

**MYTHS AND REALITIES ABOUT CORONAVIRUS DISEASE-19 AMONG THE MEDICAL STUDENTS.**

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**ABSTRACT**

**Objective:** To determine myths and realities about Coronavirus Disease-19 (COVID-19) among the Medical Students, **Study Design:** Cross sectional descriptive study. **Place and Duration:** Suleman Roshan Medical College, Tando Adam from January 2021 to September 2021. **Methods:** Myths and realities based questionnaire was designed as per WHO advisory recommendations for public myth buster. An online questionnaire-based information collection was adopted for various aspects of COVID-19 related information and level of awareness through What Apps and Google engine. A sample of 392 students qualified the study protocol. Data was entered in Microsoft Excel Sheet and analyzed in SPSS ver. 19.0 (P<0.05). **Results:** Mean age of participant's 23.5±7.1 years. Male comprised 49.2% (n=193) compared to 50.7% (n=199) female participants (P=0.9). Most of response in Yes column was no specific drug is available for novel virus was noted as 269 (68.6%), in No column 251 (64.03%) was noted for COVID – 19 spreads by houseflies and largest frequency was for 'holding breath for 10 sec indicates no COVID – 19 infection' noted in 213 (53.3%). Overall, 70.1% student's response was correctly yes. 98 (25%) participants responded thermal scanners can detect COVID – 19 virus, and 269 (68.6%) responded no specific drug is available to cure the COVID-19.

**Conclusion:** We found both myths and realities of COVID – 19 from the Medical students. Public health department should provide more informative knowledge to overcome the havoc myths.

**Key words:** Myths, Realities, COVID – 19, Medical Students, Sindh

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## INTRODUCTION

Myth is a symbolic narrative commonly defined as a folklore genre consisting of stories originated by lay man contrary to the facts. Myths are of unknown origin, often traditional that ostensibly lacks the actual facts of the story and are strongly influenced by religious, social, and cultural traditions.<sup>1</sup> Myths about a common disease are endorsed by laymen that are absolutely betraying the people as they are irrelevant to the facts of problem. Religious beliefs, rituals, customs and social traditions play major role in generating myths that add flavor to the public mind and change the propagation and acceptance of the truth.<sup>1,2</sup> Myths about infections are highly prevalent as divine curse and are very difficult to demystify them providing evidence-based realistic approach. Myths about tuberculosis, viral flu and leprosy have strongly changed the behavior of public towards the patients.<sup>2</sup> currently the coronavirus disease – 19 (COVID – 19) has created havoc over the World globe affecting all aspects of communities, societies and countries as a whole. Health care systems are strongly condemned due to the exponential rise of confirmed COVID – 19 cases and mortality caused by it. Doctors are helpless as there was no vaccine or drug against COVID – 19 at its arrival. Mortality and morbidity of COVID – 19 infection is estimated to rise and become a major health problem.<sup>2,3</sup> In the

era of telecommunication, there are many myths roaming in the World, some of them are very fearful and have disappointed the individuals. Pamphlets and signboards have tried to overcome the public myths but still the problem is prevalent in the society. Social media such as whatsapp have played major role in spreading the myths and propaganda propagation.<sup>3,4</sup> However, radio and television have provided accurate information to the public not to believe in the myths and rumors. There are hundred thousands of myths about the spread, contagiousness, cure, treatment and mortality of COVID-19 infection in the society. Myths pass on from person to person irrespective facts through social media. The myths have become dangerous to the public mind and have already created fear in the hearts of the public. Similarly, the myths and rumors about the COVID-19 are spreading in the society. There many myths for the COVID-19 vaccine such as it harms the health, people die after months, it makes you infertile, it is ineffective and useless, it kills, etc.<sup>4,5</sup> Prevailing myths about COVID – 19 infections are related to the origin of virus, spread and contagiousness of infection, turmoil's of disease mortality, preventive measures and questionable cure.<sup>1,5</sup> All these myths have confused the minds of layman. In this context, in the current situation of chaos, the authors decided to conduct a small scale study to determine the myths and realities

about the COVID – 19 infections in the medical students of Suleman Roshan Medical College, Tando Adam, and Sindh.

