



## Original Article

## Psychosocial Stressors in Patients Presenting with Depression Episodes

Naeem Ullah Leghari<sup>1</sup>, Bushra Akram<sup>2</sup> and Ahmad Bilal<sup>2</sup><sup>1</sup>Department of Psychiatry & Behavioral Sciences, Nishtar Medical University, Multan<sup>2</sup>Department of Applied Psychology, The Islamia University of Bahawalpur

## ARTICLE INFO

## Key Words:

Depression, Ssubsequent Depressive Episodes, Psycho-social stressors, Life events

## How to Cite:

Leghari, N. U., Akram, B., & Bilal, A. (2022). Psychosocial Stressors in Patients Presenting with Depression Episodes: Psychosocial Stressors in Patients. *Pakistan Journal of Health Sciences*, 3(05). <https://doi.org/10.54393/pjhs.v3i05.214>

## \*Corresponding Author:

Ahmad Bilal  
Department of Applied Psychology, The Islamia University of Bahawalpur  
[ahmadbilal4@gmail.com](mailto:ahmadbilal4@gmail.com)Received Date: 8<sup>th</sup> October, 2022Acceptance Date: 17<sup>th</sup> October, 2022Published Date: 31<sup>st</sup> October, 2022

## ABSTRACT

Depression is a mood disorder characterized by aversion to activities that affects a person's thoughts, behaviour, feelings, and sense of well-being. **Objective:** To explore the psychosocial stressors / life events and demographic variables in patients with major depression in 1<sup>st</sup> and subsequent episodes with related sociodemographic factors in each. **Methods:** The sample of this study was 50 consecutive in-patients with Major Depression. Detailed open-ended interview was conducted and also administered The Presumptive Stressful Life Events Scale (PSLES) to elicit psychosocial stressors and major life events in 1<sup>st</sup> episode and in the subsequent episodes. **Results:** showed that of the 50 subjects, majority of subjects 32(64%) were female, 13 (26%) were 26-30 years' age group, 33(66%) belonged to urban area, 23(46%) were suffering from 3<sup>rd</sup> and more depressive episodes, 21(42%) reported positive family history, 28(56%) were suffering for 3 months. In psychosocial stressors / life events, 26% had Death of spouse, in Marital and Sexual factors 16% patients reported relationship effect with spouse in 1<sup>st</sup>, 22% in 2<sup>nd</sup> and 30% in 3<sup>rd</sup> Depressive episode and in financial difficulties 12% patients in 1<sup>st</sup> episode, 20% and 28% in subsequent episodes. **Conclusions:** Study concluded that there was difference of psychosocial stressors in 1<sup>st</sup> and subsequent episodes of depression.

## INTRODUCTION

Depression is a mood disorder characterized by aversion to activities that affects a person's thoughts, behavior, feelings, and sense of well-being [1]. Sadness, nervousness, emptiness, hopelessness, frightened, powerless, worthless, guilty, irritated, hurt, or restless feelings are common in depressed persons. They may lose interest in formerly pleasurable activities, lose their appetite or overeat, have difficulty concentrating, remembering information, or making decisions, and consider or attempt suicide. Insomnia, excessive sleeping, weariness, a lack of energy, or aches, pains, or digestive issues that do not respond to treatment are all possible symptoms [2]. Major depression is one of the most common mental illnesses, with a complex aetiology. Depression affects people of all genders, ages, and

backgrounds. Childhood traumatic traumas and current stressful life events have been determined to be important risk factors for major depression, in addition to hereditary variables [3]. There is a well-established link between life stress and major Depression. Unemployment, chronic social difficulties and persistent financial strains, health-related difficulties and loss of (close) social contacts, death of a loved one / family member or friend, job problems / the loss of a job, relationship problems, separation, childbirth, menopause, and natural disasters such as earthquakes, hurricanes, tornadoes, and other natural disasters have all been found to be risk factors for depression in several studies [4]. In a positive event, such as going to marriage, moving to a new home, place / city, or starting a new business or new job, can also cause stress. It's not unusual

