

FREQUENCY OF PRECIPITATING FACTORS AMONG PATIENTS WITH DEPRESSION PRESENTING TO A TERTIARY CARE HOSPITAL: A CROSS-SECTIONAL STUDY

Original Research

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ABSTRACT

Background: Depressive disorder represents a major public health challenge in low- and middle-income countries, where social stressors, economic instability, and limited mental health resources interact to intensify disease burden. In Pakistan, depression frequently presents with diverse psychosocial precipitants that vary across demographic and occupational groups. Understanding these precipitating factors is essential for developing contextually relevant prevention and intervention strategies aimed at reducing the severity and recurrence of depressive illness.

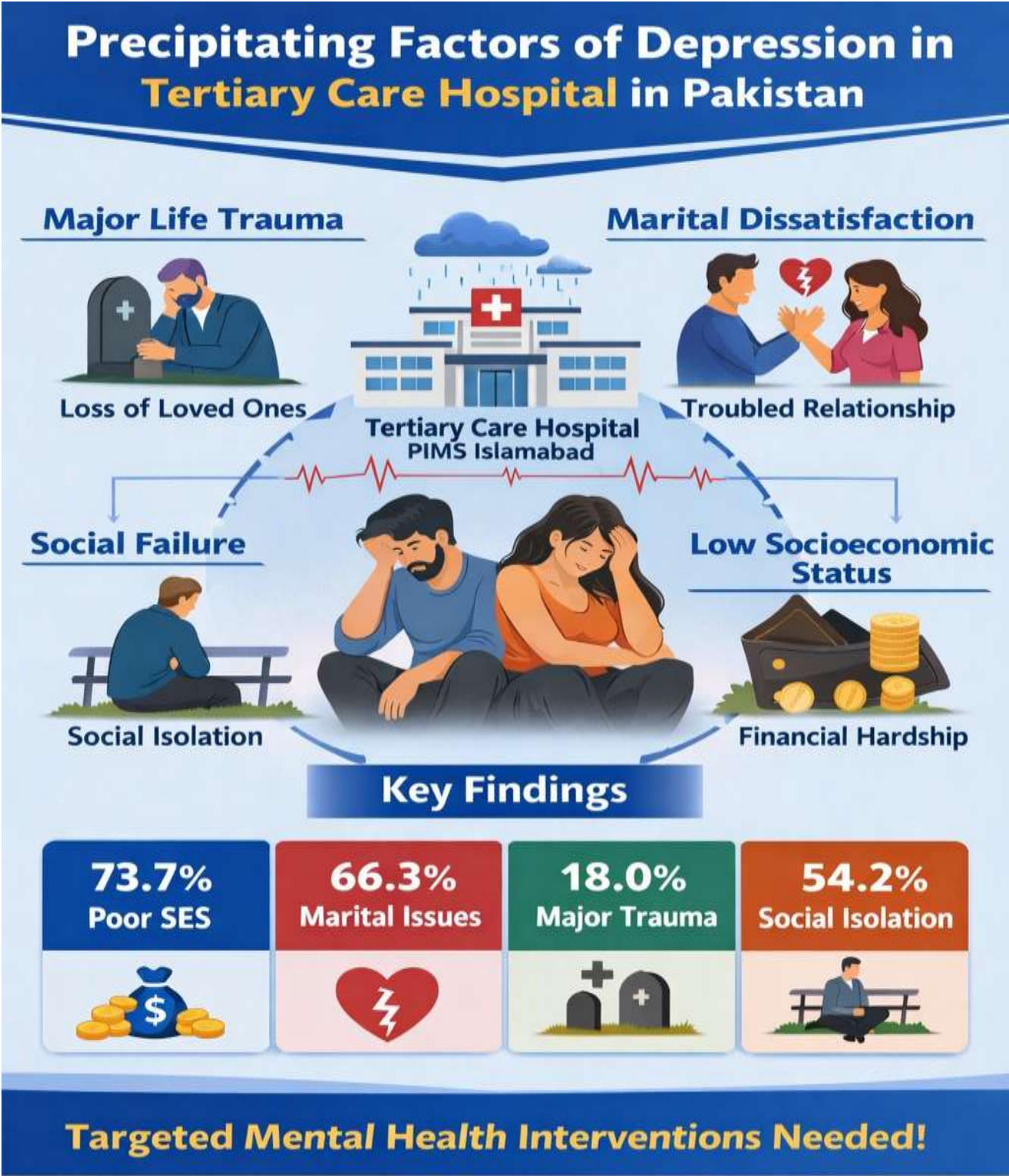
Objective: To determine the frequency and distribution of key precipitating factors of depression among patients presenting to a tertiary care hospital.

