

**Research Article**

**Preoperative Anxiety and Social Support among Patients undergoing Surgery**

<sup>§</sup>Sharada Sharma<sup>\*</sup>, Kamala Gharti<sup>\*\*</sup>

<sup>\*</sup>Lecturer, T.U.I.O.M. Pokhara Nursing Campus

<sup>\*\*</sup>Lecturer, T.U.I.O.M. Pokhara Nursing Campus

<sup>§</sup> Corresponding Author: [sharada825@gmail.com](mailto:sharada825@gmail.com)

Article History

Received 27 June 2019

Revised 11 October 2019

Accepted 21 November 2019

---

**Abstract**

*Most patients awaiting surgery experience anxiety. The study aims to assess the levels of preoperative anxiety and social support, determine the association of background variables with levels of preoperative anxiety and social support and to examine the relationship between levels of preoperative anxiety with social support.*

*A hospital based cross-sectional study was conducted among patients undergoing surgery in a government Hospital, Pokhara. The study period was from September 2016 to August 2017. Total sample was 442 patients scheduled for surgery. Data was collected through Anxiety Specific to Surgery Questionnaire for anxiety and Multidimensional Scale of Perceived Social Support through face to face interview. Ethical approval was obtained from IRC, Institute of Medicine, Tribhuvan University. Data were entered and analysis was performed with the help of the Statistical Package for Social Science (SPSS).*

*The total 94.1 percent of patients were married and 52 percent had low living standard. High level of preoperative anxiety and social support are seen in 42.1 and 64.3 percent respectively. Preoperative anxiety had significant statistical association with standard of living, experience of past operation, and types of operation ( $p < 0.05$ ). Social support had significant statistical association with age, gender, residence, standard of living, and types of operation ( $p < 0.05$ ). Correlation between preoperative anxiety and social support is significant ( $r = -.133, p = 0.005$ ) at the 0.05 level.*

*As social support increased; preoperative anxiety decreased. Therefore, health care provider should identify patients with high anxiety, encourage them to talk about their feelings and facilitate more time with their families.*

**Key Words:** *Anxiety, patients, preoperative anxiety, surgery, social support*

---

© The Author, published by JRCC, Janapriya Multiple Campus

## **Introduction**

Preoperative anxiety is an unpleasant state and most patients awaiting elective surgery experience anxiety and it is widely accepted as an expected response (Homzova & Zelenikova, 2015). Surgery is a crucial event, which directly affects the people's lives, well-being and health as well as in fundamental life pattern of an individual and family levels (Santos, Martins & Oliveira, 2014). Significant preoperative anxiety found in Nigeria was 51.0 percent (Akinsulore et al., 2015). A study conducted in India, prevalence of anxiety factor was 58.9 percent (Saini & Dayal, 2016). In Nepal also higher level of preoperative anxiety was found in female gender, younger age with no previous history of surgery (Pokharel, Bhattarai, Tripathi & Subedi, 2011).

Extreme form of anxiety prior to surgical operation has been lead to cardiovascular disturbances such as tachycardia, hypertension, arrhythmias (Akinsulore et al., 2015). The higher level of anxiety directly altered the physiological system which affects the surgical outcomes (Yilmaz et al., 2011). Continuous information reduced the experience of anxiety in (49%) of the patients and the opportunity to ask questions during the intraoperative period reduced anxiety in 55 percent (Haugen et al., 2009).

Individuals concern about the success of surgery, selection of anesthesia, fear of anesthesia and postoperative pain are the main influencing factor in preoperative anxiety (Erkilic et al., 2017; Berth, Petrowski & Balck, 2007). Fear of death (Erkilic et al., 2017; Nigussie et al., 2014), Fear of unknown, financial loss, and result of operations are also the reason for anxiety (Nigussie et al., 2014). It is also affected by many factors for example: socio-demographic characteristics, type of surgery, psychosocial variables (Berth et al., 2007).

Preoperative anxiety of patients awaiting surgery was associated with demographic characteristics as well as social support resources. Patient with high level of social support shows less anxiety, less hospital stay and low doses of narcotics (Yilmaz et al., 2011).

