

## ChatGPT in nursing education. A cross-sectional descriptive study on attitude and preparedness of Undergraduate Nursing Students of SGT University

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### KEYWORDS

ChatGPT , AI, Undergraduate Nursing Students.

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### ABSTRACT

**Background:** ChatGPT is a chatbot that responds to user inputs with responses that resemble those of a human using natural language processing. This study was conducted to assess the attitude and preparedness regarding ChatGPT among undergraduate Nursing students of SGT University.

**Objectives:** This cross-sectional descriptive study aimed to find the correlation between attitude and preparedness regarding chatgpt among Nursing students.

**METHODS:** The study's instrument is a self structured questionnaire and the descriptive research design was used "to assess the perception and attitude of nursing student regarding chatGPT". The present study was conducted in SGT UNIVERSITY Faculty of Nursing, Budhera in Gurugram. Non-probability purposive sampling technique was used to collect the data in present study.

**RESULTS:** In the present study vast majority of the samples i.e 72.40% were from the age under 18 years. Regarding the education status most of the respondents were in first year of their graduation i.e., of 54.0% and most of the samples were belongs to urban area 57.80% and 32. 90% respondents were belongs to rural area , 9.30% respondents were belongs to semi-urban area .Majority of samples are having 66.50% of previous knowledge and 33.50% are not having any previous knowledge regarding topic.

**CONCLUSION:** The study concluded that there is correlation between Attitude and Preparedness regarding ChatGPT among undergraduate score is -0.671 which is strong positive correlation.

## Introduction

Artificial Intelligence (AI) refers to the ability of digital computers or computer-controlled machines to perform tasks that usually require human intelligence. In healthcare, AI is gaining significance as it enhances patient care, reduces workload, and aids in clinical decision-making. It also shows promise in developing virtual assistants that make it easier for patients to manage their health. For nursing students, learning about AI is essential since it is shaping the future of healthcare. Among AI tools, ChatGPT stands out for its human-like responses, offering personalized and interactive assistance. Unlike many other AI models, ChatGPT can generate creative content by learning from user interactions and responding immediately, making it more engaging and convenient than tools like RoBERTa or Meta's language systems. Another unique feature of ChatGPT is its ability to maintain a conversational tone and consistent personality, which allows for more natural and meaningful interactions. Therefore, this study aims to explore the attitude and preparedness of undergraduate nursing students at SGT University toward ChatGPT

## Background of study

This study highlights a connection between nursing students' attitudes and their preparedness toward using ChatGPT. In recent years, the use of ChatGPT in everyday life has become widespread. According to the Government of India's Ministry of Statistics and Programme Implementation, about 371.4 million people (27.3% of the population) fall within the age group of 15 to 29 years (2022). With the rapid adoption of ChatGPT among students, the Indian education system is witnessing a significant transformation (India Today, 2023). Therefore, it is important to understand the perceptions and intentions of students that shape their satisfaction with this AI-powered tool. Nursing educators have also emphasized the need to keep pace with technological advancements. A survey by Best Colleges reported that 53% of nursing and health sciences students use AI tools like ChatGPT to complete their assignments or exams. Interestingly, an equal proportion of students considered such use to be cheating or plagiarism. Beyond academics, AI holds great potential in nursing practice, such as monitoring patient information, ensuring quality control, reducing hospital stays, and improving efficiency of care. This study also seeks to examine variations based on students' living conditions, prior knowledge of ChatGPT, and the availability of supportive and knowledgeable faculty.

## Research methodology

**Research design:** A cross-sectional descriptive study design was used to assess the attitude and preparedness regarding chatGPT among the undergraduate nursing student of SGT UNIVERSITY GURUGRAM.

**Study population:** The study population will consist of undergraduate nursing student currently enrolled at SGT UNIVERSITY, GURUGRAM.

The inclusion criteria will be:

- Students aged 17 to 24 old are enrolled.
- Student who consent to participate in the study with their parent consent.
- Students who were available the time of data collection.

The exclusion criteria will include:

- Nursing student on a leave or absent during the data collection.
- Student who do not consent to participate.