Methods: This cross-sectional study was conducted at the Department of Psychiatry, Pakistan Institute of Medical Sciences, Islamabad, from 21st August 2024 to 20th February 2025. A total of 300 adult male and female patients diagnosed with depression using ICD-10 criteria were enrolled through consecutive sampling. Depression severity was assessed using a standardized inventory, and precipitating factors were evaluated through structured interviews. These factors included major life trauma, social failure, low socioeconomic status, and marital dissatisfaction, defined using validated operational criteria and scales. Data were analyzed using SPSS version 26. Quantitative variables were summarized as mean and standard deviation, while categorical variables were expressed as frequencies and percentages. Associations were assessed using appropriate inferential statistical tests, with statistical significance set at $p < 0.05$.

Results: The mean age of participants was 35.48 ± 10.57 years. Individuals aged 40 years or below constituted 68.0% of the sample, and 50.7% were male. Poor socioeconomic status was the most frequently identified precipitating factor, present in 73.7% of patients, followed by marital dissatisfaction in 66.3% and social failure in 47.3%. Major life trauma was reported by 18.0% of participants. Major life trauma was significantly more common among males than females (22.4% vs. 13.5%, $p = 0.046$). Social failure was more frequent among salaried individuals compared with those in business professions (54.2% vs. 41.0%, $p = 0.023$). Marital dissatisfaction was also significantly higher among males (72.4%, $p = 0.025$). Poor socioeconomic status showed significant associations with gender ($p = 0.035$) and body mass index ($p < 0.001$).

Conclusion: Socioeconomic disadvantage and marital dissatisfaction emerged as the most prominent precipitating factors for depression, with distinct variations across gender and occupational groups. These findings emphasize the need for targeted, socially informed mental health interventions within tertiary care settings.

Keywords: Body Mass Index, Depression, Marital Conflict, Socioeconomic Factors, Social Isolation, Stress, Psychological; Tertiary Care Centers.



INTRODUCTION

Depressive disorder (DD) represents one of the most pervasive and disabling mental health conditions worldwide, imposing a substantial burden on individuals, families, and health care systems. Globally, depression has been projected to rank among the leading causes of disability, reflecting its high prevalence, chronic course, and profound impact on functional capacity and quality of life (1). The disorder is clinically heterogeneous, arising from a complex interplay of biological vulnerability, genetic predisposition, and social and cultural determinants, which together complicate both prevention and management strategies (2). Because of its far-reaching economic and social consequences, identifying the factors associated with the onset and severity of DD remains a major public health priority (3). Depression, along with stress and anxiety, has been shown to adversely affect learning, academic performance, professional competence, and overall human productivity. At a global level, approximately one million deaths each year are attributed to suicide, while nearly 150 million individuals suffer from anxiety and depressive symptoms, underscoring the scale and urgency of the problem (4). In low- and middle-income countries, the challenge is particularly acute. Evidence suggests that nearly one in three individuals in Pakistan may experience anxiety or depression at some point, placing immense pressure on an already resource-constrained mental health care system (5). Despite this alarming prevalence, mental health disorders remain under-recognized and under-treated in many such settings, highlighting a critical gap between disease burden and service provision.

A wide range of psychosocial factors have been implicated in the development of DD, including economic hardship, marital discord, exposure to significant life stressors or trauma, social isolation, and failures in educational or occupational settings (6). Sociodemographic characteristics and exposure to interpersonal violence, particularly intimate partner violence, are increasingly recognized as important indicators of vulnerability and potential triggers for depressive episodes (7). Unemployment, in particular, occupies a dual role, functioning both as a precipitating factor and as a consequence of depression, thereby perpetuating a vicious cycle of social and psychological disadvantage (8). Local evidence further emphasizes the relevance of these determinants within the Pakistani context. A study involving 200 patients with depression reported the highest vulnerability among individuals aged 26–40 years, followed by those aged 18–25 years, with a substantial proportion being married (9). Major life trauma emerged as the most frequently reported precipitating factor, followed by social failure, marital conflict, and financial hardship (10). Although these findings provide valuable insight, they also point to the need for more context-specific research that systematically examines the relative contribution of these factors and their causal association with severe depression in contemporary Pakistani society. Given the distinctive socioeconomic challenges faced by Pakistan, depressive disorder constitutes a unique and pressing public health concern. There remains a need for medically grounded, population-relevant evidence to clarify which precipitating factors are most influential and potentially modifiable. Therefore, the objective of the present study is to determine the key psychosocial and sociodemographic factors causally associated with severe depressive disorder in the Pakistani population, with the aim of informing targeted coping strategies, preventive interventions, and mental health policy planning that may reduce the severity and societal impact of depression.

