



ADVANCE SOCIAL SCIENCE ARCHIVE JOURNAL

Available Online: <https://assajournal.com>
 Vol. 05 No. 01. Jan-March 2026. Page#6163-6177
 Print ISSN: [3006-2497](https://doi.org/10.5281/zenodo.22065973) Online ISSN: [3006-2500](https://doi.org/10.5281/zenodo.22065973)
 Platform & Workflow by: [Open Journal Systems](https://doi.org/10.5281/zenodo.22065973)
<https://doi.org/10.5281/zenodo.22065973>



Relationship of Perceived Stress and Depression with Quality of Life: An Analysis among Working and Non-Working Women

Dr. Sania Zafar

MBBS, MCPS. Consultant Psychiatrist THQ Hospital Chishtian, District Bahawalnagar.

Khatija Arain

Lecturer Departemt of Applied Psychology, The Islamia University of Bahawalpur RYK Campus Pakistan.

Farva Shakeel (Corresponding Author)

PhD Scholar, Department of Applied Psychology, The Islamia University of Bahawalpur, Pakistan.

farwashakil102@gmail.com

Dr. Bisma Jamil

Clinical Psychologist, Sheikh Zaid Hospital Rahim-Yar-Khan.

ABSTRACT

Background: The context of mental health and quality of life (QoL) in women is shaped by a complex matrix of psychosocial factors such as perceived stress, depression and employment status. Recognising these relationships is essential for designing interventions, especially in more rural settings where there are often specific challenges for women. The aim of this study was to explore the relationships between perceived stress, depression and QoL in working and non-working women and to investigate the mediating role of depression between perceived stress and QoL and the moderating role of employment status. **Method:** The study adopted a cross-sectional design and used 197 women (100 working and 97 non-working) between age range of 25-45 years ($M = 33.58$, $SD = 4.886$) with rural background. The Perceived Stress Scale (PSS), The Beck Depression Inventory (BDI) and WHOQOL-BREF were completed by the participants. Independent-samples *t*-tests, moderated regression (PROCESS Model 1), and bootstrapped mediation analysis (PROCESS Model 4) were used to analyze the data. **Findings:** There were no significant differences found between working and non-working women in terms of perceived stress, depression or any QoL domain. Perceived stress and depression, however, were significantly related to all four QoL domains (Physical, Psychological, Social, Environment). Depression significantly mediated the perceived stress-QoL relationship across all domains fully for Social QoL and partially for Physical, Psychological, and Environment QoL. The stress-QoL relationship did not differ by the employment status for Social or Environment domains. **Conclusions:** Perceived stress is associated with poorer QoL mainly via depression, and this association is the same for both employed and non-employed individuals. Findings support the need for depression-focused interventions to enhance women's QoL, and challenge the notion that employment would be a distinguishing factor in women's mental health. **Keywords:** Perceived Stress, Depression, Quality of Life, Working Women, Non-Working Women, Mediation, Employment Status.

Introduction and Literature Review

Women's mental health has become a public health issue of great importance and an increasing number of studies have demonstrated the profound impact of psychosocial factors such as perceived stress, depression, and socioeconomic roles on health-related quality of life (QoL) (World Health Organization, 2022). According to World Health Organization (WHOQOL Group, 1998), QoL is defined as “a person's perception of his or her position in life in terms of their culture and value orientation, relative to his or her goals, expectations, standards and concerns.” It is a multi-dimensional construct that includes aspects like physical health, psychological state, environment and social relationships.

The subjective assessment of stresses in one's life as being too great to cope has been found to be correlated with lower levels of QoL in a wide range of populations (Lazarus & Folkman, 1984; Cohen et al., 1983). Depression is also a significant factor in impaired QoL with impacts on cognitive, emotional and social functioning (Moussavi et al., 2007). Stress and depression have been shown to be linked; chronic stress levels are a risk factor for depressive symptomology (Hammen, 2005; Monroe & Harkness, 2005).

Women's employment status is also an important context because of the dual role that many women face (Barnett & Hyde, 2001). It has been found that both working and non-working status have mental health benefits in some studies, but not in others. A few studies indicate that work offers financial stability, social inclusion, and a sense of purpose, all of which have a positive impact on psychological health (Kawachi & Berkman, 2001; Nordmyr et al., 2025). In contrast, a recent study found that mental health could be negatively affected by stress at work, work-family conflict, and workplace discrimination (Kapse, 2025; Joshi et al., 2024). Non-working women, although not exposed to occupational stressors, could experience social isolation, financial pressures, and a diminished sense of control, which have a negative impact on psychological well-being (Shoaib et al., 2024).

The transactional model of stress (Lazarus & Folkman, 1984) has been adopted as the basis for this study to explain the concept of stress as a result of the cognitive interpretation of the demands of the environment as exceeding the individual's resources. This model proposes that perceived stress has both direct effects on QoL (physiologic and behavioral responses) and indirect effects (psychologic sequelae, such as depression).

The biopsychosocial model also highlights the interplay between biological factors, psychological mechanisms, and social influences on mental health, further underscoring the role of the stress-depression-QoL pathway (Engel, 1977). Perceived stress may, as a mediator, lead to overall poor QoL in physical, psychological, social, and environmental dimensions, and this may be the case for depression.

There is strong evidence for positive links between perceived stress, depression and QoL. The author Csetvei et al. (2024) reported that female menopausal patients have high levels of depression ($p < .05$), high levels of stress ($p < .05$), and low quality of life, as measured by SF-36 dimensions, in their study of 243 women of menopause. Also, a study to infertile women who were pregnant in Iran showed that there was a significant correlation between perceived stress, mental health and QoL (Golshani et al., 2024).