**Sampling Technique:** A non-probability purposive sampling technique was used to collect the data.

**Sample size:** A sample of approximately 322 students will be targeted to ensure statistical significance.

#### Data collection Tool

Data was collected using a structured self-administered questionnaire, consisting three sections:

- **Demographic information;** this section will gather basic demographic data such age, gender, residential area, college year, previous knowledge.
- **Attitude regarding chatGPT:** Attitude was assessed by using attitude scoring table ,which assess the attitude of student regarding chatgpt by answering 12 structured question.

#### Scoring Category :-

| Attitude          | Scoring |
|-------------------|---------|
| Negative Attitude | 0-4     |
| Neutral Attitude  | 5-8     |
| Positive Attitude | -12     |

- **Preparedness regarding chatGPT:** preparedness was assessed by using preparedness scoring table, which assess the preparedness of student regarding chatgpt by answering 12 structured question.

#### Scoring Category :-

| Perception          | Scoring |
|---------------------|---------|
| Negative perception | 0-6     |
| Neutral perception  | 7-13    |
| Positive perception | 14-20   |

#### Data collection procedure

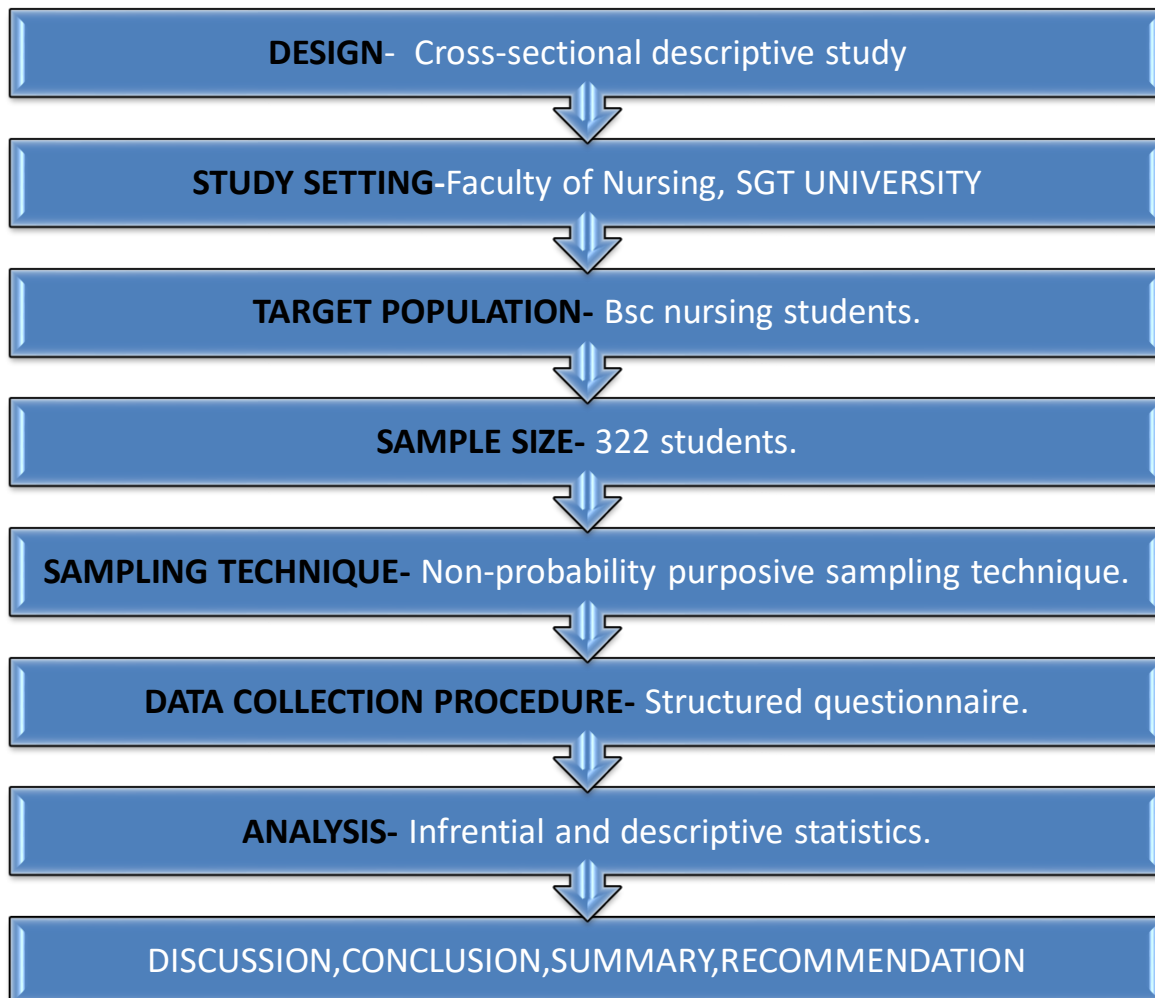
The data collection will be conducted in three days. participant will be informed about the study's purpose, procedure, and their rights as participants, including confidentiality and the

