SCIENTIFIC JOURNAL
www.scientificjournal.in
JOURNAL PUBLICATIONS INDEXED IN

www.scientificjournal.in YEAR: 2026 VOLUME: 4 ISSUE: 1 ISSN: 3107-4162

# "ANXIETY AND COPING STRATEGIES RELATED TO CLINICAL EXPOSURE AMONG NURSING STUDENTS DURING COVID-19"

**Shincy Paulose[1], Dr. C. Starmine[2]**
[1]Senior Lecturer, [2]Associate professor and HOD,
[1,2]Department of Mental Health Nursing,
M.O.S.C. College of Nursing, Kolenchery, Ernakulam, Kerala, India.
[2]Corresponding Author Email: - starsujin6pearl@gmail.com (Dr. C. Starmine)

**Date of Publication:** 16/06/2026
DOI 10.5281/zenodo.24411150

**Abstract:** The COVID-19 pandemic significantly affected nursing education, particularly clinical learning experiences, exposing nursing students to potential infection risks and psychological stress. Clinical exposure during the pandemic may contribute to anxiety and influence the coping strategies adopted by nursing students. This study aimed to assess anxiety and coping strategies related to clinical exposure during COVID-19 among nursing students, determine the relationship between anxiety and coping strategies, and identify their associations with selected sociodemographic variables. A quantitative approach with a descriptive cross-sectional design was adopted. The study was conducted at M.O.S.C. College of Nursing, Kolenchery, Ernakulam District, Kerala. A total of 68 third-year B.Sc. Nursing students was selected using a non-probability convenience sampling technique. Data were collected using a sociodemographic proforma, the Beck Anxiety Inventory (BAI), and the Brief COPE questionnaire. Descriptive and inferential statistics were used for data analysis. The median anxiety score was 10.00, with an interquartile range of 6.00–14.75. The mean coping strategy score was 66.84 ± 10.289, with scores ranging from 39 to 88. A weak negative relationship was observed between anxiety and coping strategies; however, the relationship was not statistically significant. Anxiety was not significantly associated with the selected sociodemographic variables. However, coping strategy scores showed a statistically significant association with type of family ($p = 0.02$), with higher mean scores among students from joint families. The findings indicate that nursing students demonstrated relatively low median anxiety scores and varied utilization of coping strategies during clinical exposure in the COVID-19 period. The findings highlight the importance of psychological support and appropriate coping interventions in nursing education, particularly during public health emergencies.

**Keywords:** *Anxiety; Coping strategies; Clinical exposure; Nursing students; COVID-19*

## INTRODUCTION

The Coronavirus Disease 2019 (COVID-19) pandemic emerged as a major global public health emergency and was declared a pandemic by the World Health Organization on March 11, 2020. The pandemic affected various sectors, including healthcare and education, creating significant challenges for students and healthcare professionals. [1]

Nursing education involves both theoretical learning and practical clinical experiences. Clinical exposure enables nursing students to develop professional competencies, clinical skills and confidence in patient care. However, during the COVID-19 pandemic, clinical placements became challenging due to the risk of infection, fear of transmitting the disease to family members, changes in clinical learning environments and concerns regarding personal safety.

Clinical training can be a source of anxiety among nursing students even under normal circumstances. Students may experience difficulties adapting to clinical environments, interacting with patients
and healthcare professionals, and applying theoretical knowledge in clinical practice. [2] During a pandemic, these challenges may be intensified by the fear of infection and uncertainty regarding clinical responsibilities.

Previous studies have reported anxiety and different coping responses among nursing students during the COVID-19 pandemic. Savitsky et al. reported elevated anxiety among nursing students, with fear of infection and inadequate personal protective equipment being associated with higher anxiety levels. [3] Similarly, studies conducted among nursing students during clinical placements in Nepal identified anxiety among students, with

SCIENTIFIC JOURNAL
www.scientificjournal.in
JOURNAL PUBLICATIONS INDEXED IN
www.scientificjournal.in YEAR: 2026 VOLUME: 4 ISSUE: 1 ISSN: 3107-4162

religious coping being commonly reported. [4] Previous research during the SARS outbreak also highlighted the perceived risk of infection among healthcare students. [5]

Coping strategies are cognitive and behavioural efforts used by individuals to manage stressful situations. Nursing students may use problem-focused, emotion-focused and other coping strategies to manage anxiety associated with clinical exposure. The choice of coping strategies may influence their psychological well-being and ability to adapt to challenging clinical situations.

