Research in Health & Medical Sciences *Research Article*

2025 October; 4(4)

The Protective role of life skills in the prevention of depression and anxiety among female university students

Samaneh Shahi Sanobari[1], Bahram Ali Ghanbari Hashemabadi[*1]

[1] Department of Psychology, Faculty of Education and Psychology, Ferdowsi University of Mashhad, Mashhad, Iran

***Corresponding Author Email: ghanbarih@ferdowsi.um.ac.ir**
Received: 2026/3; Revised: 2026/7; Accepted: 2026/7

Abstract

Depression and anxiety are common mental health problems among university students and can negatively affect academic functioning, emotional adjustment, and quality of life. Female students may be especially vulnerable to internalizing symptoms. Life skills may act as modifiable protective factors by improving coping, self-awareness, decision-making, interpersonal functioning, and purpose in life.

Objectives: This study examined whether total life skills and their components predict depression and anxiety among female undergraduate students.

This descriptive-correlational cross-sectional study was conducted on 233 female undergraduate students at Ferdowsi University of Mashhad selected through convenience sampling. Data were collected using the Saatchi Life Skills Questionnaire and the 28-item General Health Questionnaire. Pearson correlation coefficients and hierarchical regression analyses were conducted in SPSS-26. Age was entered as a control variable in the first step, followed by total life skills score or life skills components in the second step. Bootstrap analysis with 1000 resamples was applied to increase robustness.

Total life skills significantly and negatively predicted depression and anxiety. Self-awareness training and having a purpose in life predicted lower depression. Self-awareness training, purpose in life, and mental hygiene and mental health predicted lower anxiety, while decision-making skill showed a positive coefficient.

: Life skills appear to protect female students' mental health, particularly self-awareness and purpose in life. Findings should be generalized only to similar populations.

Keywords: Life skills; Depression; Anxiety; Female students; University students; Hierarchical regression

[Downloaded from jrhms.thums.ac.ir on 2026-09-10]

Introduction

Mental health problems among university students have become an important public health and higher education concern. The university period is often accompanied by academic pressure, identity development, separation from family, social adjustment, financial concerns, and uncertainty about future occupational and relational roles. These stressors may increase vulnerability to psychological symptoms, especially depression and anxiety.

Recent meta-analytic evidence indicates that depression and anxiety symptoms are highly prevalent in student populations worldwide. In a systematic review and meta-analysis of 64 studies involving 100,187 college students, the pooled prevalence of depressive symptoms was 33.6% and that of anxiety symptoms was 39.0% (1). Similarly, a meta-analysis of undergraduate university students reported a weighted mean prevalence of 39.65% for non-specific anxiety, and in approximately half of the included studies, female gender was associated with higher anxiety levels (2). These findings highlight the importance of identifying protective factors that may reduce vulnerability to emotional problems among female students.

Domestic evidence also suggests that depression and anxiety are important concerns in Iranian student populations. A systematic review and meta-analysis of Iranian students estimated the overall prevalence of depression at 40%, with similar rates among female students and higher rates among unmarried students (3). More recently, a systematic review and meta-analysis of medical students in Iran reported a pooled prevalence of depression of 15.2%, and also indicated that depression was more common among female students and had increased over time (4). In addition, Iranian single-center studies have reported considerable levels of anxiety and depression among medical and nursing students, including female medical students and students during the COVID-19 pandemic (5,6). Although these studies differ in target population, instrument, and historical context, together they indicate that emotional symptoms among Iranian university students require preventive attention.

International evidence has also emphasized the importance of mental health in university populations. The World Health Organization has highlighted mental health and well-being as essential components of public health (7). Large-scale findings from the WHO World Mental Health Surveys International College Student Project have shown a considerable prevalence of mental disorders among college students (8). In addition, global evidence indicates that depressive and anxiety disorders impose substantial personal and social burdens (9).

From the stress-vulnerability perspective, psychological symptoms emerge through the interaction between external stressors and internal vulnerabilities, including maladaptive cognitive processing, poor emotional regulation, and insufficient coping resources (10). Students entering university may experience behavioral, emotional, and adjustment-related problems, and some may delay or avoid treatment-seeking despite distress (11). Depression and anxiety are also associated with impaired executive functioning, reduced self-efficacy, interpersonal dysfunction, and increased risk for suicidal ideation and behavior (12-15). Therefore, prevention and early psychosocial support are essential.

Life skills are among the modifiable psychosocial factors that may protect students from psychological distress. Life skills include cognitive, emotional, interpersonal, and behavioral competencies that help individuals cope effectively with everyday demands. These skills include self-awareness, communication, decision-making, problem-solving, emotional regulation, creative thinking, critical thinking, cooperation, and purposeful living. International frameworks such as social and emotional learning emphasize competencies related to self-awareness, self-management, social awareness, relationship skills, and responsible decision-making (16, 17). The World Health Organization has also highlighted life skills education as a

[Downloaded from jrhms.thums.ac.ir on 2026-09-10]

preventive and promotive approach to mental health (18).