There are number of research conducted in other countries in preoperative anxiety and social support but very less in relation with Nepal. Studies suggest that higher social support have less preoperative anxiety. With the view, the study was undertaken to assess the preoperative anxiety and social support among patients undergoing surgery in the western region of Nepal.

## **Data and Methods**

This was a cross-sectional study to assess preoperative anxiety and social support in a government hospital; where various patients with different living standard, residence were treated, Pokhara among adult patients undergoing surgery. The study period was from September 2016 to August 2017. The hospital provides service as a referral centre throughout patients department as well as the different in patients wards. The sample size was determined by assuming prevalence of anxiety to be 50 per cent with an error of five per cent, 95 per cent confidence limit, and a non-response rate of 10 per cent, The total sample size was 442. Some criteria was used for selecting the patients were aged 20 above, consented to participate, operation planned for at least one day later and general and spinal an anaesthesia used during the surgery and surgical procedures classified as intermediate or major surgery.

The instrument consists of three parts. Part I related to background information(gender, age, educational level, marital status, residence, standard of living; measured by using multidimensional poverty index (ranges from 0-14 for a low, 15-24 for a medium and 25- 62 for a high status) and other contributing factors; Part II questionnaire related to preoperative anxiety and Part III related to social support. Anxiety Specific to Surgery Questionnaire (ASSQ) to identify preoperative anxiety; was developed by Karanci and Dirik and is composed of 10 items. A five-point scale is used for scoring (1 = strongly disagree and 5 = strongly agree). The total score is obtained by adding all scores and only responses to item 8 were reversed (5 = strongly disagree and 1 = strongly agree). All items are concerned with the anxiety about pain and death associated with the surgery and the possible complications and restrictions that might occur after the surgery. The total lowest and highest scores for the scale are 10 and 50, respectively. The higher the score is the higher the anxiety level. The Multidimensional Scale of Perceived Social Support (MSPSS) was used to measure social support. This scale was developed by Zimet et al. This scale includes 12 items rated by a five point Likert scale. The scale has three subscales, that is, family support, support from friends and support from someone special. Each subscale involves four items. The lowest and the highest scores for each subscale are 4 and 20, respectively. The total lowest and highest scores for the scale are 12 and 60, respectively. The instruments was used during face-to-face interviews in the room of the patients. Before collecting data approval was obtained from Institutional Review Board Tribhuvan University, Institute of Medicine and authority of Western Regional Hospital Pokhara. All patients

was informed about the purpose of study and methods that would be used; permission was obtained from all patients to ensure the right to dignity and explain them about the study purpose and interviewed in a separate room and filled within 25 to 30 minutes. Researcher assured that answer would be kept confidential; name of respondents was not attached with the answer and was used for study purpose only.

Data was edited on the same day of data collection. Data entry and processing was done by using Statistical Package for Social Science (SPSS) computer software. Data analysis was done by using descriptive statistics such as frequency, percentage, mean and standard deviation. Inferential statistics Chi square test was used to find out the association between factors affecting preoperative anxiety. Pearson's correlation test was used to identify relationship between preoperative anxiety and social support.

### Results and Discussion

Out of 442, most (94.1%) of patients were married, 90.3 percent were Hindu and 52 percent had low standard of living. Among them, 58.6 percent from rural area, 30.8 percent had primary level education.

Table 1

*Pre-operative Anxiety of Patients Undergoing Surgery*

Items	Mean	SD
I am afraid that I will be physically disabled by the operation.	2.28	1.549
I think I will feel pain during the operation.	2.33	1.599
I worry that I will have a lot of pain after the operation.	2.59	1.62
I am afraid that after the operation. I may not be able to walk again and/or I may not be able to care for myself as before.	2.41	1.56
I worry that I may not recover completely after the operation due to inflammation or other problem.	2.04	1.52
I worry that I may die during the operation due to bleeding or other reasons.	2.14	1.57
I am afraid that I may not regain my consciousness after the operation.	2.02	1.52

I believed that I will get rid of all my pains and problems after the operation.	4.16	1.22
Thoughts of dying frequently come to my mind.	1.93	1.52
If something happens to me, my family and children will remain helpless.	2.45	1.72

**Total Mean ±SD 24.35± 9.317**

SD = Standard Deviation

Concerning the statement related to preoperative anxiety, “I am worry that I will have a lot of pain after the operation” (Mean ±SD=2.59±1.62) was top anxiety related statement. The low anxiety related statement was the “thoughts of dying frequently come to my mind” (Mean± SD=1.93±1.52). The total Mean ±SD is 24.35± 9.317 for preoperative anxiety [Table 1].