METHODS

This cross-sectional study was conducted at the Department of Psychiatry, Pakistan Institute of Medical Sciences (PIMS), Islamabad, over a six-month period from 21st August 2024 to 20th February 2025. A total of 300 adult male and female patients diagnosed with depressive disorder were enrolled through a probability-based consecutive sampling technique. Participants were recruited from the outpatient department after formal approval was obtained from the institutional ethical review committee of PIMS. All eligible participants provided written informed consent prior to inclusion, in accordance with the principles of the Declaration of Helsinki. Patients aged 18 years and above who fulfilled the diagnostic criteria for depression were included in the study. Depression was diagnosed using the International Classification of Diseases, 10th Revision (ICD-10) criteria, requiring the presence of at least three core symptoms—depressed mood, loss of interest or pleasure, and reduced energy—along with a minimum of two additional symptoms persisting for at least two weeks. The severity of depression was assessed using the Beck Depression Inventory, a validated and widely used self-report instrument. Patients with a prior history of major psychiatric illnesses such as schizophrenia or bipolar disorder were excluded. In addition, individuals with significant concurrent medical conditions, including endocrine disorders, chronic renal or hepatic disease, previous cardiovascular or cerebrovascular events, traumatic brain injury, and hematological disorders such as anemia, were excluded to minimize confounding. The sample size of 300 participants was calculated using the WHO sample size calculator, taking the anticipated frequency of major life trauma as a precipitating factor to be 11.5%, with a 5% margin of error and a 95% confidence level (11,12). Baseline demographic and clinical data were recorded using a structured proforma, including age, gender, body mass

index (calculated as weight in kilograms divided by height in meters squared), place of residence (urban or rural), level of education, occupation, monthly income in Pakistani Rupees, and socioeconomic status.

Precipitating factors for depressive disorder were assessed through a structured, interviewer-administered questionnaire conducted by trained clinicians. Four major precipitating domains were evaluated based on predefined operational definitions. Major life trauma was defined as the death of a close family member, including parents, siblings, spouse, or offspring, within the preceding six months. Social failure was operationalized as remaining alone for more than ten hours per day during the preceding four weeks. Low socioeconomic status was assessed using the Kuppaswamy Socioeconomic Status Scale (2020), with a score of 10 or below indicating low status. Marital dissatisfaction was evaluated using the Kansas Marital Satisfaction Scale, with a score of 12 or below considered indicative of dissatisfaction (13,14). The interview explored personal, social, marital, and financial circumstances preceding the onset of depressive symptoms, and the presence of precipitating factors was determined strictly according to these operational criteria. Data were analyzed using IBM SPSS version 25. Qualitative variables, including gender, residence, education, occupation, severity of depression, and precipitating factors, were summarized as frequencies and percentages. Quantitative variables such as age, body mass index, and duration of depressive symptoms were assessed for normality using the Shapiro–Wilk test and were expressed as mean \pm standard deviation or median with interquartile range, as appropriate. Precipitating factors were stratified according to age, gender, body mass index, place of residence, education, occupation, duration of symptoms, and severity of depression. Post-stratification comparisons were performed using the chi-square test or Fisher’s exact test where applicable. A p-value of less than 0.05 was considered statistically significant.

