

## Comparison Study between Traditional, Online and Hybrid Teaching Strategies among Obstetrics Nursing Students Regarding to Perception, Satisfaction, Academic Stress, and Self-efficacy during the Epidemic Covid- 19

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### Abstract

**Background:** Rapid changes occurred all around the globe because of the pandemic crisis. As a result of "covid19," the educational sector had also suffered, and a widespread use of digital tools had accelerated. **Aim of this study:** to Compare the effect of Online, Traditional and Hybrid Teaching strategies among Obstetrics nursing students on their Perception, Satisfaction, Academic Stress, and Self-efficacy during the Epidemic Covid- 19. **Subjects and Methods:** Comparative descriptive research design was conducted at Faculty of Nursing -Minia University. **Sample:** A randomized sample of six hundred students was included in this study. **Data were collected** through five main tools: Tool I: Interviewing assessment, Tool II: Online learning perception, Tool III: Students' Satisfaction, Tool IV: Academic Stress Scale (ASS) and Tool V: Self-Efficacy scale. **Results:** The study revealed that the mean age of study students was  $21.1 \pm 2.5$  years, 54.8% of them were females. (58.5%) of traditional group had poor perceptions about quality of technology and effectiveness of online teaching method, 74.0% of the traditional teaching group had satisfactory satisfaction with their teaching methods, 80.5% of the online teaching group students had high stress level related to academic expectation, faculty work, and examination, and students' academic self-perception with statistically significant differences ( $P$ -Value  $< 0.001$ ). **Conclusion:** This study found that most of the students were satisfied with the traditional teaching method, academic stress was present across all three groups (traditional, online, and hybrid), and the greatest levels of stress were found among obstetrics nursing students who had taken the course via the online method with low total perceptions and self-efficacy. **Recommendations:** Faculties should prioritize hybrid learning that focuses on raising students' success and accommodates their unique learning styles. Both educators and students would benefit much from specialized training programs in the use of computers and internet and the management of the faculties should make concerted efforts to facilitate this development providing educators with the resources they need to reduce student stress in the classroom via the use of hybrid learning and other strategies. Additional research on the connection between hybrid learning and academic success may be conducted.

**Keyword:** Hybrid, Perception, Satisfaction, Self-efficacy, Academic stress, COVID-19.

### Introduction:

The 2030 Agenda for Sustainable Progress calls education "a basic human right, a worldwide common good, and a crucial driver of development across all 17 Sustainable development objectives." Universities had to close because of the coronavirus outbreak, and where feasible owing to technology constraints, professors moved their classes online (**United Nations, 2020**). The newly discovered disease known as COVID-19 spreads from person to person by droplets. Wuhan, China was the first to discover the virus in December of 2019. Public health officials throughout the globe declared it a

global emergency in January 2020 (**Alateeq et al., 2020**). Education was one of several fields that were affected by this phenomenon. As a consequence, several educational institutions had to shut down. Due to this shutdown, the university had to contend with the unprecedented shift from being on to online education, which posed unique challenges (**The Economic Times, 2020**).

When learning in a traditional classroom environment, at the same time and place, both the students and the instructor were there. The technique places an emphasis on seminars, case studies, group and individual projects. Traditional

classrooms allowed for meaningful one-on-one interactions between students and educators (**Almahasees et al., 2021**). On the other side, students might participate in asynchronous online learning at their own convenience. In addition, this medium allowed students to learn at their own speed, which was a huge benefit. The advantage of online registration for classes also increased students' access to the web. A hybrid curriculum is one that included both online and classroom-based components. Because of the pervasiveness of the internet as a resource, it was feasible to combine traditional lectures with virtual tours of the firms being examined. Online learning strategies, such as virtual real-time information, and face-to-face interactions between instructors and students both had their benefits (**Mohsen et al., 2021**).

Because of the epidemic, new approaches were developed for online instruction. Many countries had placed restrictions on the educational medium, which had developed into either live and interactive or self-paced and independent study. For more than 190 countries, this had been the greatest educational upheaval in their history. There might be as much as 99 percent of the global student population in poor and medium income nations that had been impacted by the closure of colleges. Many people who were ill during the COVID-19 pandemic remained at home for as long as they were contagious (**Amin et al., 2021**). The majority of schools around the world use the Internet to provide either synchronous (in which the teacher and students met at a predetermined time for interactive learning courses) or asynchronous (where the instructor and students do not engage with one another during class) training (in which the instructor does not communicate with the students at all throughout the course). No one ever talks to each other in class. With asynchronous online learning, students may study whenever and wherever they choose (**Easy LMS, 2021**).

An instructor's influence extends well beyond the classroom; it shapes students' intellectual and personal development. With the support of COVID-19, the culture of online education is growing in countries all over the globe (**Beteille et al., 2020**). As the danger presented by COVID-19 has increased, authorities have taken measures to contain it. One of the guidelines is that everyone must do their

part to help the group as a whole grow and develop. During the emergency phase of the Corona Virus Disease (COVID-19) outbreak, all education must be undertaken at home, as per point 2 of Ministry of Education and Culture circular letter No. 4 of 2020. The onus of class attendance and academic progress is not on the student. They have to do all of their homework and classwork online (**Santika & Daulay, 2021**).

Although there are numerous benefits to online education, there are also some drawbacks. Students are better able to fit university into their stressful schedules, which improves their educational experience. However, students are less likely to take part in class discussions and other activities when they are required to use online learning resources. Furthermore, the benefits of peer learning are seldom realized by students. Because of these obstacles, students' personalities change, and they become hesitant to speak out (**Almahasees et al., 2021**).

Modern technology developments have made online education two-way streets, where both students and teachers play an active role in the process of teaching (**Al-Salman & Haider, 2020**). To improve student retention, a growing number of online platforms now provide toolkits for usage in interactive online classrooms by both teachers and students. One of the main goals of virtual classroom technology is to improve two-way communication between educators and their students. There are many examples of such programs, but some of the most well-known and widely used are: Hangouts Meet (a video calls tool), Microsoft Teams (chat, interactive meetings, video and audio calls), Skype (audio and video calls), WeChat Work (video sharing and calls tailored to the Chinese market), WhatsApp (video and audio calls, chat, and content share), and Zoom (video and audio calls, chat, and content share) (**UNESCO, 2020**).

In order to participate in online classes, students need access to technology like computers and mobile devices. The ability to reliably access the internet and sufficient bandwidth are prerequisites for effective education. However, not all learners or their parents have ready access to these communication options. Many students have difficulty keeping up with the pace of the online curriculum. Online education impacts not only the students, but also their parents. They still lack the financial means or infrastructure to acquire

such communication resources (**Prawantia & Sumarni, 2020**).

Although online learning has numerous benefits, many Arab nations face major barriers to entry (**Lassoued et al., 2020**). As an example, many students either aren't given enough time to properly prepare to use online learning systems or are forced to use them despite their lack of preparedness. Inadequate broadband connections and internet unavailability are especially problematic in rural regions (**Diab & Elgahsh, 2020**). Because of the pandemic, almost all students have been ordered to remain inside and get a head start on their education for their own safety; this has resulted in many members of the same household having to log in to their respective online courses at the same time and from the same general location. These difficulties have a detrimental effect on online education's quality as well as on students' motivation to learn and their ability to stick with a course until completion (**El-Sayad et al., 2021**).

Views on dealing with COVID-19 are optimistic. The Covid-19 epidemic and the subsequent change to online education will produce undue stress or strain on today's students. Students' negative perceptions of COVID-19 stem from their inability to adapt to online learning strategies, which has knock-on effects on the students' mental and physical health as well as their immediate environment (**Almahasees et al., 2021**). A student experiences academic stresses if the demands placed on him or her in terms of coursework are greater than his or her existing capacity to cope and adapt to those demands (**Wilks, 2008**).