The theoretical relevance of life skills is supported by several psychological models. Rumination is known to contribute to depressive and mixed anxiety-depressive symptoms (19), while cognitive and emotional skills may help individuals evaluate stressors more adaptively (20,21). Evidence from school-based and preventive programs suggests that social and emotional learning and life skills interventions can improve adjustment and reduce psychological problems (22, 23). Female students may be especially vulnerable to internalizing symptoms due to biological sensitivity to emotional stimuli, gendered social expectations, and differences in coping style (24-26). Therefore, identifying protective life skills among female students is both theoretically and practically important.

In Iran, life skills and related psychosocial competencies have also received increasing attention. The Saatchi Life Skills Questionnaire has been used in Iranian psychological assessment contexts (27), and domestic studies have examined life skills in relation to emotional-behavioral problems and educational outcomes (28, 29). Previous Iranian evidence also suggests that strengthening life skills can improve general health and reduce distress (30, 31).

Despite existing evidence, several gaps remain. Many studies have examined life skills as a total score without identifying which components are most important. Gender-sensitive studies are also limited, although female students may experience higher vulnerability to depression and anxiety. Moreover, culturally grounded evidence from Iranian university settings remains necessary. Therefore, the main research question of the present study was: **Which components of life skills have the greatest predictive power for depression and anxiety among female undergraduate students?** Accordingly, the present study examined the protective role of total life skills and life skills components in predicting depression and anxiety among female undergraduate students at Ferdowsi University of Mashhad.

Objectives

The main objective of this study was to determine whether total life skills and their components predict depression and anxiety among female undergraduate students.

The specific objectives were:

1. To examine the relationship between total life skills and depression.
2. To examine the relationship between total life skills and anxiety.
3. To determine whether total life skills predict depression and anxiety after controlling for age.
4. To identify which life skills components have the greatest predictive power for depression and anxiety.

It was hypothesized that higher total life skills would be associated with and would predict lower levels of depression and anxiety among female undergraduate students. It was also expected that specific components of life skills, particularly self-awareness, purpose in life, problem-solving, and interpersonal skills, would show significant negative associations with depression and anxiety.

Methods

Study Design

This study employed a descriptive-correlational, cross-sectional design.

Participants and Sampling

The statistical population consisted of female undergraduate students at Ferdowsi University of Mashhad. A total of 233 female undergraduate students were selected through convenience sampling.

Because convenience sampling was used, the representativeness of the sample is limited. Therefore, the findings should be generalized only to populations similar to female undergraduate students at Ferdowsi University of

[Downloaded from jrhms.thums.ac.ir on 2026-09-10]

Mashhad rather than to all female university students in Iran.

Control Variables

Age was entered into the regression models as a control variable. Because all participants were female undergraduate students from a relatively homogeneous academic context, gender lacked variation and could not be statistically controlled. Marital status, field of study, socioeconomic status, and academic year were not collected in the demographic form; therefore, they could not be included in the analyses. This issue is acknowledged as a study limitation.

Instruments

Saatchi Life Skills Questionnaire

The Saatchi Life Skills Questionnaire was developed by Saatchi and colleagues (27). It consists of 40 items rated on a five-point Likert scale and includes 10 components: self-awareness training, having a purpose in life, skills related to human communication, interpersonal relations, decision-making skills, mental hygiene and mental health, problem-solving skills, participation and cooperation skills, creative thinking, and critical thinking. The reliability of the questionnaire has been reported as 0.83. Its validity was confirmed in the study by Saatchi and colleagues. To obtain the total score on this instrument, the scores of all questionnaire items are summed. To obtain the score for each subscale, the scores of the items corresponding to that subscale are summed. The minimum possible score is 40 and the maximum possible score is 200.

General Health Questionnaire-28

The General Health Questionnaire was designed by Goldberg and Hillier in 1979 (32). At present, 60-item, 30-item, 28-item, and 12-item versions of this instrument are available. In the present study, the 28-item version of the General Health Questionnaire was used. It comprises four subscales: somatic symptoms, anxiety, social dysfunction, and depression. The sum of the scores on these four subscales constitutes the overall mental health score. The items are answered on a four-point Likert scale.