RESULTS

A total of 300 patients diagnosed with depressive disorder were included in the analysis. The mean age of the participants was 35.48 ± 10.57 years, while the mean body mass index was 25.01 ± 1.07 kg/m². The average duration of depressive symptoms at presentation was 7.71 ± 2.30 months. The majority of participants were aged 40 years or younger (68.0%), and males constituted slightly more than half of the sample (50.7%). A body mass index greater than 25.0 kg/m² was observed in 36.7% of patients. Most participants belonged to rural areas (60.0%), and more than half reported a duration of depressive symptoms exceeding seven months (52.7%). In terms of education, 25.7% had no formal schooling, 38.0% had education up to matric level, and 36.3% had education above matric. With respect to occupation, 48.0% were salaried employees, while 52.0% were engaged in business-related work. Among the assessed precipitating factors, poor socioeconomic status emerged as the most frequently observed factor, present in 73.7% of participants. Marital dissatisfaction was reported by 66.3% of patients, followed by social failure in 47.3%. Major life trauma was the least frequently reported precipitating factor and was identified in 18.0% of the study population. These findings indicate that chronic socioeconomic and relational stressors were more prominent than acute traumatic events in this cohort. Stratified analysis demonstrated that major life trauma was significantly more common among male patients compared with female patients (22.4% vs. 13.5%, $p = 0.046$). A higher frequency of major life trauma was also observed among participants residing in urban areas compared with those from rural settings (23.3% vs. 14.4%, $p = 0.050$). Educational status showed a statistically significant association with major life trauma, with the highest proportion observed among individuals with no formal schooling (28.6%), followed by those educated up to matric level (19.3%), and the lowest among participants with education above matric level (9.2%). No statistically significant association was observed between major life trauma and age group, body mass index, profession, or duration of depression.

Social failure showed a significant association with occupational status, being more frequent among salaried individuals compared with those involved in business (54.2% vs. 41.0%, $p = 0.023$). A strong association was also observed between social failure and educational status, with increasing frequency noted with higher levels of education ($p < 0.001$). A statistically significant relationship was identified between social failure and duration of depression, with all participants reporting social failure having a depression duration of seven months or less, while none with longer symptom duration reported social failure ($p < 0.001$). No significant associations were found with age, gender, body mass index, or place of residence. Marital dissatisfaction was significantly more prevalent among male participants than females (72.4% vs. 60.1%, $p = 0.025$). It was also more frequently observed among patients with a body mass index of 25.0 kg/m² or below compared with those above this threshold (60.5% vs. 76.4%, $p = 0.005$). A significant association was noted between marital dissatisfaction and duration of depression, with higher prevalence among those experiencing symptoms for more than seven months (74.1% vs. 57.7%, $p = 0.003$). No statistically significant differences were observed with respect to age, education, profession, or residence. Poor socioeconomic status was more frequently observed among participants aged 40 years or younger (74.5%), although this difference did not reach statistical significance ($p = 0.629$). Significant associations were found between poor

socioeconomic status and gender, with males more frequently affected than females (78.9% vs. 68.2%, $p = 0.035$), as well as with body mass index, where participants with a body mass index greater than 25.0 kg/m² showed a markedly higher prevalence (95.5% vs. 61.1%, $p < 0.001$). Educational status was also significantly associated with poor socioeconomic status, with the highest prevalence observed among individuals educated up to matric level (80.7%). No significant associations were identified with profession, duration of depression, or place of residence.

Table 1: Descriptive statistics of study participants (n = 300)

Parameters	Mean	Std. Deviation
Age (years)	35.48	10.573
BMI (kg/m ²)	25.014	1.0663
Duration of depression (months)	7.71	2.298

Table 2: Baseline demographics and clinical characteristics of study participants (n = 300)

Parameters	Subgroups	Frequency	Percent
Age (years)	40 or below	204	68.0
	More than 40	96	32.0
Gender	Male	152	50.7
	Female	148	49.3
BMI (kg/m ²)	25.0 or below	190	63.3
	More than 25.0	110	36.7
Residence	Rural	180	60.0
	Urban	120	40.0
Education	No formal schooling	77	25.7
	Matric or below	114	38.0
	Above matric	109	36.3
Profession	Salaried	144	48.0
	Business	156	52.0
Depression duration (months)	7 or below	142	47.3
	More than 7	158	52.7

Table 3: Precipitating factors among study participants (n = 300)

Precipitating factors	Subgroups	Frequency	Percent
Major Life trauma	Yes	54	18.0
	No	246	82.0
Marital dissatisfaction	Yes	199	66.3
	No	101	33.7
Poor SES	No	79	26.3
	Yes	221	73.7
Social Failure	Yes	142	47.3
	No	158	52.7

Table 4: Stratification of major life trauma with baseline characteristics (n = 300)

