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Prevalence of anxiety and depression among family members of ICU patients in a tertiary-level hospital in Nepal: A cross-sectional observational study

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ABSTRACT

Background and aims: The Intensive Care Unit (ICU) environment places emotional and psychological strain to not only patients but also their families. In Nepal, the psychological impact on family caregivers remains underexplored. This study assessed the prevalence of anxiety and depression among ICU caregivers in a tertiary hospital setting.

Methods: A cross-sectional observational study was conducted from September to December 2024, involving 110 primary caregivers of ICU patients. Psychological distress of the caregivers was evaluated using the Nepali version of the Hospital Anxiety and Depression Scale (HADS), with scores ≥11 indicating clinically significant anxiety or depression. Demographic and clinical information was gathered using a structured questionnaire. Logistic regression analyses were used to identify associated factors.

Results: Anxiety and depression were present in 57.3% and 37.3% of caregivers, respectively. Anxiety was significantly higher among caregivers of younger patients and those cohabiting with the patient (OR 6.505; 95%CI: 1.188-35.619; p=0.031). Nasogastric tube insertion was associated with increased anxiety (p = 0.017), while tracheostomy correlated with higher depression levels (p = 0.045). Spousal relationship and role as a primary caregiver were also linked to elevated depression. Interestingly, employed individuals experienced more distress than farmers and the unemployed. No significant associations were observed with gender, marital status, education, or type of ICU admission.

Conclusion: Family caregivers of ICU patients, particularly co-residing relatives and spouses, face substantial psychological challenges. Tailored interventions, including counselling, improved physician communication, and psychosocial support, are essential to reduce caregiver distress in the ICU setting.

Key Words: *anxiety, depression, intensive care unit, intervention.*

INTRODUCTION

The Intensive Care Unit (ICU) is a specialized care setting where the combination of advanced medical interventions and a highly stressful environment poses significant challenges for all caregivers involved in patient care.[1] While patient care and their need is the prime focus in hospitals, the emotional and mental health of family members is often not given enough attention. Such an environment has been shown to contribute to heightened levels of anxiety and depression among relatives. Global studies have reported a high prevalence with anxiety rates between 10% to 67% and depression rates between 16% to 68%, depending on the population and setting.[2-5] Despite the growing recognition of this issue worldwide, there is a lack of focused research on the prevalence and factors contributing to anxiety and depression among caregivers of ICU patients in Nepal. However, data from similar low-resource, family-centric ICU settings reveal similar psychological burdens with 42% anxiety and 23% depression among ICU caregivers.[6] The absence of Nepal specific data underscores the novelty of our study.

This study aims to address this gap by assessing the psychological impact such as anxiety and depression, on family members of ICU patients in context of Nepal, and to identify key contributing factors (e.g., length of ICU stays, prognosis uncertainty, communication with healthcare providers) in order to generate evidence for developing targeted psychological support interventions.

METHODS

The study was prospectively registered (NCT06835673) as an observational cohort in ClinicalTrials.gov to ensure methodological transparency. Ethical approval from the Institutional Review Committee of Institute of Medicine, Kathmandu with Ref: 202(6-11) E2 081/082 and informed consent from participants were taken. A cross-sectional observational study was conducted from September to December 2024 across the adult mixed medical surgical level 3 ICU of a tertiary teaching hospital in Nepal. Primary caregivers were defined as the family members or individuals who are primarily responsible for making healthcare decisions, providing emotional or physical support, and maintaining regular presence or communication to their admitted patients.

Spouses, parents, or children of the patients who were more than 18 years were included if the patient was admitted for 48 hours or longer. Those with known anxiety or depression or who declined consent were excluded. Timeline of 48 hours duration of ICU stay was chosen to ensure adequate exposure to ICU stressors such as initial admission crisis and meaningful caregiver participation in early clinical decisions.

