

The role of loneliness and general health in predicting life satisfaction

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Abstract

Students are one of society's most important groups, and their health and well-being are among every nation's priorities. Satisfaction with life, as one of the effective components of well-being, is related to mental and physical health; throughout time, the feeling of satisfaction with one's life faces some ups and downs. This descriptive study investigated the relationship between loneliness, general health, and student satisfaction and was carried out using correlational designs on the statistical population of Sistan and Baluchistan University students in 2023. Furthermore, 106 people were selected among male and female students by the convenience sampling method, and they were

asked to complete satisfaction questionnaires: Huebner's life, Goldberg's general health scale, and Russell's loneliness questionnaire. The collected data were analyzed using SPSS 22 software through Pearson's correlation coefficient and step-by-step regression model. The findings indicated a significant relationship between life satisfaction, general health, and loneliness ($p < 0/001$). Also, the step-by-step regression analysis showed that loneliness can predict life satisfaction ($p < 0/001$). It seems that the developments and conditions of the student period and the distance of most students from their families pose serious challenges, including the unpleasant feeling of loneliness, which overshadows life satisfaction and, consequently, the psychological well-being of this young group, ultimately reducing their efficiency. Their social and educational skills are adequate; therefore, self-care behaviors, creating and developing stable social interactions in academic environments, and seeking help for mental and emotional health problems are emphasized. Considering the limitations of the current research and its cross-sectional nature, longitudinal studies in this field are recommended.

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Key words: life satisfaction, general health, loneliness, students.

Contributions: both authors made a substantial intellectual contribution, read and approved the final version of the manuscript and agreed to be accountable for all aspects of the work.

Conflict of interest: the authors declare that they have no competing interests.

Ethics approval and consent to participate: all ethical aspects have been fully implemented in all stages.

Funding: none.

Availability of data and materials: data and materials are available from the corresponding author upon request.

Received: 10 March 2024.

Accepted: 19 March 2024.

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Mental Wellness 2024; 2:9
doi:10.4081/mw.2024.9

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Introduction

Entering university is one of the most sensitive and challenging events in the lives of young people.¹ Students are more esteemed and valued in society from two perspectives: first, this period coincides with the most potent and opportune stage of one's life, and second, students are considered an elite group among youth because of their intellectual abilities and academic talents.² Because of factors like academic pressures, separation from family, and intense competition, the university education period is fraught with tension and serves as a breeding ground for personal and social problems that can also affect individual life satisfaction.³

Life satisfaction is a broad concept that depends on an individual's mental assessment of the extent to which their needs and goals are met. It comprises two components: cognitive (cognitive evaluation of life satisfaction) and affective (maximizing positive affect and minimizing negative affect).⁴ Achieving life satisfaction plays a prominent role in students' lives, as research evidence suggests its positive and meaningful correlation with physical and mental well-being.⁵ It also enhances feelings of competence and self-esteem, leading to better performance by students in various domains, including academic and social.⁶ Therefore, investigating the factors involved in creating and promoting life satisfaction among students is of great importance. Previous studies show that students' life satisfaction is influenced by various individual, social, and environmental factors.^{5,7} Studies show that life satisfaction is associated with essential variables such as depression,^{8,9} indicators of mental health like anxiety and sleep disturbances,¹⁰ as well as physical health.¹¹

Some research also suggests that life satisfaction predicts desirable outcomes for lifespan and reduces the effects of physical and mental health problems.¹² Life satisfaction is correlated with poorer health status, behavioral problems, depressive symptoms, and weaker social relationships.¹³

Another factor related to life satisfaction is loneliness and isolation, which are prevalent experiences worldwide.¹⁴ Loneliness is defined as a subjective feeling of deficiencies in a network of social relationships. These deficiencies can be quantitative and qualitative, and the absence of this feeling can lead individuals to exhibit avoidance behaviors in social interactions because of a lack of alignment between their expectations and desires and the possibilities in social relationships. Loneliness also extends to the environment in which a person lives and is influenced by various social, economic, and cultural factors; marital status, life arrangements, and personal social network characteristics are consistently among the most potent predictors of loneliness.¹⁵