Distress brought on by the fear of upcoming academic challenges or failure is covered. The stress levels of students may change as a result of taking classes online. As the old classroom model gives way to a more virtual one, anxiety levels are growing. Online students often do lower in their classes. Students shouldn't just sit back and take in material; they should actively want to learn more and better themselves (**Andiarna & Kusumawati, 2020**). Academic scholarship requirements, time commitments at home, peer pressure in the classroom, the demands of certain courses, and financial worries are just some of the factors that add up to high levels of stress for today's college students (**Bedewy & Gabriel, 2015**).

Students are continuously pressured to achieve better than their peers. Their parents, teachers, friends, and others regularly compare them to their siblings and other students at their age (**Burges & Sievertsen, 2020**). Most students express low self-esteem and poor concentration because of the unprecedented academic pressure they are under. The inability to handle one's course load, as well as one's mental health, job choices, quality of sleep, psychosomatic symptoms, future worry, and the presence of co-occurring illnesses like depression and anxiety, are all negatively impacted by academic stress (**Bedewy & Gabriel, 2015; Iqbal et al., 2015**).

#### **Significance of the study:**

Health standards have been set by the World Health Organization (WHO) that a global outbreak of the virus known as COVID-19 might lead to a drop in attendance rates and test scores (**Sintema, 2020**). After the WHO declared a pandemic of COVID-19 and preventative measures were lifted in a wide range of Arab states, including the complete closure of schools and universities, the Egyptian Ministry of Higher Education was urged to implement e-learning to ensure the continuity of the educational process and to prevent students from losing an academic year (**WHO, 2020**). Egypt is one of the few countries where students are required to attend classes online despite the fact that this method of instruction has seen declining popularity. Due to university closures, teachers may need to reschedule their days. Despite their reservations, students will be forced to adapt to online learning as they seek answers to the many questions raised by the pandemic (**El-Sayad et al. 2021**).

The educational system collapsed as a consequence of the social isolation induced by the COVID-19 epidemic. In light of this, the Minia University College of Nursing, like the rest of the faculties, was determined to find an educational method that suits the circumstances. Since students were unable to attend traditional classes, extensive changes were necessary to ensure their education continued. Even more so, students had to shift significantly since classrooms were traditionally educated. The faculty has developed a new educational system that includes online education and later on a blended learning curriculum that draws from both traditional and online teaching methods. Students could not have easy access to modern gadgets, especially if there were many of them. There was

a significant gap between how students feel motivated, satisfied, and engaged in online learning and how they feel in a traditional classroom setting. Researchers were unable to locate any studies that examined online, traditional, or hybrid education in terms of their impact on nursing students' viewpoints, experiences, stress levels, or confidence. So this study was conducted to examine how different teaching strategies affected obstetrics nursing students' perception, levels of satisfaction with their education, levels of stress, and their confidence in their own abilities during the recent Covid-19 pandemic.

### **Aim of the Study:**

The aim of the present study was to compare the effect of Online, Traditional and Hybrid Teaching strategy among Obstetrics nursing students on their perceptions, satisfaction, academic stress, and self-efficacy during the Epidemic Covid- 19.

### **Research hypothesis of the study:**

- 1- There is no academic stress among the three groups (traditional, online and hybrid).
- 2- The perception, self-efficacy and satisfaction are higher in traditional groups than online and hybrid.

### **Methods**

#### **Research design:**

In this study comparative descriptive research design was used. In descriptive-comparative research, the researchers considered 2 variables that were not manipulated, and establishes a formal procedure to conclude that one is better than the other. A random sample of potential participants of the test may be asked to use the 2 different methods, and factors like failure rates, time factors, and others will be evaluated to arrive at the best method. Descriptive research uses a quantitative research method by collecting quantifiable information to be used for statistical analysis of the population sample. This is very common when dealing with research in the physical sciences (Blog, 2021).

#### **Setting of the study:**

This study was carried out at Faculty of nursing at Minia University. The Faculty of Nursing was established in 1995 by Presidential Decree Number (184) Higher Institute of Nursing, which followed the Faculty of Medicine, and became the Faculty of Nursing in 2000 by Presidential Decree Number (200). Six departments made up the Faculty of Nursing: one

for pediatric nursing, one for medical/surgical nursing, one for women health and obstetric nursing, one for community health nursing, one for psychiatric health nursing and one for administration department. The four academic years of study for the Bachelor of Nursing Science in Nursing were followed by a year of required internship under faculty supervision. The academic year is divided into two fifteen-week semesters.

### **Sampling:**

#### **Sample type and size:**

The study's random sample was made up of (600 students out of 1218 students) nursing students; the researchers choose graders who enrolled to Women's Health and obstetric Nursing Course during the academic years from the 2020-2021 year. The following formula uses data from the literature (Sathish et al., 2020) to predict the sample size with 5% precision/absolute error and 5% type 1 error:

$$n = \frac{(Z_{1-\alpha/2})^2 \cdot P(1-P)}{d^2}$$

Where,  $Z_{1-\alpha/2}$  at 5% type 1 error ( $p < 0.05$ ) is 1.96, P is the expected proportion in population based on previous studies and d is the absolute error or precision. Therefore, sample size

$$n = \frac{(1.96)^2 \cdot (0.33)(1-0.33)}{(0.03765)^2} = 599.2.$$

The calculation suggested that a sample size of 600 students was necessary for the investigation.

#### **These nursing students divided into three groups: -**

**Group I: Traditional group.** Consisted of 200 nursing students who learned by the traditional educational strategy (lecture).

**Group II: Online group.** Consisted of 200 nursing students who learned by the internet educational strategy (online lecture).

**Group III: Hybrid group.** Consisted of 200, educated by blended planned course subjects as a teaching strategy.

#### **Data Collection Tools:**

To gather data, the following five main tools were used: It composed of:

**Tool I: Interviewing assessment tool.** After reading the relevant literature, the researchers created this instrument to collect data from students. It consisted of (23) items. It encompassed three main parts:

**Part 1:** Concerned with students' demographic characteristics: such as age, sex, residence and duration of an Average Cash register

Shift.

**Part 2:** Education platform and mostly used application for teaching: such as instruction provided by the instructional system and most popular educational software.

**Part 3:** Online learning experience among online and hybrid teaching groups: such as type of internet connection, quality of the internet connection, devices used during the online classes, percentage of commitment in attending online class, percentage of the interaction during online classes and frequency of internet disconnection during the online class.

**Part 4:** Students' opinions regarding using online versus traditional teaching among traditional, online, and hybrid teaching groups: such as tasks were given during online meetings in which the students were evaluated on their general knowledge. In the student's perspective, online courses were boring, problematic, perplexing or exciting, the student preferred online quizzes, class tests, or assignments. Exams taken online were simpler to score well on than those taken on paper, Online activities were a main draw of their education, their abilities had increased because of online study, The rapid feedback got from online assessments had been quite satisfying and the student was quite pleased with the instant results of online tests.

**Tool II: Online learning perception scale:** The researchers established this tool based on (Sathish et al., 2020). There were six questions that probed the student's outlook. It covered topics including how online education was superior, how much time was needed for preparation, and how much time was really spent teaching. Simple to use the computer, online education was the educational system of the future educational platform and availability of online tools before and during episode covid19.