Based on the study by Agarwal et al. (with 42% prevalence for anxiety and 23.3% for depression), sample size was calculated as 94 (95% CI, 10% margin of error).[6] To account for potential participant attrition, an additional 10% (n=9.4) was added, bringing the adjusted sample size to 104. Finally, adjusting for 10-15 events per predictor variable for multiple logistic regression, sample was expanded to 110.[7]

The Hospital Anxiety and Depression Scale (HADS) is a 14 item (7 items each for anxiety and depression) self-reported screening tool with each question ranging from 0 to 3 points, designed to assess symptoms of anxiety and depression in non-psychiatric medical settings. A score of ≥11 is used to assess the presence or absence of anxiety and depression for each category.[8] The Nepali version was validated by Risal et al.[9]

Caregiver factors like age, gender, education, occupation, relationship with the patients, number of visits allowed in ICU were collected. Patient factors including age, sex diagnosis, APACHE II scores, ICU interventions and ICU type were also collected. Interviewer assistance was provided to participants who were illiterate or had difficulty comprehending the questionnaire. Convenience sampling was applied.

Continuous variables are expressed as mean ± standard deviation, and categorical variables as percentages. Chi-square or Fisher's exact tests were used for categorical comparisons. Continuous variables like caregiver age exhibited non-normal distributions (Shapiro-Wilk test $p<0.05$) and was compared using Mann-Whitney U tests. APACHE II scores (right-skewed) were analysed using Kruskal-Wallis test. Variables with significant associations ($p \leq 0.05$) were further analysed using univariable logistic regression. Those with clinical relevance or statistical significance were included in a multivariable logistic regression model. Odds ratios (OR) and 95% confidence intervals (CI) were reported. Statistical analysis was performed using SPSS version 22.

RESULTS

This study analysed 110 ICU patients. Primary diagnosis showed no significant association with caregiver distress. The mean age was 53.03 ±17.78 (range 18 to 91 years) with male predominance of 60%. Sixty eight percent of patients were aged 40–79 years, 27.27% were 0–39 age group whereas only 4.55% were 80 years or older. Majority of the cases (50%) were admitted from the emergency department, while rest were from inpatient or operation theatres (OT). The most frequent admitting department was neurology (42.72%), followed by gastroenterology and respiratory medicine (22.73% each). Among the total admission, 81.8% were unplanned and 18.2% were planned.

Intervention wise, urinary catheterization was the most frequently performed procedure, 107 (97.27%) followed by nasogastric tube insertion followed by central veinous catheter insertion and endotracheal intubation (Table 1).

Table 1. Demographics, admission details, and ICU procedures of the patients

Category	Frequency	Percentage
Age group (years)		
0-39	30	27.27%
40-79	75	68.18%
80 and above	5	4.55%
Source of admission		
OT	20	18.18%
Emergency department	55	50.00%
Ward admission	35	31.82%
Admitting department		
Neurology	47	42.72%
Gastroenterology	25	22.73%
Respiratory	25	22.73%
Others	13	11.82%
Admission type		
Medical	56	50.91%
Surgical	54	49.09%
Admission		
Planned	20	18.20%
Unplanned	90	81.80%
Intervention		
Intubation	74	67.27%
Hemodialysis	17	15.45%
Chest tube	4	3.64%
Foley's catheter	107	97.27%
Nasogastric tube	98	89.10%
CVC insertion	81	79.10%
Surgical drain	27	24.55%
Restraints	82	74.55%
Tracheostomy	26	23.64%

Table 2. Details of the caregivers of ICU patients and the prevalence of anxiety and depression

Category	Frequency	Percentage
Gender		
Male	75	68.18%
Female	35	31.82%
Relationship with patient		
Children	54	49.09%
Parents	8	7.27%
Spouse	24	21.82%
Siblings	16	14.55%
Others	8	7.27%
Number of visits per day		
1 visit	1	0.91%
3 visits	104	94.54%
More than 3 visits	5	4.55%
Occupation		
Business	20	18.18%
Farmer	14	12.73%
Government Employee	37	33.64%
Homemaker	11	10.00%
Student	9	8.18%
Unemployed	7	6.36%
Others	12	10.91%
Education status		
Primary	53	48.18%
Secondary	31	28.18%
Bachelor	19	17.27%
Master	5	4.55%
None	2	1.82%
Prevalence of anxiety and depression		
Anxiety	63	57.27%
Depression	41	37.27%

The mean age of the patient's visitor was 40.74 ± 12.59 years. Majority of visitors were male (68.18%). Nearly half (49.09%) of the visitors were children of the patients. A high proportion (87.27%) of visitors lived together with the patients. Additionally, 95.54% of visitors adhered to the ICU visiting policy, visiting their patients three times a day. Regarding occupation, 33.64% were government professionals, whereas 6.36% were unemployed. The educational background of visitors varied, with 48.18% having attained primary education, and a small minority (1.82%) lacking formal education. Based on the HADS tool, 63 caregivers of ICU patients (57.27%) had anxiety (HADS score ≥11) while 41 patients (37.27%) met the criteria for depression (HADS score ≥11) (Table 2).