In a prospective study of a low-income sample of the Malaysian population, Shukri et al. (2024) examined the mediating role of coping mechanisms in the relationship between perceived stress, anxiety, depressive symptoms and QoL. They found that mental health problems are indeed established factors that affect QoL, and coping processes are playing a significant mediating role. In a study that explored the relationship between perceived stress and health-related quality of

life (QoL) among university students, depressive symptoms and health-promoting behaviors were shown to mediate the relationship between perceived stress and QoL, indicating that negative impacts of perceived stress on QoL are multi-faceted (Seo et al., 2018).

In a public health emergency, the levels of perceived stress can directly predict the level of QoL, and indirectly predict the level of QoL with the mediations of anxiety and depression (Zhang et al., 2022). This two-way model highlights the need for considering the direct and indirect effects of the stress-QoL relationship.

There have been mixed results in research comparing working women to women who are not working. In a study of 280 participants by Joshi et al. (2024) using the Depression, Anxiety, and Stress Scale (DASS-42), statistically significant difference ($p < .05$) in depression, anxiety, and stress was observed, with women who were employed reporting significantly higher scores for depression, anxiety, and stress. This implies that there could be a relationship between employment and mental health and well-being.

On the other hand, in the study by Kumar et al. (2025) in 160 working and non-working married/unmarried women aged 25 to 50 years, authors have found no significant interaction effect between marital status and employability in psychological distress, a significant interaction effect has been observed in psychological satisfaction/life satisfaction. This highlights some of the complexity of the employment status effects, meaning there could be other contextual factors affecting outcomes.

In the study on depression among working and stay-at-home women in Karachi, it was observed that depression was more common in stay-at-home women (mean HAD depression score 15.3 ± 8.7) compared to working women (14.8 ± 7.9) (Shoaib et al., 2024). However, a study in West Bengal, rural adult women, revealed that 22.33% of the working women had poor mental health while 28.40% of the non-working women had a poor mental health and the factors associated with poor mental health varied between the groups (Ovid, 2024) (workplace atmosphere for working women; financial aid satisfaction for non-working women).

Koch et al. (2024) carried out a comparative study of depression among working and non-working women of Meghalaya and found that both working and non-working women were suffering from mental disorder and depression. This implies that although employment status cannot be the main factor considered, the mental health issues among both working and non-working women need to be addressed.

Nordmyr et al. (2025) conducted a multi-level analysis on the subjective well-being of 6265 working women in Europe, and they found that a positive relationship between work-life balance and subjective well-being was statistically significant, even after they controlled for family and work context variables. This suggests that the quality of work experiences rather than the work itself could have a greater impact on mental health than the work itself.

Although much research has been conducted, there are still a number of holes. Few studies have investigated the relationship between perceived stress and QoL in both the physical and psychological domains, as well as social and environmental domains, using depression as a mediator. Second, the stress-QoL relationship is less well studied which is moderated by employment status. Third, although there are unique stressors in rural contexts, such as limited access to health care, traditional gender roles, and socioeconomic constraints, there is a lack of rural women-focused research. Fourth, many of the studies are based on small sample sizes, and do not use sophisticated analytic tools like bootstrapped mediation.

The aim of this research is to fill these gaps by exploring the correlations between perceived stress, depression and QoL in women working and non-working both from rural background. To specifically examine the differences between working and non-working women in relation to

their perceived stress, depression, and overall QoL scores, correlations were examined between the aforementioned variables, moderating effects of employment status on the relationship between perceived stress and overall QoL scores across four domains of QoL, and the mediating effects of depression between perceived stress and overall QoL scores across the four domains of QoL. The literature review and theories led to the following Hypotheses:

- H1.** Working women and non-working women will differ significantly in perceived stress.
- H2.** Working women and non-working women will differ significantly in depression.
- H3.** Working women and non-working women will differ significantly on the Physical, Psychological, Social, and Environment QoL domains.
- H4.** Perceived stress and depression will be significantly correlated with the Physical, Psychological, Social, and Environment QoL domains.
- H5.** Employment status will significantly moderate the relationship between perceived stress and the Social and Environment QoL domains.
- H6.** Depression will significantly mediate the relationship between perceived stress and the Physical, Psychological, Social, and Environment QoL domains.

Method

Research Design and Participants: This study was of a cross sectional, comparative design. The sample consisted of 197 women aged 25 to 45 years ($M = 33.58$, $SD = 4.886$), recruited from rural areas. Of these, 100 (50.8%) were working women and 97 (49.2%) were non-working women. Eligible were females between the age of 25 and 45 years, rural background family and willingness to participate. The following exclusion criteria were used: (a) psychiatric disorders, (b) use of psychotropic drugs and (c) incomplete questionnaires.

Measures: A self-designed demographic questionnaire was used to gather information about age, education (Intermediate, Graduation, Masters, MS/M), Employment status, marital duration (1-10 years, 11-20 years), number of children (One, 2-3, More than 3), socioeconomic status (Low, Middle, High), family structure (Nuclear, Joint), and family background (Rural). The family background of all participants was rural.

The Perceived Stress Scale (Cohen et al., 1983) is a 10-item self-report instrument that measures the perceived level of stress in life. Items are measured using a 5-point Likert scale of 0 (never) to 4 (very often). The scores are from 0-40, with higher numbers representing higher levels of perceived stress. The PSS has exhibited good psychometric properties over a range of populations (Cohen & Janicki-Deverts, 2012) with Cronbach's alpha scores of between .78 and .91.

The Beck Depression Inventory (BDI) (Beck et al., 1961) is a 21-item self-report instrument that measures the severity of depression symptoms. They are scored on a 4-point scale of 0 to 3 and the total score ranges from 0 to 63. The range of 0-13 is interpreted as having minimal depression, 14-19 as mild depression, 20-28 as moderate depression and 29-63 as severe depression. Good reliability and validity data have been reported for the BDI, with the Cronbach alpha usually higher than .85 (Beck et al., 1996).

