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EVALUATION OF KNOWLEDGE, SKILL AND ATTITUDE OF JUNIOR RESIDENTS IN TERTIARY CARE INSTITUTION, TOWARDS THE COVID-19 PANDEMIC

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Abstract

Introduction: The present study evaluated the knowledge, skill and attitude of junior residents (JR), towards the COVID-19 pandemic situation. The JRs in the academic hospital are the front liner, and they play a most important role in clinical diagnosis, primary treatment, in patient care and in the proper evaluation of treatment outcome. This study alerts the JRs to the basics of medical profession and work to improve their interest and passion in medical profession and in public health. It also informs the JRs on responses of the disease, especially pandemic situations like COVID-19 response, in our country.

Methods: The cluster sampling method was used in the survey with each batch of JRs to form a cluster. The preformed questionnaires were given among JRs in the 150 MBBS JRs at the Rama Medical College, Hospital & Research Centre, Kanpur, UP. Questionnaires were administered to evaluate the JRs' demographic information and to obtain information on their ages, gender, and marital status, religion, and study levels. JRs were inquired about their knowledge of Corona virus, their practices on the disease and attitude during patient's care. The data obtained was entered into a Microsoft-Excel sheet and analyzed by Microsoft Excel statistical tools.

Results: Female respondents were more than the male. Among 150 JRs 134 (89.3%) had sufficient knowledge about COVID-19 sign, symptoms, mode of spread, prevention, the drugs for the treatment and the most prone population's age group affected by the disease. Out of 150 respondents JRs, 145 (96.7%) know that the disease started in Wuhan city of China. All of them know that the coronavirus is the causative agent of the disease and that the adults were more prone to the disease. All of the JRs had well know the importance of following the World Health Organization (WHO) recommendations, such as proper hand hygiene and social distanc maintenance, quarantine incase of infection for 15 days and immediate reporting to the State or National Centre for registration for evaluation of the spread of the disease. Only 6 (4%) respondent JRs had knowledge about critical care management. More than half (85, 56.7%) of them had knowledge about new drugs for the treatment of the disease. Less than one fourth (28, 18.6%) had knowledge before the COVID-19 pandemic. The JRs were asked to provide information on the suportive drugs and their use in other clinical condition. More than one third of respondent JRs (132, 88%) explained the drug delivery system. Most of them (120, 80%), explained that Chloroquine is used which is an antimalarial agent, 92 (61.3%) stated that the Favipiravir, an antiviral agent, 99 (66%) stated that Tocilizumab, an

immunomodulatory drug. The respondents JRs stated some of the preventive measures that Indian government should take to combat corona virus disease as, providing basic requirements for private medical college frontline workers, increasing public awareness programs on the disease and increasing laboratory testing facilities.
Conclusion: The pandemic of COVID-19 has realized the apex healthcare system to make strategies and maintain the workforce to tackle such panic situation. JRs played a most important role in control the burden of the disease during such pandemic condition in their hospital by ensuring the administration of the right drug, rite dose and rite duration were followed to patients care. JRs speeded the awareness on the disease, cleared the misconcept on the disease, informed the people on the prevention of the disease. As the disease still had not controlled, as different variants are introduce, it is desirable to stimulate the JRs, early in their profession, on the future performance that they will play in the management of such pandemic situations and in the impose the effort towards the elimination of the COVID-19.
Keywords: Junior Residents, COVID-19, Knowledge, Skill, attitude.