Although several studies have explored psychological responses among nursing students during the COVID-19 pandemic, understanding anxiety and coping strategies among students in specific educational settings is important. Assessing these factors can help nursing institutions identify students' psychological needs and develop appropriate support mechanisms during public health emergencies.

Therefore, the present study was undertaken to assess anxiety and coping strategies related to clinical exposure during COVID-19 among nursing students at M.O.S.C. College of Nursing, Kolenchery.

## MATERIAL AND METHODS

### Study Design

A quantitative research approach with a descriptive cross-sectional design was adopted to assess anxiety and coping strategies related to clinical exposure during COVID-19 among nursing students.

### Study Setting

The study was conducted at M.O.S.C. College of Nursing, Kolenchery, Ernakulam District, Kerala, India.

### Participants

The study population comprised third-year B.Sc. Nursing students studying at M.O.S.C. College of Nursing, Kolenchery. A total of 68 students who fulfilled the selection criteria participated in the study.

### Inclusion Criteria

| No. | Inclusion criteria |
|---|---|
| 1 | Third-year B.Sc. Nursing students studying at M.O.S.C. College of Nursing, Kolenchery. |
| 2 | Students available during the period of data collection. |

### Exclusion Criteria

| No. | Exclusion criteria |
|---|---|
| 1 | Students who were physically unfit to participate in the study. |

### Variables

| Variable category | Details |
|---|---|
| **Outcome variables** | Anxiety and coping strategies |
| **Sociodemographic variables** | Age, gender, religion, residential area, type of family, birth order, school education board/syllabus and changes in family functioning during the previous three months |

### Sample Size and Sampling Technique

A total of 68 third-year B.Sc. Nursing students participated in the study. Participants were selected using a non-probability convenience sampling technique.

The sample size was 68, as determined for the original study. A specific sample size calculation formula was not documented in the dissertation.

### Data Collection Instruments

Three instruments were used for data collection.

### Tool 1: Sociodemographic Proforma

A structured sociodemographic proforma was used to collect information regarding age, gender, religion, residential area, type of family, birth order, school education board/syllabus and changes in family functioning during the previous three months.

### Tool 2: Beck Anxiety Inventory (BAI)

The Beck Anxiety Inventory developed by Beck, Epstein, Brown and Steer (1988) was used to assess anxiety. It is a 21-item self-report instrument. Each item is scored from 0 to 3, giving a total score ranging from 0 to 63. The scoring categories used in the study were:

- 0–21: Low anxiety
- 22–35: Moderate anxiety
- 36 and above: Potentially concerning levels of anxiety

The reported test-retest reliability of the instrument was r = 0.92.

### Tool 3: Brief COPE Questionnaire

The Brief COPE questionnaire developed by Carver, Scheier and Weintraub was used to assess coping strategies. It consists of 28 items representing 14 coping strategies. Each item is scored on a four-point scale, with scores ranging from 1 to 4. The total possible score ranges from 28 to 112. Higher scores indicate greater utilization of the respective coping strategies. The reported test-retest reliability was r = 0.92.

### Pilot Study

A pilot study was conducted among 12 first-year B.Sc. Nursing students at M.O.S.C. College of Nursing, Kolenchery, to assess the feasibility of the study, clarity of the research instruments and time required for data collection. The study was found to be feasible in terms of time, manpower and available resources.

### Data Analysis

SCIENTIFIC JOURNAL
www.scientificjournal.in
JOURNAL PUBLICATIONS INDEXED IN
www.scientificjournal.in YEAR: 2026 VOLUME: 4 ISSUE: 1 ISSN: 3107-4162

The collected data were coded, entered into a spreadsheet, cleaned and analysed using SPSS and R software. Normality was assessed using the Kolmogorov–Smirnov test.

Frequency and percentage were used to describe categorical variables. Median and interquartile range were used to describe anxiety scores because the data were not normally distributed. Mean and standard deviation were used to describe coping strategy scores, which followed a normal distribution.

