

PERCEIVED SOCIAL SUPPORT AND LIFE SATISFACTION AMONG FINAL-YEAR UNIVERSITY STUDENTS: THE SERIAL MEDIATING ROLE OF SELF-EFFICACY AND PSYCHOLOGICAL DISTRESS

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KEYWORDS:

Perceived Social Support, Self-Efficacy, Psychological Distress, Life Satisfaction, Final-Year University Students, Pakistan

CITE THIS ARTICLE:

Khan, F., Ali, A., Sukaina., Khola, M., & Ullah, N. (2026). Perceived social support and life satisfaction among final-year university students: the serial mediating role of self-efficacy and psychological distress. *Pakistan Journal of Positive Psychology*, 3(10), 1-9.

ABSTRACT

University students in Pakistan in their last year of degrees are under academic and career stress which can adversely affect their well-being. The aim of the present study was to test if perceived social support is a predictor of life satisfaction among final year university students in a serial mediation model between self-efficacy and psychological distress. A cross-sectional correlational design was used, with 300 final year students (59.0% female) from public and private universities in Lahore were selected through convenient sampling technique. The following scales were administered to participants: the Multidimensional Scale of Perceived Social Support, General Self-Efficacy Scale, Kessler Psychological Distress Scale and Satisfaction with Life Scale. Perceived social support was positively associated with life satisfaction ($r = .61$) and self-efficacy ($r = .61$), self-efficacy was negatively associated with psychological distress ($r = -.44$), and psychological distress was negatively associated with life satisfaction ($r = -.47$). The indirect effect from self-efficacy to psychological distress, to problem drinking was significant, and the indirect effect from psychological distress alone to problem drinking was significant. The indirect effect from self-efficacy alone to psychological distress was not significant and was not significant to problem drinking. Mediation results were obtained using serial mediation analysis with PROCESS Model 6 and 5,000 bootstrap samples. The direct effect was still present and therefore, this was partial mediation. Results indicated that Social Support contributes to students' life satisfaction, in part, by enhancing their self-efficacy, thereby decreasing their distress, which has implications for university counselling and career-support services.

I. INTRODUCTION

The final year of university education is a crucial time in Pakistan when students are readying themselves for a fiercely competitive job market (Ahsan & Khan, 2023). The unemployment rate among the Pakistani graduates is nearly three times the national average and has risen from 14% to 16% in 2018-19 and 2020-21 respectively (Ahsan & Khan, 2023). First-year university students are already at high risk of developing mental health issues,

with approximately a third of students in several countries meeting the criteria for the presence of at least one common mental disorder (Auerbach et al., 2018). There is also a higher level of psychological distress among students, compared to the general population (Stallman, 2010). In the case of final year students of Pakistan, 30-34% reported anxiety and depression and stress were found to be negatively associated with life satisfaction (Kumar et al., 2016). Perceived social support is the perception of social support from family, friends and a significant other which has been identified as one of the significant protective factors of mental health among Pakistani university students (Jibeen, 2016).

Self-efficacy is defined as an individual's overall self-assurance in his/her ability to effectively manage challenging and stressful situations (Schönfeld et al., 2016). The psychological distress is defined as non-specific symptoms of anxiety and depression, and it has been seen to have a negative impact on the psychosocial and educational adjustment of Pakistani university students (Rashid et al., 2021). Life satisfaction is a cognition of one's own life and has a strong relationship to mental health (Lombardo et al., 2018). Supportive relationships can build trust in personal competence, which can mitigate the negative impact of mental health issues caused by stress in students, and thus enhance self-efficacy (Naseem et al., 2024; Schönfeld et al., 2016). Lower distress, in turn, facilitates one's more positive evaluation of one's life (Kumar et al., 2016; Lombardo et al., 2018). Therefore, the present study aims to explore how perceived social support is related to the life satisfaction of final-year students at universities in Pakistan and investigates its serial mediation effect through self-efficacy and psychological distress (Hu et al., 2025; Ruihua et al., 2025).