Studies on loneliness highlight that individuals with better mental health and fewer functional impairments experience less loneliness.¹⁶ Social isolation and loneliness are serious yet often overlooked risks to public health, and many physical and mental health issues are associated with loneliness, which is considered a threat to mental health. Research shows that loneliness is among the cognitive risk factors for health and well-being and leads to severe immediate and long-term consequences for mental health.¹⁷ Other studies also suggest a meaningful negative relationship between life satisfaction and loneliness.¹⁸⁻²²

Some studies also suggest a relationship between life satisfaction and health.^{23,24} Maintaining and improving public health is a fundamental priority for societies. Based on existing definitions, public health refers to the ability to fulfill social, psychological, and physical roles in different developmental stages.²⁵ Researchers have considered an individual or group's perceived physical, mental, and social well-being as indicative of health.²⁶

Evidence suggests that an increase in depressive symptoms is accompanied by an increase in loneliness in adults.²⁷ Studies have shown that loneliness worsens health.²⁸ In another study examining the relationship between lifestyle, depression, and the mediating role of loneliness, it was acknowledged that healthy lifestyle habits have a negative relationship with loneliness and that there is a significant and meaningful positive relationship between loneliness and depression.²⁹ Additionally, mental health significantly and directly affects life satisfaction.³⁰ Research findings investigating the relationship between mental health, loneliness, and life satisfaction indicate a negative relationship between loneliness and psychological distress with life satisfaction.³¹

Since students are among the main assets of any country and often represent the youthful and innovative segment of society, physical and mental health and enhancing life satisfaction are essential topics in mental health. Harm to young people and neglect of factors related to their well-being and mental health have irreparable and severe effects on the entire society. Considering the conducted research briefly mentioned and the lack of comprehensive research in this area on the young population, especially on university students, given that various institutions can use the results of this research for planning to improve health and consequently increase life satisfaction among young students, the present study aimed to investigate the role of loneliness and general health in creating life satisfaction among university students. Therefore, this study presents three hypotheses: first, that there is a significant relationship between life satisfaction and general health. Second, there is a meaningful relationship between life satisfaction and loneliness. Finally, general health and feelings of loneliness significantly predict life satisfaction.

Materials and Methods

Study design

The current study was conducted with an applied objective and as a post-event, non-experimental investigation, utilizing correlation and regression designs.

Population, sample size, and sampling method

The current study population consisted of students at the University of Sistan and Baluchestan enrolled in the academic year 2023. Tabachnick and Fidell recommended a sample size of over 100 participants, considering the existence of scales and subscales. The sampling method was convenience sampling, and three questionnaires on general health, loneliness, and life satisfaction were made available to volunteers in electronic form.

Study instruments

Life satisfaction scale

Huebner designed the life satisfaction questionnaire in 2001. It consists of 40 questions and is scored using a Likert scale ranging from 1 (completely disagree) to 6 (completely agree). Researchers in Iranian society standardized it and used exploratory factor analysis to determine its validity, which was ultimately confirmed. Cronbach's α was used to calculate the reliability of the life satisfaction questionnaire. Test-retest and Cronbach's α reliability coefficients were reported as 0.70 and 0.90, respectively.³²

General health scale

The general health questionnaire was prepared by Goldberg in 1972. The original questionnaire consists of 60 questions, but shortened forms of 30, 28, and 12 questions have been used in various studies. According to researchers, different forms of the general health questionnaire have high validity and reliability, with the 12-item form being nearly as effective as the 60-item form. In this set, a 28-item form is presented, which includes four subscales of somatic symptoms: anxiety, social dysfunction, and depression. Scoring in this questionnaire is done using a Likert-type scale, with options scored as 0, 1, 2, 3. Researchers reported a reliability coefficient of 0.95 for this questionnaire using the split-half method based on responses from 853 participants.³³