#### Scoring System:

One might either (1) strongly disagree, (2) disagree, (3) be unsure, (4) agree, or (5) strongly agree on a Likert scale. The total score was based on how well you did on all of these subsets; it may go anywhere from 6 to 30 and was broken down as follows: from 6 to 13, you have a poor perception from 14 to 21, you had a moderate perception; and >21, you had a high perception.

**Tool III: Students' Satisfaction:** The researchers designed this tool on the back of (Kassem et al., 2020). The questionnaire, comprised of 19 questions, was administered to undergraduate obstetrics nursing students to gauge their satisfaction with the utilization of traditional, online, and Hybrid teaching strategies in each course. Its split into two parts: the first, a collection of 14 questions designed to gauge students' approval of online instruction for a nursing obstetrics course, and the second, five questions probing what they had learned as a result.

#### Scoring System:

There was a five-point scale used, from 1 (strongly disagree) to 5 (strongly agree) for the responses (strongly agree). Satisfaction with learning strategies was rated as "Low" (33%), "Moderate" (34-66%), and "High" (>66%).

**Tool IV: Academic Stress Scale (ASS):** The researchers based it on (Bedewy & Gabriel, 2015) to create a tool for measuring academic pressure might be stressful, exam and course-related academic stress, and academic self-perception-related anxiety and total academic stress level was measured.

#### Scoring system for Academic Stress Scale:

3-point Likert-scale survey was developed using the data relating to these academic pressures from little to considerable, from 1 (low) to 3 (high). Rated these inquiries, too (1, 2 or 3). A low percentage of students reported feeling stressed about education (70.5 percent).

**Tool V: Self-Efficacy.** The researchers that created it based it on (Arrebola et al., 2020). Some statements were revised to clarify or shorten them. Some statements were rewritten to make them more accurate or clear. It included the belief that ability could grow with effort, Belief in the ability to meet specific goals and measured total self-efficacy scale.

#### Scoring system for Self-efficacy:

The self-efficacy questionnaire's findings were examined by grading participants' replies on a three-point Likert scale that went from "1" (Low) (Less than 50%) to "3" (High) (More than 50%).

#### Validity of the study tools:

A Jury group made up of 5 specialists in the fields of Gynecological women's health and Obstetrics Nursing academics analyzed and verified the instruments. The committee reviewed the instrument to make sure it was suitable for the

study's goals and was easy to comprehend and use.

**Reliability:**

The Cronbach's alpha value for the reliability (internal consistency) of the Online learning perception scale was 0.901, of the Students' Satisfaction was 0.864, self-efficacy too was 0.727 and of the Academic Stress Scale was 0.887.

**Pilot Study:**

To evaluate the efficacy of the existing research instruments in terms of clarity, validity, and application time, a pilot study was done on (60) 10% of students enrolled in obstetric nursing courses at the aforementioned college. Since there were no modifications to the instruments, the pilot study's sample was used in the final analysis.

**Ethical considerations:**

The research team at Minia University's Faculty of Nursing was able to obtain an official letter from the committee overseeing research ethics. The study was approved by the Academic Department Head of Women's Health and Obstetrics Nursing and the professors responsible for teaching it, as well as the Dean of the Nursing College and the Vice-Dean for Education and Student Affairs. Oral permission was obtained from participants once the study's goal and methods were explained. It was emphasized that participants might refuse to continue with the research at any moment and quit without providing an explanation. Privacy and secrecy were guaranteed.

**Field work:**

A survey of relevant literature, both domestic and foreign, covering several angles of the research issue. This aided researchers in becoming familiar with the scope of the issues and directed them in assembling the necessary data gathering instruments. The researchers put the tool's content, knowledge, accuracy, and relevance to the test by having a panel of obstetrics and gynecological nursing experts evaluate them.

Distribution of questionnaires followed receipt of formal consent from the Dean, Vice Dean of Research and Postgraduate Studies, Head of the Department of women health and Obstetrics and heads of other departments as the student who studied Obstetrics course in 2020, moved on to another course. The researchers also

got the appropriate ethical committees' OK before they started the investigation.

This research used information collected from students who studied obstetric course throughout the 2020-2021 academic years. The batch of the third year in the College of Nursing was divided into two halves, one half studying pediatric nursing, and the other half studying obstetrics and women's health nursing, provided that students were switched between these two sections. Students majoring in obstetrics during the Covid 19 epidemic were studied to assess the efficacy of online, traditional, and hybrid teaching methods in terms of students' perceptions, satisfaction, academic stress, and confidence. The first semester of the year 2020, the students studied Obstetrics course by the same traditional methods of instruction. Since the 16th of March 2020, a number of actions had been taken to stem the spread of the Covid-19 virus, including the suspension and closure of universities and institutions throughout the nation. As a result, universities must develop the technology to virtualize their physical campuses so that instruction can take place online at any time, A transition from traditional classroom instruction to online learning had been occurred; and the students studied Obstetrics course in second semester in the same year of 2020 was by online methods of teaching, by the following spring, hybrid instruction had become the standard at 2021. The researchers had handed out questionnaires to obstetric nursing students in 2020 (who became in the four academic levels) and third level students who studied obstetric course throughout first semester of the year 2021. Data was gathered from the end of November 2020 to January 2021.

The researchers visited the above-mentioned location on lecture days to determine when it would be suitable to collect the required data. Sunday and Tuesday were set for the students of the current third year who were studying Obstetrics and Women's Health Nursing, a Mondays and Wednesdays were set for the fourth-year students who studied Obstetrics and Women's Health Nursing.

Interviews began with a brief introduction of the researchers, a kind hello, and an explanation of the study's goals, timeline, and procedures followed by an oral consent. After presenting the study's rationale and receiving each participant's informed consent, the

researchers distributed and collected completed questionnaires from each participant. Student demographics, course delivery mode, learning outcomes, academic stress, teacher and student perspectives, self-efficacy, and total self-efficacy across three groups were all measured, and course satisfaction was assessed.

Nursing students recorded responses in the presence of the researchers to ensure all questions were addressed. Tools for gathering information from nursing students took between 20 and 30 minutes to complete. Moreover, the students' involvement was entirely optional.

#### Statistical analysis design:

The SPSS 20.0 for Windows programme was used for the statistical analyses (SPSS, Chicago, IL). Statistics for all continuous variables were presented as means and standard deviations, provided they followed a normal distribution (SD). The classifications were shown through charts and tables including numerical data. Categorical variables were compared using the chi-square test, while continuous variables were compared using one-way analysis of variance (ANOVA). The potential for correlations between continuous variables was analyzed using the correlation coefficient test. Researchers tested the validity of the Students' Satisfaction with Coursework Scale, the Academic Stress Scale, and the Online Learning Perception Scale (internal consistency). For this study the significance level was 0.05.

#### Results

Table (1) reveals that 63% of the studied sample aged between 21 – 25 years with a mean age of  $21.1 \pm 2.5$  years, 54.8% of them were females 60.0% lived in rural area and 93.0% their average register hours were 18 hours.

Table (2): Shows that 34.3% of the studied sample their education from the education platform by video, and 44.5% used Microsoft team then 14.5% used Zoom application for teaching.

Table (3): Reveals that nearly half of online, and hybrid group using Mobile data & Wi-Fi in online learning (43.5% & 62.0%) respectively, 28.5% of both groups, used mobile phone in online group, computer tablet in hybrid group. 43% of both groups had 80-89% to more than 90 % were committed in attending online classes. 21% of online group and 31% of hybrid group interacted in online classes. While nearly half of

both groups (43% and 37%) had (3-4times) internet disconnection during the online class.

