being is divided into three

basic components: good affect, negative affect and life satisfaction. While the first two sections are about emotions, the third section, life satisfaction, is on the cognitive side of subjective well-being (Ain et al., 2021).

In spite of many different definitions for social capital, the commonly recognized agreement is that social capital includes both a network and the resources available (Bye, Muller, & Oprescu, 2019), entailing “investment in social relations by individuals through which they gain access to embedded resources to enhance expected returns in instrumental or expressive actions” (Lin, Cook, & Burt, 2001). According to social capital theory, interpersonal relationships add value to individuals by providing resources that can be employed to accomplish desired outcomes (Hung & Lau, 2019). According to Luo et al. (2021), social capital is the efficient operation of social groupings through networks of contacts, with individual social capital as one of four dimensions.

With the individual social capital as the determinant of life satisfaction, Bye and the other researchers have looked at the development of individual social capital and its impact on first-year university students’ life satisfaction and wellbeing in an Australian university regardless of program or subject (Bye et al., 2019), the positive impact of individual social capital on the life satisfaction of coaches in Turkey (Atılğan & Tükel, 2021); of the older adults in urban China (Lu & Wu, 2022; Kong & Liu, 2023). Hence, whether the individual social capital can predict the life satisfaction of university students in China has been brought up just as the following hypothesis:

H1: Individual social capital has a positive effect on life satisfaction of university students.

Self-efficacy and Life Satisfaction

Self-efficacy has been characterized in prior studies as “individual judgments of one's ability to organize and execute courses of action to designated goals by evaluating its level, generality, and strength across contexts and activities” (Bandura, 1999). It demonstrates self-assurance in one's ability to exert control over one's motivation, behavior, and social surroundings (Tian et al., 2022). Generally speaking, people with a higher level of self-efficacy were shown to have

more energy, exert less effort, and experience more positive sentiments throughout exercise (Medrano-Urena, Ortega-Ruiz, & Benitez-Sillero, 2020).

Besides, a growing body of studies have testified that the high level of self-efficacy is, the more life satisfaction will be obtained. Just as the researchers demonstrated, for Norwegian adolescents aged 15-21 years, their self-efficacy has significantly influenced their life satisfaction (Moksnes, Eilertsen, Ringdal, Bjornsen, & Rannestad, 2019). The positive impact of self-efficacy on the life satisfaction has also been represented among Korea adolescents (Kim & Park, 2020); the undergraduates students in Turkey (Deniz, 2021); long-distance runners in China (Tian et al., 2022); and university students with the ages ranging from 18 to 30 from 3 countries in West Europe (Zammitti et al., 2023). Thus, here comes the second hypothesis:

H2: Self-efficacy has a positive effect on life satisfaction of university students.

Social Capital, Self-efficacy and Life Satisfaction

In order to improve self-efficacy, some researchers have employed the individual social capital as a predictor. According to Hasani Moghdam and some other colleagues, there has been a positive impact of individual social capital on self-efficacy among women in Iran (Hasani Moghadam et al., 2020). And the other scholars have investigated the facilitating function of individual social capital on self-efficacy for high school students in China (Liu & Ngai, 2020); among the young with job in Swede (Andersson, 2021). Therefore, next hypothesis is to be proposed:

H3: Individual social capital has a positive effect on self-efficacy of university students.

Apart from that, there have been some studies demonstrating the mediating effect of self-efficacy between individual social capital and its determinants (Liu & Ngai, 2020; Andersson, 2021). But there hasn't been the studies conducted to explore the mediating effect of self-efficacy between individual social capital and university students' life satisfaction. As a result, the last hypothesis is put forward:

H4: Self-efficacy mediates the relationship between individual social capital and life

satisfaction of university students.

With the foundation of the above literature and discussion, the following Figure 1 is to be proposed to depict the framework in the study:

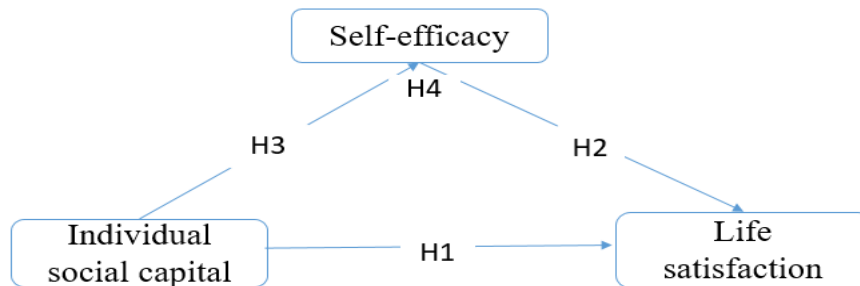


Figure 1: Hypothesized model.

