

# Myths and Realities: Novel Study on COVID-19 among the Medical students of Rural University of Sindh

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## Abstract

The COVID-19 first appeared in Wuhan city of China. It was treated as a case of pneumonia having no etiology, first appeared in December 2019. Its spread was at a rapid pace worldwide. It was called COVID-19 by the WHO on 11<sup>th</sup> February 2020, as of 5<sup>th</sup> June 2020, there are 87,113 approved instances of COVID-19 in Pakistan. A cross-sectional descriptive research was conducted on 196 students of SMBBMU through an online questionnaire. It was self-generated and evaluated by epidemiologists. The questionnaire was developed through the WHO advisory from the Coronavirus disease advice for the public: Myth busters. It contains socio-demographic information and Twenty-four (24) questions related to myths and knowledge for COVID-19 and the response of questions was taken on true/false basis. A total of 196 students participated out of which 100 were females and 96 were males, the mean age of the participants was  $22.4005 \pm 4.97$ , and 168(85.7%) participants were unmarried. The highest ratio involved in this study was of the first year, which was about 82 (41.8%). The most common source of information was social media (n=118; 60.2%). Overall, 77.21% of the students were aware of the myths and realities regarding COVID-19. Data was analyzed through SPSS 24. The students had sound knowledge regarding the myths and realities of COVID-19. It is the responsibility of public health care providers to spread this knowledge into every part of the country through social media and other sources at their disposal.

**Keywords:** COVID-19, Students, Universities, Surveys, Questionnaires

## INTRODUCTION

The COVID-19 first appeared in the city of Wuhan of China and it was treated as a case of pneumonia having no etiology in December 2019, its spread was at a rapid pace from country to international level [1-3]. The ailment is exceptionally contagious, and its major symptoms contain pyrexia, dry cough, fatigability, muscle pain, and shortness of breath [4]. In China, 18.5% of the patients with COVID-19 reach the level of the serious level, that is portrayed by acute respiratory distress syndrome, septic shock, metabolic acidosis, and coagulation problems [5-7]. Initially, it was named Novel Coronavirus Pneumonia by the Center for Disease Control of the People's Republic of China [8]. The source of the coronavirus was branched with a food market of Wuhan in China [9, 10]. COVID-19 attacks the respiratory system [11]. Later it was named 2019-nCoV by the Chinese researchers [12], then it was named SARS-CoV-2 (Severe Acute Respiratory Syndrome coronavirus-2) by the International Committee on Taxonomy of Virus [13]. It was named COVID-19 by The World Health Organization on 11<sup>th</sup> February 2020 [14] and it was declared as 6<sup>th</sup> SPHEC (Sixth Public Health of Emergency Services). On January 30<sup>th</sup>, 2020 it was not the first attack of the corona virus [15] previous

attacks were SARS-CoV (Severe Acute Respiratory Syndrome Coronavirus) and MERS-CoV (the Middle East Respiratory Syndrome Coronavirus) [16].

It is the third outbreak of the Coronavirus affecting more than 209 countries, which includes Pakistan [17]. The initial two affirmed instances of COVID-19 in Pakistan were announced on February 26<sup>th</sup> 2020 ringing the bell for the forthcoming tempest [18], as of 5<sup>th</sup> June 2020 there have been 87,113 approved instances of COVID-19 in Pakistan and 1838

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fatalities, 33,536 cases in Sindh, 33,144 in Punjab, 11,890 in KPK, 5,582 in Baluchistan, 3,946 in Islamabad, 299 in AJK, and 852 cases in GB [19]. According to a public survey conducted in Pakistan, people were shockingly unaware of COVID-19, trusting mostly on myths, rumors, and false beliefs rather than correct medic information. The present survey interviewed the public of the whole country, which includes all states and socioeconomic groups.

The survey reported horrible disinformation towards the disease and how to support oneself from it: A staggering 82% of people think that doing ablution five times per day can protect from Coronavirus. The report also shows that Pakistanis have developed conspiracy theories towards the authenticity of the virus and had misinformation towards preventive measures for COVID-19 [20]. Therefore, it is necessary to evaluate the misinformation among University students, as they are young and vulnerable to the disease. This study will further help in providing true information about COVID-19 to the youth of this nation and reject the misinformation or myths towards COVID-19 among society helping people to understand preventive measures towards the disease. The present research intended to evaluate the myths and realities of COVID-19 related information among medical students of the rural part of Sindh, Pakistan.