II. LITERATURE REVIEW

The systematic review of 51 studies between 2010 and 2024 found that social support directly enhances college students' psychological wellness and life satisfaction and ultimately lowers their stress and anxiety (Ruihua et al., 2025). The variance of subjective well-being in the pre-service teachers could be accounted for by 43% of the variance in the perceived social support level, of which 18% of the variance is explained by the family support level (Gülaçtı, 2010; Khan et al., 2026). Social support negatively correlated with stress among 241 university students in Pakistan, and it was found to moderate the relationship between life satisfaction and academic performance (Zahid et al., 2025). Low family and peer support were related with depression, anxiety, interpersonal sensitivity among 912 Pakistani undergraduates such that family support had more influence (Jibeen, 2016). Perceived social support had a significant positive effect on self-efficacy and explained 22.8% of its variance among 935 Pakistani secondary school teachers (Naseem et al., 2024). Quality of life among cardiovascular patients was also found to be significantly and positively associated with social support and self-efficacy with social support being more advantageous to people having a higher level of self-efficacy (Fatima & Jibeen, 2019; Khan et al., 2026). For student samples from Germany, Russia and China, general self-efficacy was found to act as a mediator between daily stress and positive and negative mental health (Schönfeld et al., 2016). Self-efficacy protected the negative relationship between psychological distress and social and academic adjustment among 304 university students from Pakistan (Rashid et al., 2021).

Multiple waves of a national survey in Canada have revealed a core link between poor mental health and life satisfaction (Lombardo et al., 2018). In Karachi, depression and stress were found to be negatively related to life satisfaction among 398 final year students (Kumar et al., 2016). Among 426 adults, perceived stress was lower and mental health was better when they had support from their family or significant other, which in turn predicted mental health (Acoba, 2024). The social support to depression pathway was mediated by rumination and emotion regulation self-efficacy in a sample of 1,433 college students in China (Hu et al., 2025). From these studies, perceived social support and self-efficacy, psychological distress, and life satisfaction are closely related to each other (Jibeen, 2016; Rashid et al., 2021; Zahid et al., 2025). But these variables have been investigated separately in Pakistan, and no study has used these variables in serial mediation model between perceived social support and

life satisfaction among final year students (Kumar et al., 2016; Rashid et al., 2021; Zahid et al., 2025). Most chain mediation studies are conducted in China and western countries, and the results may not be directly applicable in Pakistan as the family is the primary source of support for students (Hu et al., 2025; Jibeen, 2016; Schönfeld et al., 2016). This gap is significant as the unemployment rate for the graduates in Pakistan is increasing, the unemployment rate among female graduates is 33.8% (Ahsan & Khan, 2023). Knowing the pathway could assist universities to create counselling and career-support programs that enhance students' support systems and coping abilities (Ruihua et al., 2025).

Hypotheses

1. Perceived social support will be positively associated with life satisfaction among final-year university students.
2. Perceived social support will be positively associated with self-efficacy among final-year university students.
3. Self-efficacy will be negatively associated with psychological distress among final-year university students.
4. Psychological distress will be negatively associated with life satisfaction among final-year university students.
5. Self-efficacy and psychological distress will individually mediate the relationship between perceived social support and life satisfaction.
6. Self-efficacy and psychological distress will serially mediate the relationship between perceived social support and life satisfaction among final-year university students.

III. METHOD

Participants

The study employed a quantitative, cross-sectional, correlational design to investigate the relationships between perceived social support, self-efficacy, psychological distress and life satisfaction and to test the serial mediating roles of self-efficacy and psychological distress in the study without manipulating any variables. A convenience sample was collected comprising of 300 final year students (final year of BS degree and final semester of master's degree) of public and private universities of Lahore. Participants were aged 20 to 25 years ($M = 21.96$, $SD = 1.34$). Based on a power analysis conducted in G*Power 3.1, a power of .95, $\alpha = .05$, assuming three predictors, a minimum of 119 participants was called for, and the sample was expanded to 300 participants to ensure sufficient power for bootstrapped indirect effects. Students who were full-time employed, who were enrolled in distance-learning program or who were treated for psychiatric disorder were excluded, and none of the 300 students participating in the study met the screening exclusion criteria.