Source: Developed for this research.

METHODOLOGY

Participants

The researchers chose public universities in Ji'nan, China. On the one hand, Ji'nan is the capital of Shandong Province and, thus, the center of politics, economy and education with the second largest population in China. On the other hand, public universities are held with government funding with high requirements of students' admission score. Accordingly, it may be representative to choose the university students in Ji'nan as the targeted population.

This study distributed the questionnaires on the Questionnaire Star online platform. With the employment of snow-balling sampling, 706 questionnaires have been collected. After removing invalid questionnaires, 647 effectives have been obtained with the effective rate of 92%. In the total 647 effective questionnaires, 44.5% were male respondents and 55.5% were female respondents. The respondents majored in science and engineering accounted for 57.5%, while 42.5% of the respondents' major was liberal arts. The family of only-child accounted for 31.2%. Most of the respondents (47.5%) came from the rural areas with 35.9% of the respondents from cities and 16.7% from towns. About the family income, most families' annual income (38.8%) ranged from 50,000 to 100,000 RMB. The respondents' profile is illustrated

in Table 1.

Table 1: *Respondents' profile.*

Item	Frequency	%
Gender		
Female	359	55.5
Male	288	44.5
Discipline		
Science	372	57.5
Arts	275	42.5
Locality		
Urban	108	35.9
Town	232	47.5
Rural	307	
Sibling		
Only child	202	31.2
Non-only	445	68.8
Income		
Below 50,000	169	26.1
50,000-100,000	251	38.8
100,000-200,000	149	23
Above 200,001	78	12
Total	647	100

Source: Developed for this research.

Measurement

This study employed a self-administered survey questionnaire which was developed to investigate the determinants influencing university students' life satisfaction based on the previous related studies. Before distributing the questionnaire to target population, we

conducted a pretest with five experts who are skilled at scientific research, saving the validity of the instrument as a result. Thanks to their feedbacks, we did necessary adjustments and corrections for the questionnaire. After that, a pilot study was carried out to discover any deficiencies or deficits of the research design, whereby the further refinement was suggested with the foundation of advices and comments offered by the pilot study respondents. There were 706 questionnaires collected, among which 59 sets of data were removed because they didn't meet the criteria. Thus, we obtained 647 valid replies for analysis by the newly developed SmartPLS4 in the end.

Measures of social capital, as a higher-order construct, were adapted from a validated Chinese version of Health-related Social Capital Measurement based on youths' characteristics of living and studying environment (Luo, et al, 2021). Participants' level of social capital was assessed by 15 items in four dimensions, i.e., the individual social capital (ISC), the family social capital (FSC), the community social capital (CSC), and the society social capital (SSC) (Luo et al., 2021), among which the present study chose the individual social capital scale. The items use a 5-point Likert scale, which ranges from 1 = strongly disagree to 5 = strongly agree.

As a cognitive feature of subjective well-being that reflects one's felt happiness and satisfaction, life satisfaction refers to one's cognitive process of evaluating quality of life. (Diener, Emmons, Larsen, & Griffin, 1985; Peterson, Park, & Seligman, 2005). Five items were adapted from (Diener et al., 1985). The items use a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree).

In 2004, based on the ideas of the positive psychology movement (Seligman & Csikszentmihalyi 2000), Luthans and Youssef introduced the higher-order construct of psychological capital to capture one's positively oriented human resource strengths and psychological capacities (Luthans & Youssef, 2004). This section contains twenty-four items adapted from Fred Luthans and the other scholars (Luthans, Norman, Avolio, & Avey, 2008), composing a self-reported scale that includes four dimensions with each dimension consisting of six items. The four dimensions included: self-efficacy, optimism, resiliency, and hope, with each item using a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree), from which

the self-efficacy scale was selected in the present study.

RESULTS

Common method bias

Studies that use questionnaires for data gathering frequently use a single source of data. Despite being widely used by social science researchers, single-source data might create an artificial link that lowers the credibility of the conclusions.

Once the independent and dependent variables are measured in the same survey, common method bias may happen (Kock et al., 2021). In order to control it, the authors employed both procedural and statistical techniques before and after collecting the data respectively (Ngah et al., 2021). In the procedural method, the authentic responses will be accepted without right or wrong answers and the researchers made sure the respondents understood that the data was anonymous. Also, various mature scales were used, measuring the dependent variable and mediator with 1-7 score, and independent variable with 1-5 score (MacKenzie & Podsakoff, 2012). In the statistical method, to assess the collinearity of the formative indicators, the variance inflation factor (VIF) is frequently used. The degree of collinearity is higher when VIF values are higher. And the VIF values should ideally be below or near to 3 (Hair et al., 2019). As shown in Table 2, all VIF values are less than 3.3, demonstrating that the study is free of the CMB problem.

