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A Study on Knowledge and Awareness on COVID-19 among Nursing Students and Pharmacy Students in Chitradurga- A Prospective Observational Study



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HUMAN

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ABSTRACT

COVID 19 is a severe acute respiratory disease caused by corona virus II (SARS-COV II). The virus was first reported to the World Health Organization (WHO) country office in Wuhan, China. The WHO declared COVID-19 pandemic as a global public health emergency on January 30, 2020. The corona disease is transmitted human to human and continuously spread throughout the world. Therefore, the primary preventive measures like social distancing, hygiene and diagnosis are the effective ways to minimizing the spread of disease. The objectives of the study were to assess the awareness of Nursing and Pharmacy students regarding COVID-19, to assess the knowledge on importance of masks, sanitizer, gloves, and personal hygiene during this pandemic situation, and to compare the knowledge among Nursing and Pharmacy students. A prospective observational study was conducted among the Nursing and Pharmacy students at Chitradurga for a period of six months. A pre structured Google forms were used to assess knowledge and awareness of COVID-19. The obtained data was statistically analyzed by using unpaired T test and Pearson correlation to determine the significant difference between the variables. The mean score of knowledge of Pharmacy students was 15.29333 and 13.02667 which was higher than Nursing students 13.02667 and 15.29333. Pharmacy students are having more knowledge than Nursing students at a level of significance ($p=0.00$) which is highly significance. The result of knowledge and awareness on COVID-19 were statistically significance between nursing and pharmacy students. But knowledge and awareness need to be improved as these provisions play very important role in the health service. Awareness and education about COVID-19 should be conducted to control the spread of disease.



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INTRODUCTION

COVID-19 is severe acute respiratory disease caused by corona virus II (SARS-COV II). The virus was first reported to the world health organization country office in Wuhan, China. The virus has spread all over the world causing an unprecedented number of hospitalizations and facilities in many countries. The World health organization (WHO) declares covid-19 pandemic as a global public health emergency on January 30, 2020.¹

The COV family is a class of enveloped, single stranded RNA viruses that can cause respiratory, gastrointestinal, hepatic, and neurological diseases. The COVs are categorized in to four sub-families that is alpha, beta, gamma and delta COVs. Human COV infections are caused by alpha and beta COVs.² The corona virus can spread via close person to person contact, coughing and sneezing with a symptom of fever, dry cough, and shortness of breath and may sometimes cause severe diseases such as pneumonia, respiratory distress, and death in some cases.³ Other people can pick up the virus by touching these surfaces or objects. Based on epidemiological study, the incubation period of corona virus is 2-14 days.⁴ There are no recommendable effective drugs to control the disease. The best way to prevent infection is to avoid exposure to the virus by taking precautions to wash hands regularly with soap and water for at least 20 seconds, cover the nose and mouth with tissue or flexed elbow while coughing or sneezing, avoid close contact with people who are ill, avoid touching eyes, nose or mouth with dirty hands, stay home and self-isolate from others in case of feeling unwell.³

The WHO says, the Corona virus are zoonotic, meaning they are transmitted between animals and people. They are seven different types of human corona virus have been identified. Most people will be infected with at least one virus in their life-time.⁵ The infectious period may begin 1-2 days before symptoms appear, but people are likely most infectious during the symptomatic period, even if symptoms are mild. The infectious period is estimated to last for 7-12 days immoderate cases and up to 2 weeks in severe cases.⁶ People who have other underline problem or comorbidity factor, they are high risk.⁵

The corona disease is transmitted human to human and continuously spread throughout the world. Therefore, the primary preventive measures like physical distancing, hygiene and diagnosis are the effective ways to minimizing the spread of disease. Additionally screening of highly prone areas, quarantine of infected person, and subsequent treatment, for the high risk, have significant results to maintain public health in a better and effective way.