Spearman's rank correlation coefficient was used to assess the relationship between anxiety and coping strategies. The Mann–Whitney U test and Kruskal–Wallis test were used to assess associations between anxiety and selected sociodemographic variables. Independent t-test and analysis of variance were used to assess associations between coping strategy scores and selected sociodemographic variables, as appropriate. A p-value of less than 0.05 was considered statistically significant.

### Ethical Considerations

Ethical clearance was obtained from the Institutional Ethics Committee of M.O.S.C. Medical College Hospital, Kolenchery. Formal administrative permission was obtained from the Administrative Director, M.O.S.C. Medical College Hospital, and the Principal, M.O.S.C. College of Nursing. The purpose of the study was explained to the participants, and written informed consent was obtained before data collection. Confidentiality and privacy of the participants were maintained throughout the study.

### Data Collection Process

Data collection was undertaken after obtaining ethical clearance and formal administrative permission. Sixty-eight eligible third-year B.Sc. Nursing students were selected through convenience sampling. The purpose of the study was explained, and participants were provided with an opportunity to clarify their doubts. Written informed consent was obtained. Data were collected using the sociodemographic proforma, Beck Anxiety Inventory and Brief COPE questionnaire. Confidentiality of the information provided by the participants was ensured.

## RESULTS

The findings of the study are presented under the following sections: sociodemographic characteristics, anxiety scores, coping strategy scores, relationship between anxiety and coping strategies, and association of these variables with selected sociodemographic characteristics.

**Table 1. Sociodemographic characteristics of nursing students (N = 68)**

| Sociodemographic variable | Frequency (n) | Percentage (%) |
|---|---|---|
| **Age** | | |
| **20 years** | 9 | 13.24 |
| **21 years** | 50 | 73.52 |
| **22 years** | 9 | 13.24 |
| **Gender** | | |
| **Female** | 68 | 100.00 |
| **Religion** | | |
| **Christian** | 52 | 76.00 |
| **Hindu** | 14 | 21.00 |
| **Muslim** | 2 | 3.00 |
| **Residential area** | | |
| **Rural** | 58 | 85.00 |
| **Urban** | 10 | 15.00 |
| **Type of family** | | |
| **Nuclear** | 60 | 88.00 |
| **Joint** | 8 | 12.00 |
| **Birth order** | | |
| **First** | 29 | 43.00 |
| **Second** | 34 | 50.00 |
| **Third** | 5 | 7.00 |
| **School education board/syllabus** | | |
| **State** | 54 | 79.00 |
| **CBSE** | 13 | 19.00 |
| **ICSE** | 1 | 2.00 |
| **Changes in family functioning during the previous three months** | | |
| **Yes** | 5 | 7.00 |
| **No** | 63 | 93.00 |

Table 1 shows that the majority of participants (73.52%) were 21 years old. All participants were female. Most belonged to the Christian religion (76%), resided in rural areas (85%) and belonged to nuclear families (88%). Half of the participants (50%) were second-born children. Most had completed their school education under the state syllabus (79%). The majority (93%) reported no changes in family functioning during the previous three months.

**Table 2. Anxiety scores among nursing students (N = 68)**

| Variable | Median | Q1 | Q3 |
|---|---|---|---|
| **Anxiety score** | 10.00 | 6.00 | 14.75 |

Table 2 shows that the median anxiety score among nursing students was 10.00, with the first and third quartiles being 6.00 and 14.75, respectively.

**Table 3. Coping strategy scores among nursing students (N = 68)**

SCIENTIFIC JOURNAL
www.scientificjournal.in
JOURNAL PUBLICATIONS INDEXED IN
www.scientificjournal.in YEAR: 2026 VOLUME: 4 ISSUE: 1 ISSN: 3107-4162

| Variable | Minimum | Maximum | Mean | SD |
|---|---|---|---|---|
| Coping strategy score | 39 | 88 | 66.84 | 10.289 |

Table 3 shows that the mean coping strategy score was 66.84 ± 10.289, with scores ranging from 39 to 88.

**Table 4. Relationship between anxiety and coping strategies among nursing students (N = 68)**

| Variables | Statistical test | Relationship | Statistical significance |
|---|---|---|---|
| Anxiety and coping strategies | Spearman's rank correlation | Weak negative correlation | Not statistically significant (p=-0.77) |

A weak negative relationship was observed between anxiety and coping strategies among nursing students.