voluntary nature of participation. After obtaining consent, the questionnaire will be shared to them on their whatsapp group during their class hours. Completed questionnaires will be collected on the same day to minimize the non-response bias.

### **Ethical consideration**

The conduct of the study was approved by the institutional ethical committee. The Dean, the Faculty of Nursing, and the hospital administration all gave their administrative consent. There was no disruption to routine operations during the data collection process. Professionalism was maintained. The study participant's consent to participate in the research endeavor was acquired prior to any data collection. The confidentiality of the information was maintained and the data will be used solely for research purposes.

### **SCHEMATIC REPRESENTATION OF RESEARCH METHODOLOGY.**



## RESULT

Data collection had done from 322 students of bsc nursing. After organizing, coding, and computing the complete data set, it was summarizes and then transmitted to the master data sheet for analysis. By using appropriate statistical formula and data interpretation, the data was assessed in compliance with the objectives of the study as indicated.

**Objective 1:** To assess the attitude regarding ChatGPT among undergraduate Nursing students of SGT University.

**Table No 1:** Frequency and distribution of students of the study participants.

|          |   |                  |                   |
|----------|---|------------------|-------------------|
| <b>1</b> | <b>Age (in years)</b>                                   | <b>Frequency</b> | <b>Percentage</b> |
|          | Under 18 years  | 233              | 72.40%            |
|          | 18 to 20 years  | 58               | 18.00%            |
|          | Above 20 years  | 31               | 9.60%             |
|          | <b>Total</b>  | <b>322</b>       | <b>100%</b>       |
| <b>2</b> | <b>Gender</b>   | <b>Frequency</b> | <b>Percentage</b> |
|          | <b>Female</b>   | <b>228</b>       | <b>70.80%</b>     |
|          | <b>Male</b>   | <b>94</b>        | <b>29.20%</b>     |
| <b>3</b> | <b>Area of Resident</b>                                 | <b>Frequency</b> | <b>Percentage</b> |
|          | <b>Rural</b>  | <b>106</b>       | <b>32.90%</b>     |
|          | <b>Semi -urban</b>                                      | <b>30</b>        | <b>9.30%</b>      |
|          | <b>Urban</b>  | <b>186</b>       | <b>57.80%</b>     |
|          | <b>Total</b>  | <b>322</b>       | <b>100%</b>       |
| <b>4</b> | <b>College year</b>                                     | <b>Frequency</b> | <b>Percentage</b> |
|          | <b>1st year</b>   | <b>174</b>       | <b>54.0%</b>      |
|          | <b>2nd year</b>   | <b>103</b>       | <b>32.0%</b>      |
|          | <b>3rd year</b>   | <b>45</b>        | <b>14.0%</b>      |
|          | <b>Total</b>  | <b>322</b>       | <b>100%</b>       |
| <b>5</b> | <b>Do you have any previous knowledge about ChatGPT</b> | <b>Frequency</b> | <b>Percentage</b> |
|          | <b>No</b>   | <b>108</b>       | <b>33.50%</b>     |
|          | <b>Yes</b>  | <b>214</b>       | <b>66.50%</b>     |
|          | <b>Total</b>  | <b>322</b>       | <b>100%</b>       |
|          |   |                  |                   |

Table-1 shows the distribution of respondent according to age. The data revealed that 233 (72.40%) were under 18 years followed by 58 (18%) were in the age group of 18 to 20 years and 31 (9.6%) were above 20 years.

Table-2 highlight the distribution of respondent according to gender. Majority 228 (70.80%) participants were female and 94 (29.20%) were male.

