

Research Article

**WORKPLACE PROBLEMS OF WOMEN EMPLOYEES IN
BANING SECTOR: A CASE STUDY OF DISTRICT
BHAKKAR, LAYYAH AND MULTAN**

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Abstract

This study investigated the interplay between mental health and family dynamics among working women in Punjab province of Pakistan, during Covid-19 pandemic using primary data collected from 250 women working in public and private organizations through a structured questionnaire and employing the Depression, Anxiety, and Stress Scale (DASS-21) and the Beach Center Family Quality of Life Scale (FQOL) to evaluate psychological well-being and familial satisfaction. Statistical analysis via Multiple regression analysis revealed high levels of depression and anxiety, particularly among working mothers managing childcare, domestic obligations, and professional responsibilities. Women with extended family support reported better mental health and life satisfaction compared to those in nuclear households. Factors such as marital status, challenging work environments, and lower income correlated with poorer mental health outcomes. In contrast, joint family structures, marital stability, supportive workplace environment, and higher income were positively enhanced life satisfaction, while economic hardships worsened well-being.

Key words: working women; mental health; family life; marital status; income level; workload, well-being.

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1.Introduction

The global outbreak of COVID-19 pandemic posed extraordinary threats to human life, societies and economies all over the world. By mid-2020, the virus had taken every country into its fold, leading to widespread lockdown, social isolation and restriction of economic activities. Nations such as the United States, India, Germany, and Brazil reported the highest number of infected cases and death tolls. The Pandemic destroyed millions of jobs and caused an estimated \$16 trillion economic losses (WEF, 2020; Rhodes, et al., 2024). Multiple variants of Covid-19 are still impacting human health. WHO Report, (2025) reported that recent surveillance data from the Global Influenza Surveillance and Response System (GISRS) indicates a notable rise in SARS-CoV-2 transmission worldwide. As of May 2025, 73 countries reported an average test positive rate of 11%, matching the peak rate recorded in July 2024 (12% from 99 countries) and showing a significant jump from the 2% observed in February 2025 (See Figure 1). This upward trend is primarily attributed to surges in the Eastern Mediterranean, South-East Asia, and Western Pacific regions.

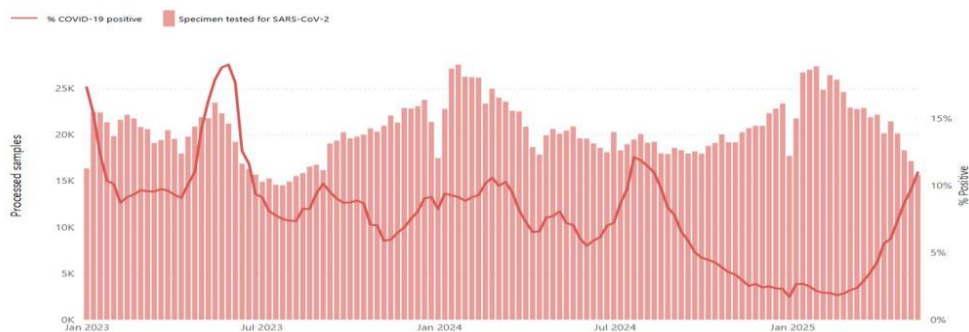


Fig 1: SARS-CoV-2 tested specimens from different countries during January 2023-May 2025. **Source:** WHO, (2025) *COVID-19 - Global Situation.

In Pakistan, the effects were similarly profound. Between April 2020 and December 2021, the country experienced five distinct waves of infections. The pandemic caused a dramatic reduction in employment, pushing millions out of the workforce and reversing progress in poverty alleviation. The percentage of people living in poverty rose sharply, and the national fiscal deficit widened significantly. These economic setbacks were accompanied by significant psychological strain, especially among vulnerable groups. Figure 2 illuminates the Covid-19 waves and their impacts.

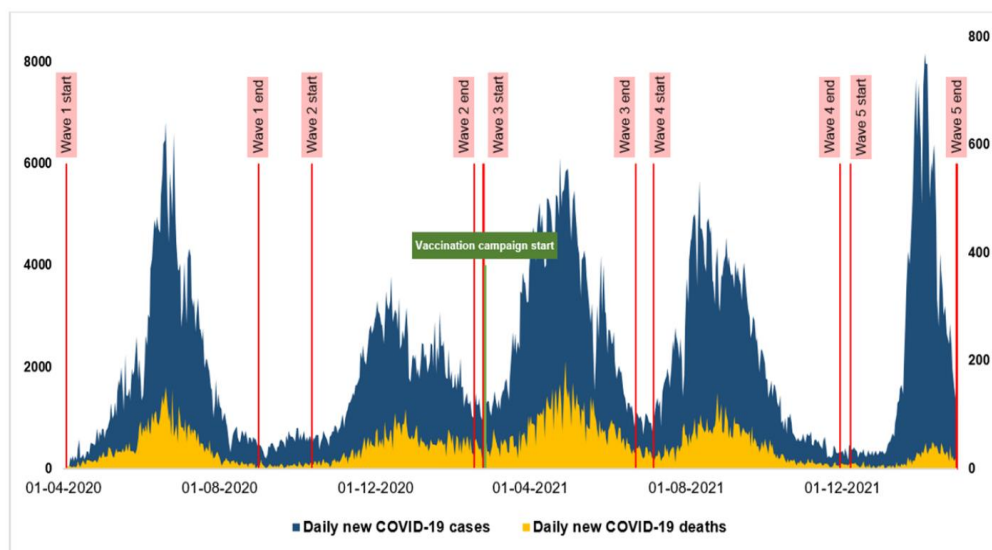


Fig 2. Fig 1. COVID-19 waves, daily reported cases and deaths.