Table (4) clarifies that there was a highly statistically significant difference regarding analysis of students' opinions regarding using online versus traditional teaching among studied groups at  $p$ -value  $< 0.001$ . While 94.5% of online group had assignments, quizzes, oral presentation, and others. Meanwhile, nearly half of the studied sample (49.5 %, 50.5 % and 43.5%) respectively had online courses were boring, problematic, perplexing, exciting and might have more than one. 64.5% of hybrid group & 59.5% of online group were strongly agree while 61% of traditional group were agree regarding exams taken online were simpler to score well on than those taken on paper. 57.5% of traditional group disagreed, while 43.5% & 40.5% of both groups agreed about their abilities increased because of online study. 67% of traditional group and 51% of the online group weren't satisfied during online assessment and 50% of hybrid group were satisfied during online assessment. 66% of both groups (online & hybrid) were pleased with the instant results of online tests, while 71.5% of traditional group weren't pleased with the instant results of online tests.

**Figure (1)** illustrates that 61.0% of online group students agreed with online teaching was better, 93.0% agreed with online teaching was the future education system and 74.5% agreed with the usage of online tools before and during the epidemic Covid 19. Also, 87.0% of traditional group students agreed with online teaching took more time-consuming, 98.5% agreed with spending more time for preparation in online teaching, and 47.0% agreed with the easy to handle the computer.

**Figure (2):** represents that, (29.5%) of the traditional group and 32.5% of the hybrid group reported the technological issues, lack of computer knowledge, time management, mental stress, physical illness, less response from the students, and personal issues were the common problems faced the online group students.

**Figure (3):** shows the students' perceptions about the quality of technology and effectiveness of online teaching methods among three groups, (58.5%) of traditional group had poor effect of online teaching method. nearly quarter of online group had good and very good effect. While (14%) of online and hybrid groups had

mentioned that the quality of the online teaching method was excellent.

Table (5): clarifies that 59.5% of the traditional teaching students had an excellent course, 67.0% mentioned the instructor was an excellent teacher, 67.0% gained a good understanding of concepts/principles in this field, 51.5% deepened interest in the subject matter of this course, 65.0% motivated to do well in obstetric nursing, 68.0% enjoyed the class, 66.5% nursing obstetric was interesting, 68.5% satisfied with using this learning methods, 68.5% learning method helped them sequence the educational information, 74.0% learning method helped them easily recall the educational information, 60.5% learning method was helpful in the development of the thinking skills, 58.5% preferred this learning method in the future based on the arrangement of ideas, and 64.0% recommended the use of this learning method to the college with statistically significance differences (P-Value < 0.001).

Table (6) Presents that there was statistically significant difference regarding Students' satisfaction level and skills outcomes regarding using of online versus traditional teaching among the studied groups. 74.0% of the traditional teaching group & 62.5% of hybrid group had total student' satisfaction more than 50%, while 66% of online group were unsatisfied 50%. Meanwhile, total skills outcomes 64% of traditional group were high (>66%).

Table (7): reveals that 80.5% of the online teaching group students had high Academic pressure might be stressful Exam and course-related academic stress and Academic self-perception-related anxiety with statistically significant differences (P-Value < 0.001). Also, Total academic stress level among the online

teaching group was higher than other groups with statistically significant differences (P-Value < 0.001).

Table (8): shows that 32.0% of the online teaching group students had a high belief that ability could grow with effort, 32.5% of the traditional teaching group students had a high belief in the ability to meet specific goals, and 32.0% of the online teaching group students had a high level of self-efficacy with statistically significant differences (P-Value < 0.025, 0.024, 0.025 respectively).

Table (9) presents a positive correlation between age with teaching experience of the students, students' satisfaction, skills outcomes, academic stress, and analysis teacher among traditional teaching methods groups ( $r=0.835$ ,  $P$  value < 0.001;  $r=0.841$ ,  $P$  value < 0.001;  $r=0.787$ ,  $P$  value < 0.001;  $r=0.850$ ,  $P$  value < 0.001;  $r=0.821$ ,  $P$  value < 0.001 &  $r=0.494$ ,  $P$  value < 0.001 respectively). It also presents a positive correlation between age with teaching experience of the students, students' satisfaction, skills outcomes, academic stress, and analysis teacher among online teaching methods groups ( $r=0.835$ ,  $P$  value < 0.001;  $r=0.841$ ,  $P$  value < 0.001;  $r=0.787$ ,  $P$  value < 0.001;  $r=0.850$ ,  $P$  value < 0.001;  $r=0.821$ ,  $P$  value < 0.001 &  $r=0.494$ ,  $P$  value < 0.001 respectively). It also noticed that there was a positive correlation between students age with teaching experience of the students, academic stress, and analysis teacher among hybrid teaching methods groups ( $r=0.420$ ,  $P$  value < 0.001;  $r=0.776$ ,  $P$  value < 0.001;  $r=0.659$ ,  $P$  value < 0.001; &  $r=0.652$ ,  $P$  value < 0.001 respectively). But negative correlation between students age with students' satisfaction and skills outcomes ( $r= -0.631$ ,  $P$  value < 0.001; &  $r= -0.622$ ,  $P$  value < 0.001 respectively).

**Table (1):** Demographic characteristics of the studied sample (n = 600).

Items	No.	%
<b>Age</b>		
16 to 20 years	213	35.5
21 – 25 years	378	63
26 – 30 years	9	1.5
Mean ± SD	21.1 ± 2.5 years	
<b>Sex</b>		
Male	271	45.2
Female	329	54.8
<b>Residence</b>		
Urban	247	41.6
Rural	353	58.8
<b>Duration of an Average Cash Register Shift</b>		
18 hours	558	93.0
21hours	42	7.0



**Table (2):** Distribution of studied sample regarding to education platform and mostly used application for teaching (n = 600).

<b>Instruction provided by the instructional system</b>	<b>No.</b>	<b>%</b>
Power Point lecture without record	27	4.5
Power Point lecture with record	133	22.1
Curriculum book	42	7.0
Educational video	204	34.0
All of them	194	32.3
<b># Most popular educational software</b>	<b>No</b>	<b>%</b>
Google Classroom	57	9.5
You tube	23	3.8
WhatsApp	58	9.6
Telegram	12	2
Microsoft team	267	44.5
Zoom	87	14.5
Moodle	55	9.16
More than one	25	4.16
All of them	16	2.6

#selected more than one choose

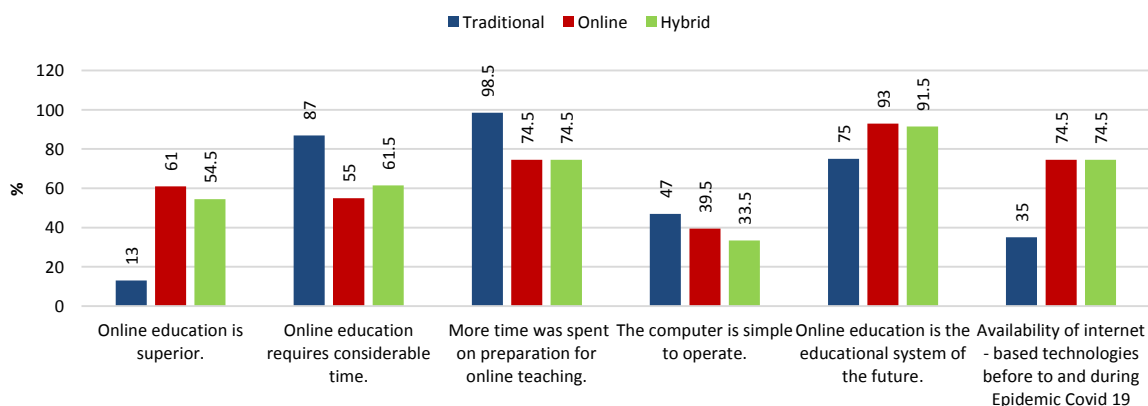
**Table (3):** Distribution of studied sample (online, and hybrid teaching methods groups) regarding to online learning experience (n = 400)