WHOQOL-BREF (WHOQOL Group, 1998) is a 26-item self-report quality of life measure that covers four domains: Physical Health (7 items), Psychological (6 items), Social Relationships (3 items), and Environment (8 items). There are two more items that evaluate overall QoL and general health. Items are scored on a 5-point Likert scale. The Score of the domains is between 4 and 20, where higher scores mean better QoL for Physical and Environment, and for Psychological and Social. The WHOQOL-BREF has been found to have good cross-cultural validity

and reliability (Skevington et al., 2004) with Cronbach's alpha for the domains ranging from .66 to .84.

Ethical Consideration: An appropriate institutional review board approved the ethical aspects. Community outreach in rural areas was the method used for recruitment. All the participants gave informed consent before the data collection. Questionnaires used were administered in a quiet and private space, and were explained to participants with limited literacy. The data were collected during three-month period. Voluntary participation and confidentiality were explained to the participants.

Data Analysis: The analysis of the data was performed with SPSS version 27.0 and PROCESS macro for SPSS (Hayes, 2018). Descriptive statistics (means, standard deviations, frequencies, percentages) were computed for all variables. Independent-samples t-tests were used to compare the working versus non-working women in terms of the six variables in the study. If variables violated the homogeneity of variance assumption (as shown by Levene's test), then Welch-corrected t-tests and Welch's degrees of freedom were reported. This was calculated as the effect size Cohen's d.

Pearson product-moment correlations were run to explore relationships between perceived stress, depression, the four domains of QoL. To test the possibility that the relationship between perceived stress and Social and Environment QoL domains was moderated by employment status, the relationship was tested using PROCESS Model 1 (Hayes, 2018). The interaction term (Perceived Stress $\times$ Employment Status) was computed and mean centered to eliminate multicollinearity.

For each of the four domains of the QOL, mediation analysis was performed using PROCESS Model 4 (Hayes, 2018) to examine if depression mediated the relationship between perceived stress and the four domains of the QOL. Bootstrapping was used to avoid the assumption of normality of the sampling distribution and to obtain more accurate estimates of the confidence intervals for the indirect effects (Preacher & Hayes, 2008). Indirect effects were deemed to be of importance if the 95% bootstrap confidence interval did not contain zero.

Results

The sample comprised 197 women, with 100 (50.8%) working women and 97 (49.2%) non-working women. Participant ages ranged from 25 to 45 years ($M = 33.58$, $SD = 4.886$). Regarding education, 32 (16.2%) had completed Intermediate, 53 (26.9%) had Graduation, 73 (37.1%) had Masters, and 39 (19.8%) had MS/M.Phil degrees. Marital duration was distributed as 1–10 years for 97 (49.2%) and 11–20 years for 100 (50.8%). Regarding number of children, 66 (33.5%) had one child, 112 (56.9%) had 2–3 children, and 19 (9.6%) had more than three children. Socioeconomic status was reported as Low for 24 (12.2%), Middle for 108 (54.8%), and High for 65 (33.0%). Family structure was Nuclear for 101 (51.3%) and Joint for 96 (48.7%). 100% of the participants had a rural background. The means, standard deviations and intercorrelations of the study variables are shown in Table 1.

Table 1

Means, Standard Deviations, and Intercorrelations Among Study Variables

Variable	M	SD	1	2	3	4	5	6
1. Depression	26.89	6.562						
2. Perceived Stress	37.67	4.868	.42**					
3. Physical	25.44	5.209	.56**	.59**				
4. Psychological	15.51	3.562	.85**	.45**	.55**			
5. Social	8.54	3.294	.34**	.24**	.56**	.35**		
6. Environment	25.78	5.391	.35**	.36**	.74**	.36**	.74**	--

Note. $N = 197$ for all correlations (pairwise). $**p < .01$ (2-tailed).

Perceived stress correlated significantly and positively with depression ($r = .42$, $p < .001$) and with all four QoL domains: Physical ($r = .59$, $p < .001$), Psychological ($r = .45$, $p < .001$), Social ($r = .24$, $p = .001$), and Environment ($r = .36$, $p < .001$). Depression was also significantly correlated with all four domains of QoL: Physical ($r = .56$, $p < .001$), Psychological ($r = .85$, $p < .001$), Social ($r = .34$, $p < .001$) and Environment ($r = .35$, $p < .001$). These results corroborate H4. Interestingly, the correlation between Depression and Psychological QoL ($r = .85$) was high relative to the correlations between Depression and the other subdimensions of QoL, indicating a high level of similarity between depressive symptoms and perceived Psychological QoL.

Independent-samples t tests were used to compare the working women with non-working women on each of the six study variables (Table 2). The depression and psychological QoL data were found to have unequal variance based on the Levene's test and the t value and degrees of freedom are therefore reported.

Table 2

Comparison of Working and Non-Working Women on Study Variables

Variable	Working M (SD)	Non-Wk M (SD)	t	df	p	d
Depression	26.94 (7.89)	26.85 (4.87)	0.10	165.7 [†]	.919	0.01
Perceived Stress	37.89 (5.06)	37.44 (4.68)	0.64	195	.521	0.09
Physical QoL	25.59 (5.35)	25.28 (5.08)	0.42	195	.676	0.06
Psychological QoL	15.96 (4.18) [†]	15.05 (2.77) [†]	1.80 [†]	172.4 [†]	.073	0.26
Social QoL	8.67 (3.43)	8.41 (3.14)	0.55	195	.584	0.08
Environment QoL	25.97 (5.52)	25.58 (5.27)	0.51	195	.611	0.07

Note. df for Depression and Psychological QoL reflect the Welch correction for unequal variances (marked [†]). d = Cohen's d .