The 28-item questionnaire, which was developed by Goldberg through factor analysis of the longer form, comprises four subscales, each containing seven items. The first subscale pertains to somatic symptoms and includes items concerning respondents' perceptions of their health status and feelings of fatigue (Items 1, 2, 3, 4, 5, 6, 7). The second subscale pertains to anxiety and includes seven items related to the assessment of anxiety (Items 8, 9, 10, 11, 12, 13, 14). The third subscale is social dysfunction. This scale measures individuals' ability to cope with occupational demands and the everyday problems of life and reflects their feelings about how they manage ordinary life situations (Items 15, 16, 17, 18, 19, 20, 21). The fourth subscale pertains to depression and includes items related to severe depression and suicidal tendencies (Items 22, 23, 24, 25, 26, 27, 28). The average completion time for the Persian version of the GHQ-28 is approximately 8 minutes, and individuals who take longer than 12 minutes to complete it are likely to be showing resistance and attempting to portray their condition differently from reality.

Administration of this questionnaire yields five scores for each respondent: four subscale scores and one total score for all items. The most appropriate scoring method is the simple Likert method, with scores of 0, 1, 2, and 3 assigned to the response options. Taghavi (33) reported the reliability coefficients of the General Health Questionnaire, based on the test-retest, split-half, and Cronbach's alpha methods, as 0.93, 0.70, and 0.90, respectively. In addition, the concurrent validity of the General Health Questionnaire, established through simultaneous administration with the Middlesex Hospital Questionnaire, was reported as 0.55, and the correlation coefficients between the subscales of this instrument and the total score were satisfactory, ranging from 0.72 to 0.87. Therefore, the mental health scale demonstrates good reliability and validity. In the present study, the anxiety subscale and

[Downloaded from jrhms.thums.ac.ir on 2026-09-10]

depression subscale were used as outcome variables.

Data Analysis

Data were analyzed using SPSS version 26. Descriptive statistics were first calculated. Pearson correlation coefficients were used to examine bivariate associations between total life skills, depression, and anxiety. Hierarchical regression analyses using the Enter method were then conducted. In the first step, age was entered as a control variable. In the second step, either total life skills score or the 10 life skills components were entered.

Prior to regression analyses, assumptions of normality, independence of errors, and absence of multicollinearity were examined. Skewness and kurtosis values were within acceptable ranges, with only mild deviation for depression. Durbin-Watson indices were 1.964 for depression and 2.089 for anxiety, indicating acceptable independence of errors. Multicollinearity diagnostics were also acceptable, with tolerance values above 0.30 and VIF values below 3 in the component-level models. Because mild deviation from normality was observed, particularly for depression, bootstrap estimation with 1000 resamples was used to obtain more robust standard errors and confidence intervals (34).

Results

The sample consisted of 233 female undergraduate students at Ferdowsi University of Mashhad. The mean age of participants was 20.77 years, with a standard deviation of 4.80.

Pearson correlation analyses indicated significant associations among the main study variables. Depression and anxiety were strongly and positively correlated, $r = 0.70$, $p < 0.01$. Total life skills showed significant negative correlations with both depression, $r = -0.33$, $p < 0.01$, and anxiety, $r = -0.20$, $p < 0.01$, indicating that higher levels of life skills were associated with lower levels of psychological symptoms.

Table 1. Correlations of Life Skills with Depression and Anxiety

Variables	Depression	Anxiety	Life Skills
Depression	1	0.70**	-0.33**
Anxiety		1	-0.20**
Life Skills			1

Note. **p < 0.01.

Hierarchical regression analysis was conducted to examine whether total life skills predicted depression after controlling for age. In the first step, age was entered into the model and did not significantly explain variance in depression, $R^2 = 0.001$, F (1, 231) = 0.294, $p = 0.588$. In the second step, total life skills were added to the model, resulting in a significant increase in explained variance, $\Delta R^2 = 0.118$, ΔF (1, 230) = 30.738, $p < 0.001$.

The final model was significant and explained 11.9% of the variance in depression, $R = 0.345$, $R^2 = 0.119$, adjusted $R^2 = 0.111$, F (2, 230) = 15.535, $p < 0.001$. In the final model, total life skills was a significant negative predictor of depression, $B = -0.088$, $SE = 0.016$, $\beta = -0.347$, $t = -5.544$, $p < 0.001$, 95% CI (-0.119, -0.057). Bootstrap results confirmed this effect, $B = -0.088$, bootstrap $SE = 0.017$, $p = 0.001$, 95% CI (-0.122, -0.059). Age was not a significant predictor of depression in the final model, $B = -0.048$, $SE = 0.035$, $\beta = -0.085$, $t = -1.352$, $p = 0.178$.