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The mental health impact of the pandemic was not uniformly distributed across populations. International and local research has shown that women, particularly those engaged in both paid work and unpaid domestic

responsibilities, were disproportionately affected (Hilado, Bond, & Sanchez, (2024). Heightened stress levels, anxiety, and depression were more common among working women than men, largely due to the compounding effects of job insecurity, care-giving responsibilities, and limited access to mental health services (Rehman & Awan, (2017); Bouteska et al., 2023; Zang & Tian, (2024). In Pakistan, working women faced dual burden—performing jobs and rearing children during the lockdown. Job losses among women were more frequent, and many female students abandoned learning due to economic and social constraints (Dasgupta, 2020; Flor, 2022; Bandial & Awan, (2022); Vansheika, Rawat, 2025). Hence, there is need to investigate the issues of working women particularly during pandemic like situation. The main research question of this study is as follows:

How did the COVID-19 pandemic affect the mental health and family life of working women in Pakistan, and what socioeconomic factors intensified these gendered impacts?

To explore this research question, this research aims:

- To analyze the key mental health challenges—such as anxiety, stress, and depression—experienced by working women during the pandemic.
- To compare mental health outcomes between men and women in the context of COVID-19.
- To examine the increased children-caring and household responsibilities of working women during the pandemic.
- To examine the role of socioeconomic disruptions, including job losses and financial disruption, in worsening the psychological burden of women.
- To explore the long-term implications of the pandemic on working environment of working women during pandemic.

This research contributes to a deeper understanding of how global crises like COVID-19 can exacerbate existing gender inequalities, particularly in developing economies like Pakistan. By focusing on the intersection of employment, mental health, and family dynamics, this study highlights the need for targeted mental health support, gender-sensitive labor policies, and more equitable distribution of domestic responsibilities. Its findings can inform policymakers, employers, and mental health practitioners in designing future strategies that support women's well-being during and after public health emergencies. Additionally, it adds to the academic discourse on gendered labor and psychological resilience in the face of socioeconomic crises.

The paper is structured into five sections: section 2 analyzes relevant literature, hypothesis development and identification of research gaps. Section 3 discusses research methodology, type of data used, and statistical techniques employed for data analysis. Section 4 consists of results while section five includes discussion, contribution, limitations and suggestions for further research.

2. Literature Review and Hypotheses development

The COVID-19 pandemic triggered an unprecedented global crisis, simultaneously threatening public health systems and destabilizing societal and economic structures. Major economic powerhouses—such as China, the United States, and the European Union, which collectively drive global production and GDP—faced significant disruption. Latest estimates disclosed

that the global GDP declined to \$85.97 trillion in 2020, reflecting a loss of approximately \$2 trillion compared to the previous year (Aaron, 2023).

The literature extensively documents the pandemic's sectoral impact. Industries heavily reliant on physical interaction, including travel, hospitality, and retail experienced acute downturns due to widespread lockdown. In contrast, technology-driven sectors such as e-commerce and digital services witnessed accelerated growth, fueled by a global shift toward remote work and online consumption. Beyond industrial disruptions, the pandemic exacerbated existing socio-economic vulnerabilities, deeply affecting areas such as poverty, gender equity, employment, and international trade (Wei et al., 2021). Women, particularly entrepreneurs, encountered severe economic challenges. Due to limited access to governmental financial and legal support, many women-led businesses struggled to survive (Torres et al., 2021). The burden of unpaid care work intensified during school closures, compelling numerous women to leave jobs to look after their children (Kotlar et al., 2021). This temporary withdrawal from the labor force translated into long-term obstacles in workforce reintegration (Alon et al., 2020). The social implications were equally severe. Educational disruptions affected nearly 1.5 billion children worldwide due to prolonged school closures (Paul et al., 2020). Simultaneously, international travel restrictions created additional barriers for working women, limiting their mobility and employment opportunities (Erick, 2022). Social activities—such as religious gatherings (Danijel et al., 2020) and gym visits (Mutz et al., 2021)—were also restricted, significantly reducing avenues for interpersonal engagement.

Lockdowns imposed strict physical distancing, weakening not only community ties but also familial connections. These disruptions profoundly

impacted global mental health. A surge in psychological distress—manifesting as anxiety, stress, depression, and despair—was observed, particularly among those who lost loved ones, faced job loss, or struggled to adapt to altered socio-economic conditions. Prolonged isolation compounded feelings of loneliness, further aggravating mental health issues (WHO, 2020). Women bore the brunt of this psychological burden due to the dual pressure of professional obligations and intensified domestic obligation, rendering them more susceptible to emotional distress (Jacques et al., 2020); Javeiria & Awan, (2024).