## MATERIALS AND METHODS

This cross-sectional descriptive research was carried out on the learners of Shaheed Mohtarma Benazir Bhutto Medical University Larkana Students through an online questionnaire with the help of Google forms. The questionnaire regarding myths and realities was self-generated and later it was validated with the help of epidemiologists and public health specialists, which was followed by a pilot study to pretest the questionnaire. The questionnaire was developed through World Health Organization advisory from the Coronaviruses illness (COVID-19) recommendation for public: Myth busters [21]. The online questionnaire contained socio-demographic data i.e. age, gender, marital status, source of information, and year in which students are currently enrolled. Twenty-four (24) questions were included regarding myths and knowledge for COVID-19 to assess the relevant information and the response of questions was taken on true/false basis. To follow SOPs for prevention of COVID-19, and keeping social distancing we carried out convenient sampling and totally 196 examinees took part in the research who filled the consent form and were willing to be part of this study. The data was collected through a link to Google forms, which was circulated among the concerned university students through social media, etc. The respondents were given proper information about the objectives and aims of the study. Assurance of confidentiality was given towards their details before conducting the survey and an informed agreement form was also taken from respondents and data were investigated by Statistical Package for Social Sciences" (SPSS) version 24.0. The findings were calculated in the form of ratio and percentages.

## RESULTS AND DISCUSSION

Totally 196 students took part in this research out of whom 100 (51%) were females and 96(49%) were males. The mean age of the participants was  $22.4005 \pm 4.97$  SD. The majority of participants in this survey 168 (85.7%) were unmarried, 27 (13.8%) were married, and 1(0.5%) was divorced. The majority of participants (n=82, 41.8%) were first-year students, followed by 2<sup>nd</sup> year (n=36, 18.4%), 3<sup>rd</sup> year (n=17, 8.7%), 4<sup>th</sup> year (n=21, 10.7%), and 5<sup>th</sup> year (n=40, 20.4%), respectively. Likewise, the students obtained information regarding COVID-19 from different sources, which included social media 118(60.2%), internet search engine 38(15%), Television (6.3%), families 5(2%), friends 2(0.8%), print media 1(0.4%), and other sources 16(6.3%), respectively (**Table 1**). Overall 91.8% of the students answered correctly that those who get COVID-19 are able to get better with the help of supportive care, 62.8% of students knew that thermic scanners cannot diagnose COVID-19 as they only detect if the person has a fever or not. 86.7% of students were aware that there is no drug confirmed to cure or hinder COVID-19.

Although several trials are going on, 76.5% of students replied that adding peppers to the soup or different food will neither hinder nor treat COVID-19 but it was advised to stay hydrated and eat a balanced diet, do exercises, and sleep well. 83.2% of students responded that COVID-19 is not permeated via houseflies since until the present, no evidence or information has come on front. 72.4% of students were aware that sprinkling and applying bleaching agent or another antiseptic into your body cannot preserve you against COVID-19 and may be hazardous because they contain toxic substances if ingested can become very dangerous. 88.8% of students knew that consuming propenyl alcohol, ethyl alcohol, or bleaching agent does not hinder or treat COVID-19 and may be highly hazardous. 81.1% of students responded that 5G/4G mobile networks do not transmit COVID-19., because the virus cannot be spread through radio or mobile waves or network. 68.9% of students answered correctly that subjecting yourself to the sun or temperatures higher than 25 °C does not hinder the coronavirus illness. 77.6% of learners knew that you can get better from the coronavirus illness, catching the new coronavirus does not mean you will have it for life. 65.8% of students were aware that being capable of holding your breath for 10 seconds or more without coughing or feeling inconvenience does not signify you are free from the coronavirus illness or any other respiratory organ diseases and the most reliable method to approve if one has COVID-19 is through a laboratory test. 61.2% responded that the COVID-19 virus could be permeated in regions with hot and humid climates. 94.9% answered correctly that cold weather and snow kill the new virus. 67.9% believed that taking a hot shower does not hinder the novel coronavirus disease. 86.7% were aware that the coronavirus could not be spread via mosquito bites until now there has been no data to surface out and confirm it. 70.4% answered correctly that the hand dryers are influential in eliminating the novel coronavirus. 78.6% responded that