[Downloaded from jrhms.thums.ac.ir on 2026-09-10]

Table 2. Hierarchical Regression Predicting Depression from Total Life Skills after Controlling for Age

Model	Predictor	B	SE	β	t	p	R^2	ΔR^2	Tolerance	VIF
1	Age	-0.020	0.037	-0.036	-0.542	0.588	0.001	0.001	1.000	1.000
2	Age	-0.048	0.035	-0.085	-1.352	0.178	0.119	0.118	0.980	1.020
2	Total life skills	-0.088	0.016	-0.347	-5.544	<0.001			0.980	1.020

A second hierarchical regression analysis examined whether total life skills predicted anxiety after controlling for age. In Step 1, age did not significantly predict anxiety, $R^2 = 0.002$, F (1, 231) = 0.376, $p = 0.540$. In Step 2, adding total life skills significantly improved the model, $\Delta R^2 = 0.038$, F change (1, 230) = 9.185, $p = 0.003$. The final model was significant and explained 4.0% of the variance in anxiety, $R = 0.200$, $R^2 = 0.040$, adjusted $R^2 = 0.032$, F (2, 230) = 4.787, $p = 0.009$. In the final model, total life skills significantly and negatively predicted anxiety, $B = -0.051$, $SE = 0.017$, β = -0.198, $t = -3.031$, $p = 0.003$, 95% CI (-0.084, -0.018). Bootstrap results also supported this finding, $B = -0.051$, bootstrap $SE = 0.019$, $p = 0.009$, 95% CI (-0.089, -0.014). Age remained non-significant.

Table 3. Hierarchical Regression Predicting Anxiety from Total Life Skills After Controlling for Age

Model	Predictor	B	SE	β	t	p	R^2	ΔR^2	Tolerance	VIF
1	Age	0.039	0.064	0.040	0.613	0.540	0.002	0.002	1.000	1.000
2	Age	0.012	0.064	0.012	0.190	0.849	0.040	0.038	0.980	1.020
2	Total life skills	-0.051	0.017	-0.198	-3.031	0.003			0.980	1.020

To determine the specific contribution of life skills components to depression, a hierarchical regression analysis was performed with age entered in Step 1 and the 10 life skills components entered simultaneously in Step 2. Adding the life skills components significantly increased explained variance, $\Delta R^2 = 0.249$, F change (10, 221) = 7.320, $p < 0.001$. The final model explained 25.0% of the variance in depression, $R = 0.500$, $R^2 = 0.250$, adjusted $R^2 = 0.212$. Among the components, self-awareness training and having a purpose in life were significant negative predictors of depression. Self-awareness training significantly predicted lower depression, $B = -0.402$, $SE = 0.142$, β = -0.214, $t = -2.825$, $p = 0.005$, accounting for 2.72% of unique variance. Having a purpose in life was also a significant negative predictor, $B = -0.600$, $SE = 0.175$, β = -0.330, $t = -3.430$, $p = 0.001$, accounting for 4.00% of unique variance. The remaining components were not significant predictors of depression.

Table 4. Regression Coefficients and Unique Contributions of Life Skills Components in Predicting Depression

Predictor	B	SE	β	t	p	Part	Unique %	Tolerance	VIF
Age	-0.035	0.033	-0.064	-1.060	0.290	-0.062	0.38	0.932	1.073
Self-awareness training	-0.402	0.142	-0.214	-2.825	0.005	-0.165	2.72	0.594	1.685
Having a purpose in life	-0.600	0.175	-0.330	-3.430	0.001	-0.200	4.00	0.367	2.727
Human communication skills	-0.098	0.172	-0.050	-0.570	0.570	-0.033	0.11	0.434	2.307
Interpersonal relations	0.085	0.158	0.047	0.538	0.591	0.031	0.10	0.439	2.278
Decision-making skill	0.254	0.185	0.137	1.373	0.171	0.080	0.64	0.341	2.937
Mental hygiene and mental health	-0.251	0.158	-0.138	-1.589	0.114	-0.093	0.86	0.453	2.205
Problem-solving skill	0.112	0.167	0.063	0.671	0.503	0.039	0.15	0.376	2.659
Participation and cooperation skill	0.154	0.148	0.083	1.041	0.299	0.061	0.37	0.532	1.880
Creative thinking	-0.054	0.186	-0.027	-0.290	0.772	-0.017	0.03	0.388	2.579

[Downloaded from jrhms.thums.ac.ir on 2026-09-10]