Table 2

*Social Support of Patients Undergoing Surgery*

Items	Mean	SD
My family really tries to help me.	4.69	0.86
I can talk about my problems with my friends.	4.34	1.21
There is a special person who is around when I am in need.	4.57	1.02
There is a special person with whom I can share my joys and sorrows.	4.46	1.18
I get the emotional help and support I need from my family.	4.54	1.08
I have a special person who is a real source of comfort to me.	4.53	1.10
My friends really try to help me.	3.99	1.43
I can count on my friends when things go wrong.	3.50	1.64
I can talk about my problems with my family.	4.66	1.08
There is a special person in my life who care about my feelings.	4.36	1.32
My family is willing to help me make decisions.	4.54	1.11
There is a special person who care about my feeling	4.36	1.32

**Total Mean  $\pm$ SD 52.31 $\pm$  9.69**

SD = Standard Deviation

The statement related to social support, “My family really tries to help me” (Mean  $\pm$ SD=4.69 $\pm$ 0.86) was the top social support related statement. The low social support, related statement was “I can count on my friends when things go wrong.” (Mean $\pm$  SD=3.50 $\pm$ 1.64).The total Mean  $\pm$ SD is 52.31 $\pm$  9.69 for social support [Table 2].

Table 3

*Association of Background variables and Preoperative Anxiety*

Characteristics	Level of Preoperative Anxiety			Chi square	p-Value
	Total	High	Low		
<b>Age in Years</b>					
20-39	280	154(55.0)	126(45.0)		
40-59	119	76(63.9)	43(36.1)	2.82	0.244
60& above	43	26(60.5)	17(39.5)		
<b>Gender</b>					
Male	113	70(61.9)	43(38.1)		
Female	329	187(56.8)	143(43.2)	1.011	0.315
<b>Marital Status</b>					
Married with Partner	416	244(58.7)	172(41.3)		
Single	26	12(46.2)	14(53.8)	1.569	0.210
<b>Residence</b>					
Rural	259	149(57.5)	110(42.5)	.039	0.844
Urban	183	107(58.5)	76(41.5)		
<b>Standard of Living</b>					
Low	230	144(62.6)	86(37.4)		
Medium	163	92(56.5)	71(43.6)	8.102	0.017
High	49	20(40.8)	29(59.2)		
<b>Previous of Operation</b>					
Yes	190	120(63.2)	70(36.8)	3.753	0.053
No	252	136(54.0)	116(46.0)		

<b>Type of Operation</b>					
Gynecological Surgery	232	126(54.3)	106(45.7)		
General Surgery	148	99(66.9)	49(33.1)	7.724	0.021
Orthopedic Surgery	62	32(51.6)	30(48.4)		
<b>Pre-anesthetic Counseling</b>					
Yes	95	57(60.0)	38(40.0)		
No	347	199(57.3)	148(42.7)	215	643

Preoperative anxiety had significant statistical association with standard of living, experience of past operation, and types of operation ( $p < 0.05$ ) [Table 3].

Table 4

*Association of Background Variables and Social Support*

<b>Characteristics</b>	<b>Level of Social Support</b>			<b>Chi square</b>	<b>p-Value</b>
	<b>Total</b>	<b>Low</b>	<b>High</b>		
<b>Age in Years</b>					
20-39	280	91(32.5)	189(67.5)		
40-59	119	45(37.8)	74(62.2)	5.956	0.051
60 & above	43	22(51.2)	21(48.8)		
<b>Gender</b>					
Male	113	44(38.9)	69(61.1)	0.673	0.041
Female	329	114(34.6)	215(65.4)		
<b>Marital Status</b>					
Married with Partner	416	150(36.1)	266(63.9)	0.298	0.585
Single	26	8(30.8)	18(69.2)		
<b>Residence</b>					
Rural	259	108(41.7)	151(58.3)	9.649	0.002
Urban	183	50(27.3)	133(72.7)		

**Standard of Living**

Low	230	57(24.8)	173(75.2)		
Medium	163	74(45.4)	89(54.6)	26.641	0.000
High	49	27(55.1)	22(44.9)		

**Previous Operation**

Yes	190	70(36.8)	120(63.2)	0.174	0.676
No	252	88(34.9)	164(65.1)		

**Type of Operation**

Gynecological Surgery	232	69(29.7)	163(70.3)		
General Surgery	148	61(41.2)	87(58.8)	7.963	0.019
Orthopedic Surgery	62	28(45.2)	34(4.8)		

Social support had significant statistical association with age gender, residence, standard of living, and types of operation (p<0.05) at 95 percent confidence level [Table 4].