for either happy or bad occurrences to turn into a crisis that leads to clinical depression [5]. Researchers have created a theory termed "learned helplessness" to explain how stressful events might lead to depression. According to this idea, people learn to feel helpless as a result of chronic or recurrent stressful occurrences. When a person believes he or she has no control over a difficult circumstance, this sense of helplessness is heightened. Depressed people frequently hold negative attitudes about their abilities to handle many elements of their lives, based on perceived failures in the past [6]. Recurrence has been linked to demographic (gender, married status, or economic position), clinical (age of onset, severity of episode index, comorbidity, or a familial history of affective disorders), and psychosocial characteristics (cognitions, personality, social support, or stressful life events) [7]. The contrast between early and subsequent episodes, as well as their relationship to stressors, is important for conceptual and practical reasons [4]. Kessler is one of many who has pointed out that most depression researches focus on recurrence because only a small percentage of depressed patients will suffer their first episode, and the predictors of first and subsequent episodes are likely to differ [8]. It is said that compared with subsequent episodes of depression, the 1st episode of depression is more likely to be preceded by major psychological stressors [9]. According to Nuggerud-Galeas et al. (2020), those who have previously had a major depressive episode may have a high recurrence rate, which is defined as the occurrence of a new major depressive episode after a previous one has completely resolved. The initial episode has an average recurrence time of about 3 years, while the subsequent episodes have an average recurrence time of between 1 and 1.5 years. During the first few months of recovery, the chance of recurrence is higher [7]. The aim of the present study was to explore the psychosocial stressors / life events and demographic variables in patients with major depression in 1st and subsequent episodes with related sociodemographic factors in each, reporting to Department of Psychiatry & Behavioral Sciences, Nishtar Medical University & Hospital, Multan.

## METHODS

A Descriptive study was conducted in the Department of Psychiatry & Behavioural Sciences, Nishtar Medical University & Hospital, Multan from October, 2021 to December, 2021. The sample size was 50 consecutive in-patients of Depression. They were admitted in Department of Psychiatry & Behavioural Sciences. All the patients included in the study who fulfilled the criteria and patients excluded from the study who did not fulfil the criteria and with any organic brain syndromes, other psychiatric

morbidity and alcohol or any other drug abuse. Diagnostic and Statistical Manual (DSM-V) criteria was for Depression used to diagnosed the patients [10]. All the information according to proforma and data collected after written informed consent and ensured confidentially. Detailed open-ended interview was conducted and also administered The Presumptive Stressful Life Events Scale (PSLES) [11] to elicit psychosocial stressors and major life events in 1st episode and in the subsequent episodes. Statistical Package for Social Sciences (SPSS) version 23.0 was using to analysed the data and to find out percentages and frequencies. Tables were used to showed findings and study results such as gender, age groups, marital status, locality, educational status, income, depressive episode, duration of index episode, family history of depression and psychosocial stressors & life events in all Depressive episodes.

## RESULTS

Table 1 shows Demographic Characteristics of subjects. Out of 50 subjects, majority of patients 32(64%) were female, 13 (26%) were 26-30 years' age group, 33(66%) belonged to urban area, 23(46%) were single, 13(26%) were students and 16(32%) were housewives (n=50).

Characteristics	Frequency (%)
<b>GENDER</b>	
Females	32 (64%)
Males	18 (36%)
<b>AGE GROUPS</b>	
16-20	9 (18%)
21-25	12 (24%)
26-30	13 (26%)
31-35	4 (8%)
36-40	8 (16%)
41-45	4 (8%)
<b>MARITAL STATUS</b>	
Single	23 (46%)
Married	21 (42%)
Divorced	6 (12%)
<b>LOCALITY</b>	
Rural	17 (34%)
Urban	33 (66%)
<b>EDUCATION</b>	
Uneducated	9 (18%)
Primary	6 (12%)
Middle	5 (10%)
Matric	7 (14%)
F.A	4 (8%)
B.A	12 (24%)
M.A	7 (14%)
<b>OCCUPATION</b>	
Unemployed	5 (10%)
Student	13 (26%)
House wife	16 (32%)

Employed	11(22%)
Farmer	5(10%)
<b>MONTHLY INCOME</b>	
6000-10000	3(6%)
11000-15000	2(4%)
16000-20000	6(12%)
21000-25000	6(12%)

**Table 1:** Demographic Detail

Table 2 shows Episodes of Depression. Out of 50 patients 23(46%) were suffering from 3rd and more depressive episodes and it also shows the Duration of Index Episode. Out of 50 patients 28(56%) were suffering for 3 months and 11(22%) for 4 to 6 months.

