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**RESEARCH ARTICLE**

**Breathe to De-Stress: Effectiveness of Shwas Lena Exercise on Academic Stress among  
College Students**

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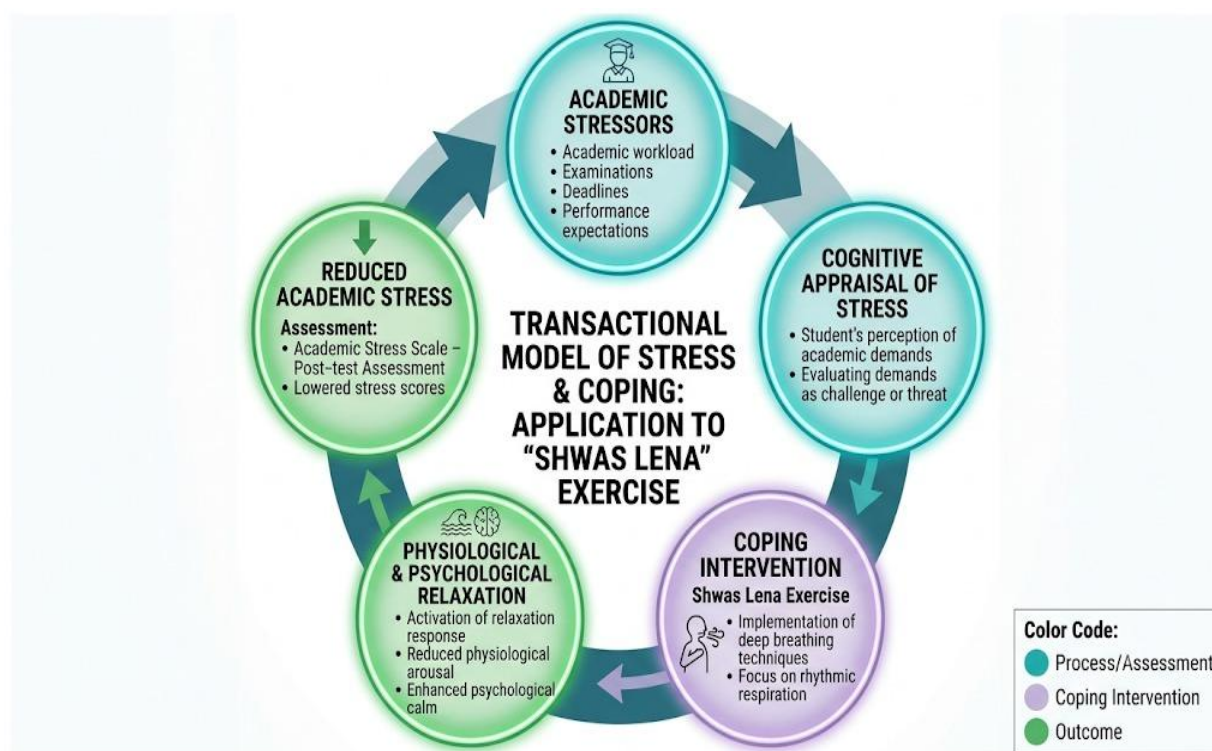
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## Original Research article

### Breathe to De-Stress: Effectiveness of Shwas Lena Exercise on Academic Stress among College Students

#### RESEARCH HIGHLIGHTS

- Academic stress is a common concern among nursing students due to workload, examinations, deadlines, and performance expectations.
- Shwas Lena exercise is a simple, non-pharmacological, and easily accessible technique for stress management.
- The study assesses the effectiveness of Shwas Lena exercise in reducing academic stress among nursing students.
- Regular breathing exercises may promote relaxation and enhance students' emotional well-being.
- The intervention may be incorporated into routine nursing student wellness and stress-management programs.