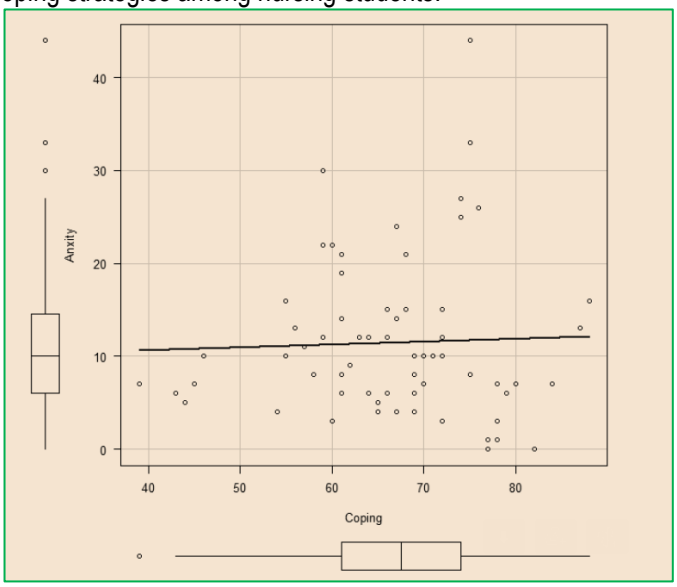



**Table 5. Association between anxiety and selected sociodemographic variables (N = 68)**

| Sociodemographic variable | Test statistic | Statistical test | p-value |
|---|---|---|---|
| Age | 2.104 | Kruskal–Wallis | 0.349 |
| Religion | 3.095 | Kruskal–Wallis | 0.213 |
| Residential area | 0.095 | Mann–Whitney U | 0.924 |
| Type of family | -0.296 | Mann–Whitney U | 0.767 |
| Birth order | 1.113 | Kruskal–Wallis | 0.573 |
| School education board/syllabus | 1.548 | Kruskal–Wallis | 0.461 |
| Changes in family functioning | -0.365 | Mann–Whitney U | 0.715 |

*Gender and year of study were not analysed because all participants belonged to the same category.*

Table 5 indicates that anxiety was not significantly associated with any of the tested sociodemographic variables, as all reported p-values were greater than 0.05.

**Table 6. Association between coping strategies and selected sociodemographic variables (N = 68)**

| Sociodemographic variable | Test statistic | p-value |
|---|---|---|
| Age | 0.305 | 0.739 |
| Religion | 1.020 | 0.367 |
| Residential area | 2.220 | 0.141 |
| Type of family | 2.27 | **0.020** |
| Birth order | 1.75 | 0.180 |
| School education board/syllabus | 0.771 | 0.467 |
| Changes in family functioning | 0.91 | 0.366 |

*Significant at p < 0.05.*

Table 6 shows that coping strategy scores had a statistically significant association with type of family (p = 0.020). Participants from joint families had a higher mean coping strategy score (74.37 ± 4.24) compared with those from nuclear families (65.83 ± 10.46). No statistically significant association was observed with the other tested sociodemographic variables.

## DISCUSSION

The present study assessed anxiety and coping strategies related to clinical exposure during COVID-19 among third-year B.Sc. Nursing students. The findings provide information regarding anxiety levels, utilization of coping strategies and their relationship with selected sociodemographic characteristics.

The median anxiety score among nursing students was 10.00, with an interquartile range of 6.00–14.75. This indicates a relatively low median anxiety score according to the scoring categories used in the study. However, the findings should be interpreted in the context of the study setting and sample characteristics.

These findings differ from those of Savitsky et al., who reported elevated anxiety among nursing students during the COVID-19 pandemic. Their study identified fear of infection and lack of personal protective equipment as factors associated with higher anxiety scores.[3] Differences in study populations, settings and assessment methods may contribute to variations in findings.