Measures

Four standardized self-report questionnaires, an informed consent form and a demographic information sheet were used. There were no reverse-scored items in all four scales. Demographic Information Sheet: A researcher-constructed sheet that included the following items: age, gender, university sector, degree programme, field of study, current semester, family system, monthly family income, residence and part-time job status, plus two screening questions regarding current full-time job and current treatment for a diagnosed psychological/psychiatric disorder. [I] Multidimensional Scale of Perceived Social Support (MSPSS): This is a 12-item self-report instrument (Zimet et al., 1988) that assesses support received from family, friends and significant other, each with 4 items ranging from 1 = very strongly disagree to 7 = very strongly agree. A higher score represents increased perceived support. The original validation provided an α of .88 and another Pakistani validation provided an α of .93 (Sharif et al., 2021). For the total scale in the present study, α was .97 and for the subscales .91 to .93. [II] The General Self-Efficacy Scale (GSE) by Schwarzer and Jerusalem (1995) is a 10-item scale that measures a general competence to cope with daily hassles and stressful events and is scored on a scale from 1 (not at all true) to 4 (exactly true). The scores range from 10–40, with a higher score representing more self-efficacy. The scale has been previously used with Pakistani university students (Rashid et al., 2021) and α values from .76 to .90 have been reported. In the present study, $\alpha = .87$. [III] The Kessler Psychological Distress Scale (K10) (Kessler et al., 2002) is a 10-item scale that measures anxiety and depression symptoms over the past 30 days, ranging from 1 (none of the time) to 5 (all the time). The total score is from 10 to 50, with higher scores reflecting more distress. In the original study $\alpha = .93$, in the present study $\alpha = .87$. The K10 was used as a screening measure and not to diagnose any disorder. [IV] Satisfaction with Life Scale (SWLS) is a 5-item scale by Diener et al. (1985)

that measures a global cognitive judgement of satisfaction with one's life on a 7-point scale from strongly disagree to strongly agree. The total score is from 0 to 35. The α coefficient for the original validation was reported at .87 and test–retest reliability of .82 and for the present study α = .86.

Procedure

This study was carried out following the ethical guidelines of the American Psychological Association pertaining to studies involving human beings. All instruments are available for research, free of cost, and with proper citation. The students were approached separately in their departments, the purpose of this study was explained and written informed consent was obtained. This Questionnaire form was completed in 15-20 minutes, and the same instructions were provided verbally to everyone. Participants were informed that confidentiality would be guaranteed, and that they could withdraw at any time without repercussion. All participants were given information about the University counselling service as the K10 contains questions related to emotional distress in young adults. Data were analyzed with SPSS version 27 and the PROCESS macro version 5.0 (Hayes, 2022). The descriptive statistics, Cronbach's alpha, skewness and kurtosis (George & Mallery, 2019) were computed, Pearson correlation and independent samples t-test for gender difference were computed. Prior to conducting the regression-based analyses, the assumptions of linearity, normality of residuals, homogeneity of variance, independence of errors and lack of multicollinearity were evaluated. The mediators of this study were self-efficacy and psychological distress, with perceived social support as the predictor and life satisfaction as the outcome, and the serial mediation was tested using PROCESS Model 6. Indirect effects were bootstrap estimated using 5,000 bootstrap samples with 95 percentile bootstrap confidence intervals and were considered significant if the confidence interval did not contain zero. A significance level of $p < .05$ was used for all analyses.

IV.RESULTS

Table I: Demographic Characteristics of Participants (N = 300)

Variable	Category	n	%
Gender	Male	123	41.0
	Female	177	59.0
University sector	Public	182	60.7
	Private	118	39.3
Degree programme	BS (4-year)	206	68.7
	MSc / MA	66	22.0
	MS / MPhil	28	9.3
Field of study	Social sciences	47	15.7
	Natural sciences	48	16.0
	Engineering / IT	51	17.0
	Medical / health sciences	51	17.0
	Management / business	54	18.0
	Arts / humanities	49	16.3
Current semester	7 th	146	48.7
	8 th	154	51.3
Family system	Nuclear	204	68.0
	Joint	96	32.0
Monthly family income (PKR)	Below 50,000	59	19.7
	50,000–100,000	114	38.0
	100,001–200,000	95	31.7
	Above 200,000	32	10.7
Residence	Hostel	104	34.7
	Day scholar (with family)	172	57.3
	Other	24	8.0
Part-time job	Yes	64	21.3
	No	236	78.7

Note. Participants were aged 20–25 years ($M = 21.96$, $SD = 1.34$). No participant reported full-time employment or current psychiatric treatment, and no participant selected “other” for degree programme or field of study.