## ABSTRACT

**Background:** Academic stress is common among college students and may negatively affect emotional well-being, academic performance, and coping. Stress may arise from academic workload, examinations, deadlines, performance expectations, career concerns, and interpersonal relationships. Breathing exercises are simple, non-pharmacological techniques that may help reduce stress. **Objectives:** To assess the pre-test and post-test levels of academic stress among college students; to evaluate the effectiveness of Shwas Lena exercise in reducing academic stress. **Methods:** A quasi-experimental research design was adopted among 100 college students with academic stress, selected using a Non-purposive sampling technique. Written informed consent was obtained after the participants became informed of the objectives and techniques of the study. Data were collected using a structured demographic questionnaire and the Academic Stress Scale (ASS). The entire 100 students will perform the Shwas Lena exercise (10 cycles in the evening) every day. Following the intervention, a post-test using the same Academic Stress Scale (ASS) will be administered after 28 days. Confidentiality was maintained throughout the study. **Results:** In the pre-test, 80% of students had moderate academic stress and 20% had mild stress. In the post-test, 88% had no academic stress and 12% had mild stress. A statistically significant association was observed between post-test academic stress levels and selected demographic variables, including age, gender, and parents' occupational status ( $p < 0.001$ ). **Conclusion:** The findings indicate a significant reduction in academic stress following the Shwas Lena exercise intervention. The exercise may be considered a simple and feasible strategy for managing academic stress among college students.

**Keywords:** Academic stress; Shwas Lena exercise; Breathing exercise; College students; Stress management.

## INTRODUCTION

Academic stress is a term used to describe the stress that an individual may feel in the educational environment and in relation to a number of academic concerns [1]. According to conventional Confucianism, Chinese education tends to focus primarily on various exams or tests, and schools and parents one-sided pursuit of high marks, resulting in considerable pressure on Chinese pupils [2]

Many people enjoy and benefit from college, but for others, it can be stressful and frustrating. The competition for grades, academic deadlines, the drive to perform, relationships, career choices, and many other components of the college atmosphere all contribute to stress [3]. Academic challenges have been identified as the most common source of stress for pupils. College requires far more effort and determination from students than high school [4].

Academic stress is an essential stressor in college life, stemming from subjective psychological suffering in many facets of academic learning and will have a detrimental impact on college students' mental health as well as their capacity to complete their studies properly [5]. Academic stress is defined as the emotional, physical, and psychological pressure that students endure as a result of scholastic demands and responsibilities (Rahmawati, 2018). Heavy course loads, homework, exams, time management, competitiveness among students, instructor competency, and a lack of resources all contribute to stress (Hibrian et al.,2022) [6]. Stress is typically defined as an experience in which people perceive pressures that exceed their coping abilities. Academic stress, as refers to academic obligations that are thought to surpass students' internal or external coping resources [7].

According to several studies, chronic and harmful stress levels are highest among college-age students and young people [8]. According to the American Psychological Association's 2022 "Stress in America," 46% of persons aged 18 to 35 said "most days they are so stressed they can't function" [9]. In a March 2023 Gallup survey of more than 2,400 college students, 66% reported feeling stressed and 51% reported feeling worried "during a lot of the day." and mental stress was one of the top reason's students thought about dropping out of college in the autumn 2022 semester, according to the State of Higher Education 2023 report, which is based on a 2022 Gallup and Lumina Foundation study [10].

Stress management is crucial for students' long-term success and well-being. Students can reduce stress and improve academic performance by incorporating stress management techniques into their daily routines, such as mindfulness meditation, exercise, time management strategies, deep breathing exercises, and seeking help from friends, family, and mental health professionals [11]. Students must recognize the negative effects of chronic stress on their academic performance and mental health, as well as take proactive steps to manage stress appropriately. Students can avoid long-term negative repercussions and achieve their full

academic and personal potential by prioritizing stress management in their daily routine and implementing stress-reduction measures [12].

Daily deep breathing exercises were found to be highly beneficial in dramatically lowering educational stress among higher secondary students, as evidenced by the experimental group's reduced mean stress score. These findings emphasize the practical value of implementing simple stress-reduction measures into educational environments. The observed advantages highlight the potential impact of these treatments on students' overall well-being. Implementing comparable tactics in educational settings could lead to more comprehensive stress management approaches [13]. Deep breathing exercise is a method for regulating and manipulating breath and meditation. It enables students to achieve a state of profound relaxation while maintaining mental alertness [14].

## **STATEMENT OF THE PROBLEM**

A Study to assess the effectiveness of Shwas Lena exercise on the level of academic stress among college students.

## **OBJECTIVES**

1. To assess the pretest and post-test level of academic stress among college students.
2. To determine the effectiveness of Shwas Lena exercise on the level of academic stress among college students
3. To find the association between the pretest and post-test level of academic stress among college students with their selected demographic variable

## **HYPOTHESIS**

- H1: There will be a statistically significant difference between the pre-test and post-test levels of academic stress among college students after the practice of Shwas Lena exercise.
- H2: There will be a statistically significant association between the post-test level of academic stress and selected demographic variables among college students.