Table 5

*Correlation between Preoperative Anxiety and Social Support*

Characteristics	Number	Percent	r	P
<b>Preoperative Anxiety</b>				
Mean ± SD 24.35± 9.317				
High	256		57.9	
Low	186		42.1	
Anxiety Score from 10 - 49				
<b>Social Support</b>			<b>- .133</b>	<b>0.005</b>
Mean± SD 52.31± 9.69				
Low	158	35.7		
High	284	64.3		
Social support Score from 12-60				

r = Pearson Correlation value Correlation is significant at the 0.05 level (2-tailed).



High level of preoperative anxiety seen in 42.1 percent and low level of anxiety seen in 57.9 percent where, mean  $\pm$ SD 24.35 $\pm$  9.317. Similarly high level of social support seen in 64.3 percent and low level seen in 57.9 percent where, mean $\pm$ SD52.31 $\pm$  9.69. There is negative correlation between pre-operative anxiety and social support indicates that Higher the social support, lower the anxiety  $r = -0.133$   $p = 0.005$  correlation is significant at the 0.05 level [Table 5].

## Discussion

Patients undergoing surgery are often more anxious than the patients with other procedure. So, pre-operative anxiety is a very crucial problem. In the present study, high level of preoperative anxiety seen in 42.1 percent and low level was seen in 57.9 percent where mean  $\pm$ SD 24.35  $\pm$  9.317. The mean preoperative anxiety score was similar to findings of a previous study carried out by Karanchi & Dirik (2003) and the score was slightly high (Mean $\pm$ SD 31.91 $\pm$ 6.30) in the study conducted by Yilmaz et.al using ASSQ (Yilmaz et al., 2011).

The findings of this study shows that preoperative anxiety had a significant statistical association with the standard of living, experience of past operation, and types of operation ( $p < 0.05$ ). The other demographic characteristics that were not associated with preoperative anxiety; age, gender, marital status, and education. But the associations have been demonstrated by previous study (Yilmaz et al., 2011).

Present study explains that patient with previous operative experience perceived low level of pre-operative anxiety and the similar finding found in (Matthias & Samarasekera, 2012, Pokharel et al., 2011, &Bander et al., 1990) and preoperative anxiety is not affected by previous operative exposure (Bander et al., 1990) In the present study, patients undergoing gynecological surgery had a high level of preoperative anxiety. The finding was supported by the previous study (Erkilic et al., 2017)

Concerning statement related to preoperative anxiety, "I am worried that I will have a lot of pain after the operation" (Mean  $\pm$ SD=2.59 $\pm$ 1.62) was top anxiety related statement. The low anxiety related statement was the "thoughts of dying frequently come to my mind" (Mean $\pm$  SD=1.93 $\pm$ 1.52). The main cause of preoperative anxiety was patient had worry about family in first which was present in the study Akinsulore et al., 2015.

The results of this study showed that high level of social support seen in 64.3 percent and low level was seen in 57.9 percent where, mean  $\pm$ SD 52.31  $\pm$  9.69. Marriage is the central relationship for most adults and has beneficial effects on health. One study reported that married persons have greater emotional support, which is positively related to their emotional state. The perceived quality of the marital relationship was relatively insignificant (Kulik and Mahler, 1989). Similar finding was observed in this study also. The findings of this study shows that social support had a significant statistical association with age gender, residence, standard of living, and types of operation ( $p < 0.05$ ). Likewise the statement related to social support, "My family really tries to help me" (Mean  $\pm$ SD=4.69 $\pm$ 0.86) was the top social support related statement. The low social support-related statement was "I can count on my friends when things go wrong." (Mean  $\pm$  SD=3.50 $\pm$ 1.64).

