The International Journal of Indian Psychology
ISSN 2348-5396 (Online) | ISSN: 2349-3429 (Print)
Volume 14, Issue 1, January- March, 2026
DIP: 18.01.164.20261401, DOI: 10.25215/1401.164
https://www.ijip.in

Research Paper

Comparative Study of Stress Among Orthopedic, Neurological, and Gynecological Patients

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ABSTRACT

Generally, any type of illness and environment of hospital increases a person's stress level. Different type of illness can have different effects on the amount of stress. The objective of the present study was to assess and compare the stress level of orthopedic, neurological, and gynecological patients. Who were hospitalized in the concern department of the hospital. In the sample of the study total of 150 female patients between 18 to 50 years of age were selected through purposive sampling method. The total sample included 50 orthopedic patients, 50 neurological patients and 50 gynecological patients. Stress level of patients was measured using the stress scale developed by Singh. To determine the significant difference in stress levels among different groups t-test was performed. The findings revealed that significant differences have been found in stress levels among the three groups. Neurological patients reported the highest stress levels, followed by orthopedic patients, while gynecological patients reported comparatively lower stress.

Keywords: *Stress, Female, Orthopedic patients, Neurological patients, Gynecological patients*

Stress is a natural psychological and physiological reaction that occurs when individuals encounter demanding situations. It may arise from environmental pressures, social expectations, or health-related problems. **Selye (1956)** defined stress as the non-specific response of the body to any demand placed upon it. This definition highlights the biological aspect of stress. Later, **Lazarus and Folkman (1984)** emphasized the psychological dimension and described stress as a condition that occurs when individuals perceive that environmental demands exceed their coping resources.

Research has shown that prolonged stress negatively affects physical and mental health. **McEwen (1998)** introduced the concept of allostatic load, explaining how chronic stress can produce wear and tear on the body. Further, **McEwen (2007)** discussed the neurobiological mechanisms through which stress affects brain functioning. A meta-analytic review by **Segerstrom and Miller (2004)** demonstrated that chronic stress suppresses immune functioning. Similarly, **Cohen et al. (2007)** reported that psychological stress contributes to increased vulnerability to disease. These findings suggest that stress influences both

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Received: March 10, 2026; Revision Received: March 17, 2026; Accepted: March 21, 2026

emotional and physical health. The **American Psychological Association (2020)** also notes that prolonged stress may affect sleep, blood pressure, and immune functioning. Just as stress causes physical illness, similarly physical illness also determines the amount of stress, and mental illness. **Vranceanu et al. (2014)** found that psychological factors significantly predict pain intensity and disability following orthopedic trauma. Neurological patients may experience stress due to fear of neurological impairment and long-term disability. According to **Taylor (2018)**, medical illness often increases emotional burden and anxiety.

The amount of stress can also vary due to different type of physical diseases. Orthopedic patients frequently experience pain and reduced mobility, which may increase psychological distress. **Carod-Artal and Egido (2009)** reviewed the relationship between stroke and health-related quality of life and reported that the physical and psychological well-being of both the stroke survivor and the caregiver is affected. Post-traumatic/stroke depression impacts the functional recovery and cognitive functions of the survivor**. Greil (1997)** reviewed the relationship between infertility and psychological distress. The study indicates that the inability to conceive affects psychological well-being and social relationships. However, the level of stress is generally moderate to high, as it is influenced more by social and emotional factors rather than physical disability.

Hospitalization itself can be a stressful experience. Patients may experience fear related to diagnosis, uncertainty about treatment, financial concerns, and separation from family. Although stress among medical patients has been widely examined, limited research has compared stress levels among female patients across different medical condition. Therefore, in the present study the stress levels of such female patients have been compared who were suffering from orthopedic, neurological and gynecological diseases and were hospitalized.