<b>Variable</b>	<b>Item</b>	<b>Online</b>		<b>Hybrid</b>	
		<b>No</b>	<b>%</b>	<b>No</b>	<b>%</b>
<b>The type of internet connection:</b>					
	Mobile data	87	43.5	76	38
	Wi-Fi	113	56.5	124	62
<b>Devices used during the online classes</b>					
	Laptop	34	17	64	32
	Desktop	35	17.5	16	8
	Computer Tablet	37	18.50	57	28.50
	I pad	37	18.50	11	5.5
	Mobile phone	57	28.50	52	26
<b>Percentage of commitment in attending online class</b>					
	More than 90%	69	34.5	86	43
	80-89%	86	43.0	83	41.5
	70-79%	45	22.50	31	15.5
<b>Percentage of the interaction during online classes</b>					
	More than 90%	42	21	62	31
	80-89%	38	19	58	29
	70-79%	28	14	24	12
	60-69%	27	13.5	36	18
	50-59%	44	22	13	6.50
	Less than 50%	21	10.5	7	3.50
<b>Frequency of internet disconnection during the online class</b>					
	1-2 times	81	40.5	103	51.5
	3-4 times	86	43	74	37
	5 and more	33	16.5	23	11.5

**Table (4):** Analysis of students’ opinions regarding using online versus traditional teaching among sample (n = 600).

Item	Traditional		Online		Hybrid		Test of significance	
	No.	%	No.	%	No.	%	X <sup>2</sup>	P-value
<b>These tasks were given during online meetings in which were evaluated on general knowledge.</b>								
Assignments	26	13.0	0	0.0	0	0.0	126.521	<0.001**
Quizzes	26	13.0	0	0.0	0	0.0		
Oral Presentations	24	12.0	11	5.5	13	6.5		
More than one	48	24.0	129	64.5	29	17.5		
All of them	55	27.5	67	33.5	166	83.0		
<b>In my perspective, online courses were:</b>								
Boring	11	5.5	10	5.0	10	5.0	174.747	<0.001**
Problematic	25	12.5	18	9.0	18	9.0		
Perplexing	28	14.0	29	14.5	29	14.5		
Exciting	99	49.5	30	15.0	31	15.5		
More than one	31	15.5	101	50.5	87	43.5		
All of them	6	3.0	12	6.0	25	12.5		
<b>I prefer</b>								
Online quizzes	22	11.0	19	9.5	19	9.5	123.787	<0.001**
Class tests	38	19.0	20	10.0	23	11.5		
Assignments	18	9.0	18	9.0	18	9.0		
More than one	99	49.5	39	19.5	33	16.5		
All of the above	23	11.5	104	52.0	107	53.5		
<b>Exams taken online were simpler to score well on than those taken on paper.</b>								
Strongly Agree	44	22.0	119	59.5	129	64.5	134.220	<0.001**
Agree	122	61.0	78	39	65	32.5		
Disagree	34	17.0	3	1.5	6	3.0		
<b>Online activities were a main draw of my education.</b>								
Strongly Agree	33	16.5	53	26.5	53	26.5	105.763	<0.001**
Agree	46	23.0	109	54.5	109	54.5		
Disagree	121	60.5	38	19.0	38	19.0		
<b>My abilities had increased because of online study.</b>								
Strongly Agree	33	16.5	53	26.5	53	26.5	69.383	<0.001**
Agree	35	17.5	87	43.5	81	40.5		
Disagree	105	57.5	51	25.5	59	29.5		
Strongly Disagree	27	13.5	7	3.5	7	3.5		
<b>The rapid feedback got from online assessments had been quite satisfying.</b>								
Yes	66	33.0	98	49.0	101	50.5	15.261	<0.001**
No	134	67.0	102	51.0	99	49.5		
<b>I was quite pleased with the instant results of online tests.</b>								
No	143	71.5	68	34	68	34	1.848	0.397
Yes	57	28.5	132	66.0	132	66.0		

\*\*Highly statistically significant differences < 0.001.



**Figure1.** Distribution of Students' perceptions towards online teaching and usage of application used during Epidemic Covid 19 among the studied sample (n = 600).

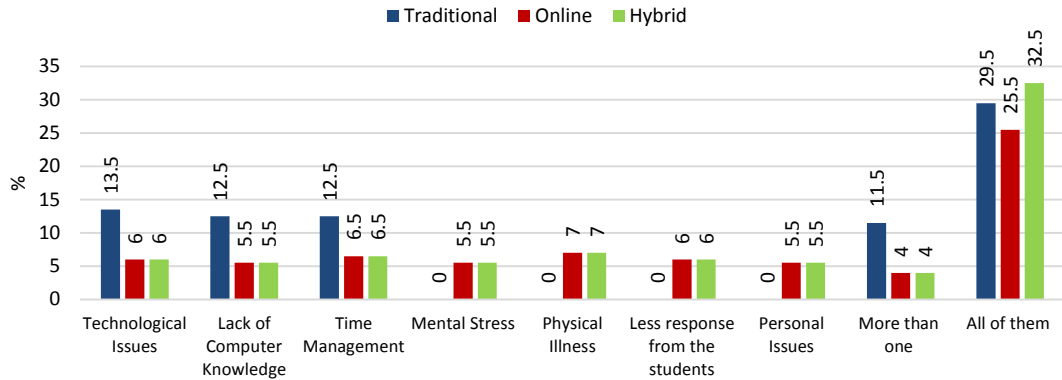


Figure 2. Distribution of Students' perceptions toward problems faced among the studied sample (n = 600)

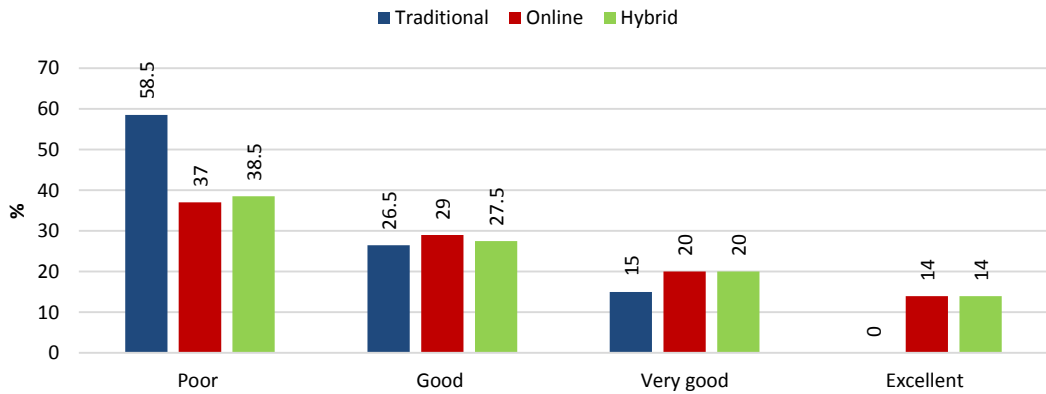


Figure 3. Distribution of Students' perceptions about the quality and effectiveness of online teaching methods among the studied sample (n = 600).

Table (5): Students' satisfaction with using online versus traditional teaching among the studied sample (n = 600).