		Major Life Trauma		Total	P value
		Yes (n =54)	No (n = 246)		
Age (years)	40 or below	36	168	204	0.817
		17.6%	82.4%	100.0%	
	More than 40	18	78	96	
		18.8%	81.3%	100.0%	
Gender	Male	34	118	152	0.046
		22.4%	77.6%	100.0%	
	Female	20	128	148	
		13.5%	86.5%	100.0%	
BMI (kg/m2)	25.0 or below	37	153	190	0.383
		19.5%	80.5%	100.0%	
	More than 25.0	17	93	110	
		15.5%	84.5%	100.0%	
Profession	Salaried	21	123	144	0.139
		14.6%	85.4%	100.0%	
	Business	33	123	156	
		21.2%	78.8%	100.0%	
Education	No formal schooling	22	55	77	0.003
		28.6%	71.4%	100.0%	
	Matric or below	22	92	114	

		Major Life Trauma		Total	P value
		Yes (n =54)	No (n = 246)		
		19.3%	80.7%	100.0%	
Depression duration (months)	Above matric	10	99	109	0.053
		9.2%	90.8%	100.0%	
	7 or below	32	110	142	
		22.5%	77.5%	100.0%	
		22	136	158	
		13.9%	86.1%	100.0%	
Residence	Rural	26	154	180	0.050
		14.4%	85.6%	100.0%	
	Urban	28	92	120	
		23.3%	76.7%	100.0%	

Table 5: Stratification of social failure with baseline characteristics (n = 300)

		Social Failure		Total	P value
		Yes (n =142)	No (n = 158)		
Age (years)	40 or below	92	112	204	0.258
		45.1%	54.9%	100.0%	
	More than 40	50	46	96	
		52.1%	47.9%	100.0%	
Gender	Male	65	87	152	0.108
		42.8%	57.2%	100.0%	
	Female	77	71	148	
		52.0%	48.0%	100.0%	
BMI (kg/m2)	25.0 or below	89	101	190	0.823
		46.8%	53.2%	100.0%	
	More than 25.0	53	57	110	
		48.2%	51.8%	100.0%	
Profession	Salaried	78	66	144	0.023
		54.2%	45.8%	100.0%	
	Business	64	92	156	
		41.0%	59.0%	100.0%	

		Social Failure		Total	P value
		Yes (n =142)	No (n = 158)		
Education	No formal schooling	18	59	77	0.000
		23.4%	76.6%	100.0%	
	Matric or below	53	61	114	
		46.5%	53.5%	100.0%	
	Above matric	71	38	109	
		65.1%	34.9%	100.0%	
Depression duration (months)	7 or below	142	0	142	0.000
		100.0%	0.0%	100.0%	
	More than 7	0	158	158	
		0.0%	100.0%	100.0%	
Residence	Rural	78	102	180	0.089
		43.3%	56.7%	100.0%	
	Urban	64	56	120	
		53.3%	46.7%	100.0%	

Table 6: Stratification of marital dissatisfaction with baseline characteristics (n = 300)

		Marital Dissatisfaction		Total	P value
		Yes (n =199)	No (n = 101)		
Age (years)	40 or below	134	70	204	0.730
		65.7%	34.3%	100.0%	
	More than 40	65	31	96	
		67.7%	32.3%	100.0%	
Gender	Male	110	42	152	0.025
		72.4%	27.6%	100.0%	
	Female	89	59	148	
		60.1%	39.9%	100.0%	
BMI (kg/m2)	25.0 or below	115	75	190	0.005
		60.5%	39.5%	100.0%	
	More than 25.0	84	26	110	
		76.4%	23.6%	100.0%	
Profession	Salaried	100	44	144	0.273

		Marital Dissatisfaction		Total	P value		
		Yes (n =199)	No (n = 101)				
Business		69.4%	30.6%	100.0%	0.788		
		99	57	156			
		63.5%	36.5%	100.0%			
	No formal schooling	49	28	77			
		63.6%	36.4%	100.0%			
Education	Matric or below	78	36	114	0.788		
		68.4%	31.6%	100.0%			
	Above matric	72	37	109			
		66.1%	33.9%	100.0%			
	Depression duration (months)	7 or below	82	60		142	0.003
			57.7%	42.3%		100.0%	
More than 7		117	41	158			
		74.1%	25.9%	100.0%			
Residence		Rural	124	56	180	0.251	
			68.9%	31.1%	100.0%		
	Urban	75	45	120			
		62.5%	37.5%	100.0%			