## **MATERIALS & METHODS**

A quasi-experimental research design was adopted to evaluate the effectiveness of Shwas Lena exercise in reducing academic stress among B.Sc. Nursing students. The study was conducted at Saveetha College of Nursing, SIMATS, Thandalam. A total of 100 B.Sc. Nursing students who fulfilled the inclusion criteria were recruited using a non-probability purposive sampling technique. The inclusion criteria were students aged 18–22 years with mild to moderate levels of academic stress (scores ranging from 33–64 and 65–96, respectively) who were willing to participate in the study. Students with severe academic stress were excluded. The participants were informed about the purpose and procedures of the study, and written informed consent was obtained. Data were collected using a structured demographic questionnaire and the Academic Stress Scale (ASS). The ASS consists of 40 items, with five response options ranging from “No Stress” to “Extreme Stress,” scored from 0 to 4,

respectively. The scale covers five domains: Personal Inadequacy (F1), Fear of Failure (F2), Interpersonal Difficulties with Teachers (F3), Teacher–Pupil Relationship/Teaching Methods (F4), and Inadequate Study Facilities (F5), with eight items in each domain. Following the pre-test assessment, all 100 participants performed Shwas Lena exercise consisting of 10 cycles in the evening daily for 28 days. After completion of the intervention, a post-test was conducted using the same Academic Stress Scale. Participants were encouraged to continue the exercise as part of their daily routine. Privacy and anonymity were maintained throughout the entire investigation. Descriptive and inferential statistics were used for data analysis. Ethical approval was obtained from the Institutional Ethics Committee before commencement of the study.

## RESULT AND DISCUSSION

### SECTION A: DESCRIPTION OF DEMOGRAPHIC VARIABLES AMONG THE COLLEGE STUDENTS HAVING ACADEMIC STRESS.

The demographic variable that the students having academic Stress had higher proportion of female i.e. 66% and all the persons were not following any daily work out. Majority of the students diagnosed with their mother's occupational status as house wife (58%). the students diagnosed with their father's occupational status as Non-Govt Employee (42%). The majority of the students were in the age group (18-19) (54%).

### SECTION B: ASSESSMENT OF PRETEST AND POST-TEST LEVEL OF ACADEMIC STRESS AMONG THE COLLEGE STUDENTS.

**Table 1: Comparison of Pre-test and Post Test level of Academic Stress among the College Students.** (N=100)

| Level of Academic Stress | Pre-Test | Post-test |
|--------------------------|----------|-----------|
| No Stress                | 0        | 60        |
| Slight Stress            | 20       | 40        |
| Moderate Stress          | 80       | 0         |
| High Stress              | 0        | 0         |
| Extreme Stress           | 0        | 0         |

The above table reveals that in the 100 sample students Majority 80% had moderate Stress, and 20% has slight Stress in the pre-test and after the posttest the majority students 60% are having no stress and 40% are having slight stress.