Critical thinking	-0.112	0.136	-0.063	-0.824	0.411	-0.048	0.23	0.567	1.762

A comparable hierarchical regression analysis was conducted for anxiety. After controlling for age, adding the 10 life skills components significantly improved the model, $\Delta R^2 = 0.200$, F change (10, 221) = 5.527, $p < 0.001$. The final model was significant and explained 20.1% of the variance in anxiety, $R = 0.449$, $R^2 = 0.201$, adjusted $R^2 = 0.162$, F (11, 221) = 5.066, $p < 0.001$. In the final model, self-awareness training, having a purpose in life, and mental hygiene and mental health were significant negative predictors of anxiety. Specifically, self-awareness training predicted lower anxiety, $B = -0.303$, $SE = 0.148$, $\beta = -0.159$, $t = -2.041$, $p = 0.042$, accounting for 1.51% of unique variance. Having a purpose in life was also a significant negative predictor, $B = -0.550$, $SE = 0.182$, $\beta = -0.300$, $t = -3.018$, $p = 0.003$, accounting for 3.28% of unique variance. Mental hygiene and mental health significantly predicted lower anxiety, $B = -0.551$, $SE = 0.165$, $\beta = -0.299$, $t = -3.347$, $p = 0.001$, accounting for 4.04% of unique variance. In contrast, decision-making skill positively predicted anxiety, $B = 0.517$, $SE = 0.192$, $\beta = 0.277$, $t = 2.690$, $p = 0.008$, accounting for 2.62% of unique variance. This positive coefficient should be interpreted cautiously, as it may reflect overlap among life skills components or a suppression effect in the multivariable model rather than a direct adverse effect of decision-making skill. The remaining components were not significant predictors of anxiety.

Table 5. Regression Coefficients and Unique Contributions of Life Skills Components in Predicting Anxiety

Predictor	B	SE	β	t	p	Part	Unique %	Tolerance	VIF
Age	0.053	0.061	0.055	0.875	0.382	0.053	0.28	0.932	1.073
Self-awareness training	-0.303	0.148	-0.159	-2.041	0.042	-0.123	1.51	0.594	1.685
Having a purpose in life	-0.550	0.182	-0.300	-3.018	0.003	-0.181	3.28	0.367	2.727
Human communication skills	-0.112	0.180	-0.057	-0.623	0.534	-0.037	0.14	0.434	2.307
Interpersonal relations	0.270	0.164	0.149	1.646	0.101	0.099	0.98	0.439	2.278
Decision-making skill	0.517	0.192	0.277	2.690	0.008	0.162	2.62	0.341	2.937
Mental hygiene and mental health	-0.551	0.165	-0.299	-3.347	0.001	-0.201	4.04	0.453	2.205
Problem-solving skill	0.134	0.174	0.075	0.765	0.445	0.046	0.21	0.376	2.659
Participation and cooperation skill	0.203	0.154	0.109	1.317	0.189	0.079	0.62	0.532	1.880
Creative thinking	-0.042	0.194	-0.021	-0.218	0.827	-0.013	0.02	0.388	2.579
Critical thinking	-0.144	0.142	-0.081	-1.014	0.312	-0.061	0.37	0.568	1.762

Discussion

The present study examined the protective role of life skills in predicting depression and anxiety among female undergraduate students. The findings showed that total life skills significantly and negatively predicted both depression and anxiety after controlling for age. This indicates that students with higher life skills reported lower levels of psychological symptoms.

The predictive power of total life skills was stronger for depression than for anxiety. Total life skills explained 11.9% of the variance in depression and 4.0% of the variance in anxiety. This pattern suggests that general life skills may be more closely related to depressive symptoms, possibly because life skills are connected to self-efficacy, goal-directed behavior, adaptive coping, and cognitive-emotional regulation. These processes are theoretically relevant to depression,

[Downloaded from jrhms.thums.ac.ir on 2026-09-10]

which is often associated with reduced motivation, hopelessness, rumination, and impaired executive functioning (12, 13, 19).

At the component level, self-awareness training and having a purpose in life significantly predicted lower depression. Self-awareness may reduce depressive symptoms by helping students identify internal emotional states, recognize maladaptive thoughts, and respond more adaptively to stressors. This interpretation is consistent with emotional intelligence research, which shows that emotional competencies are associated with better health outcomes (35, 36). Self-awareness may also improve students' ability to monitor negative mood states before they intensify. Recent intervention research also supports this interpretation. Salem et al. showed that reflective mindfulness and emotion regulation training significantly improved self-awareness, emotional understanding, and emotion regulation among nursing students (37). From a theoretical perspective, emotional self-awareness may reduce depressive symptoms by facilitating the recognition and processing of emotions and by reducing reliance on maladaptive strategies such as emotional suppression (38, 39).

Having a purpose in life was one of the strongest predictors of both depression and anxiety. This finding is theoretically consistent with developmental and positive psychology perspectives. University students are often in a stage of identity formation and future planning (40). A clear sense of purpose may provide coherence, hope, direction, and resilience when students face academic and interpersonal stressors. Meaning in life has also been shown to vary across the life span and to be relevant during emerging adulthood (41). Positive psychology similarly emphasizes purpose, meaning, and flourishing as central dimensions of well-being (42).