In synthesis, the existing literature broadly categorizes the pandemic's impact into four interconnected domains: global economic performance, industrial output, social life, and individual health and well-being. For example, Aaron (2023) analyzed the contraction of global GDP, with specific focus on major economies such as the U.S., EU, China, and Japan. Wei et al. (2021) investigated sectoral impacts of pandemic, revealing, while some industries faltered, others flourished under lockdown conditions. Torres et al. (2021) highlighted the financial vulnerabilities of women entrepreneurs. Meanwhile, Kotlar et al. (2021) and Alon et al. (2020) discussed the compounded challenges faced by working mothers during school closures and their difficulty in re-entering the labor market. Paul et al. (2020) emphasized educational disruptions, whereas Erick (2022) addressed the gendered effects of travel restrictions. The limitations on communal activities were further analyzed by Danijel et al. (2020) and Mutz et al. (2021). Mental health deterioration, particularly among women balancing work and family life, was examined by Awan & Tahir, (2015), WHO (2020) and Jacques et al. (2020).

However, a notable gap exists in the academic discourse: there is limited empirical research examining the interplay between mental health and domestic life of working women in Pakistan during the COVID-19 pandemic. This study seeks to bridge that gap by exploring how economic strain, psychological distress, and increased domestic responsibilities collectively affected working women, thereby intensifying prior gender disparities within both professional and household contexts.

Hypotheses Development

Grounded in the reviewed literature and aligned with the study's objectives, the following hypotheses are constructed for statistical analysis:

H1: Mental health positively correlates to the life satisfaction of working women.

H2: Income level positively correlates to the life satisfaction of working women.

H3: Marital status positively associates with the life satisfaction of working women.

H4: Family system positively correlates to the life satisfaction of working women.

H5: Working environment positively associates with the life satisfaction of working women

H6: Education positively relates to the life satisfaction of working women in Pakistan

Testing these six hypotheses will offer insights into the relationships between key independent variables—such as mental health, marital status, education, income level, working environment, and family structure—and the dependent variable: the life satisfaction of working women. We constructed a conceptual model on the basis of above variables, and it is shown in [Figure 3](#).

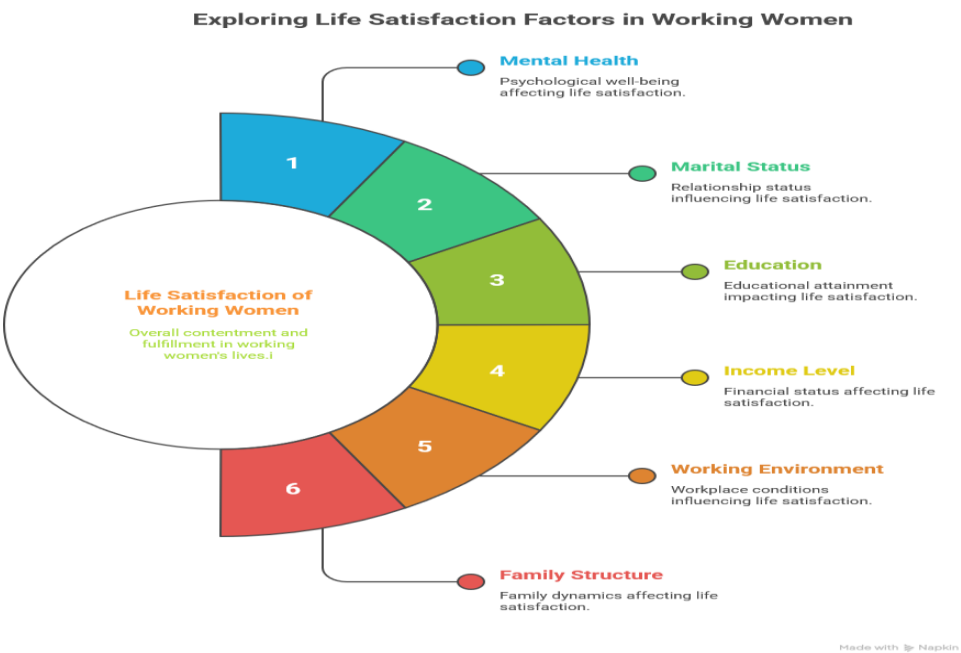


Fig.1: Research Model

3. Material and Methods

This study adopts a quantitative research approach to examine the relationship between mental health and family life satisfaction among working women in Punjab, Pakistan, during the COVID-19 pandemic. The objective is to assess how selected socio-economic variables influence psychological well-being and family life outcomes during a period of heightened stress and uncertainty. Primary data were used in this study, and this data were collected through a structured survey questionnaire. The instrument comprised the following three distinct sections: (i) socio-demographic characteristics of the respondents, (ii) measures of family life satisfaction, and (iii) indicators of mental health status. To ensure methodological rigor and validity, the study incorporated two standardized scales. The Beach Center Family Quality of Life Scale (FQOL)

was adopted to assess various dimensions of family well-being, while the Depression, Anxiety, and Stress Scale (DASS-21) was employed to measure mental health levels among participants. Both scales are well-established and widely used in psychological and social research, ensuring construct validity and compatibility with existing literature.