NO OF EPISODES	FREQUENCY (%)	DURATION OF INDEX EPISODE	FREQUENCY (%)
1st Episode	17(34%)	0-3 Months	28(56%)
2nd Episode	10(20%)	4-6 Months	11(22%)
3rd and More Episodes	23(46%)	7-9 Months	3(6%)
		10-12 Months	8(16%)

**Table 2:** Episode and Duration of Depression

Table 3 shows Family History of Depression. Out of 50 patients, 29(58%) reported No family history & 21(42%) reported family history of Depression.

FAMILY HISTORY	FREQUENCY (%)
No Family History	29(58%)
Mother	13(26%)
Father	6(12%)
Sibling	2(4%)

**Table 3:** Family History of Depression

Table 4 shows list of major life events and psychosocial stressors of The Presumptive Stressful Life Events Scale (PSLES). In each subject, more than one stressor was found. In psychosocial stressors / life events, 26% had Death of spouse, in Marital and Sexual factors 16% patients reported relationship effect with spouse in 1st, 22% in 2nd and 30% in 3rd Depressive episode and in financial difficulties 12% patients in 1st episode, 20% and 28% in subsequent episodes. And 6% patients were facing lack of child or infertility in 1st Depressive episode and with time it increased 12% in 2nd episode and 16% in 3rd Depressive episode. Same 12% patients reported financial difficulties in 1st, 20% in 2nd and 28% in 3rd Depressive episode.

STRESSORS	1ST EPISODE (%)	2ND EPISODE (%)	3RD & MORE EPISODES (%)
<b>FAMILY AND SOCIAL</b>			
Conflict with In-laws	14%	6%	-
Disturbed relationship with family	22%	18%	2%
<b>WORK</b>			
Fired from work	4%	-	-
<b>FINANCIAL</b>			
Financial Difficulties	12%	20%	28%
Property issues	8%	4%	-

Business loss	6%	4%	2%
<b>MARITAL AND SEXUAL</b>			
Disturbed Relationship with spouse	16%	22%	30%
Marriage against will	8%	-	-
Divorced	6%	10%	15%
Sexual Problems	4%	6%	10%
Sexual Abused	4%	-	-
Lack of child	6%	12%	16%
<b>HEALTH</b>			
Physical illness	8%	6%	4%
<b>BEREAVEMENT</b>			
Death of spouse	26%	-	-
Death of close Family Member	15%	8%	4%
<b>EDUCATION</b>			
Ending School / Study	6%	4%	2%
Failure in Examination	16%	4%	6%
<b>COURTSHIP AND COHABITATION</b>			
Break-up of Engagement/ Love Affair	14%	2%	2%
Getting Married	4%	-	-

**Table 4:** Psychosocial Stressors / Stressful Life Events

## DISCUSSION

In this research, 64% were females & 36% were males presenting with Depression. This was in concordance with another research by Lewinsohn, et al., where the 52% were females and 26% were male [12], however other researchers reported female and male ratio respectively 74%-26% [5], 64%-36% [13] and 83.2%-16.8% [14]. In the present study, majority of the subjects 26% were presented with Depression at 26-30 years & 24% were from 21-25 years' age group. This is in accordance with observation of other studies in which all subjects of 18-58 years [5] and 32.4% subjects were from 20-30 years [14], 44% were from 25-29 years [15], 100% were from 35-50 years of age group presented with Depression [16]. In this research, 66% belonged to urban area, 46% were single, 26% were students, 32% housewives & 11% employed but the socio-economic status was low. This is in accordance with various other researchers reported. According to other studies 58% [5], 53% patients were single [13], 31% were from urban area [13] and People who met the poverty level criteria had a higher rate of major depression than those who did not [6]. In this study, 34% of the patients were suffering from 1st episode, 20% 2nd episode and 46% suffering from 3rd and more episodes. Amongst them 56% of the patients were suffering from Depression for 3 months & 22% for 4 to 6 months. This is in keeping with various other researches. According to Roca, et al., each episode of depression increases the chances of subsequent episodes: up to 60% of all patients who suffer one episode will undergo at least one recurrence in their

