"A STUDY ON THE IMPACT OF ARTIFICIAL INTELLIGENCE IN EDUCATION AND THE SOCIAL EFFECTS OF REMOTE LEARNING ON ACADEMIC PERFORMANCE AND LEARNING OUTCOMES AMONG STUDENTS."

BY:

Mr. Muhammed Ihsan
Mr. Muhammed Yasil
Mr. Muhammed Fadil
Mr. Muhammed Anees

4th Year B. Sc. Nursing (2022-26) Research Project Submitted to

Acharya NR College of Nursing

Under the Guidance of Mr. Sunny Jerome Assistant Professor

Department of Mental Health Nursing, Acharya NR College of Nursing

Acharya Institute, Dr. Sarvepalli Radhakrishnan Road Soladevanahalli,

Bengaluru-560090

RAJIV GANDHI UNIVERSITY OF HEALTH SCIENCES BENGALURU,

ACHARYA NR COLLEGE OF NURSING, SOLADEVANAHALLI,

BENGALURU- 560107

THIS IS TO CERTIFY THAT THIS PROJECT WORK HAS BEEN SUCCESSFULLY CARRIED OUT BY.

(Mr. Muhammed Ihsan, Mr. Muhammed Yasil, Mr. Muhammed Fadil, Mr. Muhammed Anees)

4th YEAR B.Sc. NURSING SUBMITTED AS A PARTIAL FULFILMENT OF REQUIREMENTS FOR THE BACHELOR OF SCIENCE IN NURSING FROM RAJIV GANDHI UNIVERSITY OF HEALTH SCIENCES, BENGALURU

Dr. Vijayamalar S
Principal
Acharya NR College of Nursing

Mr. Sunny Jerome
Assistant Professor
Acharya NR College of Nursing

DECLARATION BY CANDIDATE

We hereby declare that this project entitled “A Study on the Impact of Artificial Intelligence in Education and the Social Effects of Remote Learning on Academic Performance and Learning Outcomes among B.Sc. Nursing Students” is research done by Mr. Muhammed Ihsan, Mr. Muhammed Yasil, Mr. Muhammed Fadil, and Mr. Muhammed Anees as a partial fulfilment of the requirements for the Degree of Bachelor of Science in Nursing, under the guidance of Mr. Sunny Jerome, M.Sc. (N), Department of Mental Health Nursing, Assistant Professor, Acharya NR College of Nursing.

Signature of the Students:

Mr. Muhammed Ihsan

Mr. Muhammed Yasil

Mr. Muhammed Fadil

Mr. Muhammed Anees

Date:

Place: Bengaluru

CERTIFICATE BY THE GUIDE

This is to certify that the project entitled “A Study on the Impact of Artificial Intelligence in Education and the Social Effects of Remote Learning on Academic Performance and Learning Outcomes among B.Sc. Nursing Students” is a research work done by Mr. Muhammed Ihsan, Mr. Muhammed Yasil, Mr. Muhammed Fadil, and Mr. Muhammed Anees as a partial fulfilment of the requirements for the degree of Bachelor of Science in Nursing, under the guidance of Mrs. Sunny Jerome, Assistant Professor, Acharya NR College of Nursing.

Date:

Place: Bengaluru

Signature of the guide:

Mr. Sunny Jerome

Assistant Professor

Department of Mental Health Nursing

Acharya NR College of Nursing.

ENDORSEMENT BY THE PRINCIPAL

This is to certify that the research project entitled " A Study on the Impact of Artificial Intelligence in Education and the Social Effects of Remote Learning on Academic Performance and Learning Outcomes among B.Sc. Nursing Students " is a bonafide research work done by Mr. Muhammed Ihsan, Mr. Muhammed Yasil, Mr. Muhammed Fadil, and Mr. Muhammed Anees as a partial fulfilment of the requirement for the degree of Bachelor of Science in Nursing under the guidance of Mr. Sunny Jerome, M.Sc. (N), Department of Mental Health Nursing, Assistant Professor

Date:

Place: Bengaluru

Signature of Principal
Dr. Vijayamalar. S
Principal
Acharya NR College of Nursing

ACKNOWLEDGMENT

"Oh, give thanks to the Lord, for He is good! For His mercy endures forever. The Lord is for me among those who help us."