The study population consisted of all employed women—whether in public sector, private sector, or self-employed—residing in Punjab province of Pakistan. This province was one of the most severely affected regions during the pandemic (OCHA, 2020). A sample of 250 working women was selected through a non-probability convenience sampling technique. While this approach may introduce potential sampling bias, the decision was based on practical constraints posed by the pandemic and the need for timely data collection. Nonetheless, steps were taken to ensure that the sample included women from diverse professional and socio-economic backgrounds, enhancing the generalizability of findings within the study area. The selection of independent variables education, income, marital status, mental health, working environment, and family system—were guided by prior empirical research and theoretical frameworks. Each variable was chosen for its potential influence on the dependent variable, life satisfaction, thereby reducing the risk of omitted variable bias. Multicollinearity among independent variables was tested to ensure robustness of the regression model, helping address endogeneity concerns.

Data was processed and analyzed using SPSS statistical software. Descriptive statistics were employed to summarize demographic characteristics of variables. To ensure equality of variances and homogeneity among groups, Levene's Test was applied. Furthermore, Multiple Regression

Analysis was conducted to identify the direction of association between variables. This inferential method enables the isolation of individual variable effects while controlling for other predictors, thus minimizing estimation bias and enhancing the reliability of conclusions. An econometric model was constructed to examine relationships between variables and its functional form is as follows:

$$LS = f(MH, MS, FS, Inc., WE, Edu.)$$

This model is transformed into an Econometric model, which is given below:

$$LS = \beta_0 + \beta_1 \cdot MH + \beta_2 \cdot MS + \beta_3 \cdot FS + \beta_4 \cdot Inc + \beta_5 \cdot WE + \beta_6 \cdot Edu + \epsilon$$

Where:

Life Satisfaction (LS) is the dependent variable, representing the overall quality or satisfaction of family life of working women.

Education (Edu.), *Income* (Inc.), *Mental Health* (MH), *Working Environment* (WE), *Marital Status* (MS), and *Family System* (FS) are independent variables, each capturing distinguished aspects that influences life satisfaction.

β_0 is the intercept term, depicting the baseline level of life satisfaction when all independent variables are zero.

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ are the coefficients indicating the impact of each independent variable on the dependent variable.

ϵ is the error term, representing unobserved factors that affect life satisfaction.

4. Empirical Results

To assess the mental health and life satisfaction of working women during COVID-19, Beach Centre Family Quality of Life Scale (FQOL Scale) was used as a standard instrument (Babincak et. al, 2023). While the Depression, Anxiety and Stress Scale (DASS-21) was employed to examine mental health

of respondents (Henry et. al, 2005). Data were collected from working women serving in different public or private organizations, or they were self-employed.

4.1 Demographic Profile of the Respondents

The data display in Table 1 shows that, out of 250 respondents, 55% were married, 42% were single while participation of divorced or widowed respondents was only 3%. As far as the respondents' education level is concerned, 38% had 18 years of education, 5.2% had 14 years of education, and 40% had 16 years of education. Whereas 13.6% of respondents were highly qualified, having more than 18 years of education. Data related to family system reflects that 61.2% participants lived in nuclear family system and remaining 38.8% were a part of a joint family system. Only 2% of respondents earned over Pak Rs 150,000 monthly income, over 16% earned between Pak Rs 100,000 and Rs. 150,000 while 39.2% participants earned between Pak Rs. 50,000 and 100,000, and 40.4% earned below Pak Rs. 50,000 per month.

4.2 Analysis of Participants' responses

4.2.1 Working Environment

Table 1 also shows that half (51.6%) of participants agreed that their work place environment is comfortable. While more than 20% slightly agreed, 14% remained neutral whereas nearly 14% found it uncomfortable. The majority confirmed that their working environment is conducive, and they feel comfortable.

Table 1

Working Environment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Agree	129	51.6	51.6	51.6
	slightly agree	51	20.4	20.4	72.0
	Neutral	36	14.4	14.4	86.4
	slightly disagree	32	12.8	12.8	99.2
	Disagree	2	.8	.8	100.0
Total	250	100.0		100.0	

4.2.2 Mental Health and Education

Table 2 demonstrates the outcomes of independent samples t-test when applied on variables of mental health and education. The value of Levene's test for equality of variance is greater than alpha ($p > \alpha$, $p = 137$, $\alpha = 0.05$). Therefore, homogeneity exists in data. As the value of t-test for equality of means is greater than alpha ($p > \alpha$, $p = .415$, $\alpha = 0.05$) it shows that there is no change in the respondent's state of mental health based on education level. It means that education has no significant relationship with life satisfaction.