The present finding regarding the protective role of purpose in life is consistent with recent meta-analytic evidence. Boreham and Schutte, in a meta-analysis including 99 effect sizes, found that purpose in life was strongly negatively associated with depression and significantly negatively associated with anxiety (43). This suggests that having a sense of purpose and meaning may function as a protective factor against internalizing symptoms by strengthening direction, enhancing hope, and reducing avoidance tendencies. In addition, Moreno-Montero et al. showed in a cross-cultural sample of university students that purpose in life was associated with anxiety both directly and indirectly through hope, and that purpose in life together with hope explained 20.1% of the variance in anxiety (44).

For anxiety, self-awareness training, having a purpose in life, and mental hygiene and mental health were significant negative predictors. The role of mental hygiene and mental health may be particularly relevant to anxiety because this component likely reflects practical knowledge and behaviors related to stress management, emotional balance, psychological self-care, and healthy coping. Students who possess these skills may be better able to manage worry, physiological arousal, and daily stress.

Decision-making skill showed a positive coefficient in the multivariable anxiety model. This result should be interpreted cautiously. Because the life skills components were correlated with one another, the positive coefficient may reflect a suppression effect or overlap among predictors rather than a direct adverse role of decision-making. It is also possible that students who are more engaged in decision-making experience greater perceived responsibility, uncertainty, or cognitive load, which may be associated with anxiety in specific contexts. Future studies should examine this finding using longitudinal designs, structural equation modeling, or separate models for each component.

The present findings are consistent with Iranian evidence showing that life skills training can improve mental health and reduce psychological distress. Sogolitappeh et al. reported that group life skills training reduced anxiety and depression among patients after bypass surgery (30). Rahimian Bogar et al. also

[Downloaded from jrhms.thums.ac.ir on 2026-09-10]

found that life skills improved students' general health (31). Although these studies differ in population and design, they support the broader interpretation that life skills can operate as protective psychosocial resources.

The findings also support the practical value of university-based preventive programs. Rather than offering only broad and undifferentiated life skills training, counseling centers and student mental health programs may benefit from emphasizing self-awareness, purpose in life, and mental health-related skills. These components may be especially useful for female students, who may be more vulnerable to internalizing symptoms due to emotional, social, and coping-related factors (24-26).

Limitations

Several limitations should be considered. First, convenience sampling was a major limitation. Because participants were selected from Ferdowsi University of Mashhad, the findings should be generalized only to similar female undergraduate populations and not to all Iranian university students. Second, the study was cross-sectional; therefore, causal inferences cannot be drawn. Third, all variables were measured using self-report instruments, which may introduce response bias. Fourth, only age was available as a control variable. Other potentially important variables, such as field of study, marital status, socioeconomic status, academic year, and academic performance, were not collected and could not be controlled.

Suggestions for Future Research

Future studies should use probability-based or stratified sampling methods, include students from multiple universities and academic disciplines, and control for additional demographic and educational variables. Longitudinal and intervention studies are also recommended to clarify whether life skills reduce depression and anxiety over time. Future research should also examine whether targeted training in self-awareness and purpose in life is more effective than general life skills packages.

Conclusion

The present study showed that life skills function as meaningful protective factors in relation to depression and anxiety among female undergraduate students. After controlling for age, total life skills significantly predicted both outcomes, with stronger predictive power for depression. At the component level, self-awareness training and having a purpose in life were the most consistent protective predictors, while mental hygiene and mental health also predicted lower anxiety. These findings suggest that university-based mental health promotion programs should focus especially on self-awareness, purpose in life, and mental health-related competencies. Due to convenience sampling and limited control variables, the results should be interpreted cautiously and generalized only to similar populations.

Conflict of Interest

The authors declare that they have no financial, institutional, personal, or professional conflicts of interest related to this study.

Acknowledgments

The authors would like to thank the female undergraduate students of Ferdowsi University of Mashhad who participated in this study. The authors also appreciate the cooperation of the Faculty of Education and Psychology.

Ethical Considerations

This study was reviewed and approved by the Research Ethics Committees of Ferdowsi University of Mashhad. The ethics approval code is IR.UM.REC.1404.141 ،issued on 2025-06-04.

References

1. Li W, Zhao Z, Chen D, Peng Y, Lu Z. Prevalence and associated factors of depression and anxiety symptoms among college students: A systematic review and meta-analysis. Journal of Child Psychology and Psychiatry. 2022.