Table 2: *Full collinearity testing.*

ISC	LS	SE
1.184	1.199	1.064

Notes: ISC = Individual Social capital, LS = Life satisfaction, SE=Self-efficacy

Source: Developed for this research.

Measurement model

The measurement model and the structural model are the two steps of the study that adheres to the two-step methodology just as Anderson and Gerbing (1988) suggested. There are two different kinds of validities in the measuring model. On the one hand, to assess the convergent

validity, the average variance extracted (AVE) for all items on each construct is the statistic used to assess a concept's convergent validity (Hair et al., 2019). When both the loading and average variance extracted (AVE) exceed or equalize 0.5, as well as the composite reliability (CR) is greater than or equal to 0.7, convergent validity is demonstrated (Hair et al., 2014; Hair et al., 2019). Both the convergent validity and reliability of this study is illustrated in the following table 3.

Table 3: *Convergent validity and reliability assessment.*

Construct	Item code	Loading	CR	AVE
Individual			0.876	0.661
Social Capital (ISC)				
	ISC1	0.836		
	ISC2	0.844		
	ISC3	0.753		
	ISC4	0.817		
	ISC5	0.813		
Life Satisfaction (LS)			0.917	0.743
	LS1	0.887		
	LS2	0.844		
	LS3	0.893		
	LS4	0.869		
	LS5	0.815		
Self-efficacy (SE)			0.931	0.741
	SE1	0.869		
	SE2	0.868		
	SE3	0.846		
	SE4	0.873		

SE5	0.866
SE6	0.844

Source: Developed for this research.

Discriminant Validity

On the other hand, in order to evaluate the discriminant validity, the Heterotrait-Monotrait (HTMT) ratio of correlation criterion rather than the conventional Fornell and Larcker's approach (Henseler, J. et al., 2015) is frequently and commonly put into use. A HTMT threshold of up to 0.85 was advised when the constructs had a stronger conceptual differentiation (Hair et al., 2019). It guarantees that the constructs in the research framework are indeed unique from one another. The results in Table 4 proved the discriminant validity.

Table 4: *Discriminant validity assessment (HTMT).*

Construct	ISC	LS	PCR
ISC			
LS	0.594		
PCR	0.636	0.700	

Source: Developed for this research.

Structural model

Just as what was suggested by Hair et al. (2019), a 5,000-resample bootstrapping technique was employed. And it is essential to confirm that multi-collinearity was not a serious issue in the study before evaluating the hypotheses of the investigation. Diamantopoulos and Sigauw (2006) assert that VIF values must be less than or equal to 3.3 to ensure that multi-collinearity is not a problem. Therefore, the authors came to the conclusion that multi-collinearity is free from worry in the current investigation for all VIF values were less than 3.3, even lower than 3 which is an ideal condition (Hair et al., 2019). Additionally, the beta value's directions all correspond to the hypothesis's direction; all the t-values exceed 1.645; each value of p is zero, far from the standard of being lower than 0.05; and the confidence interval doesn't contain a zero between the lower level (LL) and upper level (LL), all of which are in line with the criteria

put forward by Ngah and the other researchers (2021).

There were 3 direct hypotheses tested to justify the relationship among individual social capital, self-efficacy and university students' life satisfaction under the shadow of stimulus, organism and response in this study. For structural equation modeling, exogenous variables are used to refer to independent variables, while endogenous variables are employed to define dependent variables. The authors used two direct hypotheses to assess life satisfaction from the perspective of individual social capital and self-efficacy, whereby both exogenous variables testified to have a significant impact on the endogenous variable. Just as the following results in Table 5 shows:

Just as the following results show: $ISC \rightarrow LS$ ($\beta = 0.238$, $p < 0.01$) and $SE \rightarrow LS$ ($\beta = 0.575$, $p < 0.01$) explaining 46% of variance in life satisfaction. Effect sizes were determined by f^2 values, as indicated by Cohen and the f^2 values of 0.02, 0.15, and 0.35 represent the small, medium and large respectively (Cohen, 2018). The results express that individual social capital has a large effect size on self-efficacy ($f^2=0.495$), and self-efficacy has a medium effect size on life satisfaction ($f^2=0.325$), while it has a small effect size on life satisfaction ($f^2=0.70$). Thus, hypotheses 1 and 2 are supported.