There are several hands and hearts behind this work, without which this study could not have been completed successfully. We would like to express our sincere gratitude to all those who supported and encouraged us throughout the study.

First of all, we thank the Almighty God for His boundless grace, strength, and blessings, which enabled us to carry out the study and complete it within the specified period of time.
It is our honour and privilege to express our deep sense of gratitude to our Principal, Dr. Vijayamalar S., Acharya NR College of Nursing, for providing us with the opportunity and necessary facilities to conduct this study.

We express our sincere and heartfelt thanks to our guide, Mr. Sunny Jerome, Assistant Professor, Department of Mental Health Nursing, for his constant encouragement, valuable guidance, supervision, and timely help throughout the entire course of this study. His support and constructive suggestions were invaluable in completing this research successfully.

We extend our sincere thanks to all the faculty members of Acharya NR College of Nursing for their guidance, encouragement, and support during the study. We are also grateful to all the students who participated in the study and provided their valuable time and cooperation. Without their cooperation, this study would not have been possible.

We express our sincere gratitude to our librarian, Mrs. Sheela, Acharya NR College of Nursing, for extending the necessary library facilities and providing valuable support throughout the study.
Finally, yet importantly, we express our heartfelt gratitude to our parents and family members for their constant love, encouragement, prayers, and support throughout our academic journey and during the completion of this study.

Date:

Place: Bengaluru

ABSTRACT

TITLE OF THE STUDY

A Study on the Impact of Artificial Intelligence in Education and the Social Effects of Remote Learning on Academic Performance and Learning Outcomes among B.Sc. Nursing Students in a Selected College of Nursing, Bengaluru.

BACKGROUND

Artificial Intelligence (AI) is increasingly being integrated into education to support students in accessing information, understanding concepts, completing academic activities, and enhancing learning. At the same time, remote learning has become an important mode of education, providing flexibility and access to learning resources but potentially affecting students' social interaction, communication, motivation, and academic engagement. Understanding the impact of AI and the social effects of remote learning is important to determine their influence on students' academic performance and learning outcomes.

OBJECTIVES OF THE STUDY

1. To assess the impact of Artificial Intelligence in education among undergraduate nursing students.
2. To assess the social effects of remote learning among undergraduate nursing students.
3. To assess the level of academic performance and learning outcomes among undergraduate nursing students.
4. To determine the relationship between the use of Artificial Intelligence and academic performance and learning outcomes among undergraduate nursing students.
5. To determine the relationship between the social effects of remote learning and academic performance and learning outcomes among undergraduate nursing students.
6. To find out the association between the impact of Artificial Intelligence in education and selected socio-demographic variables among undergraduate nursing students.
7. To find out the association between the social effects of remote learning and selected socio-demographic variables among undergraduate nursing students.

METHODOLOGY

A quantitative, non-experimental descriptive correlational research design will be adopted for the study. The study will include 60 undergraduate nursing students (n = 60) studying in B.Sc. Nursing 1st to 4th year from a selected College of Nursing, Bengaluru. The participants will be selected using non-probability convenience sampling.

Tools: -

Section A: Socio-demographic variables

Section B: Impact of Artificial Intelligence in Education

Section C: Social Effects of Remote Learning

Section D: Academic Performance and Learning Outcomes

TABLE OF CONTENTS

SL.NO	CONTENT	PAGE NO
1.	INTRODUCTION	**9 – 13**
2.	OBJECTIVES	**14 – 20**
3.	REVIEW OF LITERATURE	**21 – 25**
4.	METHODOLOGY	**26 – 39**
5.	RESULT	**40- 59**
6.	DISCUSSION	**60 – 63**
7.	SUMMARY	**64 – 66**
8.	BIBLIOGRAPHY	**67 – 69**
9.	ANNEXURE	**70 – 76**

CHAPTER- I
INTRODUCTION

INTRODUCTION

Artificial Intelligence (AI) refers to the ability of computers and machines to perform tasks that normally require human intelligence, such as learning, reasoning, problem-solving, decision-making, and understanding information. In recent years, AI has developed rapidly and has been increasingly integrated into various sectors, including healthcare, business, and education. In the field of education, AI-based applications such as intelligent tutoring systems, chatbots, virtual assistants, automated content generators, and personalized learning platforms have changed the way students access information and participate in learning activities.