Objective of the Study

- To find out the difference in the level of stress among gynecological patients and neurological patients.
- To assess the significant difference in the amount of stress among gynecological patients and orthopedic patients.
- To examine the significant difference in stress level among orthopedic patients and neurological patients

METHODOLOGY

Participants

The sample of the study consisted of 150 female patients who were hospitalized at Shiva Hospital, Azamgarh. The participants included in which 50 gynecological patients, 50 Neurological patients and 50 orthopedic patients. The age range of the selected participants in the sample was 18 to 50 years. The purposive sampling method was used for sample selection.

Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
• Female patients. • Hospitalized patients. • Orthopedic, Neurological and Gynecological patients.	• Male patients. • Non hospitalized patients. • Patient suffering from diseases other than Orthopedic, Neurological and Gynecological diseases.

Instrument

Stress level of the participant was measured using the Stress Scale developed by **Singh**. This is highly reliable and valid test for the measurement of level of stress. This is three-point scale the scale contain total thirty-two statement related to daily life stress. The minimum possible score for stress level is 0 and the maximum possible score for stress level is 64. Higher scores indicate higher levels of stress.

Procedure

Before collecting the researcher took proper permission from the hospital authorities. After this the researcher met the patients one by one. The purpose of the study was explained to the participants and they were requested to cooperate in the research. They were assured that their information would be kept confidential and used only for research purposes. After which participants provided their verbal consent. After obtaining consent the stress scale was given to each participant individually. Finally, the instruction of the scale were thoroughly explained to the participants and their responses were recorded.

Statistical Analysis

For the statistical analysis of the collected data, descriptive and inferential statistics were employed. In descriptive statistics, the Mean and Standard Deviation were calculated to determine the average stress level and variability among the three groups of patients. This helped in understanding the overall stress pattern in each medical category. To find out the significant difference of stress level among different groups t test was performed. Bar diagrams are also used for clear representation and better comparison of stress levels of Orthopedic, Neurological and Gynecological patients.

RESULT

The present study was conducted to compare the level of stress among Gynecological, Orthopedic, and Neurological patients. The research findings are presented in the following tables -

Table 1 Difference between mean stress score of Gynecological patients and Neurological patients.

Groups	N	M	SD	t-value
Gynecological Patients	**50**	**38.08**	**5.90**	**6.36****
Neurological Patients	**50**	**46.28**	**6.99**	

*Note: ** Significant at 0.01 level*

The above table shows the comparison of stress levels between Gynecological and Neurological patients. It is known from the t-value available in the table that a significant difference has been found in the stress level of gynecological patients and neurological patients. The mean stress score of Gynecological patients was 38.08, whereas the mean stress score of Neurological patients was 46.28. The obtained t-value is 6.36, which is significant at the 0.01 level. It is clear that, Neurological patients have higher level of stress than Gynecological patients. The comparison of the mean of these two groups is presented in the bar diagram below -