The results about the second endogenous variables, i.e. self-efficacy reveal that individual social capital ($\beta = 0.513$, $p < 0.01$) has a positive effect on self-efficacy, explaining 33.1% of the variance of self-efficacy. The results indicate that individual social capital has a small effect size on self-efficacy, which supports the hypotheses 3.

In order to explore the predictive competence of the study, the authors conducted a mediating analysis with the self-efficacy of psychological capital as a mediator within the framework. According to the guidelines that Preacher and Hayes (2008) put forward, the indirect effect can be tested and checked by bootstrap to examine the absence or presence of zero ranging from lower to upper levels of the confidence interval. The results show that the self-efficacy of psychological capital functions as a mediator in the relationship between the individual social capital and life satisfaction ($\beta = 0.295$, $p < 0.01$). Since there is no zero between the lower and upper levels, hypotheses H4 is supported. Both the direct and indirect effects of the study are

illustrated in the table 5.

Table 5: Hypotheses testing.

Hypo	Relationship	Beta	Se	T value	P value	LL	UL	R ²	f ²	VIF
H1	ISC-LS	0.238	0.048	4.982	0.000	0.145	0.331	0.460	0.070	1.495
H2	SE-LS	0.575	0.034	17.121	0.000	0.419	0.600		0.325	1.495
H3	ISC-SE	0.513	0.047	10.980	0.000	0.500	0.634	0.331	0.495	1.000
H4	ISC-SE-LS	0.295	0.034	8.615	0.000	0.227	0.361			

Source: Developed for this research.

Because of the restriction of the blindfolding to examine the predictive function, the authors employed the PLS to compare the Root Mean Square Error (RMSE) and the Linear Modeling (LM) RMSE in order to use the PLS to anticipate measuring mistakes (Shmueli et al., 2019). When all of the discrepancies between the PLS and LM are less than 0, the model is said to have a strong ability to predict the future. Predictive reliability is deemed moderate if the majority of differences are less than 0. A low predictive power is indicated by a minority of values that are less than 0. The predictive relevance will not be justified if there are any things higher than 0, though. It is proved that the model has a medium predictive power because most of items for all dependent variables are less than the values predicted by linear modeling. The study of the PLS predict is illustrated in Table 6.

Table 6: PLS predict.

Item	PLS RMSE	LM RMSE	Q2_Predict
LS1	1.336	1.339	0.227
LS2	1.340	1.341	0.192
LS3	1.321	1.331	0.212
LS4	1.494	1.505	0.231
LS5	1.731	1.739	0.179
SE1	1.156	1.157	0.215

SE2	1.293	1.288	0.233
SE3	1.178	1.180	0.267
SE4	1.136	1.147	0.224
SE5	1.173	1.162	0.272
SE6	1.097	1.090	0.241

Source: Developed for this research.

Conclusion and recommendations

Life satisfaction is a prime construct implying living condition of people. In order to further the understanding of university students' life satisfaction, the authors employed individual social capital as the antecedent and self-efficacy as the mediator to explain the life satisfaction. The results indicated that individual social capital has a positive effect on life satisfaction, which reinforced the prior findings in the studies of Lu and Wu (2022), as well as Kong and Liu (2023) who also proved the positive relationship between individual social capital and life satisfaction. Consequently, it is obvious that individual social capital is vitally important to life satisfaction from the positive aspect. The other construct explaining university students' life satisfaction is self-efficacy of psychological capital. The outcomes also indicated that self-efficacy is positively associated with life satisfaction, which corresponds to the prior studies conducted by Kim and Park (2020), along with Deniz (2021) and Tian and the other researchers (2022). Hence, it comes to the conclusion that self-efficacy can positively influence the university student's life satisfaction. In addition, another important finding in the present study is the mediating effect of self-efficacy between the relationship of individual social capital and life satisfaction has been investigated.

Consequently, the present study is making noticeable contribution to the prior research in the following ways. To begin with, the study explores the university students' life satisfaction from the perspective of their individual social capital. Secondly, the mediating effect of self-efficacy is employed in the above relationship. Thirdly, the study broadens and extends the related literature about university students' life satisfaction.

In spite of the above findings, there are limitations in this study. Firstly, research on life satisfaction of university students still needs to be furthered in different contexts to supply valuable information on how to plan and design the related activities to improve their life satisfaction. Secondly, there are some other relevant predictors of life satisfaction, which should be thoroughly explored to supplement the extant findings on either their mediating or the moderating effect in the framework.

Based on the above limitations of this study, future research should focus on different populations from different regions. And to assess the similarities and differences between international and local university students, comparative research between local and foreign university students would be ideal.

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