Introduction

Corona virus disease came as most sever pandemic in this century affecting more than half of the population [1]. The causative virus was discovered in China in 2019, in Wuhan City. The spread of novel corona virus starts in March 2020 in India causing acute respiratory syndrome (SARS-2) disease. The acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is another name of corona virus-2. The SARS-CoV-2 is responsible for severe respiratory syndrome disease coded as COVID-19 [2]. The World Health Organization (WHO) in collaboration with their national partners, science experts, higher authorities, medical and research institutions, and researchers, have been observing and assessing the severity of the spread the disease [3]. National, state, institutional and individual efforts to decrease the spread of the SARS CoV-2 disease has been increased day by day, but SARS Cov-2 has continued to spread in the communities [4]. There was more than one third population affected, including many deaths by August 2022 [5]. The incidence of the disease spread has increased in log by the emergence of new variants of the virus, the alpha, beta, gamma, delta and sub variants like omicron and much more, converting the disease of public health concern in the world and especially in India [6, 7]. This pandemic compelled us to check the competency of ours new medical professional health care personals. So, there is need to evaluate the knowledge, skill and attitude of the RS off MBBS, who has engage in disease control and management, as this will helpful to the strengthening of the our healthcare system in such a panic situation.

Aim and Objectives

The aim of the study is to evaluate the knowledge, skill and attitude of the MBBS JRs during a panic situation of COVID-19 pandemic.

Materials and Methods

The study was conducted in Kanpur, U.P. India including two institutes i.e. Rama Medical College and Dr. B. S. Kushwah Institute of Medical sciences Kanpur from March 2021 to Augut 2022. Preformed questionnaires were asked to 150 MBBS JRs and their performance was observed during clinical procedure. The cluster random sampling method was employed in this survey. After that, simple random sampling was performed within each cluster with each JRs in the different clusters having the equal probability of being selected at any stage during the sampling procedure. The questionnaires were prepared to evaluate the JRs knowledge, skill and attitude by collecting information like their age, gender, marital status, family status, and study score. The JRs were assessed about their knowledge of COVID-19, their skill of clinical procedure and their attitude during real situation of the disease

management.

The ethical approval has been taken from the institutional ethical committee. The data obtain was entered into a Microsoft Excel sheet. The data was analyzed by the Microsoft Excel statistical tools. The sample size was determined using Taro Yamane's formula [8].

Inclusion Criteria

- The MBBS JRs of having less than six month of clinical exposure.
- The JRs who agreed to participate in the study.

Exclusion Criteria

- JRs posted in non COVID patient care facilities.
- Respondent JRs who had infected during study period.