Demographic characteristics of the sample are shown in Table 1. Almost all the participants were female (59.0 %), studying in public university (60.7 %), BS programme (68.7 %), nuclear family (68.0 %), and were day scholars (57.3 %). 78.7% had no part-time job.

Table II: Psychometric Properties and Descriptive Statistics of Study Variables (N = 300)

Variable	k	α	M	SD	Actual range	Potential range	Skewness	Kurtosis
Perceived social support	12	.97	59.44	13.14	13–83	12–84	–0.30	–0.23
Significant other	4	.93	19.83	4.60	4–28	4–28	–0.33	–0.21
Family	4	.92	19.76	4.47	4–28	4–28	–0.21	–0.27
Friends	4	.91	19.86	4.46	5–28	4–28	–0.33	–0.18
Self-efficacy	10	.87	36.89	3.38	21–40	10–40	–1.58	2.43
Psychological distress	10	.87	13.98	3.93	10–36	10–50	1.93	5.18
Life satisfaction	5	.86	20.79	3.89	8–30	5–35	–0.23	–0.08

Note. K = number of items. Perceived social support was measured with the MSPSS, self-efficacy with the GSE, psychological distress with the K10 and life satisfaction with the SWLS. SE of skewness = 0.14; SE of kurtosis = 0.28.

All scales had good to excellent internal consistency ($\alpha = .86$ – $.97$) as indicated in Table 2. Skewness and kurtosis for perceived social support, subscales and life satisfaction were within ± 2 . The range for self-efficacy (2.43) and psychological distress (1.93, 5.18) exceeded this because the majority of students were likely well (91.7% of students scored between 10 and 19 on the K10 in the likely well range, 5.3% in the mild range, 2.7% in the moderate range, and 0.3% in the severe range). The regression residuals were normally distributed, and the indirect tests were performed using bootstrapping, which does not require a normal distribution, so the variables were analyzed in their original form.

Table III: Pearson Correlations Among Study Variables (N = 300)

Variable	1	2	3	4	5	6	7
1. Perceived social support	—						
2. Significant other	.97**	—					
3. Family	.97**	.92**	—				
4. Friends	.97**	.91**	.92**	—			
5. Self-efficacy	.61**	.59**	.60**	.58**	—		
6. Psychological distress	–.50**	–.48**	–.49**	–.48**	–.44**	—	
7. Life satisfaction	.61**	.60**	.61**	.59**	.44**	–.47**	—

** $p < .01$

The Pearson correlations are presented in Table 3 and are consistent with H1 to H4. Life satisfaction and self-efficacy were positively correlated with perceived social support, $r(298) = .61$, $p < .001$ and $r(298) = .61$, $p < .001$, respectively. There was a negative correlation found between self-efficacy and psychological distress, $r(298) = -.44$, $p < .001$ and a negative correlation between psychological distress and life satisfaction, $r(298) = -.47$, $p < .001$. The three support subscales were congruent. No main variables of age were found.

Table IV: Gender Differences in Study Variables (Independent Samples t-Test)

Variable	Male (n = 123) M (SD)	Female (n = 177) M (SD)	t(298)	p	Cohen's d
Perceived social support	58.65 (13.22)	59.99 (13.09)	–0.87	.387	–0.10
Self-efficacy	36.81 (3.48)	36.95 (3.31)	–0.34	.732	–0.04
Psychological distress	14.19 (4.33)	13.84 (3.63)	0.76	.447	0.09
Life satisfaction	20.60 (4.18)	20.93 (3.69)	–0.71	.478	–0.08

Note. Equal variances were assumed because Levene's tests were non-significant ($p \geq .115$). The significant other, family and friends' subscales also showed no gender differences (all $p > .23$).