Table 2

Links between Mental Health and Education

	Levene's test for equality of variance	t-test for equality of means
Mental health	Sig.	Sig. (2 tailed)
Equal variances are considered	.137	.391
Equal variances are not considered		.415

4.2.3 Mental Health and Income

The independent samples T-test is applied on variables of mental health and income level. The significance value of Levene's test for equality of variance is .735, which is greater than alpha ($\alpha = 0.05$). It implies that the dataset is homogeneous. The significance value of t-test for equality of means is 0.041, which is less than the value of alpha ($p < \alpha$, $\alpha = 0.05$). Hence, there is a difference in mental health level based on income level. During the period of Covid-19, health crisis was accompanied by economic and social crisis. In that situation, most people were disturbed about their jobs and source of income. Individuals having high income and security of their jobs showed better mental health during pandemic compared to those having no job or strong source of income. [Table 3](#) shows the outcomes of Levene's test for quality of variance and t-test for quality of means.

Table 3

Relationship between Mental Health and Income

	Levene's test for equality of variance	t-test for equality of means
Mental health	Sig.	Sig. (2 tailed)
Equal variances are considered	.735	0.045
Equal variances are not considered		0.041

4.2.4 Mental Health and Marital Status

Table 4 demonstrates the outcomes of independent samples t-test when applied to variables of mental health and marital status. The value of Levene's test for equality of variance is .256, which is greater than alpha ($\alpha = 0.05$) and it reflects homogeneity in dataset. The value of t-test for equality of means is 0.049, which is less than the value of alpha ($p < \alpha$, $\alpha = 0.05$). Thus, the outcomes confirmed the relationship between marital status and mental health. During Covid-19 pandemic married women especially mothers felt more stress due to number of reasons like family health, school closures and inaccessibility of house help, childcare, and home chores along with work from home pressure.

Table 4

Relationship between Mental Health and Marital Status

	Levene's test for equality of variance	t-test for equality of means
Mental Health	Sig.	Sig. (2 tailed)
Equal variances are considered		0.041
Equal variances are not considered	.256	0.049

4.2.5 Mental health and Family System

Table 5 shows the findings of independent samples t-test relating to the variables of mental health and family system. The value of Levene's test for equality of variance is .735, which is greater than alpha ($\alpha = 0.05$). It means the data is homogeneous. The value of t-test for equality of means is 0.039, which is less than alpha value ($p < \alpha$, $\alpha = 0.05$). Therefore, there is a closeness between mental health and family system. During Covid-19, pandemic, nuclear family system faced more lonesomeness or socially isolated compared to joint family system because there was complete lockdown and restriction of social mixing. It means family system is more valuable during crisis and has positive impact on human health.

Table 5

Relationship between Mental health and Family System

	Levene's test for equality of variance	t-test for equality of means
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Mental Health	Sig.	Sig. (2 tailed)
Equal variances considered	.735	0.045
Equal variances not considered		0.039

4.2.6 Life Satisfaction and Education

Table 6 shows the outcomes of independent samples T-test when applied to the variables of family life quality and education. The value of Levene's test for equality of variance is 0.941, which is greater than alpha ($p > \alpha$, $\alpha = 0.05$). Hence, there is homogeneity in dataset. The results suggest that there is no difference in family life satisfaction levels of respondents on the basis of their education because the significance value of t-test for equality of means is greater than alpha ($p > \alpha$, $p = .471$, $\alpha = 0.05$).

Table 6

Relationship between Life Satisfaction and Education

	Levene's test for equality of variance	t-test for equality of means
Life satisfaction	Sig.	Sig (2 tailed)
Equal variances are considered	0.941	0.477
Equal variances are not considered		0.471

4.2.7 Life Satisfaction and Income

Table 7 presents the results of independent samples T-test when applied to the variables of family life quality and income level. The value of Levene's test for equality of variance is .901, which is greater than alpha ($p > \alpha$, $\alpha = 0.05$),

indicating the existence of homogeneity in data. The findings suggest that there is some difference in family life quality levels of respondents based on their income. As the value of t-test for equality of means is greater than alpha ($p > \alpha$, $p = .047$, $\alpha = 0.05$). It means economic crisis during COVID-19 pandemic did not affect those whose income level was high, and they felt less stress due to availability of basic necessities. It means that high income level smoothens quality of family life during economic recession.

Table 7

Relationship between Life Satisfaction and Income

	Levene's test for equality of variance	t-test for equality of means
Life satisfaction	Sig.	Sig. (2 tailed)
Equal variances are considered		0.041
Equal variances are not considered	.901	0.047

4.2.8 Life Satisfaction and Working Environment

Table 9 depicts the results of independent samples T-test. The value of Levene's test for equality of variance is .537, which is greater than alpha ($\alpha = 0.05$). It confirms homogeneity in dataset. The value of t-test for equality of means is 0.035. which is less than alpha value ($p > \alpha$, $\alpha = 0.05$), suggesting a difference in life satisfaction based on working environment.

Table 8

Relationship between life satisfaction and working Environment

	Levene's test for equality of variance	t-test for equality of means
Life satisfaction	Sig.	Sig. (2 tailed)
Equal variances are considered		.039
Equal variances are not considered	.537	.035

4.2.9 Life Satisfaction and family System

Table 10 demonstrates the results of independent samples T-test. The value of Levene's test for equality of variance is 0.641, which is greater than alpha ($\alpha = 0.05$), indicating the existence of homogeneity in data set. The value of t-test for equality of means is 0.046, which is less than alpha value ($p > \alpha$, $\alpha = 0.05$). So, family system has a close link with life satisfaction.