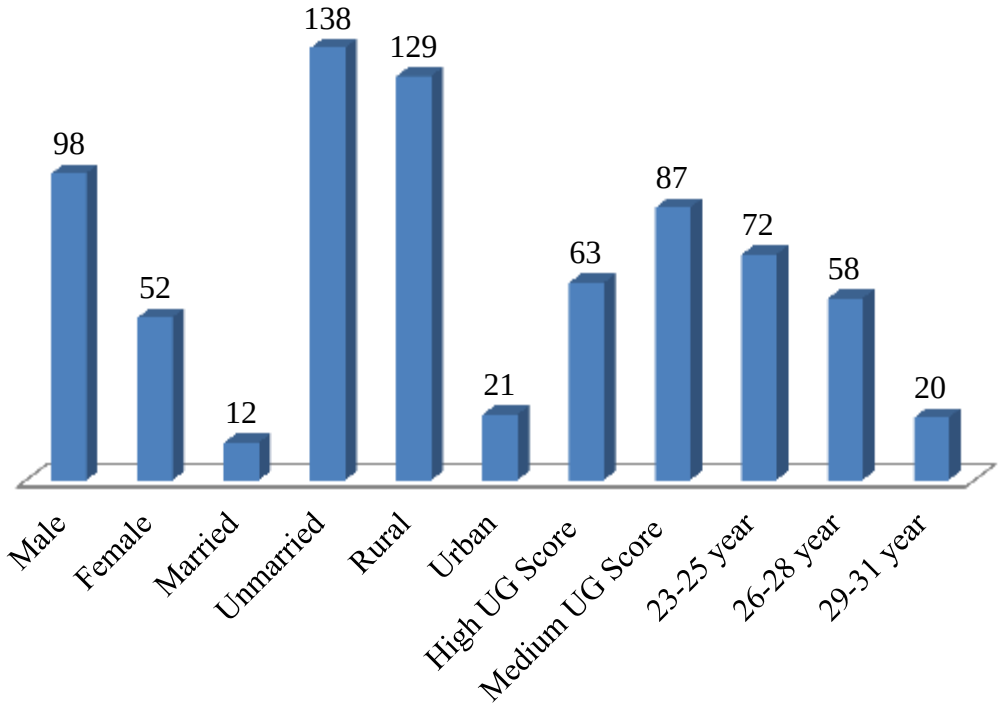
Results

The males JRs (n=98, 65.3%) were more as compared to females (n=52, 34.7%). The female to male ratio was 1:1.9. Out of 150 respondents only 12 (8%) were married in which 8 (5.3%) were female and 4 (2.7%) males. Younger age group respondents were more as compared to older. It may be because of availability of younger respondents and focus of Indian government on medical education from last five years. For age variations, 72 (48%) of respondents belonged to age group 23 to 25 years, 58 (38.7%) within 26 to 28 years, and 20 (13.3%) within 29 to 31 years. Most of them 129 (86%) belong to rural area of Uttar Pradesh. Most of the JRs (n=87, 58%) responded well scored a medium in their under graduation (Table No. 1). These respondents compensate score of the study by their skill and attitude (Table No.2).

Table 1: Demographic presentation of Respondents JRs.

Criteria	**Variables**	**Number of respondents JRs**	**Percentage (%)**
Gender	Male	98	65.3
	Female	52	34.7
Marital status	Married	12	8.0
	Unmarried	138	92.0
Community	Rural	129	86.0
	Urban	21	14.0
Study Score Level	High	63	42.0
	Medium	87	58.0
Age group	23-25 year	72	48.0
	26-28 year	58	38.7
	29-31 year	20	13.3

Graph 1: Demographic presentation of Respondents JRs.



The major variation was observed in knowledge, skill and attitude of the respondents JRs towards COVID-19 disease management. The knowledge of the disease was evaluated using multiple choice questions. The skill was evaluated by giving demo tasks related to clinical management of the disease. Finally real performance was observed to evaluate the attitude of the respondent JRs. Most of the respondents (n=98, %) scored in the knowledge variable. Initially performance of JRs in skill was less but after one month of the study skill was improved. It may be because of continuous training provided at institutional and national level.

Table No. 2: Distribution of respondents according to their score.

Variables	Score in UG						Initial Score (Time <1 month)			Score After six month			Score After one year		
	High			Medium											
	<4	4-6	>7	<4	4-6	>7	<4	4-6	>7	<4	4-6	>7	<4	4-6	>7
Knowledge	01	03	59	9	31	47	46	89	15	02	23	125	00	8	142
Skill	13	42	8	24	40	23	14	89	17	09	13	128	01	16	133
Attitude	16	36	11	18	26	43	08	130	12	07	83	60	11	16	123
The variables were scored from 1 to 10 and categorize as <4, 4-6 and >7.															

Discussion

The MBBS JRs were selected for the study because they are the first line medical

professionals diagnosed the disease. The Indian Medical Education system focused on skill and attitude apart from knowledge three years. This study will become the base of current medical education system. The results show that male respondents JRs were more than the females. This is not surprising since male medical professional were still more in India. But compare to last decade there is a dramatic increase in female medical professionals not only in our country but also in some other developing in the country [9]. Many of the respondents JRs were belong to younger age group. These age group professionals are more eager to explore new things and enthusiastic. Most of the JRs were unmarried students in this study. Similar finding was also reported in a study African country [10]. Most of the respondent JRs belong to rural area of the India and their score was appreciable. It may be due to traditional value of Indian culture. Initial score was low but as time passed it increased rapidly. This might be because of national strategy to control the COVID-19.

Conclusion

We concluded that the current medical education system is better to handle the panic medical situations like COVID-19 pandemic. Apart from new medical education system we should also emphasize on other factors like gender equality, social gap etc.

Limitation of the Study

There was the limitation of time during COVID-19 pandemic due to lock down in the country so that we couldn't observe the stress level and its effect on their performance.

Ethical Approval: This study was approved by the institutional ethical committee.

Conflict of Interest: There is no conflict of interest among authors.

Acknowledgement

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