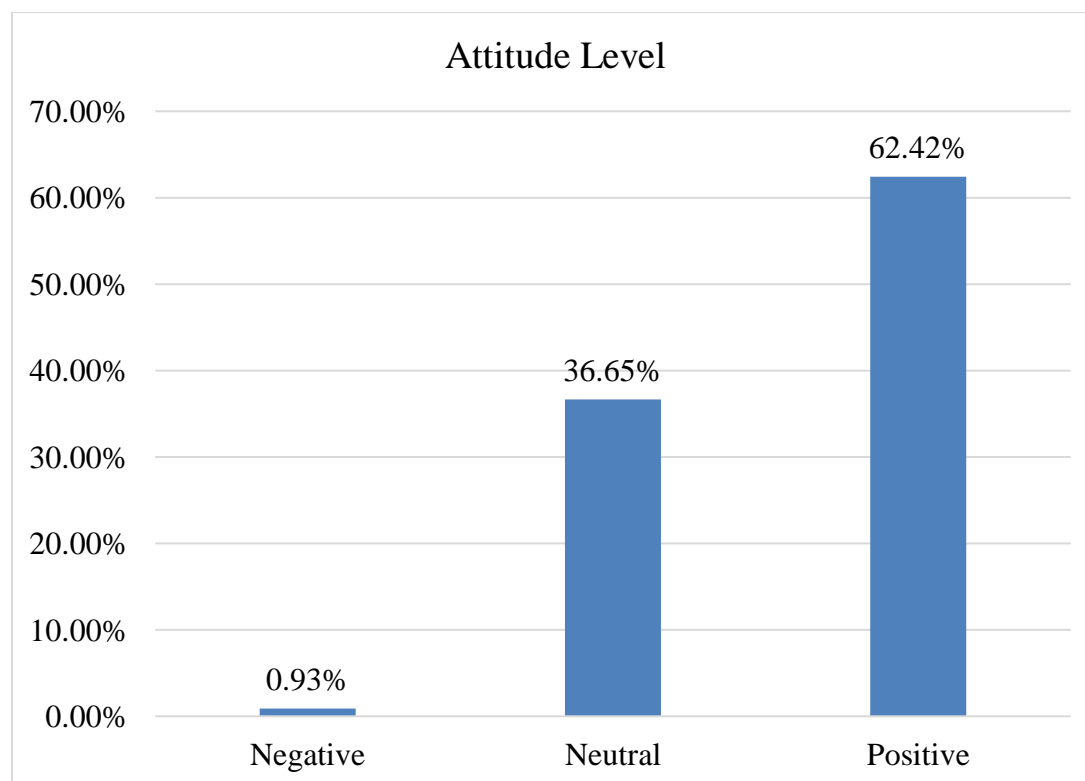
Table-3 Project the distribution of respondent according to area of residence. Majority 186 (57.80%) participants were residing in urban area, followed by 106 (32.90%) participants from rural area and 30 (9.30%) participants from semi-urban area.

Table-4 Shows the distribution of respondent according to college year. Majority 174 (54%) participants were 1<sup>st</sup> years followed by 103 (32%) participants from 2<sup>nd</sup> years and 45 (14%) were from 3<sup>rd</sup> year respectively.

Table-5 highlight the distribution of respondent according to any previous knowledge about ChatGPT. Majority 214 (66.50%) participants were having previous knowledge about ChatGPT and 108 (33.5%) were not having any previous knowledge about ChatGPT use.

**Objective 2:** To assess the attitude regarding chatgpt among nursing students.

**Figure 1:** Bar diagram showing the distribution of respondent on Attitude level regarding ChatGPT among undergraduate students.



According to figure, Majority 201 (62.42%) participants have positive attitude followed by 118(36.65%) were Neutral attitude and only 3 (0.93%) participants have negative attitude regarding ChatGPT.