Perceived stress did not differ significantly between working ($M = 37.89$, $SD = 5.06$) and non-working women ($M = 37.44$, $SD = 4.68$), $t(195) = 0.64$, $p = .521$, $d = 0.09$. Thus, H1 was not supported. Depression also did not differ significantly between working ($M = 26.94$, $SD = 7.89$) and non-working women ($M = 26.85$, $SD = 4.87$), $t(165.7) = 0.10$, $p = .919$, $d = 0.01$. So, H2 was not supported. None of the four QoL domains differed significantly between working and non-working women: Physical, $t(195) = 0.42$, $p = .676$, $d = 0.06$; Psychological, $t(172.4) = 1.80$, $p = .073$, $d = 0.26$; Social, $t(195) = 0.55$, $p = .584$, $d = 0.08$; Environment, $t(195) = 0.51$, $p = .611$, $d = 0.07$. Thus, H3 was not supported.

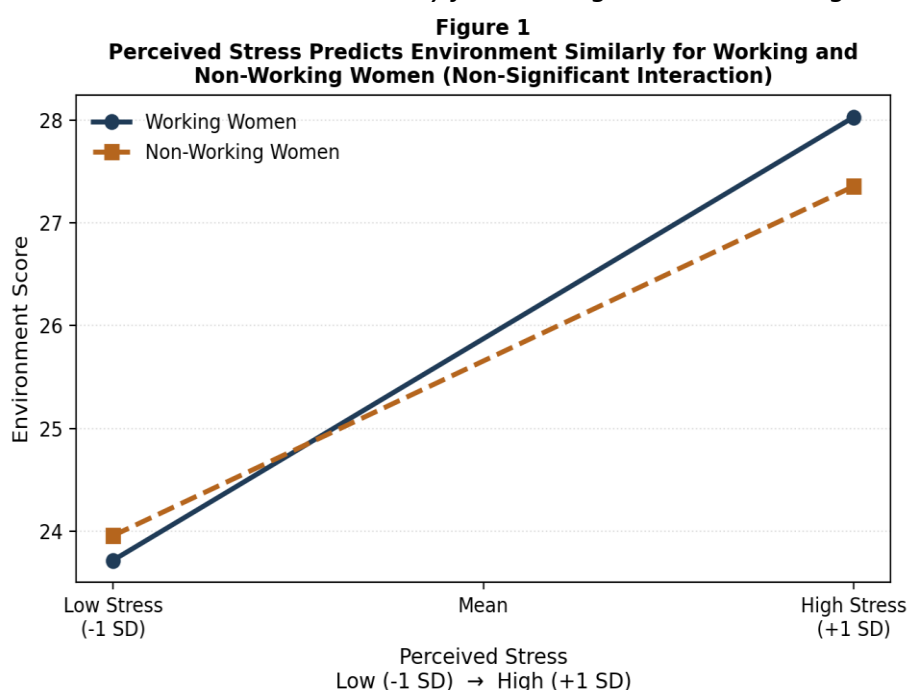
Table 3 shows moderate regression analyses (PROCESS Model 1) indicating that there was no moderating effect of employment status for the relationships between perceived stress and Social and Environment domains of the QoL measures.

Table 3*Moderated Regression Results: Employment Status as a Moderator of Perceived Stress*

Outcome / Predictor	B	SE	t	p
Y = Social ($R^2 = .066$, $F(3,193) = 4.56$, $p = .004$)				
Perceived Stress (X)	-.05	.15	-0.33	.742
Employment Status (W)	-4.90	3.59	-1.37	.174
Stress $\times$ Employment (Int_1)	.14	.09	1.43	.155
ΔR^2 for interaction ($F = 2.03$)	.01			.155
Y = Environment ($R^2 = .133$, $F(3,193) = 9.89$, $p < .001$)				
Perceived Stress (X)	.26	.24	1.05	.294
Employment Status (W)	-3.31	5.66	-0.58	.559
Stress $\times$ Employment (Int_1)	.09	.15	0.63	.531
ΔR^2 for interaction ($F = 0.40$)	.002			.531

Note. W (Employment Status) coded 1 = Non-Working Women, 2 = Working Women. B = unstandardized coefficient.

For Social QoL, the overall model was significant, $R^2 = .066$, $F(3, 193) = 4.56$, $p = .004$, but neither perceived stress alone ($B = -.05$, $p = .742$) nor the Stress $\times$ Employment interaction was significant, $B = .14$, $t = 1.43$, $p = .155$, $\Delta R^2 = .01$. For Environment QoL, the overall model was significant, $R^2 = .133$, $F(3, 193) = 9.89$, $p < .001$, but the Stress $\times$ Employment interaction was not significant, $B = .09$, $t = 0.63$, $p = .531$, $\Delta R^2 = .002$. The results of this study suggest that perceived stress is a similarly strong predictor of Social and Environment QoL for both women working and those not working, and it does not appear that employment status affects the relationship. Therefore, H5 was not supported.

Figure 1*Perceived Stress Predicts Environment Similarly for Working and Non-Working Women*

Note. Figure 1 predicted Environment scores at ± 1 SD of Perceived Stress, computed from the corrected-data regression coefficients. The near-parallel slopes reflect the non-significant Stress $\times$ Employment interaction ($p = .531$).

Mediation analyses were conducted using bootstrapping (PROCESS Model 4, 5,000 resamples) to determine if depression was a mediator for the association between perceived stress and each of the four QoL domains (Table 4). Perceived stress significantly predicted depression in every model, $a = .56$, $SE = .09$, $t = 6.37$, $p < .001$, $R^2 = .172$, $F(1, 195) = 40.52$, $p < .001$. Depression, in turn, significantly predicted every QoL domain when controlling for perceived stress: Physical, $b = .30$, $p < .001$; Psychological, $b = .43$, $p < .001$; Social, $b = .15$, $p < .001$; Environment, $b = .20$, $p = .001$.