Moreover, social distancing, regular sanitization of exposed surfaces, and proper utilization of the available health care facilities potentially contribute to the control of the disease.⁷

It is very essential to take the vaccine from a licensed healthcare professional and follow every instructions, including getting a second dose. A person may get the vaccine at a local health department, hospitals. In the short term, a person who has had a COVID-19 vaccine may experience flu-like symptoms and other side effects like pain at the injection site, swelling at the injection site, fatigue, headache, muscle pain and fever. People's observance of the prevention measure is essential for controlling the spread of COVID-19, which is affected by their knowledge and awareness towards COVID-19. Therefore, the current study is aimed to investigate the knowledge and awareness towards COVID-19 among nursing and pharmacy students.

MATERIALS AND METHODS

A prospective observational study conducted among Nursing students and Pharmacy students of colleges in Chitradurga, for a period of six months. A total of 300 students from nursing and pharmacy colleges who satisfied the study criteria and consent to participate in this study were included in the study. The inclusion criteria includes pharmacy and nursing students, both male and female students, students who gave consent to be a part of this study. The exclusion criteria was students who were drop out from the study. The study was done after obtaining the approval by the Institutional Ethical Committee of Sri Jagadguru Mallikarjuna Murugharajendra College of Pharmacy, Chitradurga, Ref: No. SJMCP/690/2021-2022.

After obtaining informed consent, a self-administered questionnaire on knowledge and awareness regarding COVID-19 was distributed among nursing and pharmacy students using Google forms. Data was collected by the investigators and confidentially was maintained during the data collection process. For each correct answers of Knowledge and Awareness questionnaire was scored '1' and for each wrong answer '0' in the survey. The Knowledge and Awareness based questionnaire was assessed and mean Knowledge and Awareness scores were determined.

Statistical Analysis

The data was entered in Microsoft Excel-2010 version and the results were analyzed using Statistical Package for Social Services (SPSS 16.0). Descriptive method was applied to obtain the frequency and percentage, single paired T-test, paired T-test (2 tailed) & Pearson

correlation was applied to determine any significant difference between quantitative variables.

RESULTS

A total of 300 students were screened from pharmacy and nursing college in Chitradurga, out of which majority of the participants were females (n=300) (68.0%), gender wise distribution is represented in table no 1. The respondents were categorized into three age groups, 18-21 years old, 22-25 years old and 26-30 years old. The highest percentage of respondents, 15.72% were from 26-30 years old. Equal numbers of participants were selected from both courses due to different syllabus.

Knowledge based questionnaire assessment

The score of the test were analyzed using suitable statistical parameters such as mean, standard error mean, standard deviation, one sample test, and paired t test. In this study the result shows that the mean difference values of knowledge are 13.0267 for nursing students and 15.2933 for pharmacy students. Standard deviation values are 3.35974 for nursing students and 1.72057 for pharmacy students. Standard error mean values are 0.27432 for nursing students and 0.14048 for pharmacy students. The results indicate that Pharmacy students are having comparatively high knowledge (15.29) than Nursing students (13.03) at a level of significance ($p=0.00$) which is highly significance. The results are tabulated in table 2.

The results depict that mean value of knowledge are 13.50 for 18-21 years, 14.22 for 22-25 years and 15.72 for 26-30 years. The results are presented in table no 3.

Knowledge based questionnaire on assess the knowledge on importance of masks, sanitizer, gloves and personal hygiene during this pandemic situation.

In this study population results shows that mean value scores of nursing and pharmacy students are 3.7667 for nursing and 4.4267 for pharmacy. Standard deviation values are 1.3319 for nursing and 0.74498 for pharmacy. Standard error mean values are 0.10885 for nursing and 0.06083 for pharmacy. Study results represents that Nursing 3.7667 and Pharmacy 4.4267 follows best practices almost but comparatively Pharmacy students had higher level of knowledge regarding COVID 19 when compared to nursing students. The results are presented in table no 4.

The results states that gender mean knowledge scores are 3.54 for males and 4.32 for females but comparatively female students had higher level of knowledge regarding importance of masks, sanitizer, gloves and personal hygiene during this pandemic situation. The results are tabulated in table no 5.