Independent samples t-tests (Table 4) revealed no significant differences between perceived social support, self-efficacy, psychological distress or life satisfaction scores for boys and girls (all $p > .38$) and all effect sizes were negligible ($|d| \leq 0.10$). To explore the regression assumptions, life satisfaction was regressed on perceived social support and self-efficacy and psychological distress. The variance inflation factors were between 1.38 and 1.76 (tolerance = .57 and .72), and the Durbin–Watson statistic was 2.00, with standardized residuals being between –2.88 and 2.51. The histogram, normal P–P plot and residual scatterplot showed nearly normal and homoscedastic residuals. Four cases were identified as being beyond the Mahalanobis distance criterion, ($\chi^2(3) = 16.27$, $p < .001$), but none of these cases was influential (maximum Cook's distance = .04), and therefore were retained.

Table V: Serial Mediation of Self-Efficacy and Psychological Distress Between Perceived Social Support and Life Satisfaction (PROCESS Model 6, N = 300)

Predictor	Self-efficacy (M1)		Psychological distress (M2)		Life satisfaction (Y)	
	B	95% CI	B	95% CI	B	95% CI
Constant	27.61***	[26.20, 29.03]	29.91***	[25.60, 34.21]	12.84***	[7.94, 17.75]
Perceived social support	0.16***	[0.13, 0.18]	–0.11***	[–0.14, –0.07]	0.14***	[0.11, 0.17]
Self-efficacy			–0.26***	[–0.40, –0.12]	0.07	[–0.06, 0.20]
Psychological distress					–0.21***	[–0.31, –0.11]
R^2	.37		.28		.42	
F	174.35***		56.73***		70.05***	

Note. B = unstandardized coefficient; CI = confidence interval. F degrees of freedom were (1, 298), (2, 297) and (3, 296) for the three models. *** $p < .001$.

Table 5 shows the path coefficients of PROCESS Model 6. Self-efficacy was positively predicted by perceived social support ($B = 0.16$, $p < .001$), and psychological distress was negatively predicted by perceived social support ($B = -0.11$, $p < .001$) and self-efficacy ($B = -0.26$, $p < .001$). In the second regression (all predictor variables included), psychological distress negatively predicted life satisfaction ($B = -0.21$, $p < .001$), while self-efficacy was not significant ($B = 0.07$, $p = .285$). The overall model accounted for 41.5% of the variance in life satisfaction.

Table VI: Total, Direct and Indirect Effects of Perceived Social Support on Life Satisfaction

Pathway	Effect	SE	95% CI
Total effect	0.181	0.014	[0.155, 0.208]
Direct effect	0.139	0.018	[0.105, 0.174]
Total indirect effect	0.042	0.012	[0.019, 0.065]
Ind1: Support → Self-efficacy → Life satisfaction	0.011	0.010	[–0.008, 0.031]
Ind2: Support → Distress → Life satisfaction	0.023	0.007	[0.010, 0.037]
Ind3: Support → Self-efficacy → Distress → Life satisfaction	0.009	0.004	[0.003, 0.017]

Note. Standard errors and confidence intervals for indirect effects are based on 5,000 percentile bootstrap samples. An indirect effect is significant when its 95% CI does not include zero.

Overall, the effect of perceived social support on life satisfaction was significant ($B = 0.18$, $p < .001$) and remained significant when the mediators were added (direct effect $B = 0.14$, $p < .001$) (see Table 6). There was a significant serial indirect effect via self-efficacy and then psychological distress ($B = 0.009$, 95% CI [0.003, 0.017]), consistent with H6. The indirect effect of psychological distress alone was significant ($B = 0.023$, 95% CI [0.010, 0.037]), while the indirect effect of self-efficacy alone was not ($B = 0.011$, 95% CI [–0.008, 0.031]); therefore, H5 was partially supported. The direct effect was still significant, as the mediation was partial, and the indirect effects explained 23.2% of the total effect.

V. DISCUSSION

This study aimed to investigate the serial mediation of the relationship between perceived social support and Life Satisfaction with self-efficacy and psychological distress between final year university students of Pakistan. Five hypotheses were accepted and H5 was partially accepted.