The mean coping strategy score in the present study was 66.84 ± 10.289, indicating variation in the utilization of coping strategies

SCIENTIFIC JOURNAL
www.scientificjournal.in
JOURNAL PUBLICATIONS INDEXED IN
www.scientificjournal.in YEAR: 2026 VOLUME: 4 ISSUE: 1 ISSN: 3107-4162

among nursing students. Banstola et al. reported that nursing students used different coping strategies to manage anxiety during clinical placements, with religious coping being commonly reported.[4] Temiz also reported the utilization of various coping strategies among nursing students during the COVID-19 pandemic.[6]

The present study identified a weak negative relationship between anxiety and coping strategies; however, this relationship was not statistically significant. This suggests that the overall coping strategy score did not demonstrate a statistically significant relationship with anxiety in the study population. The findings should be interpreted cautiously because the exact correlation coefficient and p-value need confirmation from the original statistical output.

Regarding the association with sociodemographic variables, anxiety did not show a statistically significant association with any of the tested variables. This finding differs from the study by Savitsky et al., which identified associations between anxiety and factors such as gender, fear of infection and lack of personal protective equipment.[3] The difference may be related to variations in sample characteristics and the limited diversity of participants in the present study.

An important finding of the present study was the statistically significant association between type of family and coping strategy scores ($p = 0.020$). Students from joint families had higher mean coping strategy scores than those from nuclear families. This finding may indicate a possible role of family structure and available family support in the utilization of coping strategies. However, the study design does not establish a causal relationship.

Overall, the findings highlight the importance of assessing psychological well-being and coping strategies among nursing students during challenging clinical situations. Nursing educational institutions may consider providing psychological support, counselling and coping skills training to promote students' well-being during public health emergencies.

## CONCLUSION

The study revealed a median anxiety score of 10.00 and a mean coping strategy score of 66.84 among nursing students during clinical exposure in the COVID-19 period. A weak negative relationship was observed between anxiety and coping strategies. Anxiety was not significantly associated with the selected sociodemographic variables, whereas coping strategy scores showed a significant association with type of family. The findings emphasize the importance of psychological support and strengthening coping skills among nursing students during challenging clinical experiences.

## REFERENCES

1. World Health Organization. Statement on the second meeting of the International Health Regulations (2005) Emergency Committee regarding the outbreak of novel coronavirus (2019-nCoV). Geneva: WHO; 2020.
2. Kim KH. Baccalaureate nursing students' experiences of anxiety producing situations in the clinical setting. Contemp Nurse. 2003;14(2):145-55.
3. Savitsky B, Findling Y, Ereli A, Hendel T. Anxiety and coping strategies among nursing students during the COVID-19 pandemic. Nurse Educ Pract. 2020;46:102809.
4. Banstola B, Shakya N, Sharma P. Anxiety among nursing students towards clinical placement during COVID-19 in a tertiary hospital of Nepal: a descriptive cross-sectional study. JNMA J Nepal Med Assoc. 2021;59(238):542.
5. Wong JG, Cheung EP, Cheung V, Cheung C, Chan MT, Chua SE, et al. Psychological responses to the SARS outbreak in healthcare students in Hong Kong. Med Teach. 2004;26(7):657-9.
6. Temiz Z. Nursing students' anxiety levels and coping strategies during the COVID-19 pandemic. Int Arch Nurs Health Care. 2020;6:150.
7. Kaplan Serin E, Doğan R. The relationship between anxiety and hopelessness levels among nursing students during the COVID-19 pandemic and related factors. Omega (Westport). 2021:00302228211029144.
8. Hamadi HY, Zakari NM, Jibreel E, Al Nami FN, Smida JA, Ben Haddad HH. Stress and coping strategies among nursing students in clinical practice during COVID-19. Nurs Rep. 2021;11(3):629-39.
9. Huang L, Lei W, Xu F, Liu H, Yu L. Emotional responses and coping strategies in nurses and nursing students during COVID-19 outbreak: a comparative study. PLoS One. 2020;15(8):e0237303.

## Conflict of Interest

The authors declare that there is **no conflict of interest** related to this study.

## Source of Funding

SCIENTIFIC JOURNAL
www.scientificjournal.in
JOURNAL PUBLICATIONS INDEXED IN
www.scientificjournal.in YEAR: 2026 VOLUME: 4 ISSUE: 1 ISSN: 3107-4162

The study was **self-funded**, and no external financial assistance was received.