TABLE NO. 1: DETAILS OF GENDER WISE DISTRIBUTION (N=300)

Sl. No.	Gender	Frequency	Percent
1	Males	96	32.0
2	Females	204	68.0
TOTAL		300	100

TABLE NO. 2: DISTRIBUTION OF MEAN SCORES OF KNOWLEDGE ASSESSMENT

Course	Mean	N	Std. Deviation Error	Std. Error Mean
Nursing	13.0267	150	3.35974	.27432
Pharmacy	15.2933	150	1.72057	.14048

TABLE NO. 3: DISTRIBUTION OF AGE GROUP V/S MEAN KNOWLEDGE SCORES

Age group V/S Mean scores				
Age group	N	Mean	Std. Deviation	Std. Error Mean
18-21	88	13.5000	3.36991	.35923
22-25	183	14.2295	2.71985	.20106
26-30	29	15.7241	1.50941	.28029

TABLE NO. 4: DISTRIBUTION OF MEAN COURSE OF KNOWLEDGE ON IMPORTANCE OF MASKS, SANITIZER, GLOVES AND PERSONAL HYGIENE DURING THIS PANDEMIC SITUATION

Course	Mean	N	Std. Deviation	Std. Error Mean
Nursing	3.7667	150	1.33319	.10885
Pharmacy	4.4267	150	.74498	.06083

TABLE NO. 5: DISTRIBUTION OF GENDER WISE OF KNOWLEDGE ON IMPORTANCE OF MASKS, SANITIZER, GLOVES AND PERSONAL HYGIENE DURING THIS PANDEMIC SITUATION

	Mean	N	Std. Deviation	Std. Error. Mean
Males	3.5435	46	1.45612	.21469
Females	4.3261	46	.92025	.13568

DISCUSSION

The current study was conducted among the Pharmacy and Nursing students of Chitradurga. Its main objective was to assess the awareness of nursing and pharmacy students regarding COVID-19, to assess the knowledge on importance of masks, sanitizer, gloves, and personal hygiene during this pandemic situation, and to compare the knowledge on COVID-19 among nursing students and pharmacy students.

The study aimed to assess knowledge and awareness among college students. It was carried out among the colleges of S.J.M College of nursing science and S.J.M College of pharmacy in Chitradurga. The study observed a satisfactory level of knowledge and awareness on COVID-19 among the enrolled individuals.

A total of 300 students from Chitradurga College who had satisfied the study criteria and given consent for the study is enrolled. The study result shows that pharmacy students with a mean score of 15.29 had more knowledge when compared with nursing students with knowledge of a mean score of 13.03. That is in this study most of the students have high knowledge, and the student of age group of 26-30 years had better knowledge when compared with other students of age 22-25, 18-21 years and S. J. M college of pharmacy have better knowledge than S. J. M college of nursing science. In the study, knowledge regarding 31.7 % of nursing students had good knowledge about COVID-19 while **Sharma D A et al.**, found 68.3% average knowledge regarding COVID-19. The study included total of 50.3% was male and other 54.5% were between age 21-23 years. Although both are having almost different improvement, comparatively 21-23 years are having high improvement in terms of knowledge similarly **Maheshwari S et al.**, conducted a study and found that both

males and females are having significantly different practices knowledge about COVID-19 [8].

We collected over 300 online survey responses from Chitradurga colleges, to assess the knowledge on importance of masks, sanitizer, gloves and personal hygiene during this pandemic situation. In this study, female participants were more than the males, because the same is the ratio of male to female among Nursing and Pharmacy college students, similarly as conducted by *Jha N et al.*, in Nepal in which male participants were half of females [9].

Our study results noticed that the knowledge of most people towards the COVID-19 was bit above the average (86.3%). Although the knowledge of the people was found to be better than average but their awareness towards the disease was respectable. This is similar to **Modi P D et al.**, in Mumbai who reported 71% of knowledge in medical students [10]. The study included total of 300 subjects and among them 96 were males and 204 were females. Although both are having almost same improvement, comparatively females are having high improvement in terms of knowledge, moreover our finding were similar to the results of another study that was conducted by **Ravi R C et al.**, in Visakhapatnam, India [11].

Also the current study gives an idea about the correlation of the age with corresponding level of knowledge. Students in age-group of 26-30 years old had higher levels of knowledge regarding COVID-19. Overall this study gives an outline of the amounts of improvements that has to be made in the knowledge and awareness of Nursing students and Pharmacy students of Chitradurga.