In the present study, the patients had a mean score of 52.31 $\pm$ 9.69 for social support and there was an inverse correlation  $r = -0.133$  between the preoperative anxiety scores and social support scores ( $p = 0.005$ ). These findings illustrate that as family support and support from friends and/or someone special increased, preoperative anxiety decreased. In the studies done by Yilmaz M. et.al. reported that patients visited by their relatives and close friends had decreased levels of anxiety (Yilmaz et al., 2011).

### **Conclusion**

About forty two percent of patients had higher level of anxiety and about sixty-four percent had good social support. The findings illustrate that as social support increased, preoperative anxiety decreased. Therefore, health care provider should identify patients that have high anxiety levels, encourage them to talk about their feelings and facilitate more time with their families.

### **Acknowledgement**

Researcher is grateful to the respondents who agreed to be interviewed and to University Grant Commission for the financial support.

### **References**

Akinsulore, A.A., Owojuyigbe, A.M., Aponle, A.A.F., & Atoye, F.O. (2015). Assessment of Preoperative and Postoperative Anxiety among Elective Major Surgery Patients in A Tertiary

- Hospital In Nigeria. *Middle East Journal of Anesthesiology*, 23(2). (Retrieved from: [http://www.meja.aub.edu.lb/downloads/23\\_2/235.pdf](http://www.meja.aub.edu.lb/downloads/23_2/235.pdf)).
- Berth, H., Petrowski, K., & Black, F. (2007). The Amsterdam Preoperative Anxiety and Information Scale (APAIS)- First Trial of German Version. *German Medical Science*, PMC ID:PMC2736533, (Retrieved from: <https://www.ncbi.nlm.nih.gov/pubmed/19742298>).
- Badner, N.H., Nielson, W.R. Munk, S., Kwiatkowska, C., & Gelb, A.W. (1990). Preoperative Anxiety: detection and contributing factors. *Can Journal of Anaesthesia*, 37, 444-447.
- Erkilic, E., Kesimci, E., Soykut, C., Doger, C., Gumus, T., & Kanbak, O. (2017). Factor Associated Central,11, doi: 10.2147/PPA.S127342.
- Hogan, B.E., Linden, W., & Najarian, B. (2002). Social Support Interventions Do They Work?. *Clinical Psychology Review*, 22, 381-440. PII: S0272-7358(01)00102-7.
- Homzová, P. & Zeleníková, R. (2015). Measuring Preoperative Anxiety in Patients Undergoing Elective Surgery in Czech Republic. *Central European Journal of Nursing and Midwifery*, 6(4), 321-328, doi: 10.15452/CEJNM.2015.06.0023.
- Karanci, A.N., & Dirik, G. (2003). Predictors of pre- and postoperative anxiety in emergency surgery patients. *Journal of Psychosomatic Research*, 363-369, doi:10.1016/S0022-3999(02)00631-1.
- Kulik, J.A. & Mahler, I.M. (1989). Social support and recovery from surgery. *Health Psychology* 8, 221-238.
- Matthias, A.T., & Samarasekera, D.N. (2012). Preoperative anxiety in surgical patients - experience of a single unit. *Acta Anaesthesiologia Taiwanica*, 4-7, doi:10.1016/j.aat.2012.02.004. *Medicine*, 4, (Retrieved from: <http://www.egms.de/de/journals/psm/2007-4/psm000033.shtml>).
- Pokharel, K., Bhattarai, B., Khatiwada, S., & Subedi, A. (2011). Nepalese patients' anxiety and concerns before surgery. *Journal of Clinical Anesthesia*, 372- 378, doi:10.1016/j.jclinane.2010.12.011.
- Santos, M. M. B. D., Martins, J. C. A., & Oliveira, L. M. N. (2014). Anxiety, depression and stress in the preoperative surgical patient. *Revista de Enfermagem Referência Série*, 4(3), 7-13, doi: 10.12707/RIII1393.
- Yilmaz, M., Sezer, H., Gurler, H., & Beker, M. (2011). Predictors of preoperative anxiety in surgical inpatients. *Journal of Clinical Nursing*, 21, 956-964, doi: 10.1111/j. 1365-2702.2011.03799.x.