Loneliness scale

The loneliness questionnaire was developed by Russell, Peplau, and Ferguson in 1978. The questionnaire items are designed based on a 5-option Likert scale (ranging from "never" to "always"). The questionnaire consists of 20 questions with four options, including ten negative and ten positive statements. The reliability of this test was reported at 78% in the revised version. The test's reliability was also reported at 89% using the test-retest method.³⁴

Procedure

A total of 106 students from Sistan and Baluchestan University were selected through convenience sampling. Necessary explanations about the research were provided to the individuals, and their consent was obtained. Participants completed three questionnaires on general health, loneliness, and life satisfaction individually. After completing the surveys and correcting them, data analysis was conducted.

Statistical analysis

In the data analysis phase, the Pearson correlation was used after calculating descriptive statistics (mean and standard deviation) to examine the relationship between differentiation, attachment styles, and ego strength. Stepwise regression was employed to determine the predictive role of attachment styles and ego strength in differentiation. Statistical operations were performed using the SPSS software (IBM, Armonk, NY, USA).

Results

According to Table 1, the age group of the participants is as follows: 8 people (7.5%) are under 21 years old, 95 people (89.6%) are between 21 and 30 years old, and 3 people (2.8%) are between 31 and 40 years old. The participants' gender was as follows: 47 (44.33%) were male, and 59 (55.66%) were female. The education levels of the participants are: 72 people (67.9%) have a bachelor's degree, 29 people (27.4%) have a master's degree, and five people (4.7%) are at a doctorate level.

The findings in Table 2 of the descriptive indices of the scales and subscales of the three questionnaires show differentiation, ego strength, and attachment styles. According to Table 2, the mean and standard deviation for the life satisfaction scale are 186.08 and 25.17, for the general health scale, 46.02 and 11.29, and for the loneliness scale, 37.53 and 15.11. In the following, Pearson's correlation coefficient was used to check the correlation's significance between the research scales' scores.

These results are presented in Table 3. It should be noted that the normality of the data was determined by the Kolmogorov-Smirnov test, and the data were normal ($p > 0.05$). According to Table 3, the Pearson's correlation coefficient result showed a significant and inverse relationship between life satisfaction, loneliness, and general health. The stepwise regression test has been used in life satisfaction. The assumptions of multiple regression include the linearity of relationships and the constancy of variance in the error score. The normality of their distribution and the linearity of the relationship between the remaining scores and the predictor were checked, and all the assumptions resulted from the rationality of the analysis. As a result, it is possible to use step-by-step regression in this research.

Table 3. Pearson correlation between research scales.

	1	2	3
1. Life satisfaction	-	-	-
2. Loneliness	-0.68 $p < 0.001$	-	-
3. General health	0.63 $p < 0.001$	-0.53 $p < 0.001$	-

Table 4. Summary of step-by-step regression analysis in predicting life satisfaction.

Step	Predictor variable	R ²	R	F	sig
1	Loneliness	0.46	0.68	90.81	$p < 0.001$

sig, significance.

Table 5. Standard and non-standard regression coefficient in life satisfaction.

Variables	b	B	T	sig
Constant		256.14	33.84	$p < 0.001$
Loneliness	-0.68	-1.52	-9.53	$p < 0.001$

sig, significance.

The results of Table 4 show that the feeling of loneliness entered the equation in only one step, and this variable explains 46% of the variance of life satisfaction, which is significant ($p < 0.001$). The public health component has been removed because of a lack of impact.

Table 5 shows the standard and non-standard regression coefficients in life satisfaction, showing that loneliness can significantly predict life satisfaction.

Discussion

Students are considered among the assets of every nation, a capital that must be prioritized for preservation and sustainability to envision a brighter future for progress and elevation of knowledge. This research investigates the role of loneliness and general health in

Table 1. Demographic characteristics of participants.