Students' satisfaction	Traditional		Online		Hybrid		Test of significance	
	No.	%	No.	%	No.	%	X <sup>2</sup>	P-value
<b>The course was quite good.</b>								
Low	38	19.0	81	40.5	68	34.0	62.580	<0.001**
Moderate	43	21.5	71	35.5	35	17.0		
High	119	59.5	48	24.0	97	48.5		
<b>The professor was, in general, a very good educator.</b>								
Low	5	2.5	68	34.0	92	46.0	165.086	<0.001**
Moderate	61	30.5	83	41.5	11	5.5		
High	134	67.0	49	24.5	97	48.5		
<b>I now had a solid grasp of the fundamental ideas and principals involved in this work.</b>								
Low	7	3.5	92	46.0	96	50.0	164.360	<0.001**
Moderate	59	29.5	49	24.5	9	4.5		
High	134	67.0	59	29.5	95	47.5		
<b>Taking this course stimulated my interest in the material even more.</b>								
Low	3	1.5	59	29.5	46	23.0	75.684	<0.001**
Moderate	94	47.0	73	36.5	58	49.0		
High	103	51.5	68	34.0	96	48.0		
<b>To succeed as an obstetric nurse, I set goals for myself.</b>								
Low	4	2.0	77	38.5	53	26.5	95.312	<0.001**
Moderate	61	31.5	55	27.5	49	24.5		

Students' satisfaction	Traditional		Online		Hybrid		Test of significance	
	No.	%	No.	%	No.	%	X <sup>2</sup>	P-value
High	135	67.5	68	34.0	98	49.0		
<b>The course was interesting to me.</b>								
Low	3	1.5	80	40.0	34	17.0	114.643	<0.001**
Moderate	61	31.5	52	26.0	74	37.0		
High	136	68.0	68	34.0	92	46.0		
<b>Obstetric nursing was a fascinating field to study.</b>								
Low	6	3.0	41	20.5	19	9.5	75.529	<0.001**
Moderate	61	30.5	91	45.5	88	44.0		
High	133	66.5	68	34.0	93	46.5		
<b>Obstetric nursing was challenging.</b>								
Low	141	70.5	68	34.0	97	48.5	83.846	<0.001**
Moderate	53	36.5	96	48.0	87	43.5		
High	6	3.0	36	18.0	16	8		
<b>This strategy for education had met with my approval.</b>								
Disagree	8	4.0	92	46.0	94	47.0	161.754	<0.001**
Somewhat	55	31.5	40	20.0	7	3.5		
Agree	137	68.5	68	34.0	99	49.5		
<b>I was able to better organize my course work due to this technique of instruction.</b>								
Disagree	4	2.0	91	45.5	86	43.0	142.795	<0.001**
Somewhat	59	28.5	41	20.5	16	8.0		
Agree	137	68.5	68	34.0	98	48.0		
<b>I was able to retain a lot of course material due to the strategy.</b>								
Disagree	3	1.5	95	47.5	91	45.5	153.077	<0.001**
Somewhat	49	28.5	37	18.5	12	6		
Agree	148	74.0	68	34.0	97	48.5		
<b>The approach to learning helped me grow as a thinker.</b>								
Disagree	32	16.0	99	48.5	92	46.0	85.212	<0.001**
Somewhat	47	23.5	32	16.0	15	7.5		
Agree	121	60.5	68	34.0	93	46.5		
<b>Due to the systematic presentation of information, I liked this approach to education.</b>								
Disagree	30	15.0	88	44.0	89	44.5	65.674	<0.001**
Somewhat	53	26.5	44	22.0	15	7.5		
Agree	117	58.5	68	34.0	96	48.0		
<b>I thought my university might benefit from adopting this style of instruction.</b>								
Disagree	30	15.0	93	46.5	81	40.5	60.562	<0.001**
Somewhat	42	21.0	39	19.5	21	10.5		
Agree	128	64.0	68	34.0	97	48.5		

\*\*Highly statistically significant differences < 0.001.

**Table (6):** Students' satisfaction level and skills outcomes regarding using of online versus traditional teaching among the studied sample (n = 600).

	Traditional		Online		Hybrid		Test of significance	
	No.	%	No.	%	No.	%	X <sup>2</sup>	P- value
<b>Total students' satisfaction</b>								
Un-satisfaction (50%)	52	26.0	132	66.0	75	37.5	65.038	<0.001**
Satisfaction (>50%)	148	74.0	68	34.0	125	62.5		
<b>Total students' skills outcomes</b>								
Low (33.0%)	29	14.5	9	4.5	11	5.5	78.444	<0.001**
Moderate (34-66%)	43	22.5	123	61.5	92	46.0		
High (>66%)	128	64.0	68	34.0	97	48.5		

\*\*Highly statistically significant differences < 0.001.

**Table (7):** Students' Academic Stress regarding using of online versus traditional teaching among the studied sample (n = 600).

Academic Stress Dimension	Traditional		Online		Hybrid		Test of significance	
	No.	%	No.	%	No.	%	X <sup>2</sup>	P-value
<b>1- Academic pressure might be stressful.</b>								
Low	141	70.5	4	2.0	48	24.0	336.635	<0.001**
Moderate	56	23.0	35	17.5	74	37.0		
High	3	1.5	161	<b>80.5</b>	78	39.0		
<b>2- Exam and course-related academic stress</b>								
Low	51	25.5	5	2.5	48	24.0	284.701	<0.001**
Moderate	144	72	34	17	74	37.0		
High	5	2.5	161	<b>80.5</b>	78	39.0		
<b>3- Academic self-perception-related anxiety</b>								
Low	51	25.5	4	2.0	48	24.0	284.701	<0.001**
Moderate	146	73.0	35	17.0	74	37.0		
High	3	1.5	161	<b>80.5</b>	78	39.0		
<b>Total academic stress level</b>	<b>Mean</b>	<b>SD</b>	<b>Mean</b>	<b>SD</b>	<b>Mean</b>	<b>SD</b>	<b>F</b>	<b>P-value</b>
<b>Mean scores</b>	4.8	1.1	8.4	1.2	6.5	2.3	241.885	<0.001**

\*\*Highly statistically significant differences < 0.01.

**Table (8):** Self-efficacy among traditional, online, and hybrid teaching methods groups (n = 600).

Self-efficacy	Traditional		Online		Hybrid		Test of significance	
	No.	%	No.	%	No.	%	X <sup>2</sup>	P-value
<b>The belief that ability could grow with effort</b>								
Low (Less than 50%)	141	70.5	136	68.0	159	79.5	7.367	0.025*
High (More than 50%)	59	29.5	64	32.0	41	20.5		
<b>Belief in the ability to meet specific goals</b>								
Low (Less than 50%)	135	67.5	148	74.0	159	79.5	7.440	0.024*
High (More than 50%)	65	32.5	52	26.0	41	20.0		
<b>Total self-efficacy scale</b>								
Low (Less than 50%)	141	70.5	136	68.0	159	79.5	7.367	0.025*
High (More than 50%)	59	29.5	64	32.0	41	20.5		

\*Statistically significant differences < 0.05

**Table (9):** Correlation matrix between age, teaching experience of the students, students' satisfaction, skills outcomes, academic Stress, and analysis teacher among the studied sample (n = 600).