### **SUBJECTS AND METHODS**

A cross-sectional descriptive study was conducted at the Department of Basic Medical Sciences of a rural area medical college, the Suleman Roshan Medical College, Tando Adam from January 2021 to September 2021. The purpose of study investigates the myths and realities prevalent among the medical college students and estimates the current burden of myths and realities among future medical practitioners. Study ethics protocol was applied for approval by the competent authority of the institute. Aim of study was to analyze how the medical students are thinking about the COVID – 19 – what the myths, rumors and realities in their minds. An online Google data collection system was introduced to gather data from medical students who were waiting at the home; the data was collected and compiled by the principal researcher. A pre – structured questionnaire was generated by the authors that were validated by the community health specialist of the medical college. A small pilot study was conducted online to pre – test the feasibility of questionnaire. Study questionnaire myths and realities for COVID – 19 was generated according to the WHO advisory recommendations for public myth buster.<sup>6</sup> An online questionnaire was designed to fill the data by the respondents. It included Biodata and questions related to myths and realities about COVID – 19. Questions regarding myths and realities assessed the relevant information in form of true/false basis. To achieve the objective of study, an online questionnaire-based information collection was adopted. Questionnaire was designed in systemic way by the authors and included various aspects of COVID-19 related information and level of awareness. Participants were informed of the aims and objectives of the research protocol. They were interviewed online before filling the questionnaire to understand the data to be

filled in. Volunteers, who filled consent form willingly, were given the questionnaire to fill on volunteer basis. A sample of 392 students participated and completed the study protocol. Questionnaire was designed in English and Sindh language. Questionnaire based data was circulated through What Apps and Google engine to the participants and filled proforma was collected online by social media. Confidentiality was assured towards the Biodata. Filled questionnaire was taken in custody by the principal investigator. Gathered data was entered in Microsoft Excel Sheet till completion of sample. Graphs and tabulation was completed in Microsoft Excel Sheet. Data was analyzed in SPSS ver. 19.0 ( $P < 0.05$ ).

### **RESULTS**

Mean age of participant's  $23.5 \pm 7.1$  years. Male comprised 49.2% ( $n=193$ ) compared to 50.7% ( $n=199$ ) female participants ( $P=0.9$ ). Female to male ratio 1:0.96 ( $P=0.97$ ). Descriptive statistics is shown in table – 1. Medical students of 1<sup>st</sup> year MBBS to Final MBBS were included. 19.6% belonged to first year MBBS, 22.7% to 2<sup>nd</sup> year MBBS, 18.3% to 3<sup>rd</sup> year MBB, 20.6% to 4<sup>th</sup> year MBBS, and 18.6% to final year MBBS. Source of data was through WhatsApp and Google emailing. Results of 24 – questionnaire is shown in table – 2. Patients recovery, thermal scanner, no medicine, pepper food, houseflies, propylene alcohol hand wash, 4G network, high temperatures, lifetime protection, holding breath for 10 seconds, sultry climate, cold and snowfall, hot shower, mosquito bite, hand dryers, UV light, pneumonia vaccine, washing nose, garlic intake, elderly and younger people, antibiotics and no specific drugs response rate is shown in table -2 as yes, no and don't know. Most of response in Yes column was no specific drug is available for novel virus and noted as 269 (68.6%), in No column 251 (64.03%) was noted for COVID – 19 spreads by houseflies and largest frequency was for 'holding breath for 10 sec indicates no COVID – 19 infection' noted in 213

(53.3%). Overall, 70.1% student's response was correctly yes. 98 (25%) participants responded thermal scanners can detect

COVID – 19 virus, and 269 (68.6%) responded no specific drug is available to cure the COVID-19.

**Table – 1. Descriptive statistics of medical students (n=392)**

Descriptive statistics	Frequency	%
Age	23.5±7.1 years	
Male	193	49.2
Female	199	50.7
Single	351	89.5
Married	41	10.4
1st MBBS	77	19.6
2nd MBBS	89	22.7
3rd MBBS	72	18.3
4th MBBS	81	20.6
Final year MBBS	73	18.6
WhatsApp	273	69.9
Google	119	30.3
Total	392	100