The development of digital technology has significantly transformed modern education systems. Students increasingly use digital platforms, online resources, and AI-assisted applications to obtain information, understand difficult concepts, complete assignments, prepare for examinations, and improve their academic skills. AI tools can provide immediate responses, personalized explanations, learning resources, and academic support. These technologies have the potential to make learning more flexible, accessible, and efficient.

In nursing education, the integration of technology has become particularly important because nursing students are required to acquire theoretical knowledge as well as practical and clinical competencies. Nursing education involves learning complex subjects, developing clinical reasoning, applying knowledge to patient-care situations, and making appropriate decisions. AI-supported educational tools can assist students in understanding nursing concepts, reviewing learning materials, preparing assignments, and obtaining additional explanations beyond the classroom.

At the same time, the development of remote learning has brought significant changes to the educational experience of students. Remote learning refers to an educational approach in which teaching and learning take place through digital platforms without requiring students and teachers to be physically present in the same classroom. Online classes, video conferencing, digital learning platforms, recorded lectures, electronic resources, and virtual discussions have become important components of remote education.

Remote learning provides several advantages, including flexibility, accessibility, convenience, and access to a wide range of educational resources. Students can attend classes from different locations, review recorded materials, and communicate with teachers through digital platforms. However, remote learning may also create challenges for students, particularly in relation to social interaction, communication, motivation, participation, and feelings of isolation.

Social interaction is an important component of student learning. Face-to-face interaction with teachers and classmates provides opportunities for discussion, collaboration, peer support, communication, and sharing of experiences. During remote learning, reduced physical interaction may affect these opportunities. Some students may experience loneliness, reduced motivation, difficulty communicating with classmates, and limited participation in group activities. These social effects may influence students' engagement with learning and may subsequently affect their academic performance and learning outcomes.

Academic performance refers to the extent to which students achieve expected educational goals, which may be reflected through examination results, assignments, participation, understanding of concepts, and other academic activities. Learning outcomes refer to the knowledge, skills, abilities, and competencies that students develop through the learning

process. For nursing students, positive learning outcomes are particularly important because their educational preparation directly contributes to their future professional practice and ability to provide safe and effective patient care.

The use of AI and remote learning may influence academic performance and learning outcomes in different ways. AI can support students by providing quick access to information, simplifying complex concepts, offering personalized learning assistance, and helping them prepare for academic activities. Similarly, remote learning can provide students with flexible access to educational resources. However, the effectiveness of these approaches may depend on students' digital literacy, internet accessibility, learning environment, motivation, level of interaction, and ability to use technology appropriately.

Although technology can support education, excessive reliance on digital resources may also create challenges. Students may sometimes depend on readily available online information rather than engaging deeply with learning materials. In remote learning environments, distractions, technical difficulties, limited interaction, and lack of direct supervision may also affect concentration and academic engagement. Therefore, it is important to understand not only the educational benefits of AI and remote learning but also their potential social and academic effects.

Nursing educators have an important role in ensuring that technology is used effectively in nursing education. Educators can guide students in the responsible use of AI tools, encourage independent learning, facilitate meaningful interaction during remote education, and provide appropriate academic support. A balanced approach can help students benefit from technological advancements while continuing to develop communication, collaboration, clinical reasoning, and other essential competencies.

The increasing use of AI and remote learning makes it necessary to examine their influence on students' educational experiences. Understanding the relationship between AI use, the social effects of remote learning, academic performance, and learning outcomes can provide useful information for nursing educators and educational institutions. Such information may help in developing appropriate teaching strategies, improving digital learning practices, and supporting students in achieving better educational outcomes.

Therefore, the present study aims to assess the impact of Artificial Intelligence in education and the social effects of remote learning on academic performance and learning outcomes among undergraduate nursing students in a selected College of Nursing. The findings of the study may contribute to a better understanding of how emerging educational technologies and remote learning environments influence nursing students and may provide useful direction for improving the quality of nursing education.