Variables	Frequency	Frequency percentage (%)
Age yield		
Under 21 years	8	7.5
21 to 30 years	95	89.6
31 to 40 years	3	2.8
Gender		
Male	47	44.33
Female	59	55.66
Educational level		
Undergraduate student	72	67.9
Master's student	29	27.4
Ph.D. student	5	4.7

Table 2. Descriptive indicators of research scales.

Variable	Mean	SD
Life satisfaction	186.08	25.17
General health	46.02	11.29
Loneliness	37.53	15.11

SD, standard deviation.

predicting students' life satisfaction. In the first hypothesis, we posited that there is a significant relationship between life satisfaction and general health, which can be affirmed based on the research findings. These results align with the findings of Mambini and board,³¹ Zanjari *et al.*,²¹ Salimi *et al.*,¹³ and Fardi and Ahmadi.¹²

Based on the findings, it can be concluded that there is a significant and inverse relationship between life satisfaction and general health, meaning that as individuals' physical and psychological problems increase, their life satisfaction decreases, and vice versa. Student life presents individuals with various psychological challenges and physical hardships, which significantly reduce their life satisfaction. Therefore, addressing issues and problems such as poor university food quality, a lack of hygiene in dormitories, and the need for stress-reducing physical and psychological activities at the university can be among the reasons for the emergence of mental and physical illnesses that decrease life satisfaction in students. Studies by Zanjari *et al.* have shown that various health status indicators positively correlate with life satisfaction, while worsening nutrition, mental health status, and physical limitations decrease life satisfaction.²¹

In the second hypothesis of this research, we stated that there is a significant relationship between life satisfaction and loneliness. The results have also confirmed this hypothesis. These findings are consistent with the studies of Fokoue-Ouassou *et al.*,¹⁸ Yan *et al.*,²⁰ Henrich and Gullone.¹⁷ Based on the results, it can be said that there is a significant and inverse relationship between life satisfaction and loneliness. When a person experiences loneliness more frequently, their satisfaction with life tends to decrease. Students are often compelled to leave their parental homes and live in the city where they study, significantly increasing the need for belongingness as a fundamental need for individuals. Therefore, creating and maintaining strong and stable relationships for individuals is essential. The more students find an intimate and safe environment in the university setting, the more their life satisfaction increases. In the third hypothesis of the research, we stated that loneliness and general health can significantly predict life satisfaction. The present research results have shown that loneliness only has a solid and significant predictive ability for life satisfaction and general health, and despite its significant and robust relationship, it cannot predict life satisfaction. Various factors beyond individual mental health can influence the prediction of life satisfaction. These factors include environmental conditions such as economic and social status, personal factors like goals and values, self-awareness level, problem-solving abilities, and individuals' past experiences. All these factors can directly or indirectly impact life satisfaction, and a deeper understanding of these influential factors can improve individual and societal psychology.

Practical implications

Considering the importance of the student population for the progress and development of the country, conducting specialized research on this group of individuals should be more widespread. Based on the research findings, it can be stated that organizing courses and workshops to maintain and improve general health and enhance students' ability to establish healthy and normal relationships can take a helpful step toward increasing life satisfaction. It is worth mentioning that university officials should also take the necessary measures to create a safe, healthy, and dynamic environment for students.

Limitations

One limitation of the current research is that the studied population consisted of students from various levels and fields of study at Sistan and Baluchestan University. Therefore, caution should be

exercised when generalizing the results to other segments of society. Another critical point is that this research solely relied on questionnaires, and due to insufficient access to all students, interviews were not conducted. This limitation can affect the ability to generalize the results. Due to the ease and cost reduction of the research, the data was collected cross-sectionally, and the available sampling method was used.

Conclusions

Public health and feelings of loneliness due to a meaningful relationship can be essential variables in employment and measuring individuals' satisfaction with life. Considering the ability of loneliness to predict life satisfaction, more emphasis can be placed on it, so in all future studies in health psychology or the use of necessary tools in psychotherapy, the results of this research can be used. Of course, this research has been conducted explicitly on students, which indicates the necessity and high importance of designing and implementing practical programs to increase public health and reduce loneliness for students, university managers, and officials.

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