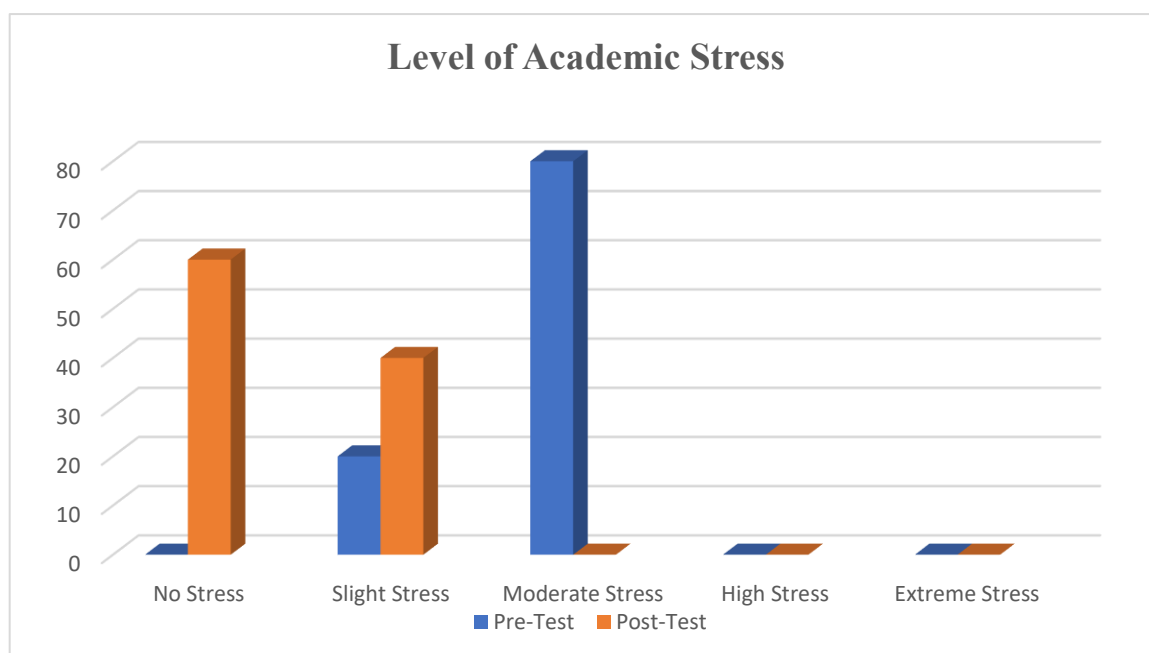


**Fig1: Effectiveness of shwas lena exercise on the level of academic stress among the college students in pretest and post-test.**

**Table 2: Determine the effectiveness of Shwas Lena exercise on the level of academic stress among the College Students. in pre and post test.**

|                               | Pre-Test |       | Post-Test |       | "t" Value          |
|-------------------------------|----------|-------|-----------|-------|--------------------|
|                               | Mean     | SD    | Mean      | SD    |                    |
| Experimental Samples          | 131.2    | 23.63 | 83.2      | 20.63 | T=16.30<br>P=0.905 |
| Mean Difference               | 48       |       |           |       |                    |
| Standard Deviation Difference | 3        |       |           |       |                    |

The above table reveals that in the pretest mean score was 131.2 with standard deviation of 23.63 and the posttest mean score was 83.2 with standard deviation of 20.63 and "t" value is 16.30 it shows that  $p < 0.001$  level of significance

On comparing the pre-test and posttest there was a statistically high significance difference present in the outcome of the Shwas Lena exercise on the level of academic stress among nursing Students in pre and post test.

# SECTION C: ASSOCIATION OF POST-TEST LEVEL OF ACADEMIC STRESS AMONG THE COLLEGE STUDENTS. WITH THEIR SELECTED DEMOGRAPHIC VARIABLES.

**Table 3: Association of post-test level of Academic Stress among the College Students. with their demographic variables. N=100**

| Demographic Variables                      | Experimental Samples of N=100 | No Stress |      | Slight Stress |      | Value                                          |
|--------------------------------------------|-------------------------------|-----------|------|---------------|------|------------------------------------------------|
|                                            | F                             | F         | %    | F             | %    |                                                |
| <b>Age in years</b>                        |                               |           |      |               |      | $\chi=5.95$<br>$df=10$<br>$\chi p=2.558$<br>S  |
| 18– 19                                     | 54                            | 49        | 90.7 | 5             | 9.2  |                                                |
| 20 – 21                                    | 46                            | 39        | 84.7 | 7             | 15.2 |                                                |
| 22 – 23                                    | 0                             | 0         | 0    | 0             | 0    |                                                |
| <b>Gender</b>                              |                               |           |      |               |      | $\chi=10.4$<br>$df=4$<br>$\chi p=0.297$<br>S   |
| Male                                       | 34                            | 27        | 79.4 | 7             | 20.5 |                                                |
| Female                                     | 66                            | 61        | 92.4 | 5             | 7.5  |                                                |
| <b>Educational Status</b>                  |                               |           |      |               |      |                                                |
| 1 <sup>st</sup> Year                       | 0                             | 0         | 0    | 0             | 0    | --                                             |
| 2 <sup>nd</sup> Year                       | 0                             | 0         | 0    | 0             | 0    |                                                |
| 3 <sup>rd</sup> Year                       | 100                           | 88        | 88   | 12            | 12   |                                                |
| 4 <sup>th</sup> Year                       | 0                             | 0         | 0    | 0             | 0    |                                                |
| <b>Type of Family</b>                      |                               |           |      |               |      |                                                |
| Joint family                               | 50                            | 41        | 82   | 9             | 18   | -----                                          |
| Nuclear Family                             | 50                            | 47        | 94   | 3             | 6    |                                                |
| <b>Occupational Status of the Father</b>   |                               |           |      |               |      |                                                |
| Govt Employee                              | 28                            | 24        | 85.7 | 4             | 14.2 | $\chi=33.4$<br>$df=12$<br>$\chi p=3.571$<br>S  |
| Non- Govt Employee                         | 42                            | 35        | 83.3 | 7             | 16.6 |                                                |
| Self-Employee                              | 30                            | 29        | 96.6 | 1             | 3.3  |                                                |
| Unemployed                                 | 0                             | 0         | 0    | 0             | 0    |                                                |
| <b>Occupational Status of the Mother</b>   |                               |           |      |               |      |                                                |
| Govt Employee                              | 3                             | 3         | 100  | 0             | 0    | $\chi=59.05$<br>$df=12$<br>$\chi p=3.571$<br>S |
| Non- Govt Employee                         | 9                             | 8         | 88.8 | 1             | 11.1 |                                                |
| Self-Employee                              | 30                            | 28        | 93.3 | 2             | 6.6  |                                                |
| House Wife                                 | 58                            | 49        | 84.4 | 9             | 15.5 |                                                |
| <b>Type of Residential</b>                 |                               |           |      |               |      |                                                |
| Day-Scholar                                | 50                            | 46        | 92   | 4             | 8    | ----                                           |
| Hosteller                                  | 50                            | 42        | 84   | 8             | 16   |                                                |
| <b>Are you following any daily workout</b> |                               |           |      |               |      |                                                |
| Yes                                        | 0                             | 0         | 0    | 0             | 0    | -----                                          |
| No                                         | 100                           | 88        | 88   | 12            | 12   |                                                |