Table 7: Stratification of poor SES with baseline characteristics (n = 300)

		Poor SES		Total	P value
		No (n =79)	Yes (n = 221)		
Age (years)	40 or below	52	152	204	0.629
		25.5%	74.5%	100.0%	
	More than 40	27	69	96	
		28.1%	71.9%	100.0%	
	Male	32	120	152	
		21.1%	78.9%	100.0%	
Gender	Female	47	101	148	0.035
		31.8%	68.2%	100.0%	
	25.0 or below	74	116	190	
		38.9%	61.1%	100.0%	
	BMI (kg/m2)				

		Poor SES		Total	P value
		No (n =79)	Yes (n = 221)		
Profession	More than 25.0	5	105	110	0.183
		4.5%	95.5%	100.0%	
	Salaried	43	101	144	
		29.9%	70.1%	100.0%	
	Business	36	120	156	
		23.1%	76.9%	100.0%	
Education	No formal schooling	28	49	77	0.032
		36.4%	63.6%	100.0%	
	Matric or below	22	92	114	
		19.3%	80.7%	100.0%	
	Above matric	29	80	109	
		26.6%	73.4%	100.0%	
Depression duration (months)	7 or below	38	104	142	0.873
		26.8%	73.2%	100.0%	
	More than 7	41	117	158	
		25.9%	74.1%	100.0%	
Residence	Rural	52	128	180	0.218
		28.9%	71.1%	100.0%	
	Urban	27	93	120	
		22.5%	77.5%	100.0%	

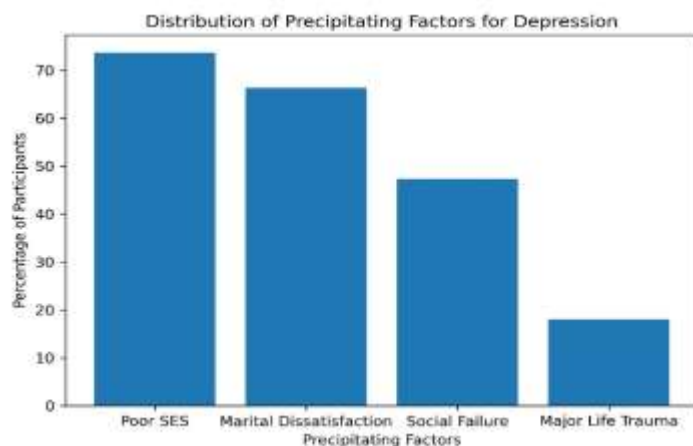


Figure 2 Distribution of Precipitating Factors for Depression

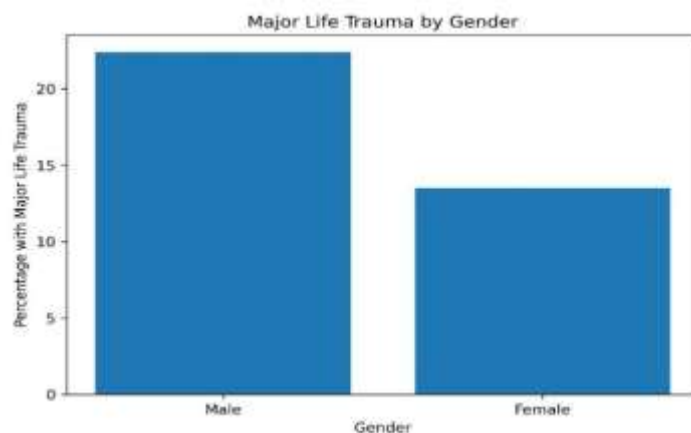


Figure 2 Major Life Trauma by Gender

DISCUSSION

The present study highlighted the substantial burden of depressive disorder across adult age groups in a tertiary care setting, reinforcing the view that depression remains a pervasive public health concern in the region. The observed patterns align with regional and international evidence reporting high prevalence rates of depressive symptoms in Middle Eastern and South Asian populations, although considerable variability has been documented across studies (9,10). Such disparities are plausibly attributable to differences in study populations, age distribution, health status of participants, diagnostic instruments, and sociocultural contexts, all of which influence the measured prevalence and severity of depression. A key finding of this study was the prominent role of psychosocial stressors, particularly marital dissatisfaction, poor socioeconomic status, and social failure, as precipitating factors for depression. Participants reporting strained marital relationships and limited social support were more likely to experience depressive symptoms, a pattern that has been consistently reported across diverse populations (12–14). These findings underscore the importance of interpersonal relationships and social connectedness in mental well-being, especially in collectivist societies where family structures and social bonds play a central role. Financial hardship also emerged as a major precipitating factor, supporting prior evidence that economic stress, debt, and financial insecurity substantially increase vulnerability to depression (15,16). In resource-limited settings, such stressors may exert a sustained psychological burden, contributing to both the onset and persistence of depressive symptoms.