[Downloaded from jrhms.thums.ac.ir on 2026-09-10]

https://doi.org/10.1111/jcpp.13606
2. Ahmed I, Hazell CM, Edwards B, Glazebrook C, Davies EB. A systematic review and meta-analysis of studies exploring prevalence of non-specific anxiety in undergraduate university students. BMC Psychiatry. https://doi.org/10.1186/s12888-023-04645-8
3. Sarokhani D, Visani Y, Sarokhani MT, Esmaelimanesh R, Sayehmiri K, Vafaee R, Fakoor H. Prevalence of depression among Iranian university students: A systematic review and meta-analysis. Journal of Medical History. 2016;4(13):85-105. https://doi.org/10.1155/2013/373857
4. Isfahani P, Samani S, Bazi A, Afshari M, Abbaszadeh Bezi M. Prevalence of depression in medical students in Iran: A systematic review and meta-analysis. Payesh. 2024;23(5):727-736. https://doi.org/10.61186/payesh.23.5.727
5. Labbafinejad Y, Bossaghzade A. Assessment of anxiety prevalence and its contributing factors in female medical students of Tehran University of Medical Sciences in 2010-2011. Iran Occupational Health. 2013;9(3):32-38.
6. Feizi H, Valiee S, Johari K, Kalashipour F, Ahmadi M. Evaluation of stress, anxiety, depression and related factors in students of Kurdistan University of Medical Sciences during the COVID-19 pandemic. Scientific Journal of Nursing, Midwifery and Paramedical Faculty. 2025;10(3):264-278. http://sjnmp.muk.ac.ir/article-1-646-en.html
7. World Health Organization. Mental Health and Well-Being of University Students. Geneva: WHO; 2022.
8. Auerbach RP, Mortier P, Bruffaerts R, Alonso J, Benjet C, Cuijpers P, et al. WHO World Mental Health Surveys International College Student Project: Prevalence and distribution of mental disorders. Journal of Abnormal Psychology. 2018;127(7):623-38. https://doi.org/10.1037/abn0000362
9. 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. The Lancet. 2021;398(10312):1700-12. https://doi.org/10.1016/S0140-6736(21)02143-7
10. Zuckerman M. Vulnerability to Psychopathology: A Biosocial Model. Washington, DC: American Psychological Association; 1999. https://doi.org/10.1037/10316-000
11. McLafferty M, Lapsley CR, Ennis E, Armour C, Murphy S, Bunting BP, et al. Mental health, behavioural problems and treatment seeking among students commencing university in Northern Ireland. PLOS ONE. 2017;12(12): e0188785. https://doi.org/10.1371/journal.pone.0188785
12. Snyder HR. Major depressive disorder is associated with broad impairments on neuropsychological measures of executive function: A meta-analysis and review. Psychological Bulletin. 2013;139(1):81-132. https://doi.org/10.1037/a0028727
13. Bandura A. Self-Efficacy: The Exercise of Control. New York: Freeman; 1997.
14. Mortier P, Auerbach RP, Alonso J, Bantjes J, Benjet C, Cuijpers P, et al. Suicidal thoughts and behaviors among first-year college students: Results from the WMH-ICS project. Journal of the American Academy of Child and Adolescent Psychiatry. 2018;57(4):263-73. e1. https://doi.org/10.1016/j.jaac.2018.01.018
15. Nock MK, Borges G, Bromet EJ, Alonso J, Angermeyer M, Beautrais A, et al. Cross-national prevalence and risk factors for suicidal ideation, plans and attempts. The British Journal of Psychiatry. 2008;192(2):98-105. https://doi.org/10.1192/bjp.bp.107.040113
16. CASEL. Core SEL Competencies. 2020. Available from: https://casel.org/core-competencies/
17. World Health Organization. Life Skills Education School Handbook. Geneva: WHO; 2017.
18. World Health Organization. Life Skills Education for Children and Adolescents in Schools. Geneva: WHO; 1997.
19. Nolen-Hoeksema S. The role of rumination in depressive disorders and mixed anxiety/depressive symptoms. Journal of Abnormal Psychology. 2000;109(3):504-11. https://doi.org/10.1037//0021-843X.109.3.504
20. Ellis A. Reason and Emotion in Psychotherapy. New York: Lyle Stuart; 1962.
21. Lazarus RS, Folkman S. Stress, Appraisal, and Coping. New York: Springer Publishing Company; 1984.
22. Durlak JA, Weissberg RP, Dymnicki AB, Taylor RD, Schellinger KB. The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. Child Development. 2011;82(1):405-32. https://doi.org/10.1111/j.1467-8624.2010.01564.x
23. Botvin GJ, Griffin KW. Life skills training: Empirical findings and future directions. Journal of Primary Prevention. 2004; 25:211-32. https://doi.org/10.1023/B:JOPP.0000042391.58573.5b

[Downloaded from jrhms.thums.ac.ir on 2026-09-10]