NEED FOR THE STUDY

Technological development at a rapid pace has transformed the field of education. The emergence of Artificial Intelligence (AI) has brought significant changes in the way students access information, learn concepts, complete assignments, prepare for examinations, and communicate with teachers and peers. AI-based educational tools provide students with immediate access to information, personalized learning support, explanations, and academic assistance. In nursing education, where students require both theoretical knowledge and practical skills, the appropriate use of technology can support and enhance the learning process. Nursing education involves the development of knowledge, skills, communication, clinical reasoning, problem-solving, and decision-making abilities. Undergraduate nursing students are expected to acquire adequate theoretical knowledge and clinical competencies to provide safe and effective patient care. AI-based educational tools can assist nursing students in understanding complex concepts, reviewing academic content, obtaining additional learning resources, and preparing for examinations. Therefore, AI has the potential to contribute positively to students' academic performance and learning outcomes.

Along with the development of AI, remote learning has become an increasingly important component of modern education. Remote learning allows students to attend classes, access study materials, communicate with teachers, and participate in academic activities through online platforms. It offers flexibility and convenience and enables students to continue their education irrespective of geographical location. However, remote learning may also influence students' social experiences and academic engagement.

Social interaction plays an important role in the educational development of nursing students. Face-to-face interaction with teachers and classmates provides opportunities for communication, discussion, collaboration, peer support, and sharing of learning experiences. In remote learning environments, reduced physical interaction may result in limited communication, reduced peer interaction, feelings of social isolation, difficulty maintaining relationships, and decreased participation in group activities. These social effects may influence students' motivation, concentration, and engagement in learning.

Academic performance is an important indicator of the effectiveness of the educational process. It reflects students' ability to understand concepts, complete academic activities, participate in learning, and achieve educational requirements. Learning outcomes include the knowledge, understanding, skills, and competencies that students acquire through education. For nursing students, achieving appropriate learning outcomes is particularly important because their academic preparation contributes directly to their future clinical practice and patient care.

The use of AI and remote learning may have both positive and negative effects on academic performance and learning outcomes. AI can help students obtain information quickly, simplify difficult concepts, save time, and provide personalized academic assistance. Remote learning can provide flexible access to lectures, learning materials, and educational resources. However, technical difficulties, poor internet connectivity, distractions, reduced interaction, lack of motivation, and an unsuitable home learning environment may negatively influence students' academic engagement and outcomes.

The social effects of remote learning are particularly important to consider because nursing education requires communication, teamwork, collaboration, and interpersonal skills. Students

need opportunities to interact with teachers and peers to develop professional communication and collaborative abilities. Therefore, it is necessary to understand whether the social changes associated with remote learning have an influence on students' academic performance and learning outcomes.

The increasing availability of smartphones, internet facilities, digital learning platforms, and AI applications has made technology an integral part of students' educational lives. Undergraduate nursing students are increasingly exposed to these technologies for academic purposes. However, there is a need to understand how students perceive the use of AI and remote learning and how these educational approaches influence their academic performance, learning outcomes, social interaction, and motivation.

Nursing educators have an important role in ensuring the effective integration of technology into nursing education. Students should be encouraged to use AI tools as supportive learning resources rather than relying entirely on technology. At the same time, educators need to create opportunities for meaningful interaction, collaboration, communication, and academic support in remote learning environments. A balanced approach can help students benefit from technological developments while maintaining effective learning and social engagement.

Research on AI in education and remote learning can provide valuable information for nursing educators and educational institutions. Understanding the impact of AI and the social effects of remote learning may help educators identify challenges faced by students and develop appropriate teaching strategies. It may also contribute to improving digital learning practices, student support systems, academic engagement, and learning outcomes.

The findings of such a study may be useful for developing appropriate guidelines for the responsible use of AI, improving remote-learning practices, and strengthening student-teacher and peer interaction. It may also help educational institutions provide suitable digital facilities and support to nursing students.

Therefore, there is a need to study the impact of Artificial Intelligence in education and the social effects of remote learning on academic performance and learning outcomes among undergraduate nursing students. Such a study can provide useful evidence regarding the benefits and challenges associated with emerging educational technologies and help ensure that technology is used effectively to support the development of competent and academically successful nursing professionals.