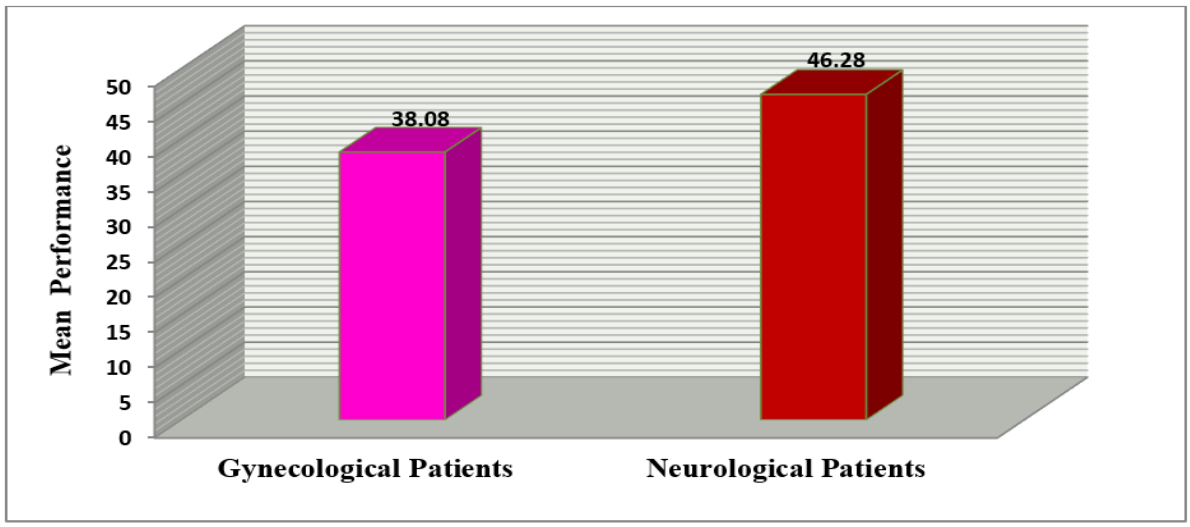

Figure-1: Bar diagram showing mean performance of Neurological patients and Gynecological patients.

Table 2 Difference between mean stress score of Gynecological patients and orthopedic patients

Groups	N	M	SD	t-value
Gynecological Patients	50	38.08	5.90	2.99**
Orthopedic Patients	50	42.36	8.24	

*Note: ** Significant at 0.01 level*

The above table presents the comparison of stress levels between Gynecological patients and Orthopedic patients. The mean stress score of Gynecological patients was 38.08, while the mean score of Orthopedic patients was 42.36. The calculated t-value is 2.99, which is significant at the 0.01 level. This shows that a significant difference exists between Gynecological patients and Orthopedic patients in terms of stress level. It is clear from the mean values of both the groups that Orthopedic patients reported higher stress level compared to Gynecological patients. The comparison of the mean of these two groups is presented in the bar diagram below -

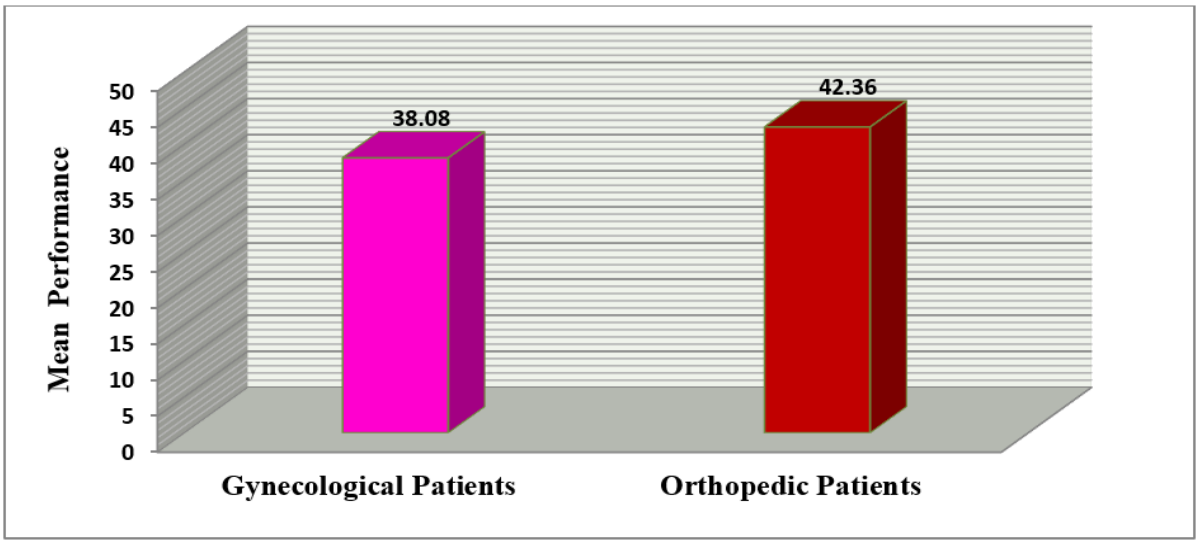

Figure-2: Bar diagram showing mean performance of Gynecological patients and Orthopedic patients.