Note \*  $P>0.001$  level of Significance N.S Not Significant, S- Significant

The above table reveals the statistically that the demographic variables such as age, gender, Occupational status of father and mother among the college students of SIMATS had a **significant**

**association** with the post level stress than 0.001 levels. The other demographic variables such as Type of Residential, Type of family and educational status had no statistically significance with the post level academic stress.

**The objectives were to compare the pretest and post-test level of academic stress among college students between experimental and control group**

The table 2 findings show that in personal inadequacy pretest 80(80%) had moderate stress, 20(20%) had slight stress, in post-test 60(60%) had no stress, 40(40%) had reduced to slight stress. The study was supported by Smitha K.V (2020) conducted on “Effectiveness of pranayama for reducing stress among adolescents (12-17 years) of selected high school” Mangalore, Karnataka, India. 60 adolescents were selected. In the experimental group, 90% of sample had moderate stress in pretest, where as in the post-test 76.7% of them had moderate stress. In the experimental group the mean post-test score was less than of the mean pretest stress score. There was a significant reduction in stress scores before and after pranayama in the experimental group [15].

**The objective was to determine the effectiveness of Shwas Lena exercise on the level of academic stress among college students**

The above table reveals that in the pretest mean score was 131.2 with standard deviation of 23.63 and the posttest mean score was 83.2 with standard deviation of 20.63 and “t” value is 16.30 it shows that  $p < 0.001$  level of significance

On comparing the pre-test and posttest there was a statistically high significance difference present in the outcome of the Shwas Lena exercise on the level of academic stress among nursing Students in pre and posttest. conducted on the study was supported by Akman, O, et. al., (2020) "The effect of mindful breathing exercise on stress levels of nursing first year students before first clinical experience," which included forty-two first-year nursing students. During the application, Information for Students Form, Visual Analog Scale and Pagana Clinical Stress Questionnaire were utilized to all students. Following that, a skilled researcher invested thirty minutes. Both breath therapy and questionnaires were used. According to this study, nursing students' stress levels were successfully lowered by using conscious breathing treatment. “The effect of mindful breathing exercise on stress levels of nursing first year students before first clinical experience”. 42 nursing first year students were included in the study. Before the application, Student Information Form, Visual Analog Scale and Pagana Clinical Stress Questionnaire were applied to all students. Then 30 minutes by expert researcher. breath therapy was applied and questionnaires were applied again. This study, revealed that the conscious breathing therapy application was found to be effective in reducing the stress of nursing students[16].

## CONCLUSION

The investigator analyzed the data and it could be concluded that the following Shwas Lena (deep breathing) exercise had significant effect on academic stress among college students.