Table 9

Relationship between life satisfaction and family system

	Levene's test for equality of variance	t-test for equality of means
Life satisfaction	Sig.	Sig. (2 tailed)
Equal variances are considered		.038
Equal variances are not considered	.641	.046

4.3 Empirical analysis

After analyzing the statements of participants, now we examine the relationship between variables of the study through statistical techniques, such as descriptive statistics, correlation matrix, Multiple Regression

4.3.1 Descriptive Analysis

Table 10 shows the descriptive statistics of variables. These descriptive statistics provide a summary of the central tendency, variability, and range of each variable in the dataset. The mean score of marital status is 1.53, with a standard deviation of 0.666. This suggests that, on average, respondents tend towards the lower end of the scale (Single or married). Most of the participants of study were either married or single, a few were otherwise. The mean score of education level is 4.59, with a standard deviation of 1.003. This suggests that, on average, respondents have attained a relatively high level of education (16 or 18 years of education), with some variability in educational attainment within the sample. The mean score of family system is 1.33, with a standard deviation of 0.472. This suggests that, on average, respondents tend to have one type of family system, which is nuclear family system, but there is variability in family structures among the respondents. The mean score of working environments is 1.87, with a standard deviation of 1.182. This suggests that, on average, participants perceive their working environment as moderately positive, but there is considerable variability in these perceptions within the sample. The mean score of monthly income level is 1.89, with a standard deviation of 0.771. This suggests that, on average, respondents have a moderate monthly income, but there is variability in their income levels in the sample. The mean score of life satisfaction is approximately 68.82, with a standard deviation of 10.28058. This indicates that, on average, respondents

report relatively high levels of life satisfaction, but there is variability in life satisfaction levels within the sample. The mean score of mental health is approximately 46.94, with a standard deviation of 9.35875. This suggests that, on average, respondents report moderate levels of mental health, but there is variability in mental health status in the sample

Table 10-

Descriptive analysis results

Variables	N	Minimum	Maximum	Mean	Std. Deviation
Marital status	250	1	4	1.53	.666
Education	250	1	6	4.59	1.003
Family system	250	1	2	1.33	.472
Working environment	250	1	4	1.87	1.182
Monthly income	250	1	4	1.89	.771
Life satisfaction	250	37.00	90.00	68.8200	10.28058
Mental health	250	21.00	61.00	46.9360	9.35875
Valid N (listwise)	250				

4.3.2 Multiple regression analysis

The econometric model of this study was as follows:

$$LS = \beta_0 + \beta_1 \cdot MH + \beta_2 MS + \beta_3 \cdot FS + \beta_4 Inc + \beta_5 \cdot WE + \beta_6 \cdot Edu + \epsilon$$

When we put estimated values of variables in the model, we found:

$$LS = 87.125 + 0.248MH + 6.542MS + 0.156FS + 0.575Inc + 0.115WE + \epsilon$$

Now we discuss the results of the study's hypotheses.

4.3.2.1 Hypotheses testing

Table 11 shows the outcomes of Multiple Regression Analysis. According to the findings, mental health is strong predictor of life satisfaction because there is a positive association between mental health and life satisfaction among working women during the COVID-19 pandemic. With an unstandardized coefficient of 0.248 (SE = 0.060) and a standardized beta of 0.267, mental health demonstrated a statistically significant effect ($t = 4.139$, $*p = 0.031$). This indicates that women with stronger mental health reported markedly higher life satisfaction compared to those with poorer mental well-being, underscoring its critical role during periods of heightened stress and uncertainty. Hence, first hypothesis (**H1**) is confirmed because empirical evidence supports it. Similarly, marital status emerged as a strong predictor of life satisfaction, with a coefficient of 6.542. This suggests that married women experienced significantly greater life satisfaction than their unmarried counterparts. The positive standardized beta and significance ($*p < 0.05$) highlights the stabilizing effect of marital relationships, which may have provided emotional and practical support during the pandemic's challenges. Therefore, second hypothesis (**H2**) is accepted because hard evidence endorses it. Further, a joint family system was linked to improved life satisfaction, evidenced by a coefficient of 0.156. This translates to a 15.6% increase in life satisfaction per unit improvement in family support, reflecting the protective role of shared responsibilities and reduced isolation in collaborative households. The statistically significant association ($*p < 0.05$) aligns with findings that extended family networks buffered against pandemic-related loneliness. Thus, third hypothesis (**H3**) is accepted due to empirical