A significant association was observed in the family members living with the patient demonstrating higher levels of both anxiety ($p = 0.001$) and depression ($p = 0.002$) compared to those living independently (Table 3). Significant association was also observed between anxiety and occupational status ($p = 0.037$) with students having the highest proportion of anxiety (100%), followed by government employees (62.2%) as compared to farmers (Table 3). Furthermore, the relationship between the patient and the family member played a crucial role in depression levels. Spouses (58.3%) and parents (75.0%) had the highest prevalence of depression ($p = 0.006$). However, no significant association were identified between anxiety or depression and variables such as age of the visitor, gender, marital status, or education attainment of the family member (Table 3).

Table 3. Univariable analysis to identify association between visitors' related features and anxiety and depression of visitors.

	Anxiety				Depression			
Family member profile	**No (n=47)**	**Yes (n=63)**	**Total (n=110)**	**p-value**	**No (n=69)**	**Yes (n= 41)**	**Total (n=110)**	**p-value**
Visitor age (mean±SD)	42.94 ± 11.55	39.10 ± 13.15	40.74 ± 12.59	0.114[c]	40.39 ± 11.88	41.32 ± 13.82	40.74 ± 12.59	0.867[c]
Age (years)								
0-39	19	35	54		33	21	54	
40-79	28	27	55	0.173[a]	36	19	55	0.383[a]
80 and above	0	1	1		0	1	1	
Visitor gender								
Male	37	38	75	0.074[b]	50	25	75	0.211[a]
Female	10	25	35		19	16	35	
Visitor marital status								
Married	43	50	93	0.082[a]	59	34	93	0.717[a]
Unmarried	4	13	17		10	7	17	
Relationship with patient								
Children	23	31	54		40	14	54	
Parents	1	7	8		2	6	8	
Siblings	9	7	16	0.220[b]	10	6	16	**0.006[b#]**
Spouse	9	15	24		10	14	24	
Others	5	3	8		7	1	8	
Occupation								
Business	12	8	20		16	4	20	
Farmer	9	5	14		10	4	14	
Government	14	23	37		21	16	37	
Homemaker	4	7	11	**0.037b[#]**	6	5	11	0.526[b]
Student	0	9	9		5	4	9	
Unemployed	4	3	7		5	2	7	
Others	4	8	12		6	6	12	
Residence with the patient								
Yes	35	61	96	**0.001[a#]**	55	41	96	**0.002[a#]**
No	12	2	14		14	0	14	
Education status of visitors								
Primary	25	28	53		32	21	53	
Secondary	11	20	31		20	11	31	
Bachelor	7	12	19	0.733[b]	12	7	19	0.918[b]
Master	3	2	5		4	1	5	
None	1	1	2		1	1	2	

a: Chi-square test, b: Fischer's exact test, c: t-test; #: statistically significant.

In univariable analysis, anxiety and depression were significantly more prevalent among family members of younger patients (0–39 years), with 73.3% reporting anxiety and 60% depression. Those with patients aged 40–79 years showed lower rates (p = 0.039 for anxiety, p = 0.010 for depression). No significant associations were found with gender, marital status, illness chronicity, admission type, diagnosis category, or prior hospitalization (Table 4).

Nasogastric (NG) tube insertion was associated with caregiver anxiety (p=0.017) but not depression. Tracheostomy was linked to higher depression levels (14/26, p = 0.045), while the association with anxiety (19/26, p = 0.062) was not statistically significant. Other interventions including intubation, hemodialysis, chest tube, urinary catheter, central line, surgical drain, and restraints showed no significant association with anxiety or depression (Table 4).