24. Stevens JS, Hamann S. Sex differences in brain activation to emotional stimuli: A meta-analysis of neuroimaging studies. Neuropsychologia. 2012;50(7):1578-93. https://doi.org/10.1016/j.neuropsychologia.2012.03.011
25. Capodilupo CM, Nadal KL, Corman L, Hamit S, Lyons OB, Weinberg A. The manifestation of gender microaggressions. In: Sue DW, editor. Microaggressions and Marginality: Manifestation, Dynamics, and Impact. Hoboken: Wiley; 2010.
26. Tamres LK, Janicki D, Helgeson VS. Sex differences in coping behavior: A meta-analytic review and an examination of relative coping. Personality and Social Psychology Review. 2002;6(1):2-30. https://doi.org/10.1207/S15327957PSPR0601_1
27. Saatchi MK, Askarian M. Psychological Tests. Tehran: Roshd; 2010.
28. Rashidi F, Javdan M. Developing the prediction model of self-concept based on behavioral-emotional problems mediated by life skills in elementary school students. Psychological Models and Methods. 2022;13(48):1-20. 10.22067/tpccp.2025.93154.1781
29. Barani SM, Bahmani T, Barani SMA. Effect of Philosophy for Children Curriculum on life skills development in fifth grade students attending public elementary schools in Behbahan. Thinking and Children. 2024;14(2):27-49. 10.30465/fabak.2024.9275
30. Sogolitappeh FN, Aliloo MM, Kheyroddin JB, Tabrizi MT. Effectiveness of group life skills training on decreasing anxiety and depression among heart patients after bypass surgery. Iranian Journal of Psychiatry and Clinical Psychology. 2009;15(1):50-56.
31. Rahimian Bogar A, Mohammadifar M, Najafi M, Dehshiri G. The effect of life skills on the general health of students. Clinical Psychology and Personality. 2013;8(20):23-34.
32. Goldberg DP, Hillier VF. A scaled version of the General Health Questionnaire. Psychological Medicine. 1979;9(1):139-45. https://doi.org/10.1017/S0033291700021644
33. Taghavi M. Validity and reliability of the General Health Questionnaire (GHQ-28) in college students of Shiraz University. Journal of Psychology. 2002;5:381-98.
34. Tibshirani RJ, Efron B. An Introduction to the Bootstrap. Monographs on Statistics and Applied Probability. 1993;57(1):1-436. https://doi.org/10.1007/978-1-4899-4541-9_1
35. Goleman D. Emotional Intelligence: Why It Can Matter More Than IQ. New York: Bantam Books; 1995.
36. Schutte NS, Malouff JM, Thorsteinsson EB, Bhullar N, Rooke SE. A meta-analytic investigation of the relationship between emotional intelligence and health. Personality and Individual Differences. 2007;42(6):921-33. https://doi.org/10.1016/j.paid.2006.09.003
37. Salem GMM, Hashimi W, El-Ashry AM. Reflective mindfulness and emotional regulation training to enhance nursing students' self-awareness, understanding, and regulation: A mixed method randomized controlled trial. BMC Nursing. 2025; 24:478. https://doi.org/10.1186/s12912-025-03086-w
38. Wang R, Li H, Sang B and Zhao Y (2023) Emotion regulation as a mediator on the relationship between emotional awareness and depression in elementary school students. Front. Psychol. https://doi.org/10.3389/fpsyg.2023.1127246
39. Tyra AT, Fergus TA, Ginty AT. Emotion suppression and acute physiological responses to stress in healthy populations: A quantitative review of experimental and correlational investigations. Psychology & Health. 2023. https://doi.org/10.1080/17437199.2023.2251559
40. Erikson EH. Childhood and Society. 2nd ed. New York: W. W. Norton; 1963.
41. Steger MF, Oishi S, Kashdan TB. Meaning in life across the life span: Levels and correlates of meaning in life from emerging adulthood to older adulthood. The Journal of Positive Psychology. 2009;4(1):43-52. https://doi.org/10.1080/17439760802303127
42. Seligman ME. Flourish: A Visionary New Understanding of Happiness and Well-Being. New York: Simon and Schuster; 2011.
43. Boreham ID, Schutte NS. The relationship between purpose in life and depression and anxiety: A meta-analysis. Journal of Clinical Psychology. 2023. https://doi.org/10.1002/jclp.23576
44. Moreno-Montero E, Moreta-Herrera R, Rodas JA, Cuesta-Andaluz E, Puerta-Cortés DX, Ferrufino-Borja D, Oleas D, Gismondi Diaz R. The mediating role of hope in the relationship between purpose in life and anxiety: A cross-cultural analysis in university students. PLOS ONE. 2025. https://doi.org/10.1371/journal.pone.0331042

[Downloaded from jrhms.thums.ac.ir on 2026-09-10]