**Table – 2. Myths & Realities Questionnaire (n=392)**

	Yes (%)	No (%)	Don't Know
Most of COVID – 19 patients recover	157	136	99
COVID detection by thermal scanners	98	197	97
No medicine available	199	134	59
Adding peppers to food protects against it	95	102	195
COVID – 19 spreads by houseflies	34	251	107
Antiseptics protect against it	131	153	108
Propylene – alcohol, ethyl alcohol, bleaching agent protects against it	168	187	37
COVID – 19 permeates by 4G network	60	197	135
High temperature protects against it	133	172	87
COVID – 19 infection protects against it for lifetime	203	178	11
Holding breath for 10 sec indicates no COVID – 19 infection	82	97	213
Sultry climate facilitates COVID – 19 spread	223	91	78
Cold and Snowfall eliminates novel virus	131	157	104
Hot shower protects against novel virus	195	84	113
It spreads via mosquito bite	90	225	77
Hand dryers eliminate novel virus	103	82	207
UV – light applied to hands protects	193	109	90
Pneumonia vaccine protects against it	75	182	135
Washing nose hinders novel virus infection	187	109	96
Garlic intake hinders novel virus infection	190	113	89
It affects elderly people only	119	241	32
It does not affect younger people	110	189	93
Antibiotics are effective against novel virus	262	91	39
No specific drug is available against novel virus	269	72	51

## DISCUSSION

The present is a cross sectional descriptive study that was conducted in the young medical students of Suleman Roshan Medical College. The study investigated the myths and realities among the medical college students and estimates the current burden of myths and realities among future medical practitioners. Very important findings of myths and realities have been noted in present study (table – 2). The findings of present study alarm the myths are wandering in high frequency even among the medical students and demands more informative campaign against COVID – 19 facts and realities that should be in line with the WHO guidelines.<sup>7,8,9</sup> Focusing on 24 – questionnaire knowledge of medical student poor information was noted on the COVID – 19 novel virus infections. Participants exhibited good understanding of COVID – 19 viruses however they were unaware about certain specific questions in the questionnaire about the disease. Virus, its sources, and the incubation period were well acquainted. There are a large number of students who believed thermal scanners can detect novel virus and using garlic cures the disease. Myths may have serious outcomes in medical students as it is evident from other studies.<sup>10,11</sup> Myths need to be targeted separately and let the facts and realities may spread without ambiguity through various media channels. In present study, the mean age of participant's was  $23.5 \pm 7.1$  years. The findings are concordant to a previous study<sup>12</sup> that noted age of  $22.4005 \pm 4.97$  years. In present study, the male comprised 49.2% (n=193) compared to 50.7% (n=199) female participants (P=0.9). Female to male ratio 1:0.96 (P=0.97). The findings are concordant to a previous study<sup>12</sup> that reported 100 (51%) were female and 96(49%) were male. In present study, 19.6% belonged to first year MBBS, 22.7% to 2<sup>nd</sup> year MBBS, 18.3% to 3<sup>rd</sup> year MBBS, 20.6% to 4<sup>th</sup> year MBBS, and 18.6% to final year MBBS. The findings are concordant to previous studies.<sup>12,13</sup> Overall, 70.1% student's

response was correctly yes. 98 (25%) participants responded thermal scanners can detect COVID – 19 virus, and 269 (68.6%) responded no specific drug is available to cure the COVID-19. The findings are in disagreement with a previous studies<sup>12</sup> that reported 91.8% students answered correctly, controversial finding might be due to the sample size, different study sample, and technical errors. In present study, 190 (48.5%) participants replied adding garlic to pepper and garlic prevents against the novel virus disease. Many students responded virus permeates through houseflies, 4G network, sneezing, coughing and body touching that were false. Many students replied sprinkling and applying antiseptic and bleaching agent can protect against COVID – 19.<sup>14,15</sup> Findings of present study are valuable regarding the false myths that are prevalent in the society and even medical students. Limitations of present study are; small sample size, first and second year MBBS students have low knowledge because they are not in contact with clinical contact, third – participants may not have paid much attention due to social media – the WhatsApp and Google media. Face to face information is more effective compared to social media. Hence results of present study cannot be generalized. Further studies are required, and making public campaign much effective may overcome the problem of myths wandering in the society.

#### CONCLUSION

Overall, 70.1% student's response was correctly yes. 98 (25%) participants responded thermal scanners can detect COVID – 19 virus, and 269 (68.6%) responded no specific drug is available to cure the COVID-19. Overall the students had poor information regarding the myths and realities of the COVID-19. Therefore, it is the responsibility of public health department to disseminate proper information through social media effectively. More effective public awareness is required to disseminate the

disease knowledge to hinder the false myths wandering in the society.

**ETHICS APPROVAL:** The ERC gave ethical review approval

**CONSENT TO PARTICIPATE:** written and verbal consent was taken from subjects and next of kin

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