**Objective 3:** To assess the preparedness regarding chatgpt among Nursing students.

**Figure 2:** Bar diagram showing the preparedness level regarding ChatGPT among undergraduate students

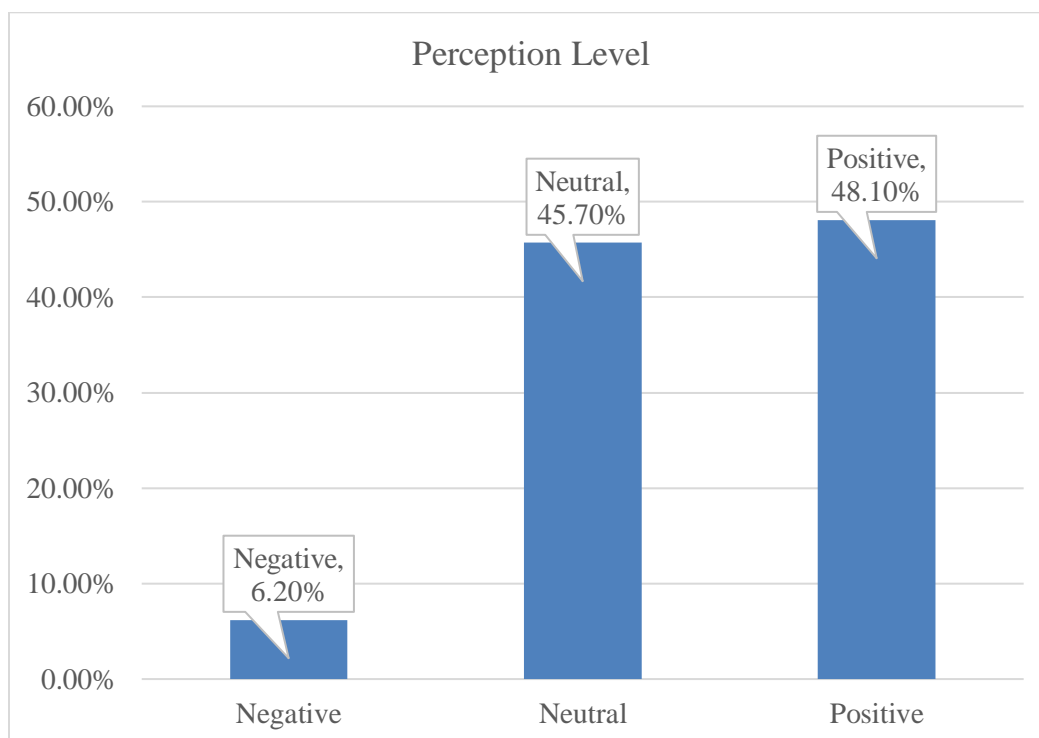


Figure 2 highlights the distribution of respondent according to preparedness Level regarding ChatGPT among undergraduate students. 155 (48.10%) participants have positive preparedness followed by 147 (45.70%) were Neutral preparedness and 20 (6.20%) participants have negative preparedness regarding ChatGPT.

**Objective3:** To assess the association between preparedness level regarding ChatGPT among undergraduate students.

Table no 2: Deals with association between preparedness level regarding ChatGPT among undergraduate students. (N=322).



| Variable   | Negative | Neutral | Positive | Chi-square value & df | P value | Inference |
|--|----------|---------|----------|-----------------------|---------|-----------|
| Age in year                                      |          |         |          |                       |         |           |
| Under 18 years                                   | 5        | 18      | 8        | 10.565<br>Df=4        | 0.032   | S         |
| 18 to 20 years                                   | 13       | 102     | 118      |                       |         |           |
| Above 20 years                                   | 2        | 27      | 29       |                       |         |           |
| Total  | 20       | 147     | 155      |                       |         |           |
| Gender   |          |         |          |                       |         |           |
| Female   | 16       | 109     | 103      | 3.035<br>Df=2         | 0.219   | NS        |
| Male   | 4        | 38      | 52       |                       |         |           |
| Total  | 20       | 147     | 155      |                       |         |           |
| Area of Resident                                 |          |         |          |                       |         |           |
| Rural  | 9        | 48      | 49       | 1.633<br>Df=4         | 0.803   | NS        |
| Semi-urban                                       | 2        | 14      | 14       |                       |         |           |
| Urban  | 9        | 85      | 92       |                       |         |           |
| Total  | 20       | 147     | 155      |                       |         |           |
| College Year                                     |          |         |          |                       |         |           |
| 1 <sup>st</sup> year                             | 19       | 79      | 76       | 15.223<br>Df=4        | 0004    | S         |
| 2 <sup>nd</sup> year                             | 1        | 48      | 54       |                       |         |           |
| 3 <sup>rd</sup> Year                             | 0        | 20      | 25       |                       |         |           |
| Total  | 20       | 147     | 155      |                       |         |           |
| Do you have any previous knowledge about chatGPT |          |         |          |                       |         |           |
| No   | 19       | 50      | 39       | 38.788<br>Df=2        | 0.000   | S         |
| Yea  | 1        | 97      | 116      |                       |         |           |
| Total  | 20       | 147     | 155      |                       |         |           |

**S = Significant and NS = Not significant at 0.05 level of significant.**

The table 2 shows association between preparedness level regarding ChatGPT among undergraduate students. The chi – square value for Age ( $\chi^2= 10.565$ ), college year ( $\chi^2 =15.223$ ), previous knowledge about ChatGPT ( $\chi^2 =38.788$ ) the obtained p value for these variables is less than 0.05 value, which indicates that there is a significant association.