Table 4

Path Coefficients (a, b, c, c') for the Mediation Models

Outcome (Y)	Path	B	SE	t	P
(all models)	a: Stress $\rightarrow$ Depression	.559	.088	6.37	< .001***
Physical	b: Depression $\rightarrow$ Y (Stress)	.299	.046	6.53	< .001***
	c: Stress $\rightarrow$ Y (total)	.632	.062	10.21	< .001***
	c': Stress $\rightarrow$ Y (Depression)	.465	.062	7.53	< .001***
Psychological	b: Depression $\rightarrow$ Y (Stress)	.433	.022	19.32	< .001***
	c: Stress $\rightarrow$ Y (total)	.334	.047	7.11	< .001***
	c': Stress $\rightarrow$ Y (Depression)	.091	.030	3.02	.003**
Social	b: Depression $\rightarrow$ Y (Stress)	.148	.037	4.00	< .001***
	c: Stress $\rightarrow$ Y (total)	.159	.047	3.39	.001**
	c': Stress $\rightarrow$ Y (Depression)	.077	.050	1.54	.126
Environment	b: Depression $\rightarrow$ Y (Stress)	.201	.059	3.42	.001**
	c: Stress $\rightarrow$ Y (total)	.401	.074	5.42	< .001***
	c': Stress $\rightarrow$ Y (Depression)	.289	.079	3.65	< .001***

Note. B = unstandardized coefficient. Path a (Stress $\rightarrow$ Depression) is identical across all four models. ** $p < .01$. *** $p < .001$.

Table 5

Model Fit Statistics and Bootstrapped Indirect Effects

Outcome (Y)	R ² (Total Model)	F (Total)	R ² (Full Model)	F (Full)
Physical	.349	104.31**	.466	84.58**
Psychological	.206	50.57**	.728	260.19**
Social	.056	11.46**	.128	14.19**
Environment	.131	29.42**	.181	21.37**

Note. R² (Total) = variance explained by Stress alone ($Y \sim X$). R² (Full) = variance explained by Stress and Depression together ($Y \sim X + M$).

All four indirect effects were significant, with 95% bootstrap confidence intervals excluding zero in every case: Physical, $B = .167$, 95% CI [.097, .258]; Psychological, $B = .242$, 95% CI [.141, .373]; Social, $B = .083$, 95% CI [.037, .145]; Environment, $B = .112$, 95% CI [.048, .197]. Therefore, the results from all four QoL domains were supportive of H6.

Direct effects differentiated between full and partial mediation. Full mediation: depression fully accounts for perceived stress's relationship with Social QoL, $c' = .077$, $p = .126$: in this case, the direct effect was no longer significant. The direct effects were also significant for Physical, Psychological, and Environment QoL, respectively ($c' = .465$, $p < .001$; $c' = .091$, $p = .003$; and $c' =$

.289, $p < .001$), with partial mediation. The direct effect, although not negligible, was relatively small (compared to the indirect effect) and the full model for Psychological QoL accounted for 72.8% of variance ($R^2 = .728$), indicating that most of the association between perceived stress and Psychological QoL works through depression.

Discussion and Conclusion

This study investigated the relationships between perceived stress, depression and quality of life among the working and non-working women in the rural population. Our findings add to the growing body of literature on women's mental health by clarifying the pathways of how perceived stress impacts QoL and by examining whether it impacts these pathways differently based on employment status.

Unlike H1, H2, and H3, no significant differences were found between working and non-working women in perceived stress, depression, or in any of the domains of QoL. The results are particularly significant considering the significant literature based on mental health disparities between employed and unemployed women (Joshi et al., 2024; Shoaib et al., 2024; Koch et al., 2024). The findings of the present study however support those that have found no interaction effect between marital status and employability with regards to psychological distress (Kumar et al., 2025), indicating that employment status alone is not a good predictor of mental health outcomes among women.

There are a number of reasons why these non-significant findings might occur. Firstly, our sample was limited to those with a rural background and traditional gender roles and family structures could have a more significant impact on women's mental health than employment status alone. Women's health status may be influenced more by their family environment, social support networks and community norms than by employment status in rural settings (Ovid, 2024). Second, the type of employment can be more important than whether or not it exists. Women in rural areas may work as farmers or in the informal sector, activities that do not offer the same psychological advantages as formal jobs in urban areas, such as autonomy, social cohesion, and the sense of contribution (Kapse, 2025).

Third, the effect size observed for all group comparisons were small ($d = 0.01$ to 0.26), implying that, even if the results of those comparisons had reached significance with a larger sample, the magnitude of the difference would be small. This is an example of the need to look at the effect size as well as p-values in psychological research (Cohen, 1988).

The results contradict the common belief that employment brings mental health benefits and that being out of work is harmful. Rather, they propose that the stress, depression, and QoL of working and non-working women are comparable, as there are different stressors that are equally challenging for each group. Working women can find themselves struggling with work-family conflict, job insecurity and workplace stress (Kapse, 2025; Joshi et al., 2024) and non-working women may experience social isolation, financial dependence, and decreased autonomy (Shoaib et al., 2024).

For those who endorsed H4, there was a significant correlation between perceived stress and all four domains of QoL as well as depression and all four domains of QoL. The most significant relationships were found between depression and Psychological QoL ($r = .85$) indicating substantial conceptual similarity between depression and Psychological QoL. This is consistent with studies showing that depressive states have a fundamental impact on psychological well being, by changing mood, thinking patterns, self-esteem and life satisfaction (Moussavi et al., 2007; Beck et al., 1996).