Table 3 Difference between mean stress score of Orthopedic patients and Neurological patients

Groups	N	M	SD	t-value
Orthopedic Patients	**50**	**42.36**	**8.24**	**2.57***
Neurological Patients	**50**	**46.28**	**6.99**	

*Note: * Significant at 0.05level*

A comparison of amount of the stress experienced by Orthopedic patients and Neurological patients is presented in the above table (Table-3). The mean stress score of Orthopedic patients was 42.36 whereas the mean stress score of Neurological patients was 46.28. The obtained t-value is 2.57, which is significant at the 0.05 level. This t-value indicates that a significant difference has been found in stress levels between Orthopedic and Neurological patients. Neurological patients reported higher stress level than Orthopedic patients. The amount of stress experienced by Orthopedic patients and Neurological Patients is shown in the bar diagram below -

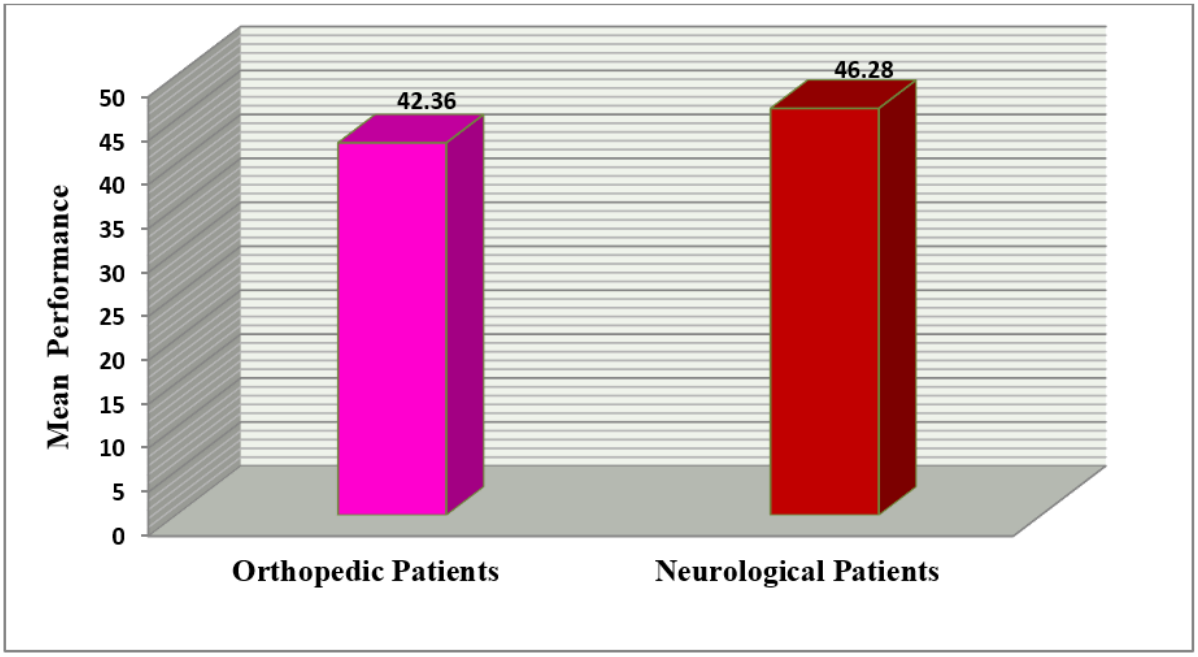

Figure-3: Bar diagram showing mean performance of Orthopedic patients and Neurological patients.

DISCUSSION

From the above finding it has been found that there is a meaningful difference in the amount of stress among gynecological patients, Neurological patients and Orthopedic patients. The highest stress level has been found in neurological patients. Orthopedic patients have been experienced less stress as compare to neurological patients. Whereas Gynecological patients reported the lowest level of stress.