The obtained chi square value for Gender is  $\chi^2 =3.035$  and area of residence is  $\chi^2= 1.633$  and p value is greater than 0.05 which indicate there is no significant association.

**Objective 4:** To find the correlation between attitude and preparedness regarding chatGPT among nursing students.

**Table 3: Finding related to Correlation between Attitude and preparedness regarding ChatGPT among undergraduate students. (N=322)**

| Category     | R     | INFERENCE                 |
|--------------|-------|---------------------------|
| Attitude     | 0.671 | 0.671                     |
| Preparedness |       | StrongPositivecorrelation |

This table show The correlation between the Attitude and preparedness 0.671 which indicate strong positive correlation. It is computed by Raw Score method. Hence research Hypothesis  $H_1$ : There is a significant correlation between attitude and preparedness regarding ChatGPT among undergraduate students is accepted and null Hypothesis  $H_{01}$  is rejected.

## DISCUSSION

The objective of the study was to assess correlation between attitude and preparedness regarding chatgpt among Nursing students of SGT UNIVERSITY. Findings were discussed based on different review of literature with reference of the study findings. The discussion was preparedness under the following subsequent headings.

**Objective 1:** To assess the attitude regarding ChatGPT among undergraduate Nursing students of SGT University.

The present study depicts that majority the nursing students had positive attitude towards chatGPT [62.42%] while other students had neutral and negative attitude .that is 36.65% and 0.83% respectively.

**Objective 2:** To assess the attitude regarding chatgpt among nursing students.

The present study depicts that majority the nursing students had positive preparedness towards chatGPT [48.10%] while other students had neutral and negative preparedness .that is 45.70% and 6.20% respectively.

**Objective3:** To assess the association between preparedness level regarding ChatGPT among undergraduate students.

The present study show association between preparedness level regarding ChatGPT among undergraduate students. The chi – square value for Age ( $\chi^2= 10.565$ ), college year ( $\chi^2 =15.223$ ), previous knowledge about ChatGPT ( $\chi^2 =38.788$ ) the obtained p value for these variables is less than 0.05 value, which indicates that there is a **significant association**.

The obtained chi square value for Gender is  $\chi^2 =3.035$  and area of residence is  $\chi^2= 1.633$  and p value is greater than 0.05 which indicate there is no significant association.

**Objective 4:** To find the correlation between attitude and preparedness regarding chatGPT among nursing students.

The present study show The correlation between the Attitude and preparedness **0.671** which indicate **strong positive correlation**. It is computed by Raw Score method. Hence research

Hypothesis

H<sub>1</sub>: There is a significant correlation between attitude and preparedness regarding ChatGPT among undergraduate students is accepted and null Hypothesis **H<sub>01</sub> is rejected**.

## RECOMMENDATION.

The current study has opened avenues for future research in the following ways:

1. In future the study may be conducted on GNM and ANM students of Sgt University
2. In future the study may be conducted on post-graduated students of nursing department.
3. A study may be conducted in other Medical department of Sgt University.
4. Study may be conducted on a large scale.

## CONCLUSION:

The need of this study arises from the frequent use of chatgpt by students to complete their assignment and exams. It is important to find what is attitude and preparedness of nursing students regarding chatgpt as they are the future health providers. Positive attitude towards new

technology will help them to learn more and quickly if used correctly. However using these technology in health care settings arises ethical and legal issue.

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**Conflict of interest:** The authors declare that there are no conflicts of interest.

**Ethical Approval:** The study was approved by the institutional ethical committee of SGT University.

**Informed Consent:** Informed Consent was obtained from the participants.

**Data and materials availability:** Upon justifiable request, the corresponding author will make all of the data sets gathered during this investigation available.