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## AUTHORS CONTRIBUTION

All the authors actively participated in the work of study. All the authors read and approved the final manuscript.

## CONFLICT OF INTEREST

The authors declare no conflict of interest.

## REFERENCES

- 1.Chen, B., Wang, W., & Yang, S. (2024). The relationship between academic stress and depression among college students during the COVID-19 pandemic: a cross-sectional study from China. *BMC psychiatry*, 24(1), 46. DOI: [10.1186/s12888-024-05506-8](https://doi.org/10.1186/s12888-024-05506-8)
- 2.Nolasco, D. P., Sarmiento, J. M., & Tamangan, E. A. (2019). College Academic Stress: Getting by, Muddling Through. *Liceo Journal of Higher Education Research*, 15(1). DOI:[10.7828/ljher.v15i1.1288](https://doi.org/10.7828/ljher.v15i1.1288)
3. Zheng, G., Zhang, Q., & Ran, G. (2023). The association between academic stress and test anxiety in college students: The mediating role of regulatory emotional self-efficacy and the moderating role of parental expectations. *Frontiers in psychology*, 14, 1008679. DOI: [10.3389/fpsyg.2023.1008679](https://doi.org/10.3389/fpsyg.2023.1008679)
4. Nweke, G. E., Jarrar, Y., & Horoub, I. (2024). Academic stress and cyberloafing among university students: The mediating role of fatigue and self-control. *Humanities and Social Sciences Communications*, 11(1), 1-8. [10.1057/s41599-024-02930-9](https://doi.org/10.1057/s41599-024-02930-9)
5. Tharaldsen, K. B., Tvedt, M. S., Caravita, S. C. S., & Bru, E. (2023). Academic stress: links with emotional problems and motivational climate among upper secondary school students. *Scandinavian Journal of Educational Research*, 67(7), 1137-1150.
- 6.Rahmawati, L. R. (2018). The Effect of Circ Strategy and Achievement Motivation Toward Studentsâ Reading Comprehension. *Journal Pendidikan dan Pembelajaran Bahasa Indonesia*, 7(1).
7. Hibrian, H., Baihaqi, M., & Ihsan, H. (2022). Relationship between academic stress and cyberloafing behavior among Psychology Department Students at Universitas Pendidikan Indonesia. *PSIKOPEDAGOGIA Jurnal Bimbingan dan Konseling*, 10(2), 89.
8. Dimitrov, G. (2017). A study on the impact of academic stress among college students in India. *Ideal Research: An International Multidisciplinary*, 2(4), 21-34.

9. Elavarasi, D., & Rajendran, P. (2021). Academic Stress among Secondary Grade Students of Chennai (South) City. *International Journal of Indian Psychology*, 9(2)
10. Patel, S. K., & Srivastava, S. (2024). Effect of pranayama on breath holding time of college students. *Integr. J. Res. Arts Human.*, 4(2), 88-91.
11. Gobena, G. A. (2024). Effects of Academic Stress on Students' Academic Achievements and Its Implications for Their Future Lives. *Anatolian Journal of Education*, 9(1), 113-130.
12. Niraula, S., & Baral, K. (2024). Impact of Academic Stress on Help-Seeking Attitudes Among Nursing Students of Kathmandu District. *Journal of College of Medical Sciences-Nepal*, 20(1), 63-67.
13. Akanpaadgi, E., Binpimbu, F., & Kuuyelleh, E. N. (2023). The impact of stress on students' academic performance. *Eureka: Journal of Educational Research*, 2(1), 60-67.
14. Al-Shahrani, M. M., Alasmri, B. S., Al-Shahrani, R. M., Al-Moalwi, N. M., Al Qahtani, A. A., & Siddiqui, A. F. (2023). The prevalence and associated factors of academic stress among medical students of King Khalid University: an analytical cross-sectional study. In *Healthcare* 11, (14), 20-29.
15. Smitha K.V. Effectiveness of Pranayama for reducing stress among adolescents (12-17 years) of selected high schools at Mangalore. *Int. J. Nur. Edu. and Research*. 2020; 8(4):497-500.
16. Akman, Ö., Yıldırım, D., Öksüz, S., & Poplata, S. Ö. (2020). The effect of mindful breathing exercise on stress levels of nursing first year students before first clinical experience. *Gevher Nesibe Journal of Medical & Health Sciences*, 5(6), 1-8.