Based on the result of this research, it can be said that different types of physical diseases generate different stress levels in individuals. The results of some previous studies directly or indirectly support the finding of the investigation such as **Carod-Artal and Egido (2009)** reported that neurological conditions significantly affect emotional well-being and quality of life. **Greil (1997)** found that Gynecological conditions may also create psychological

distress, especially when related to reproductive health issues. **Cohen et al. (2007)** reviewed the association between psychological stress and disease and reported that stress plays an important role in the development and progression of various physical illnesses. The findings suggest that individuals suffering from physical diseases often experience increased stress, which is also indicated in the study that neurological patients facing severe physical illness experience higher stress.

CONCLUSION

On the basis of the finding of the present investigation the following conclusions have been drawn-

- A significant difference has been found among stress level of gynecological, Neurological and Orthopedic patients.
- Comparatively the highest level of stress has been found in Neurological patients.
- Orthopedic patients reported less stress than Neurological patients.
- Gynecological patients reported the lowest level of stress compared to the other two groups.

Limitations and Recommendations

- In the present study patients from only one hospital of Azamgarh were selected in the sample. Therefore, it is difficult to generalize the finding of the investigation. To overcome this shortcoming, it is recommended to increase the area of sample selection.
- Purposive sampling method was used for sample selection in this study. To generalize the results, it is recommended that random sampling method can be used for sample selection in future studies.
- This study compared the stress level between Neurological patients, Orthopedic patients and Gynecological patients. Future studies are recommended to compare the stress levels of patients with various other chronic physical diseases such as diabetes, heart diseases, cancer, asthma, etc.

REFERENCES

American Psychological Association. (2020). *Stress effects on the body*. https://www.apa.org/topics/stress/body

Carod-Artal, F. J., &Egido, J. A. (2009). Quality of life after stroke: The importance of good recovery. *Cerebrovascular Diseases, 27*(1), *204–214*.

Cohen, S., Janicki-Deverts, D., & Miller, G. E. (2007). Psychological stress and disease. *JAMA, 298*(14), *1685–1687*. https://doi.org/10.1001/jama.298.14.1685

Greil, A. L. (1997). Infertility and psychological distress. *Social Science & Medicine, 45*(11), *1679–1704*.

Lazarus, R. S., &Folkman, S. (1984). Stress, appraisal, and coping. *Springer*.

Matud, M. P. (2004). Gender differences in stress and coping styles. *Personality and Individual Differences, 37*(7), *1401–1415.*

McEwen, B. S. (1998). Stress, adaptation, and disease. *Annals of the New York Academy of Sciences, 840, 33–44*.

McEwen, B. S. (2007). Physiology and neurobiology of stress. *Physiological Reviews, 87*(3), *873–904*.

Segerstrom, S. C., & Miller, G. E. (2004). Psychological stress and the human immune system. *Psychological Bulletin, 130*(4), *601–630*.

Selye, H. (1956). The stress of life. *McGraw-Hill*.

Singh, R. (n.d.). Manual for stress scale, *Manovaigyanik Parikshan Sansthan*
Taylor, S. E. (2018). Health psychology (10th ed.). *McGraw-Hill Education*.
Vranceanu, A. M., Barsky, A., & Ring, D. (2014). Psychological factors predict disability after skeletal trauma. *Journal of Orthopaedic Trauma, 28*(8)*, e188–e193*.

Acknowledgment
The author(s) appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interest
The author(s) declared no conflict of interest.

How to cite this article: Chaurasia, A.K. & Zaidi, F. (2026). Comparative Study of Stress Among Orthopedic, Neurological, and Gynecological Patients. *International Journal of Indian Psychology*, *14*(1)*,* 1644-1650. DIP:18.01.164.20261401, DOI:10.25215/1401.164