These correlations between perceived stress and the various domains of QoL were also significant, especially the correlation with Physical QoL ($r = .59$). This is in line with the stress

literature that has documented physiological and behavioral effects of chronic stress such as cardiovascular strain, immune suppression, and health-compromising behaviors (Cohen et al., 2007; Sapolsky, 2004). The moderate correlation between perceived stress and Social QoL ($r = .24$) indicates that social relationships are only somewhat protected from the effects of stress perhaps because of the buffering effect of social support (Cohen & Wills, 1985).

All the correlations between depression and the QoL domains were similar, with the Psychological domain of QoL ($r = .85$) having the highest association followed by Physical QoL ($r = .56$), Environment QoL ($r = .35$), and Social QoL ($r = .34$). The relative weak relationships with both Social and Environment QoL indicate that depression may impact one's sense of social relationship and environment, but other factors are important in these domains as well.

In contrast to H5, there was no moderating effect of employment status on the relationship between perceived stress and Social or Environment QoL. The results of this study suggest that perceived stress is linked to QoL in the same way in both groups of women: working and non-working, and that there is no evidence that working or non-working status strengthens or weakens this connection.

The absence of a significant moderation could be due to the subjective nature of the appraisal of stress which is shaped by cognitive appraisals and coping resources of the individual, which are somewhat independent of work status (Lazarus & Folkman, 1984). Women in both groups process and react to stressors in comparable ways and the employment status makes little difference in these processes.

Second, due to the specific outcomes assessed in moderation analyses, the Social and Environment QoL domains may be less likely to be sensitive to differences related to employment than other domains. The social QoL (relationships and social support) could be more affected by family and community relations than employment status. Likewise, the trends in socioeconomic status and geographic location might be a better predictor of the factors of Environment QoL (financial resources, safety, living conditions) than employment or job status alone (WHOQOL Group, 1998).

Depression significantly mediated the relationship between perceived stress and all four domains of the QoL in favor of supporting H6. This finding is strong in all physical, psychological, social and environmental dimensions of QoL, indicating that depression is a core mechanism by which perceived stress degrades well-being.

There were domain differences in the mediation pattern. Depression accounted for the entire relationship between perceived stress and social QoL, so that there was no direct relationship between perceived stress and social QoL other than through depression. It indicates that social impairments are more likely brought about by depressive symptoms (withdrawing and lack of interest in interpersonal relationships, and interpersonal perceptions) than by direct effects of stress.

Partial mediation was noted for Physical, Psychological and Environment QoL, suggesting both direct and indirect pathways. The direct effects for both Physical and Environment QoL were quite large, indicating that perceived stress impacts these domains beyond depression, possibly through physiological stress response, health behaviors and environmental appraisals (Cohen et al., 2007; Sapolsky, 2004). The complete mediation was observed for Psychological QoL domain with the full model accounting for 72.8% of the variance with the direct effect being relatively small ($c' = .091$). This is in accord with the high correlation between depression and Psychological QoL ($r = .85$) as there is conceptual overlap between depressive symptoms and perceived psychological well-being.

The results of this study support previous studies showing that depression acts as a mediator between stress and QoL (Shukri et al., 2024; Zhang et al., 2022). In a low-income Malaysian sample, Shukri et al. (2024) revealed that coping mechanisms accounted for the relationship between perceived stress, anxiety, depressive symptoms and QoL. Similarly, Zhang et al. (2022) found that perceived stress also negatively influenced QoL in public health emergencies, through the mediation of anxiety and depression. The current study is a study of women in a rural setting, and it further confirms these findings by showing that the mediation is consistent across all four domains of the WHOQOL-BREF.

Implications

The results have some theoretical implications. First, they provide a support for the transactional model of stress (Lazarus & Folkman, 1984) which shows that perceived stress impacts on QoL in a direct and indirect manner. Indirect pathway through depression illustrates the significance of cognitive and emotional appraisal in determining stress outcomes. Second, the results are consistent with the biopsychosocial model (Engel, 1977) that demonstrates a mediating effect of psychological processes (depression) between psychosocial stressors (perceived stress) and multidimensional health outcomes (QoL).

Third, non-significant differences among groups indicate that the assumption that employment is a protective or risk factor for women's mental health is not so straightforward. This implies that employment status needs to be understood in the context of a wider ecological system, which encompasses the individual, family, community and culture (Bronfenbrenner, 1979). However, in the rural environment where traditional relationships and roles are still very prominent, all these factors may contribute more to mental health than employment status.

Our findings have several practical implications for mental health interventions and policy. First, it is noteworthy that all the domains of QoL were mediated by depression, thus indicating that interventions focusing on depression might be especially effective in enhancing QoL for women in high stress levels. Cognitive-behavioral therapy, mindfulness-based interventions, and pharmacological treatments for depression could have a wide array of physical, psychological, social, and environmental benefits (Butler et al., 2006; Hofmann et al., 2010).

Secondly, there were no significant group differences, meaning that mental health interventions do not necessarily need to be tailored to working or non-working women, depending on their employment status. Instead, interventions need to focus on common risk factors affecting women, regardless of their employment status, such as perceived stress and depression. In rural settings, universal methods that are applicable to all women, regardless of occupation, might be the most suitable.

Third, that the correlation between depression and Psychological QoL was so strong ($r = .85$) indicates that screening for depression could be used as an effective tool for determining psychological health. Depression screening instruments can be administered in resource-poor rural areas, and such instruments can be brief, to identify women at risk for poor QoL and refer them to mental health care services in a timely manner.

Fourth, the absence of moderation by employment status suggests that workplace-based interventions might not be enough to help alleviate stress-related QoL impairment in working women. Rather, interventions should focus on stressors from several life domains (family, community, environment) affecting working and non-working women.