Table 4. Patient factor associated with anxiety and depression of visitors

Variable	Anxiety			Depression		
	No	Yes	p-value	No	Yes	p-value
Age (years)						
0–39	8	22	**0.039**[b#]	12	18	**0.010**[b#]
40–79	35	40		53	22	
≥80	4	1		4	1	
Gender						
Male	30	36	0.479[b]	44	22	0.295[b]
Marital status						
Married	44	58	0.756[b]	65	37	0.468[b]
Illness						
Acute	24	37	0.424[a]	38	23	0.917[a]
Admission type						
Unplanned	36	54	0.220[a]	54	36	0.210[a]
Diagnosis						
Gastro	13	12	0.547[a]	16	9	0.131[a]
Neuro	21	26		34	13	
Respiratory	9	16		14	11	
Others	4	9		5	8	
Previous hospitalisation						
Yes	10	20	0.223[a]	52	28	0.421[a]
ICU interventions						
Intubation	29	45	0.282[a]	48	26	0.506[a]
Hemodialysis	7	10	0.888[a]	10	7	0.717[a]
Chest tube	2	2	0.765[b]	1	3	0.145[b]
Foley catheter	45	62	0.575[b]	67	40	0.886[b]
NG tube	38	60	**0.017**[b#]	60	38	0.529[b]
CVC	32	49	0.254[a]	51	30	0.932[a]
Surgical drain	11	16	0.810[a]	17	10	0.977[a]
Restraints	32	50	0.179[a]	51	31	0.843[a]
Tracheostomy	7	19	0.062[a]	12	14	**0.045**[a#]
APACHE II score (Median) (IQR)	19 (14-24)	19(14-24)	0.345[c]	18(13-23)	19(14-23)	0.197[c]

a: Chi-square test, b: Fischer's exact test, c: Mann-Whitney test, #: statistically significant.

In the multivariable analysis, which adjusted for all co-variates found significant in the univariable analysis, nasogastric tube insertion, co-residing with the patient, and patient age (40–79 years) were identified as independent predictors of anxiety. In contrast, no variables were statistically significant as independent predictors of depression (Table 5).

Table 5. Multivariable logistic regression for anxiety and depression

Variables	Significance (p value)	Odds Ratio	95% CI for odds ratio	
			Lower limit	Upper limit
Anxiety				
Nasogastric tube	**0.049***	6.524	1.008	42.246
Occupation				
Business	0.592	1.557	0.309	7.861
Government	0.054	4.172	0.976	17.836
Homemaker	0.351	2.408	0.380	15.256
Student	0.999	2.2	-	-
Unemployed	0.538	1.943	0.234	16.144
Others	0.243	2.996	0.476	18.869
Patient's age (years)				
Age group: 40-79	**0.019***	0.243	0.074	0.795
Age group: 80 and above	0.084	0.097	0.007	1.362
Residing together	**0.031***	6.505	1.188	35.619
Depression				
Patient's age (years)				
Age group: 40-79	0.530	0.658	0.178	2.436
Age group 80 and above	0.974	1.047	0.064	17.260
Tracheostomy	0.200	1.982	0.696	5.650
Relationship				
Parent	0.163	4.429	0.547	35.853
Siblings	0.124	3.930	0.687	22.494
Spouse	**0.047***	3.121	0.909	10.716
Others	0.913	0.876	0.082	9.411
Residing together	0.998	>100	-	-

*Reference category for relationship is 'children', for age is 0-39 years and for occupation is 'farmer'. *: statistically significant.*

DISCUSSION

This study reveals a high burden of psychological distress among family caregivers of ICU patients in a tertiary hospital of Nepal, with 57.3% exhibiting clinically significant anxiety and 37.3% depression. Notably, cohabiting caregivers had 6.5 fold higher odds of anxiety (95% CI: 1.2–35.6, p = 0.031), while spouses had a higher risk of depression (OR = 3.121) compared to children. Similarly, spouses and parents showed the highest depression rates (58.3% and 75%, respectively). Younger patient age (0–39 years) and invasive interventions (nasogastric tubes, tracheostomies) emerged as modifiable risk factors, whereas traditional predictors like gender or education showed no association. These findings underscore the unique psychosocial impact of ICU caregiving in resource limited, family-centric settings.

These findings align with multiple studies, that also reported increased stress, anxiety, and depression among cohabiting family members and spouses.[6,10] In Nepalese society, where families often live together, not only strong emotional bonds but also deep sense of responsibility, caregiving burden and financial strain likely exacerbate anxiety and depression among cohabiting relatives. Cohabiting caregivers experience greater emotional burden through direct exposure to patient decline and their role conflicts with managing household and caregiving duties. However, selection bias may play a role, as cohabiting caregivers are often spouses or adult children who are inherently more vulnerable to distress. While we adjusted for key variables like relationship type and occupation, residual confounding likely persists. For spouses, the fear of losing a life partner, loneliness, and emotional dependency may further explain their increased vulnerability to depression.