As in H1, students who felt they had more support from family, friends and significant other were more content with their lives. This is consistent with the systematic review that found that social support has a positive impact on college students' well-being and life satisfaction (Ruihua et al., 2025); Gülaçtı's (2010) finding that perceived support accounted for forty three percent of the variance in life satisfaction; and support in relation to reduced stress and increased life satisfaction among college students in Pakistan (Zahid et al., 2025). In the same way as Naseem et al. (2024) and Fatima and Jibeen (2019), perceived support was found to be positive and highly correlated with self-efficacy. Similarly, in line with H3, higher self-efficacy was linked to less distress, which aligns with the findings of Rashid et al. (2021) who reported that self-efficacy was a buffer for Pakistani students' distress, and Schönfeld et al. (2016) who reported that self-efficacy mediated the relationship between daily stress and mental health in three countries. Also, the results obtained in this study indicate that distress showed negative correlation with life satisfaction, which is also found in the final year students of Karachi (Kumar et al., 2016) and in the Canadian national survey (Lombardo et al., 2018).

Partial support for H5 is the most informative finding. Psychological distress was found to be the mediator for the effect of support on life satisfaction as reported by Acoba (2024) that perceived stress mediated the relationship between social support and mental health. After controlling for distress, however, self-efficacy was not the sole mediator of the relationship with life satisfaction, ruling it out as a predictor of life satisfaction. This is different from Jia and Wang (2024), who have found that the relationship between perceived social support and life satisfaction was mediated by self-efficacy among 853 college students in China. One justification is that the self-efficacy score was not very high ($M = 36.89$ of a possible 40), and support had a very high correlation with self-efficacy ($r = .61$) which further weakens its unique contribution. Another is that, for students who have an uncertain labour market, self-confidence may enhance life evaluations primarily via the alleviation of emotional stress rather than directly.

Support-H6-Self-Efficacy-Lower Distress-Life satisfaction was significant. This is consistent with Saltzman and Holahan (2002), who found a link between social support and depression via self-efficacy, and with Hu et al. (2025), who found a chain pathway between social support and depression through emotion regulation self-efficacy in 1,433 Chinese students. There are other direct impacts of support that are not tested in this study but have been recognized as important. In each study variable there was no difference between the genders. This is in line with a meta-analysis of over one million participants which showed no significant gender disparity in life satisfaction (Batz-Barbarich et al., 2018) but differs from Pakistani studies that revealed higher level of distress in female students as compared to male students on the K10 (Qamar et al., 2014). The distress was also lower than the previous studies of Pakistan as only 8.3% of students scored above K10 well range, while 30% to 34% of the final year students from Karachi reported anxiety (Kumar et al., 2016). Some differences may be due to the disparity in measures when the data were collected, or to the fact that distress is underreported, and the low levels of distress could also have minimized gender differences. Universities can, practically, enhance the peer mentoring, family participation and counselling services in cultivating students' coping confidence in the transition to employment (Ruihua et al., 2025). Programmed which could increase self-efficacy also appeared to benefit life satisfaction primarily by decreasing distress, so stress-management will need to be considered as part of any self-efficacy programme.

Limitations and Suggestions

This study is one of the first in Pakistan to test perceived social support as a predictor of self-efficacy and psychological distress, which in turn were predictive of life satisfaction, followed using reliable measures ($\alpha = .86$ to $.97$) and bootstrapped indirect effects. There are some caveats to be noted. First, the cross-sectional design does not allow for inferences of causal relationships and second, longitudinal studies are necessary to determine the sequence of effects. Second, the results may not be generalized, as the samples were taken from convenience of the universities in Lahore. Third, all measures were self-reports and could be impacted by social desirability and common method variance. Fourth, self-efficacy and distress scores were skewed, and most students experienced very low distress scores, limiting the effects observed. The probability of sampling of several cities and multiple informants and/or longitudinal data should be incorporated which could have in future studies.

VI. CONCLUSION

The relation of perceived social support with life satisfaction was positive and significant in both direct and indirect manner for the final year university students of Pakistan. The indirect effect was through reduced psychological distress and also via a serial pathway where support increased self-efficacy which then decreased distress, with no direct effect of self-efficacy on life satisfaction. Therefore, university counselling and career-support services should build students' support networks and coping self-confidence and directly alleviate the distress they experience during the transition from university to work.

Disclosure Statement

No potential conflict of interest was reported by the authors.

Funding

The author received no funding from any organizations.

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