Limitations

There are a number of caveats that need to be noted. First, cross sectional design does not allow causal inferences. Although our mediation analyses indicate the direction of relationships that are consistent with theory, studies with more longitudinal methods are warranted to establish

the temporal sequence and causal pathways. Future studies should use prospective designs to explore relationships between changes in perceived stress and depression with changes in QoL over time.

Second, the sample was restricted to rural areas, thus limiting the generalizability of the findings to urban populations. The stressors, social support systems and employment opportunities may be different for rural and urban women. Future studies should explore whether the relationships observed are similar across rural and urban samples, and would be useful to examine how these relationships are different.

Thirdly, the sample was fairly uniform with regard to family background (all rural), family structure (about half nuclear, half joint) and socioeconomic status (mostly middle to high class). Further studies are needed with more varied samples to determine if the relationships found here can be replicated in other social and economic settings.

Fourth, all variables were self-reported, which may have contributed to common method bias and shared method variance (Podsakoff et al., 2003). Objective stress measures (e.g., cortisol) and clinician-administered depression measures should be added in future research to triangulate these findings as well as multi-informant ratings of QoL.

Fifth, the study did not examine specific components of employment quality like job satisfaction, work-life balance, workplace support or job security which can be more important for mental health than employment itself (Nordmyr et al., 2025). These employment traits should be explored further in future research to better elucidate the relationship between work experiences and stress, depression and QoL.

Sixth, coping strategies and social support were not measured in the study and could moderate or mediate the relationships found. Shukri et al. (2024) found evidence that coping strategies play a mediating role between the stress-mental health-QoL relationship and future studies should consider these in holistic models.

The high correlation between the items of depression and Psychological QoL ($r = .85$) is a question of discriminant validity. This correlation is in line with the conceptual similarities between these constructs, but also indicates that the WHOQOL-BREF Psychological domain may be tapping into constructs related to depression. Alternative measures of QoL should be explored in future research to determine if there are other patterns of associations.

Strengths

Although the study has some caveats, it possesses a number of strengths. First, valid, well-established instruments (PSS, BDI and WHOQOL-BREF) increase the reliability and comparability of results. Second, the straightforward of the analytical approach (bootstrapped mediation analysis and moderated regression) yields precise estimates of indirect effects and interaction effects. Thirdly, the rural population is overlooked in mental health research as it is a largely underrepresented group. Fourth, the analysis of all four domains of the WHOQOL-BREF gives a broad overview of the QoL instead of focusing on one domain.

This study explored the association between perceived stress, depression and quality of life in rural women, both working and non-working. Our results show that there is no significant difference between the working and non-working women in terms of perceived stress, depression, and QoL; however, perceived stress and depression have a strong relationship with all four domains of QoL. Notably, depression has been found to mediate the relationship of perceived stress to all measures of QoL in physical, psychological, social, and environmental domains, and fully mediate between perceived stress and Social QoL and partially mediate between perceived stress and Physical, Psychological, and Environment QoL.

This study's results indicate that the relation between perceived stress and poorer QoL is mostly mediated by depression, and that this relation is comparable for employed and non-employed individuals. The lack of significant differences among groups in the main effects and lack of significant interactions with employment status questions the assumption that employment status is a significant factor in the mental health of women, particularly in the rural context.

In terms of practice, our findings highlight that interventions aimed at treating depression are beneficial for enhancing the QoL of women who face high stress. Screening for depression can be an effective method to identify women who are at risk for poor QoL and interventions should target stressors across several life domains, not just the work domain.

Suggestions

Future studies should focus on longitudinal studies, sample diversity, employment quality/coping strategies, and use objective measures to better understand the multifaceted relationship between stress, depression, and QoL in women's lives. This type of research will guide the design of evidence-based targeted interventions to support women's mental health and QoL in a variety of contexts.

References

- Barnett, R. C., & Hyde, J. S. (2001). Women, men, work, and family: An expansionist theory. *American Psychologist*, 56(10), 781–796. <https://doi.org/10.1037/0003-066X.56.10.781>
- Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *Manual for the Beck Depression Inventory-II*. Psychological Corporation.
- Beck, A. T., Ward, C. H., Mendelson, M., Mock, J., & Erbaugh, J. (1961). An inventory for measuring depression. *Archives of General Psychiatry*, 4(6), 561–571. <https://doi.org/10.1001/archpsyc.1961.01710120031004>
- Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design*. Harvard University Press.
- Butler, A. C., Chapman, J. E., Forman, E. M., & Beck, A. T. (2006). The empirical status of cognitive-behavioral therapy: A review of meta-analyses. *Clinical Psychology Review*, 26(1), 17–31. <https://doi.org/10.1016/j.cpr.2005.07.003>
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Lawrence Erlbaum Associates.
- Cohen, S., & Janicki-Deverts, D. (2012). Who's stressed? Distributions of psychological stress in the United States. *Journal of Applied Social Psychology*, 42(6), 1315–1336. <https://doi.org/10.1111/j.1559-1816.2012.00900.x>
- Cohen, S., Janicki-Deverts, D., & Miller, G. E. (2007). Psychological stress and disease. *JAMA*, 298(14), 1685–1687. <https://doi.org/10.1001/jama.298.14.1685>
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, 24(4), 385–396. <https://doi.org/10.2307/2136404>
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98(2), 310–357. <https://doi.org/10.1037/0033-2909.98.2.310>
- Csetvei, A., Csákvári, T., Gombárovity, E., Verzár, Z., Betlehem, J., Püspök, N., Boncz, I., & Pakai, A. (2024). Assessing quality of life, depression, and stress among menopausal women. *Value in Health*, 27(12), S2. <https://doi.org/10.1016/j.jval.2024.10.018>
- Engel, G. L. (1977). The need for a new medical model: A challenge for biomedicine. *Science*, 196(4286), 129–136. <https://doi.org/10.1126/science.847460>
- Golshani, F., Hasanpour, S., Mirghafourvand, M., & Bani, S. (2024). Mental health and its relationship with quality of life in pregnant Iranian women with a history of primary infertility.