support. Monthly regular income also showed a robust positive relationship with life satisfaction (coefficient = 0.575, $*p* < 0.05$). Each unit increase in income correlated with a 57.5% rise in satisfaction, emphasizing the importance of financial security during global economic instability. Higher income likely mitigated stressors such as job loss or healthcare costs, enhancing overall well-being of working women. Hence, fourth hypothesis (**H4**) is validated because the findings support it. Work environment is also a good predictor of life satisfaction of working women because a supportive contributed to an 11.5% increase in life satisfaction per unit improvement (coefficient = 0.115, $*p* < 0.05$). Flexible arrangements, workplace safety measures, and interpersonal support may have reduced pandemic-induced occupational stress, fostering greater contentment among working women. Hence, fifth hypothesis (**H5**) is accepted. However, the education level has no significant association with life satisfaction as the empirical findings reveal that, while higher education levels corresponded to a 10% increase in life satisfaction (coefficient = 0.100), this relationship was not statistically significant ($t = 0.667$, $*p* = 0.065$). This trend suggests education may indirectly influence well-being through factors like employment opportunities, but the evidence does not support a definitive causal link in this context. Hence, sixth hypothesis (**H6**) is rejected because the empirical evidence does not support it. We can conclude that this study highlights mental health, marital stability, family cohesion, financial security, and workplace conditions as key factors influencing life satisfaction among working women during the COVID-19 crisis. However, Education, while positively correlated, did not

reach statistical significance, warranting further investigation into its contextual nuances.

Table 11

Multiple Regression analysis results

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	87.125	5.561		15.668	.000
	Mental health	.248	.060	.267	4.139	.031
	Marital status	6.542	1.033	.424	6.331	.000
	Family system	.156	.059	.141	2.623	.009
	Monthly income	.575	.020	.360	8.660	.000
	Working environment	.115	.058	.456	7.093	.001
	Education	0.100	0.150	0.100	0.667	.065

*Dependent Variable: life satisfaction

The regression analysis results based on unstandardized and standardized coefficients values are exhibited in [Figure 5](#) showing major predictors of women's life satisfaction.

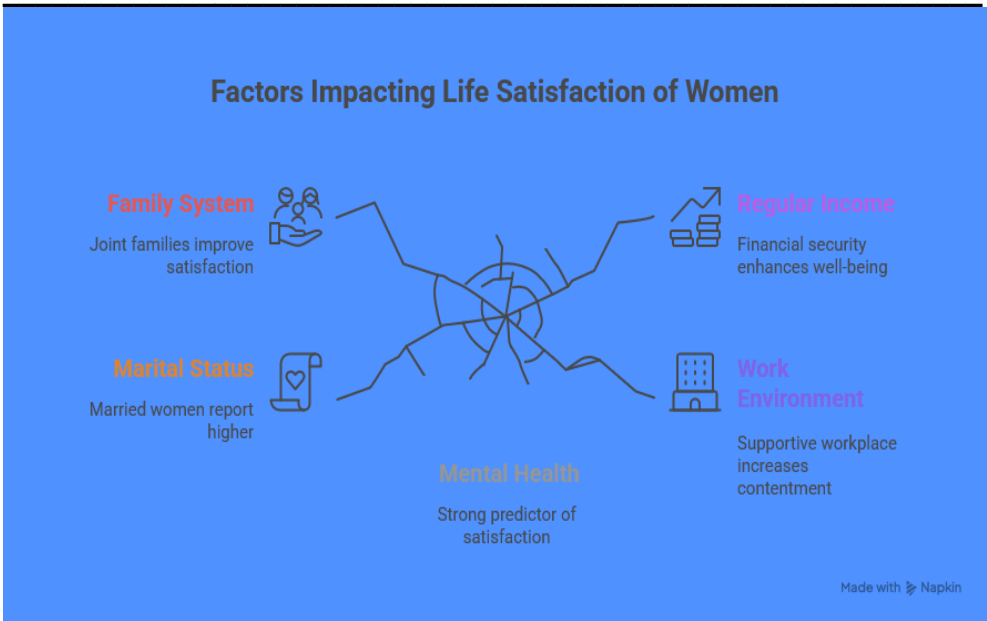


Fig 5: Four top predictors of women’s life satisfaction

4.3.3 Predictive power of the model

Table 12 provides model summary containing information about the robustness of the model.

The value of R (or correlation coefficient) highlights strength and direction of straight relationship between the predictors (education, family system, work environment, monthly income, mental health, and marital status) and the outcome variable, Life satisfaction). In this case, $R=0.762$, suggesting a relatively strong positive relationship between variables. R-squared value is 0.581, suggesting that 58.1% variation is explained by the combined effect of all independent variables. The Adjusted R-squared value is 0.57,5, indicating that the model is goodness of fit as it predicts 57.5% changes in the dependent variable, life satisfaction.

Table 12-

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.762 ^a	.581	.575	.63186

a. Predictors: (Constant), education, family system, working environment, monthly income, mental health, marital status.