lifetime [17]. According to study, 70% patients were of first onset and 43% were from recurrent episodes [12], Nandrino et al., 2004 explained in his study, 46% were suffering from 1st episode and 54% were recurrent episode and a total of 50% to 85% of patients who experience a depressive episode will have at least one more episode [18]. In present study, 58% of the patients suffering from Depression had no family history and 42% had positive family history of Depression. People with a family history of depression have long been known to be at a high risk to develop the mental illness [19]. Present research revealed that majority of subjects reported more than one stress. In present study, 26% had Death of spouse in first episode, and death of close family member 15% in 1st episode, 8% in 2nd episode and 4% in 3rd episode. This is in accordance with other researches. One study by Slavich, 16.3% patients reported death of spouse / close family member in 1st episode [5]. Depression is more common among the bereaved, particularly among those who have lost a spouse or child. When compared to married women and men, widows and widowers have a higher risk of getting major depression. Clayton et al, found that 35% of widows had enough symptoms to meet criteria for major depression 1 month after the death of a husband in their study of widowhood [20]. According to study by Chouinard et al, most people become depressed as a result of significant adversity, such as the death of a loved one or divorce, researchers discovered that roughly 30% of people with first-time depression and 60% of people with a history of depression develop the disorder as a result of relatively minor misfortunes [21]. In present study, 14% patients reported conflict with In-laws in 1st and 6% in 2nd Depressive episode, 22% reported disturbed relationship with family in 1st and 18% in 2nd Depressive episode, 16% patients reported relationship effect with spouse in 1st, 22% in 2nd and 30% in 3rd Depressive episode, 8% reported marriage against will in 1st Depressive episode, 6% divorced in 1st, 10% in 2nd and 15% in 3rd Depressive episode and 14% had breakup issue in 1st episode, 2% in 2nd and 3rd Depressive episode. It is in accordance with other studies reported. According to these studies, 68% [22] and 34.9% [23] patients reported with dysfunctional families, 40.5% were not satisfied with family situation and 22.4% were not satisfied with housing situation [14]. In a study by Rounsaville et al., Results showed 76 moderately depressed married patients who received outpatient maintenance treatment for depression, around 25% of those with marital disagreements or disputes and after treatment had a significant improvement in their marriage during course of treatment [24]. In our Pakistani culture, disturbed relationship with spouse or in-laws and marriage against will always lead to divorce. According to a survey by

Gallup & Gilani, 2019 in Pakistan, 02 out of 05 Pakistanis believed that in-laws are responsible for most of divorce cases and 58% at the time also believed that divorce rates have increased in Pakistan [25]. In this study, 12% patients reported financial difficulties in 1st, 20% in 2nd and 28% in 3rd Depressive episode, 6% reported business loss in 1st, 4% in 2nd and 2% in 3rd Depressive episode, 8% reported property issues and 4% fired from work / trouble with boss in 1st Depressive episode. In other studies, on depression recurrence, for example, life stress has almost exclusively referred to severe and major negative life events, such as the loss of stable job, and so on, are common [26]. According to other studies, 7.1% job stress [27], 33.3% not satisfied with working situation, 32.9% poor finance in 1st depressive episodes [14]. One study result on nurses in Pakistan showed 27.1% poor environment, 21.4% heavy work load, 12.9% occupational hazards [15]. In this study widows also reported financial difficulties after death of spouse. Other studied found prevalence of depression was 19.2% [28] and explained that in Asian culture sexually, emotionally and economically exploitation or abuse of widows is very common [29]. In Pakistan one study by Gopang et al., 2017 at Karachi widows that facing depression, its results showed 7% widows earning 3000 to 4000rs per month and faced financial difficulties & 53.85% widows facing bad attitude of family and society [30]. In this study, 26% patients were students, in which 16% reported exam failure in 1st, 4% in 2nd and 6% in 3rd depressive episode and 6% reported ending school / study in 1st, 4% in 2nd and 2% in 3rd Depressive episode. Examination stress among children and teenagers is unquestionably higher than it has ever been. Smith reported one student killed himself with his father's shotgun because he had failed his physics paper and one more student hanged himself from a tree because he believed he would not pass his math [31]. In this study, 6% patients were facing lack of child or infertility in 1st Depressive episode and with time it increased 12% in 2nd episode and 16% in 3rd Depressive episode. In Pakistani culture female suffer socially, emotionally and psychological due to family pressure for lack of child or infertility and it's a major stress for a married woman that lead to depression. According to Pakistani studies 20% were mild depression, 11% moderate to severe depression and 49% suffering from Moderate Depression and 10% Severe Depression due to infertility [32-33]. In some other stressors of present study, 8% patients were reported physical illness in 1st, 6% in 2nd and 4% in 3rd Depressive episode. People suffering from any physical disease experience more psychological and emotionally distress than the healthy people. Risk of depression also increased due to poor physical health, especially it is very common in

chronically ill patients[34].

## CONCLUSIONS

Study concluded that there was difference of psychosocial stressors in 1st and subsequent episodes of depression.