- Journal of North Khorasan University of Medical Sciences*, 16(3). <https://doi.org/10.22038/jnkums.2024.80545.1254>
- Hammen, C. (2005). Stress and depression. *Annual Review of Clinical Psychology*, 1, 293–319. <https://doi.org/10.1146/annurev.clinpsy.1.102803.143938>
- Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2nd ed.). Guilford Press.
- Hofmann, S. G., Sawyer, A. T., Witt, A. A., & Oh, D. (2010). The effect of mindfulness-based therapy on anxiety and depression: A meta-analytic review. *Journal of Consulting and Clinical Psychology*, 78(2), 169–183. <https://doi.org/10.1037/a0018555>
- Joshi, K., Srivastava, R., Bansal, S., & Saran, B. (2024). Depression, anxiety & stress among working and non-working women. *African Journal of Biological Sciences*, 6(14), 2375–2380. <https://doi.org/10.33472/AFJBS.6.14.2024.2375-2380>
- Kapse, P. R. (2025). Psychological well-being and distress among women in the workforce: A cross-sectional study. *Frontiers in Health Informatics*, 14(1). <https://doi.org/10.63682/fhi2838>
- Kawachi, I., & Berkman, L. F. (2001). Social ties and mental health. *Journal of Urban Health*, 78(3), 458–467. <https://doi.org/10.1093/jurban/78.3.458>
- Seo, E. J., Ahn, J. A., Hayman, L. L., & Kim, C. J. (2018). The association between perceived stress and quality of life in university students: the parallel mediating role of depressive symptoms and health-promoting behaviors. *Asian nursing research*, 12(3), 190–196. <https://doi.org/10.1016/j.anr.2018.08.001>
- Koch, A., Marak, S., & Sangma, R. (2024). A comparative study on depression among working and non-working women of Tura Hawakhana West Garo Hills Meghalaya. *International Journal For Multidisciplinary Research*. <https://api.semanticscholar.org/CorpusID:274478934>
- Kumar, K., Gautam, S., & Singal, S. (2025). Psychological well-being and life satisfaction: A cross-sectional study of working versus non-working, married and unmarried women in today's challenging times. *Asian Pacific Journal of Health Sciences*, 12(4), 61–65. <https://doi.org/10.21276/apjhs.2025.12.4.10>
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer.
- Monroe, S. M., & Harkness, K. L. (2005). Life stress, the "kindling" hypothesis, and the recurrence of depression: Considerations from a life stress perspective. *Psychological Review*, 112(2), 417–445. <https://doi.org/10.1037/0033-295X.112.2.417>
- Moussavi, S., Chatterji, S., Verdes, E., Tandon, A., Patel, V., & Ustun, B. (2007). Depression, chronic diseases, and decrements in health: Results from the World Health Surveys. *The Lancet*, 370(9590), 851–858. [https://doi.org/10.1016/S0140-6736\(07\)61415-9](https://doi.org/10.1016/S0140-6736(07)61415-9)
- Nordmyr, J., Forsman, A. K., & Kalseth, J. (2025). The case of mental wellbeing among working women in Europe: The association between subjective wellbeing and work-life balance. *Scandinavian Journal of Public Health*. Advance online publication. <https://doi.org/10.1177/14034948251395875>
- Ovid. (2024). IJCM_325A: A study on relationship of working status of rural adult women with their mental health in a rural block of West-Bengal. *Indian Journal of Community Medicine*, 49(Suppl 1), S93. https://doi.org/10.4103/ijcm.ijcm_325A_24
- Podsakoff, P. M., MacKenzie, S. B., Lee, J.-Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, 40(3), 879–891. <https://doi.org/10.3758/BRM.40.3.879>

- Sapolsky, R. M. (2004). *Why zebras don't get ulcers: The acclaimed guide to stress, stress-related diseases, and coping* (3rd ed.). Henry Holt and Company.
- Shoaib, R., Jehangir, F., Riffat, M., Abbasi, R., Altaf, A. J., & Madiha, A. (2024). Analysis of depression rates among working and non-working women in Karachi. *Academic Research*, 1(2), 60–65.
- Shukri, M., Tarmizi, N. N., Che Rahim, N. F., Kamarudin, K. S., & Koris, R. (2024). Perceived stress, anxiety and depressive symptoms and quality of life in a low-income sample in Malaysia: A prospective study on the mediating role of coping mechanisms. *Current Psychology*, 43, 32358–32373. <https://doi.org/10.1007/s12144-024-06342-1>
- Skevington, S. M., Lotfy, M., & O'Connell, K. A. (2004). The World Health Organization's WHOQOL-BREF quality of life assessment: Psychometric properties and results of the international field trial. *Quality of Life Research*, 13(2), 299–310. <https://doi.org/10.1023/B:QURE.0000018486.91360.00>
- WHOQOL Group. (1998). Development of the World Health Organization WHOQOL-BREF quality of life assessment. *Psychological Medicine*, 28(3), 551–558. <https://doi.org/10.1017/S0033291798006667>
- World Health Organization. (2022). *World mental health report: Transforming mental health for all*. WHO.
- Zhang, X., Zhang, L., Geng, D., Chen, X., Zhang, C., & Zhou, F. (2022). Effects of public perceived stress on quality of life in public health emergencies: The mediating effect of anxiety and depression. *Journal of Xuzhou Medical University*, 42(8), 613–617. <https://doi.org/10.3969/j.issn.2096-3882.2022.08.012>