CONCLUSION

This study imparted that Pharmacy students were having higher knowledge than nursing students. This study also disclosed that students who came under the age group of 26-30 years old were having higher knowledge compared to 18-21 and 22-25 years age group. Nursing obtained a value of (=3.77) and Pharmacy obtained a value of (=4.43) both students had knowledge but comparatively Pharmacy students were having better results (=4.43) in terms of knowledge and awareness. Students within the age group of 26-30 years followed better awareness compared to students under the age group of 18-21 years and 22-25 years. Study results indicated that knowledge gaps were present among the nursing students, so it is necessary to expose the students for continuous educational programs to enhance the knowledge and awareness regarding COVID.

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REFERENCES

1. Pandit S B, Pandit B R. Knowledge and attitude and practice of nursing students towards COVID-19: a cross sectional study in Pune, India. *International journal of health science and research*. 2021; 11(1):2249-9571.
2. Tesfaye T Z, Yismaw B M, Negash Z, Ayele G A. COVID-19 related knowledge, attitude and practice among hospital and community pharmacists in Addis Ababa, Ethiopia. *Integrated pharmacy research and practice*. 2020:9.
3. Muhammad K *et al.*, Knowledge, attitude and practice of community pharmacist about COVID-19. A cross sectional survey in two provinces of Pakistan. 2020.
4. Advice on the use of masks in the context of COVID-19. Available from [Reliefweb.int/report/world/advice-use-masks-context-COVID-19-interim-guidance-june-5-2020](https://reliefweb.int/report/world/advice-use-masks-context-COVID-19-interim-guidance-june-5-2020).
5. Ray B, Biswal P K, Panda B B, Dash S N. Evaluation of COVID-19 awareness and understanding amongst pharmacy students at Gayatri College of Pharmacy Sambalpur, Odisha. *International journal of current research and review*. 2021; 13(5).
6. Abirami P, Suseela T, Jelin E G, Kanniammal C. Knowledge regarding COVID-19 pandemic among student nurses: online cross sectional survey. *Medico legal update*. 2020; 20:4.
7. Karim S, Ahmad V. Level of awareness amongst staff and students of academic institutions towards COVID-19 in India. *Journal of pharmaceutical research international*. 2020; 32(22):110-118.
8. Sharma D A, Verma K, Sehgal M, Verma Y, K Anupama. A descriptive study to assess the knowledge of coronavirus among nursing students, Sirmaur, Himachal Pradesh. *International journal of research in medical science*. 2020; 8(12):4422-4425.
9. Maheswari S, Gupta P K, Sinha R, Rawat P. Knowledge, attitude and practice towards coronavirus disease (2019) among medical students: a cross sectional study. *Journal of acute disease*. 2021; 9(3):100-104.
10. Jha N *et al.*, Knowledge about the COVID-19 pandemic among undergraduate medical and dental students in Lalitpur, Nepal. 2019.
11. Ravi R C, Ponugubati C C, Bonu S K, Athkuri S, Uppalapati L V, Majeti C. Knowledge and awareness on novel corona virus spread among dental fraternities in Visakhapatnam, India: a questionnaire-based survey. *Journal of education and health promotion*. 2020; 9.
12. Kumar M, Khodor S A. Pathophysiology and treatment strategies for COVID-19. *Journal of translational medicine*. 2020; 18-353.
13. Labban L, Thallaj N, Labban A. Assessing the level of awareness and knowledge of covid-19 pandemic among Syrians. *Med pub journals*. 2020; 12.
14. Mousa KNAA, Saad MMY, Abdelghafor MTB. Knowledge, attitudes, and practices surrounding COVID-19 among Sudan Citizens during the pandemic: An online cross-sectional study. *Sudan journal of medical sciences*. 2020.
15. Venkataraman R, Krishna H, Varghese K K, Sharma R. Knowledge and belief towards covid-19 pandemic among the pharmacy students and professionals. *International journal of research in pharmacy and pharmaceutical sciences*. 2021; 6(1):01-08.