## Conflicts of Interest

The authors declare no conflict of interest.

## Source of Funding

The author(s) received no financial support for the research, authorship and/or publication of this article.

## REFERENCES

- [1] Jager KJ, Kovesdy C, Langham R, Rosenberg M, Jha V, Zoccali C. A single number for advocacy and communication—worldwide more than 850 million individuals have kidney diseases. *Nephrology Dialysis Transplantation*. 2019 Nov; 34(11):1803-5.
- [2] Trappey AJ, Lin AP, Hsu KY, Trappey CV, Tu KL. Development of an Empathy-Centric Counseling Chatbot System Capable of Sentimental Dialogue Analysis. *Processes*. 2022 May; 10(5):930.
- [3] Assari S and Lankarani MM. Stressful Life Events and Risk of Depression 25 Years Later: Race and Gender Differences. *Public Health Frontier*. 2016 Mar; 4:49. doi: 10.3389/fpubh.2016.00049.
- [4] Kendler KS and Gardner CO. Depressive vulnerability, stressful life events and episode onset of major depression: a longitudinal model. *Psychological Medicine*. 2016 Jul; 46(9):1865-74. doi: 10.1017/S0033291716000349.
- [5] Slavich GM, Monroe SM, Gotlib IH. Early parental loss and depression history: associations with recent life stress in major depressive disorder. *Journal of psychiatric research*. 2011 Sep; 45(9):1146-52. doi: 10.1016/j.jpsychires.2011.03.004.
- [6] Song X and Vilares I. Assessing the relationship between the human learned helplessness depression model and anhedonia. *PLoS One*. 2021 Mar; 16(3): e0249056. doi: 10.1371/journal.pone.0249056.
- [7] Nuggerud-Galeas S, Sáez-Benito Suescun L, Berenguer Torrijo N, Sáez-Benito Suescun A, Aguilar-Latorre A, et al. Analysis of depressive episodes, their recurrence and pharmacologic treatment in primary care patients: A retrospective descriptive study. *PLoS One*. 2020 May; 15(5): e0233454. doi: 10.1371/journal.pone.0233454.
- [8] Kessler RC, Berglund P, Demler O, Jin R, Koretz D, et al. National Comorbidity Survey Replication. The epidemiology of major depressive disorder: results from the National Comorbidity Survey Replication (NCS-R). *Journal of the American Medical Association*. 2003 Jun; 289(23):3095-105. doi: 10.1001/jama.289.23.3095.
- [9] Mitchell PB, Parker GB, Gladstone GL, Wilhelm K, Austin MP. Severity of stressful life events in first and subsequent episodes of depression: the relevance of depressive subtype. *Journal of Affective Disorders*. 2003 Feb; 73(3):245-52. doi: 10.1016/s0165-0327(01)00479-7.
- [10] American Psychiatric Association, American Psychiatric Association. *DSM-5 Task Force Diagnostic and statistical manual of mental disorders: DSM-5*. Washington. DC: American Psychiatric Association 2013.
- [11] Singh G, Kaur D, Kaur H. Presumptive stressful life events scale (PSLES)—a new stressful life events scale for use in India. *Indian journal of psychiatry*. 1984 Apr; 26(2):107.
- [12] Lewinsohn PM, Allen NB, Seeley JR, Gotlib IH. First onset versus recurrence of depression: differential processes of psychosocial risk. *Journal of Abnormal Psychology*. 1999 Aug; 108(3):483-9. doi: 10.1037//0021-843x.108.3.483.
- [13] Steunenberg B, Beekman AT, Deeg DJ, Kerkhof AJ. Personality predicts recurrence of late-life depression. *Journal of Affective Disorders*. 2010 Jun; 123(1-3):164-72. doi: 10.1016/j.jad.2009.08.002.
- [14] Strömberg R, Backlund LG, Löfvander M. Psychosocial stressors and depression at a Swedish primary health care centre. A gender perspective study. *BMC Family Practice*. 2011 Nov; 12:120. doi: 10.1186/1471-2296-12-120.
- [15] Irfan U, Sheikh S, Faisal M. Frequency of depression due to stress in female nurses. *Khyber Medical University Journal*. 2010; 2(1):10-4.
- [16] Brillman EI and Ormel J. Life events, difficulties and onset of depressive episodes in later life. *Psychological Medicine*. 2001 Jul; 31(5):859-69. doi: 10.1017/s0033291701004019.
- [17] Roca M, Gili M, Garcia-Campayo J, Armengol S, Bauza N, Garcia-Toro M. Stressful life events severity in patients with first and recurrent depressive episodes. *Social Psychiatry and Psychiatric Epidemiology*. 2013 Dec; 48(12):1963-9. doi: 10.1007/s00127-013-0691-1.
- [18] Nandrino JL, Dodin V, Martin P, Henniaux M. Emotional information processing in first and recurrent major depressive episodes. *Journal of psychiatric research*. 2004 Oct; 38(5):475-84. doi: 10.1016/j.jpsychires.2004.03.002.
- [19] Shadrina M, Bondarenko EA, Slominsky PA. Genetics Factors in Major Depression Disease. *Frontiers in psychiatry*. 2018 Jul; 9:334. doi: 10.3389/fpsyt.