		Traditional group						Online group						Hybrid group					
						Academic Stress	Analysis teacher	Age	Teaching experience of the students	Students' satisfaction	Skills outcomes	Academic Stress	Analysis teacher	Age	Teaching experience of the students	Students' satisfaction	Skills outcomes	Academic Stress	Analysis teacher
Teaching experience of the students	R							.835**	1					.420**	1				
	P-value	<.001						<.001						<.001					
Students' satisfaction	R	.841**	.866**	1				.841**	.866**	1				-.631**	.048	1			
	P value	<.001	<.001					<.001	Age	Teaching experience of the students	Students' satisfaction	Skills outcomes		<.001	.502				
Skills outcomes	R	.787**	.690**	.934**	1			.787**	.835**	1				-.622**	.075	.981**	1		
	P value	<.001	<.001	<.001				<.001	<.001	<.001				<.001	.288	<.001			
Academic stress	R	.850**	.787**	.854**	.834**	1		.850**	.787**	.854**	.834**	1		.776**	.004	-.773**	-.775**	1	
	P value	<.001	<.001	<.001	<.001			<.001	<.001	<.001	<.001			<.001	.957	<.001	<.001		
Analysis teacher	R	.821**	.680**	.895**	.948**	.852**	1	.821**	.680**	.895**	.948**	.852**	1	.659**	.014	-.921**	-.932**	.796**	1
	P value	<.001	<.001	<.001	<.001	<.001		<.001	<.001	<.001	<.001	<.001		<.001	.839	<.001	<.001	<.001	
Self-efficacy	R	.494**	.416**	.513**	.551**	.668**	.680**	.494**	.416**	.513**	.551**	.668**	.680**	.652**	.239**	-.639**	-.674**	.790**	.751**
	P value	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001

## Discussion

Since the 16th of March 2020, as part of a flurry of steps to curb the Covid-19 outbreak, colleges and schools throughout the nation have been closed. To make education accessible from any location, it was necessary to simulate physical environments virtually. The old system's catastrophe response had been rendered ineffective, and the pandemic's repercussions would continue to be felt for months, if not years.

The main aim of this study was to compare the effect of Online, Traditional and Hybrid Teaching strategy among Obstetrics nursing students on their perceptions, satisfaction, academic stress, and self-efficacy during the Epidemic Covid- 19. The findings of the present study will be discussed under the following points:

**Regarding socio -demographic characteristics of the studied sample**, it was found that near than two thirds of the studied sample aged between 21 – 25 years with mean  $21.1 \pm 2.5$  years, more than half of them lived in the rural area, the great majority their average register hours were 18 hours (**Table 1**). These results didn't affirm the study of **Kassem et al., (2020)** who reported that more than two thirds of nursing students using the blended approach were female and under the age of 20. Meanwhile, at the traditional process, more than half of students were under the age of 20 and more than half were female.

The finding of the current study showed that more than one third of the studied sample, their education from the education platform by video, and near than half of them used Microsoft team then less than one quarter used Zoom application for teaching (**Table 2**). The results of study contradicted those of **Sathish et al., (2020)** who reported that most students participated in online lectures using the zoom app; they used Google Meet after using Google Classroom for their academic tasks. A minority of students had a low opinion of this application method as a means of disseminating instructional materials during a pandemic.

Also, the current study showed that nearly half of online and nearly two third of hybrid groups used Mobile data & Wi-Fi in online learning, nearly more than third of both groups had excellent quality of internet connection. About more than quarter of both groups used mobile phones in the online group, computer

tablet in hybrid group. While nearly half of both groups had committed to online classes. Approximately a quarter of online group and nearly third of hybrid group interacted in online classes. While nearly half of both groups (online & hybrid) had frequency of internet disconnection during the online class (3-4times) and (1-2 times) respectively (**Table 3**). The researchers' opinions revealed that these results could be linked to insufficient broadband connections and internet inaccessibility. These results didn't agree with **Sathish et al., (2020)** who revealed a substantial gap between how people thought about online education and how they really utilized the tools they needed during the time covered by episode covid19. They found that online education outperformed more traditional means.

**Regarding using online versus traditional teaching among traditional, online, and hybrid teaching methods groups (Table 4)**. The results of the current study clarified that there was a highly statistically significant difference regarding analysis of students' opinions at p-value  $<0.001$ . The vast majority of online groups had assignments, quizzes, oral presentations, and others. Meanwhile, nearly half of the studied sample had online courses that were boring, problematic, perplexing, exciting and may have more than one. Nearly two thirds of hybrid group & more than half of online group were strongly agreed while nearly two third of traditional group agreed regarding exams taken online were simpler to score well on than those taken on paper. More than half of traditional groups disagreed, while nearly half of both groups agreed about their abilities increased because of online study. Two thirds of the traditional group and half of the online group weren't satisfied during online assessment and half of hybrid group were satisfied during online assessment. Two thirds of both groups (online & hybrid) were pleased with the instant results of online tests, while nearly three quarters of traditional group weren't pleased with the instant results of online tests. This result might be due to the fact that most of the students must have mobile, laptop, computers, and smart technology to continue the learning process during the episode of Covid 19 pandemic.

This finding was affirmed by **Jamal & Aldaifallah, (2020)** who conducted the study "Traditional Teaching or Virtual Learning: Better

Option". Their results showed that Maximum of the students completed their semester via blackboard, Zoom, Telegram and minority of them had none. Students found online sessions problematic, while less than quarter of them found online session boring, perplexing, exciting and felt all the above, while only minor of them replied as none. The query related to the problems due to their absence from the virtual sessions was (owing to technical issues, while not interesting, no internet connection and other issues).

Those results were consistent with those of several other studies **Kassem et al., (2020)** which found that the group that benefited most from the adaptability and convenience of blended learning's electronic resources (those who showed the most improvement in computer literacy and self-assurance in identifying what was most relevant to solving problems) outperformed the control group (those who relied on more traditional teaching methods). **Kintu et al., (2017)** had shown that a student's level of comfort and skill with technology was a significant predictor of their success in a mixed learning environment.

The study was also backed with **Kavitha & Jai Singh, (2018)** who mentioned that blended classrooms had been shown to have a favorable effect on student learning and these classrooms included students who were comfortable with and adept at using technology. Information, communication technologies, and analytical skill development were all bolstered by students who used blended learning strategies.

**Regarding Students' perceptions towards online teaching and usage of application used during Epidemic Covid 19 among traditional, online, and hybrid teaching methods group (Figure 1).** The current study illustrated that more than half of online group students agreed with online teaching was better, vast majority of them agreed with online teaching was the future education system and nearly three quarter agreed with the usage of online tools before and during the Epidemic Covid 19. Also, most of traditional group students agreed with online teaching took more time-consuming, great majority agreed that with spending more time for preparation in online teaching, and near than half of them agreed with the easy to handle the computer.

Those results were agreed with the findings of **Sathish et al., (2020)** who also found a

discordant relationship between students' pre- and post-episode covid19 attitudes about online education and their use of related applications, these findings validated hypotheses concerning the effectiveness of the latter. The researchers' opinion that online education was the future of the educational system, that it was superior to traditional methods of instruction, that it required more time to prepare lessons, that it was simple to use computers in the classroom, and that it was easy to use computers in the classroom were not significantly correlated with either the prevalence of these beliefs or the frequency with which their applications were used before or during the airing of Covid19.

**Regarding distribution of Students' perceptions toward problems faced among traditional, online, and hybrid teaching methods groups (Figure 2),** the current study represented that nearly more than quarter of the traditional group and nearly third of the hybrid group reported the technological issues, lack of computer knowledge, time management, mental Stress, physical illness, less response from the students, and personal issues were the common problems faced the online group students.

These findings in accordance with those of **Sathish et al., (2020)** who also discovered an age-related variation in the challenges that students confront while enrolled in online courses. Acceptance of the null hypothesis ( $p > 0.05$ ) indicated that there was no significant association between age and difficulties encountered by students when attending online programs. There may be a correlation between students' lack of access to technology and these outcomes. The quality of the IT infrastructure and the familiarity of the teaching staff with digital teaching tools were two relevant characteristics, and they both pointed to a low level of instruction.