5. Discussion

5.1 Major findings

If we compare the findings of current research with previous academic literature, we find similarities and differences in the impact of the COVID-19, but current study focuses on the gendered dimensions of the Pandemic, which previous studies ignored. Prior studies such as [Aaron, 2023](#); [Ahmad et al., 2023](#); [Wei et al. \(2021\)](#) broadly focused on the global economic downturn in the context of the U.S., EU, and China, indicating that industries such as hospitality, travel, and retail were mostly affected, while technology and e-commerce flourished. Whereas the current research examines the specific socio-economic effects on working women in Pakistan, shedding light on how the pandemic influenced family life and mental health. Previous studies discuss industry-level effects, the current study concentrated on the personal and household level with special reference to working women. The studies conducted by [Torres et al. \(2021\)](#), [Kotlar et al. \(2021\)](#), and [Alon et al. \(2020\)](#) have determined the impact on women entrepreneurs and working mothers during pandemic, resulting in the loss of jobs, faced economic hardships and tried to re-enter labor market due to childcare obligations. In contrast, this

study examined the role of family life in mental health among working women in Pakistan, highlighting how factors, such as marital status, income, and family system play significant roles in life satisfaction and mental health. The unique factor, which untouched by prior literature, is that the current research has identified that both income and joint family system significantly contribute into mental health and life satisfaction. Similarly, [WHO, 2020;2023;2025; Jacques et al. 2020; Babincak, & Monika., 2023](#)) examined the psychological impacts of the pandemic in broader context and did not investigate into the mental health and family life of working women. The current study has made a novel contribution by establishing a close positive link between mental health and family life satisfaction of working women in Pakistan. The current research uses standardized tools like DASS-21 and the Family Quality of Life (FQOL) Scale to identify empirical relationship between mental health and family life. No previous study used these scales.

5.2 Novelty of study

This empirical analysis provides a fresh insight into how mental health and working environments of working women interact with family dynamics during a global crisis. Another novel aspect of current study is that unlike prior research, which establish significant impact of education on working women during crisis, the findings of current study suggest insignificant impact of education level on life satisfaction of working women during the pandemic. This also challenges the common propositions about the positive and significant link between education and life satisfaction, providing a nuanced landscape in the context of a global crisis. This finding supports the study of [Mirzazadeh, Chen et al. \(2021\)](#), who also identified insignificant link between

education and life satisfaction and argues that it depends on other characteristics such as social status, income level and job accomplishment. Thus, the link between education and life satisfaction is complicated and impacted by a variety of environmental and individual factors. Most of the studies found this relationship positive when education was taken as a single independent variable but when it combined with other variables its impact becomes insignificant ([Van Loon, Diener et al. \(2021\)](#)).

5.3 Theoretical implications

The findings of this research support Maxwell's (1996) *theory of social cohesion* predicts that social cohesion and integration reduce inequalities in wealth and income, and engage workers to strive for common goals, facing similar issues in the same community. The findings of this study also strengthen the view of [Kim, et al. \(2008\)](#), who argue that social capital and physical health evolve close social knots improving physical health of human beings. The findings of this study are also consistent with [Tetsuo's. \(2016\)](#) theory of social cohesion which suggests how social integration can be created in the independent world. He emphasized that social interaction is necessary to create social cohesion in society.

The study also challenges the orthodox belief that education levels significantly enhance life satisfaction, instead it reveals that factors such as working environment, income level, marital status and family systems play a more positive role in alleviating stress produced by pandemic. This study also contradicts modern concept of single life or nuclear family system because single persons or individuals living in a nuclear family suffered more mental health issues and low life satisfaction during Pandemic. Therefore, there is a need to promote joint family system in order to enhance social cohesion.

5.4 Policy implications

The findings of this study have significant implications for policy formulation for addressing the issues of working women during abnormal situations like the COVID-19 pandemic. The study pinpoints the significant role of income support as a core factor affecting both mental health and life satisfaction. Therefore, policymakers should focus on increasing income support programs to alleviate economic stress during economic recession. The study also emphasizes the importance of flexible working environments that can accommodate the dual obligations of family life and work assignments, which are considered essential for continuing life smoothly during financial crisis. There is need to promote supportive policies to strengthen joint family systems, such as mutual care-giving support and community close interaction and such policies can facilitate working women to manage their domestic and professional responsibilities effectively.

5.5 Limitations and suggestions for further research

While this research contributes valuable insights into the mental health and life satisfaction of working women during the COVID-19 pandemic, several limitations warrant acknowledgment. First, the use of convenience sampling, though practical, may compromise the generalizability of the findings. The sample, drawn exclusively from Punjab, Pakistan, may not fully represent the broader population of working women across diverse regions or cultural contexts. Second, the geographical focus on a single province limits the exploration of socioeconomic and cultural variations that shape women's experiences in other areas. Third, the cross-sectional design captures data at a

single time-point, which restricts the ability to assess long-term trends in mental health and life satisfaction during or after the pandemic. Finally, reliance on self-reported data might create potential biases, as respondent may underreport facts due to social desirability or recall inaccuracies, affecting objectivity of results.

To address these limitations, future studies should adopt longitudinal designs to track changes in mental health and life satisfaction over extended periods, particularly during and after crises. Expanding the geographical scope to include women from varied regions and cultural backgrounds would enhance the applicability of findings across different socioeconomic contexts. Increasing sample sizes and incorporating stratified or randomized sampling methods could reduce selection bias and improve the robustness of results.

Data statement

The data that supports the findings of this study will be made available on strong requests.

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