- 2018.00334.
- [20] Clayton PJ, Halikas JA, Maurice WL. The depression of widowhood. *The British Journal of Psychiatry*. 1972 Jan; 120(554):71-7. doi: 10.1192/bjp.120.554.71.
- [21] Chouinard G, Chouinard VA, Corruble E. Beyond DSM-IV bereavement exclusion criterion E for major depressive disorder. *Psychotherapy and Psychosomatics*. 2011; 80(1):4-9. doi: 10.1159/000316966.
- [22] Ebrahim EM. The relationship of expressed emotion with mental health in the families of bipolar patients. *Revista Publicando*. 2018;5(17):52-7.
- [23] Reinares M, Bonnín CM, Hidalgo-Mazzei D, Sánchez-Moreno J, Colom F, Vieta E. The role of family interventions in bipolar disorder: A systematic review. *Clinical psychology review*. 2016 Feb; 43:47-57. doi: 10.1016/j.cpr.2015.11.010.
- [24] Rounsaville BJ, Weissman MM, Crits-Christoph K, Wilber C, Kleber H. Diagnosis and symptoms of depression in opiate addicts. Course and relationship to treatment outcome. *archives of general psychiatry*. 1982 Feb; 39(2):151-6. doi: 10.1001/archpsyc.1982.04290020021004.
- [25] Jha V. Current status of end-stage renal disease care in India and Pakistan. *Kidney International Supplements*. 2013 May; 3(2):157-60.
- [26] Monroe SM and Harkness KL. Life stress, the "kindling" hypothesis, and the recurrence of depression: considerations from a life stress perspective. *Psychological review*. 2005 Apr; 112(2):417-45. doi: 10.1037/0033-295X.112.2.417.
- [27] Wang J. Work stress as a risk factor for major depressive episode(s). *Psychological medicine*. 2005 Jun; 35(6):865-71. doi: 10.1017/s0033291704003241.
- [28] Blanner Kristiansen C, Kjær JN, Hjorth P, Andersen K, Prina AM. Prevalence of common mental disorders in widowhood: A systematic review and meta-analysis. *Journal of Affective Disorders*. 2019 Feb; 245:1016-1023. doi: 10.1016/j.jad.2018.11.088
- [29] Trivedi JK, Sareen H, Dhyani M. Psychological aspects of widowhood and divorce. *Mens Sana Monographs*. 2009 Jan; 7(1):37-49. doi: 10.4103/0973-1229.40648.
- [30] Gopang N, Khushik AG, Begum S, Saeed S. An Analysis of Socio-Economic Conditions of Widows Living in Sindh University Colony Jamshoro, Sindh. *The Women-Annual Research Journal of Gender Studies*. 2012 Mar; 4.
- [31] O'Connor RC, Rasmussen S, Hawton K. Predicting depression, anxiety and self-harm in adolescents: The role of perfectionism and acute life stress. *Behaviour research and therapy*. 2010 Jan; 48(1):52-9.
- [32] Abbasi S, Kousar R, Sadiq SS. Depression and anxiety in Pakistani infertile women. *Journal of surgery Pakistan*. 2016 Jan; 21(1):13-7.
- [33] Yusuf L. Depression, anxiety and stress among female patients of infertility; A case control study. *Pakistan Journal of Medical Sciences*. 2016 Dec; 32(6):1340-1343. doi: 10.12669/pjms.326.10828.
- [34] Ohrnberger J, Fichera E, Sutton M. The relationship between physical and mental health: A mediation analysis. *Social Science and Medicine*. 2017 Dec; 195:42-49. doi: 10.1016/j.socscimed.2017.11.008.