The absence of significant depression predictors, unlike anxiety, likely reflects the temporal differences (depression develops over weeks vs. acute anxiety), HADS-D limitations in capturing early caregiving specific symptoms and unmeasured LMIC stressors (financial strain, long term role captivity). While anxiety is linked to immediate threats (e.g., NG tubes), depression may require prolonged exposure beyond our 48–72 hour window. Cultural buffering (family support) may further delay depressive symptoms. Future studies need longitudinal designs with LMIC specific mediators to clarify these pathways.

Family members of younger patients (18–39 years) had a significantly higher likelihood of experiencing anxiety, while those with patients aged 40–79 had 75% lower odds (OR = 0.243, 95% CI: 0.074–0.795, p = 0.019), similar to the study by Pochard et al, who also reported inverse association with anxiety symptoms in family members (OR = 0.984 per year, 95% CI: 0.971–0.997, p = 0.01) and age.[11] Nasogastric (NG) tube insertion was significantly associated with higher anxiety among family members (OR = 6.524, 95% CI: 1.008–42.246, p = 0.049), consistent with findings by Hande Gürbiz et al.[2] In their study family members perceived these "dangling tubes" likely to be painful and imagined suffering and as a marker of clinical severity. Its visible and invasive nature may contribute to distress. In contrast, other interventions such as mechanical ventilation, tracheostomy, central lines, urinary catheters, and surgical drains were not significantly linked to anxiety a similar finding as our study. This may be due to family members' lack of understanding about these procedures or inadequate communication from physicians.[2]

Higher APACHE II (Acute Physiology and Chronic Health Evaluation) scores, and unplanned ICU admissions were often linked to greater anxiety and depression, likely due to the severe and sudden nature of illness respectively.[2,14] However, this was not found in our study. It is possibly due to narrowly distributed APACHE scores, with most patients being moderately ill. This could be because ICU admission is generally perceived as critical, leading families to assume a poor prognosis regardless of the patient's actual condition. Their emotional responses may have been driven more by visible signs such as machines or the patient's unconscious state than by clinical indicators like the APACHE score.

Carolina Tintim Lobato et al. in their study found that, unemployment is typically associated with higher distress.[12] In contrast, in our study, government employees exhibited a trend toward elevated distress levels (OR = 4.172, p = 0.054), though this was not statistically significant. This trend may be attributed to the increased stress from job demands and the difficulty of balancing caregiving responsibilities. Many studies have connected caregivers' education levels to increased anxiety and psychological distress, but this link was not found in the current study. This difference may stem from cultural or socioeconomic factors, financial strain, or lack of social support, which could overshadow the role of education.[13,14]

Unlike other studies linking younger caregivers and females to higher anxiety and depression, our study found no such association.[15,16] This may be due to Nepal's lack of government support, with families relying on out-of-pocket payments, leading to severe financial strain. Additionally, strong social ties and close knit family structures distribute caregiving responsibilities across all members, potentially causing stress across all genders and age groups.

This study has several limitations. First, the use of the HADS as a screening tool, rather than diagnostic interviews may overestimate prevalence, limiting clinical generalizability. Second, convenience sampling in a single tertiary centre risks selection bias (e.g., overrepresentation of urban and educated caregivers). Third, unmeasured confounders (e.g., financial strain, prior mental health history excluded per protocol) could inflate observed associations. Fourth, the cross-sectional design precludes causal inference about ICU experiences precipitating distress. Finally, while the Nepali HADS is validated, its performance in ICU specific populations remains unconfirmed, potentially affecting accuracy. These factors necessitate cautious interpretation and highlight the need for longitudinal, multicentre studies with diagnostic confirmation.

The external validity of this study is moderately supported for low-resource, family-centric ICU settings, particularly

in South Asia, given we used a validated Nepali HADS and findings are consistent with the global trends in caregiver distress. However, generalizability is limited due to the single centre design, convenience sampling, and exclusion of financial stressors factors. Addressing these gaps is crucial, as financial burdens and inadequate communication can exacerbate psychological distress among caregivers. Future research should prioritize identifying caregivers' specific needs and developing targeted interventions, such as financial support systems, improved physician-family communication strategies, and psychosocial support programs, to mitigate caregiver stress and improve overall outcomes.