**Concerning students' perceptions about the quality of technology and effectiveness of online teaching methods among three groups (Figure 3),** more than half of traditional group had poor effect of on- line teaching method. Nearly a quarter of online group had good and very good effect. While less than quarter of online and hybrid groups had mentioned that the quality of the online teaching method was excellent. Consistent with the findings of **Jamal & Aldaifallah, (2020)** just half of respondents strongly agreed that using online learning



materials would help them improve their abilities and support immediate feedback on their computer-generated assessments.

**Regarding students' satisfaction with using online versus traditional teaching among traditional, online, and hybrid methods (Table 5).** It revealed that that more than half of the traditional teaching students had an excellent course, more than two thirds mentioned the instructor was an excellent teacher, gained a good understanding of concepts/principles in this field, half of them deepened interest in the subject matter of this course, nearly two thirds of them motivated to do well in obstetric nursing, enjoyed the class, nursing obstetric was interesting, more than two third satisfied with using this learning methods, learning method helped them sequence the educational information, most of learning method helped them to easily recall the educational information, nearly three quarter of them had learning method was helpful in the development of the thinking skills while nearly two third recommended the use of this learning method to the college. All with statistically significance differences (P-Value < 0.001 respectively).

The findings corroborated those of **Kassem et al., (2020)** who found a similar mean score of student satisfaction while employing a mixed vs conventional teaching technique. The average course satisfaction score when utilizing the hybrid approach was  $(46.17 \pm 6.06)$ , compared to  $(44.20 \pm 6.19)$  when using the more conventional approach. Statistically speaking, there was a difference in how motivated I was to succeed in nursing administration using the blended learning technique and the conventional learning method ( $P < 0.05$ ), but overall, the course was fantastic, and I was inspired to perform well in both.

Similarly, **Jaish, (2018)** found that students who were taught in a conventional classroom reported being happier and more pleased with the clarity of instruction, lending credence to current findings. The development of students' analytic abilities was prioritized and valued more in mixed learning settings. In addition, the research finding was to those of other researchers **Ramly et al., (2019)** that revealed students were happier with a hybrid approach to instruction than with the more conventional lecture format. Students that used blended learning to study typically come away with a more optimistic outlook on the topic of **Lin et al., (2016)**. Also, it's a great time-

saver, especially for teachers of big courses, since it allowed them to interact with more learners in less time.

Also, the current study presented that there was statistically significant difference regarding students' satisfaction level and skills outcomes regarding using online versus traditional teaching among traditional, online, and hybrid teaching methods groups. Nearly three quarters of the traditional teaching group & nearly two thirds of the hybrid group had total student' satisfaction with more than fifty percent, while two thirds of the online group were unsatisfied with fifty percent. Meanwhile, total skills outcomes were high more than sixty-six percentage for nearly two third of traditional group (**Table 6**).

The mean score of skill outcomes from blended vs traditional methods, as judged by both study groups, did not coincide with these findings **Kassem et al., (2020)** who reported that there was a statistically significant difference between the groups that utilized conventional and blended learning for two skill outcomes: "my computer abilities had improved because of this course" and "I was confident in recognizing what was important in addressing issues." Also, **Tananuraksakul, (2016)** observed that students were motivated by blended learning and had a good attitude towards it, but that it may not be an adequate instrument for real learning, which runs counter to the conclusions of the present research. This was because blended learning was increasingly being seen as an alternative mode of instruction that benefits students' academic outcomes.

**Regarding academic stress,** revealed that majority of the online teaching group students had high Academic pressure may be stressful, Exam and course-related academic stress and Academic self-perception-related anxiety with statistically significant differences (P-Value < 0.001). Also, Total academic stress level among the online teaching group was higher than other groups with statistically significant differences (P-Value < 0.001) (**Table 7**). This finding could be related to a combination of stress and difficult home circumstances, such as a lack of access to academic tools such as computers and internet access. Distractions in the learning environment at home were additional factors to consider.

Most obstetrics nursing students reported only mild to moderate academic stress while using the blended learning approach. This

conclusion was consistent with the findings of **Luaran et al., (2015)** that the average student stress score was reduced by blended learning. Since this was the case, the researchers may infer that stress was quite minimal. This finding accords with the claims of **Commodari & La Rosa (2021)** who found that students who participated in distance learning reported significantly higher levels of stress and homework-related psychological discomfort. The negative impact of academic stress on performance was also demonstrated among online group studied by **Khan et al., (2018)**. The academic stress identified by **Gbetor et al., (2015)** had appreciable impact on the online population under study.

Moreover, this went against the findings of **Essel & Owusu, (2017)** who found that students who had the "traditional learning experience" of high academic stress at predictable times do so because they had to prepare for and take exams, compete for class rankings, and learn a vast amount of syllabus in a short amount of time. Those results go counter to those of **Alateeq et al., (2020)** who found that although most students experience some degree of academic stress, the correlation was stronger for traditional learning.

The study's findings corroborated those of **Elashry et al., (2021)** which found that teenagers experiencing the COVID-19 pandemic had elevated levels of academic stress. This may be the result of students' increased difficulty concentrating, disorganization, and anxiety about lockdown as a result of the ongoing COVID-19 epidemic.

**Regarding Self-efficacy, the current study** showed that nearly third of the online teaching group students had a high belief that ability can grow with effort, also one third of the traditional teaching group students had a high belief in the ability to meet specific goals, and one third of the online teaching group students had a high level of self-efficacy with statistically significant differences (P-Value < 0.025, 0.024, 0.025 respectively) (**Table 8**). This conclusion was consistent with the finding of **Essel & Owusu, (2017)** since the semester system requires students to complete fewer periods than they would like. While results disagreed with **Kassem et al., (2020)** who revealed that total self-efficacy was significantly correlated with performance in the blended group. The fact that some students can mitigate the negative effects of

stress on their performance may explain this finding. This suggested adopting alternative strategies for teaching students how to deal with stress, which may have a positive impact on the education of the most capable students.

**Lastly, this study revealed a positive correlation between age with** teaching experience of the students, students' satisfaction, skills outcomes, academic stress, and analysis teacher among traditional teaching methods group, also, there was a positive correlation between age with teaching experience of the students, students' satisfaction, skills outcomes, academic stress, and analysis teacher among online teaching methods groups. Also, there was a positive correlation between student's age with teaching experience of the students, academic stress, and analysis teacher among hybrid teaching methods groups. There was a negative relationship between students' ages and their levels of pleasure in the classroom, and skills outcomes (**Table 9**).

The finding agreed with **Kassem et al., (2020)**, **Sathish et al., (2020)** and **Jamal & Aldaifallah, (2020)** who reported that there was positive correlation between age with teaching experience of the students, students' satisfaction, skills outcomes, academic stress, and analysis teacher among traditional, online, and hybrid teaching methods groups.

### **Conclusions**

It was concluded that most of students were satisfied with the traditional teaching method, academic stress was present across all three groups (traditional, online, and hybrid), and the greatest levels of stress were found among obstetrics nursing students who had taken the course via the online method with low total perceptions and self-efficacy.

### **Recommendations:**

After analyzing the data, the authors of the research that recommended that

- 1- Both educators and students would benefit much from specialized training programs in the use of computers and the internet, and the management of the faculties should make concerted efforts to facilitate this development.
- 2- The faculties should prioritize blended learning that focuses on raising students' success and accommodates for their unique learning styles.

- 3- Providing educators with the resources they need to reduce student stress in the classroom via the use of blended learning and other strategies.
- 4- Additional research on the connection between blended learning and academic success may be conducted.

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