Stressful life events were also strongly associated with depression in the current study. Individuals who experienced significant stressors, including bereavement and other major adverse events, showed a higher likelihood of depression, consistent with global evidence linking trauma, displacement, and exposure to conflict with poor mental health outcomes (17,18). These findings highlight the cumulative impact of acute and chronic stressors on psychological resilience. Additionally, although not explored in depth in this study, the role of familial vulnerability has been widely reported, with evidence suggesting that a positive family history of depression markedly increases the risk of developing the disorder (19). This interaction between environmental stressors and underlying susceptibility may partially explain the observed heterogeneity in clinical presentation. Gender differences in depression were evident, although their direction and magnitude varied across precipitating factors. While some international and regional studies have reported a higher prevalence of depression among women (20,21), the current findings demonstrated that certain precipitating factors, such as marital dissatisfaction and major life trauma, were more frequently reported among male participants. This divergence may reflect sociocultural norms influencing symptom reporting, gender-specific stress exposures, and differences in help-seeking behavior. Such findings suggest that gender-sensitive approaches are required when designing screening strategies and psychosocial interventions. Marital dissatisfaction emerged as one of the most prominent precipitating factors, second only to poor socioeconomic status. Comparable regional evidence has shown that living conditions, employment status, family size, and educational attainment are closely intertwined with depressive symptoms (22,23). These associations indicate that depression cannot be viewed in isolation from broader social and economic realities, particularly in rapidly urbanizing societies where traditional support systems may be under strain.

The study offered several strengths, including an adequate sample size, the use of standardized diagnostic criteria, and the systematic assessment of multiple precipitating factors within a clinical population. However, certain limitations should be acknowledged. The cross-sectional design precluded causal inference, limiting the ability to determine temporal relationships between precipitating factors and depression. The reliance on self-reported measures may have introduced recall or reporting bias. Additionally, there was an inconsistency between the diagnostic and severity assessment tools described, as depressive severity was assessed using one standardized inventory while another screening instrument was referenced later, which may affect interpretability. The absence of multivariable analyses also limited the ability to identify independent predictors after adjusting for confounding factors. Future research would benefit from longitudinal designs to clarify causal pathways and from incorporating multivariate modeling to better delineate independent risk factors. Community-based studies could complement hospital-based findings to enhance generalizability, while qualitative approaches may provide deeper insight into culturally specific stressors and coping mechanisms. Despite these limitations, the findings provide clinically relevant evidence that may inform targeted screening, early intervention, and psychosocial support strategies within tertiary care settings, ultimately contributing to more effective management of depressive disorder in similar populations.

CONCLUSION

This study demonstrated that marital conflict and low socioeconomic status emerged as the most prominent precipitating factors for depression, with clear differences observed across gender and occupational groups. Patterns of social failure were more evident among

salaried individuals, while men appeared to be disproportionately affected by major life stressors and marital dissatisfaction, underscoring the influence of social roles and economic responsibilities on mental health. The observed interplay between socioeconomic disadvantage, physical health indicators, and gender further emphasized that depression is deeply rooted in broader social and structural contexts rather than isolated psychological vulnerability. These findings directly address the study objective by clarifying key precipitating factors within a tertiary care population and highlight the need for integrated, context-sensitive mental health interventions. Targeted strategies that incorporate socioeconomic support, workplace-based mental health services, and family-centered counseling may enhance prevention and early management of depression. Future research exploring causal pathways and longitudinal outcomes is essential to guide sustainable preventive policies and tailored mental health care delivery.

AUTHOR CONTRIBUTIONS

Author	Contribution
Masouda Batool*	Substantial Contribution to study design, analysis, acquisition of Data
	Manuscript Writing
	Has given Final Approval of the version to be published
Rizwan Taj	Substantial Contribution to study design, acquisition and interpretation of Data
	Critical Review and Manuscript Writing
	Has given Final Approval of the version to be published

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