CONCLUSION

We found a high prevalence of anxiety and depression amongst the family members of patients admitted in ICU of a tertiary level hospital of Nepal. Our study identified co-residency, patients of younger age, spousal relationship and ICU interventions as key factors predictors of anxiety and depression among the family members. There is a need for targeted psychological support programs for caregivers and spouses, who are at the highest risk of anxiety and depression.

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REFERENCES

1. Jongerden IP, Slooter AJ, Peelen LM, et al. Effect of intensive care environment on family and patient satisfaction: a before-after study. Intensive Care Med. 2013;39(9):1626–34. [Pub Med | Google Scholar | DOI]
2. Gurbuz H, Demir N. Anxiety and depression symptoms of family members of intensive care unit patients: a prospective observational study and the lived experiences of the family members. Avicenna J Med. 2023;13(2):089–96. [Pub Med | Google Scholar | DOI]
3. Pochard F, Azoulay E, Chevret S, et al. Symptoms of anxiety and depression in family members of intensive care unit patients: ethical hypothesis regarding decision making capacity. Crit Care Med. 2001;29(10):1893–7. [Pub Med | Google Scholar | DOI]
4. Anderson WG, Arnold RM, Angus DC, Bryce CL. Passive decision making preference is associated with anxiety and depression in relatives of patients in the intensive care unit. J Crit Care. 2009;24(2):249–54. [Pub Med | Google Scholar | DOI]
5. Siegel MD, Hayes E, Vanderwerker LC, Loseth DB, Prigerson HG. Psychiatric illness in the next of kin of patients who die in the intensive care unit. Crit Care Med. 2008;36(6):1722–8. [Pub Med | Google Scholar | DOI]
6. Aggarwal D, Vaz F. Psychological distress among family members of inpatients in general medicine wards at a tertiary care hospital: a cross-sectional study. J Clin Diagn Res. 2021;15:LC05–08. [Google Scholar | DOI]
7. Peduzzi P, Concato J, Kemper E, Holford TR, Feinstein AR. A simulation study of the number of events per variable in logistic regression analysis. J Clin Epidemiol. 1996;49(12):1373-9. [Pub Med | Google Scholar | DOI]
8. Zigmond AS, Snaith RP. The Hospital Anxiety and Depression Scale. Acta Psychiatr Scand. 1983;67(6):361–70. [Pub Med | Google Scholar | DOI]
9. Risal A, Manandhar K, Linde M, et al. Reliability and validity of a Nepali language version of the Hospital Anxiety and Depression Scale (HADS). Kathmandu Univ Med J. 2015;13(50):115–24. [Pub Med | Google Scholar | DOI]
10. Białek K, Sadowski M. Stress, anxiety, depression and basic hope in family members of patients hospitalised in intensive care units – preliminary report. Anaesthesiol Intensive Ther.2021;53(2):134–40. [Pub Med | Google Scholar | DOI]
11. Pochard F, Darmon M, Fassier T, et al. Symptoms of anxiety and depression in family members of intensive care unit patients before discharge or death: a prospective multi-center study. J Crit Care. 2005;20(1):90–6. [Pub Med | Google Scholar | DOI]
12. Lobato CT, Camões J, Carvalho D, et al. Risk factors associated with post-intensive care syndrome in family members (PICS-F): a prospective observational study. J Intensive Care Soc. 2023;24(3):247–57. [Pub Med | Google Scholar | DOI]
13. Adelman RD, Tmanova LL, Delgado D, Dion S, Lachs MS. Caregiver burden: a clinical review. JAMA. 2014; 12;311(10):1052–60. [Pub Med | Google Scholar | DOI]
14. Creedle C, Leak A, Deal AM, et al. The impact of education on caregiver burden on two inpatient oncology units. J Cancer Educ. 2012;27(2):250–6. [Pub Med | Google Scholar | DOI]
15. Fumis RRL, Deheinzelin D. Family members of critically ill cancer patients: assessing the symptoms of anxiety and depression. Intensive Care Med. 2009;35(5):899–902. [Pub Med | Google Scholar | DOI]
16. Kao YY, Chen CI, Chen FJ, et al. Effects of resourcefulness on sleep disturbances, anxiety, and depressive symptoms in family members of intensive care unit patients. Arch Psychiatr Nurs. 2016;30(5):607–13. [Pub Med | Google Scholar | DOI]