ultraviolet lights must not be utilized to sterilize hands or other parts of your skin since they may damage your eyes and can also result in skin irritation. 82.1% answered correctly against the vaccines against pneumonia that protect against the novel coronavirus. 43.9% answered correctly that regularly washing your nose with saline can prevent infection with the novel coronavirus. 67.9% answered correctly that eating garlic helps to hinder infection with the novel coronavirus while there is no document. 92.3% answered correctly that the coronavirus only affects older people. 92.9% answered correctly that the coronavirus does not affect younger people. 63.3% answered correctly that antibiotics are influential in hindering and curing the novel coronavirus because antibiotics do not act against viruses. 95.4% knew that there are no special drugs to hinder or cure the new coronavirus reported in (Table 2). Overall 77.21% of the students responded with correct answers.

**Table 1. Descriptive Statistics of Study Participants (N=196)**

Variable (n)	(%)
<b>Gender</b>	
Male (96)	49
Female (100)	51
<b>Age(Mean± SD)</b>	22.4005 ± 4.97
<b>Marital status</b>	
Single (168)	85.7
Married (27)	13.8
Divorced (1)	0.5
<b>Participation of students</b>	
1 <sup>st</sup> Year (82)	41.8
2 <sup>nd</sup> Year (36)	18.4
3 <sup>rd</sup> Year (17)	8.7
4 <sup>th</sup> Year (21)	10.7
5 <sup>th</sup> Year (40)	20.4
<b>Source of information</b>	
Social Media (118)	60.2
Internet Search Engine (38)	15
Television(16)	6.3
Families (5)	2
Friends (2)	0.8
Print Media (1)	0.4
Other Sources (15)	6.3

**Table 2. Questions regarding the Myths and Realities of COVID-19**

Description	Frequency (%)
Most peoples who get COVID-19 recover from it.	180(91.8)

Thermal scanners cannot detect COVID-19.	123(62.8)
No licensed medicines have been produced for curing or preventing COVID-19 at the present.	170(86.7)
Adding peppers to the soup or different food does not hinder or treat COVID-19.	150(76.5)
COVID-19 is not spread by houseflies.	163(83.2)
Sprinkling and applying bleach or another antiseptic into your body will not preserve you against COVID19 and may be hazardous.	142(72.4)
Consuming propenyl alcohol, ethyl alcohol, or bleaching agent does not hinder or treat COVID-19 and can be highly hazardous.	174(88.8)
5G/4G mobile networks do not permeate COVID-19.	159(81.1)
Subjecting yourself to the sun or temperatures higher than 25 C degrees does not hinder coronavirus illness.	135(68.9)
You can recover from the coronavirus illness, catching the new coronavirus does not mean you will have it for lifetime.	152(77.6)
Being capable of holding your breath for 10 seconds or more without coughing or feeling discomfort does not indicate you are free from coronavirus illness or any other respiratory organ disease.	129(65.8)
COVID-19 virus can be spread in places with sultry climates.	120(61.2)
Cold weather and snow eliminate the novel virus.	186(94.9)
Taking a hot shower does not hinder the novel coronavirus illness.	133(67.9)
The coronavirus cannot be permeated via mosquito bites.	170(86.7)
The hand dryers are influential in eliminating the novel coronavirus.	138(70.4)
Ultraviolet lights must not be utilized to sterilize hands or other parts of your skin.	154(78.6)
Vaccines against pneumonia preserve against the novel coronavirus.	161(82.1)
Regularly washing your nose with saline help hinder infection with the new coronavirus.	86(43.9)
Consuming garlic assists hinder infection with the novel coronavirus.	133(67.9)
The coronavirus only affects older people.	181(92.3)
The coronavirus does not affect younger people.	182(92.9)
The antibiotics are influential in hindering and curing the novel coronavirus.	124(63.3)
No special drugs exist to hinder or cure the novel coronavirus.	187(95.4)
<b>Total Percentage</b>	<b>77.21</b>

After the discovery of the novel coronavirus, it has started its journey across the globe, and WHO has declared it as a public health emergency of international matter [22]. The image of

COVID-19 is yet to be understood and clear [23], but it is associated with dry cough, fever, pneumonia, and shortness of breath. Until now, no vaccine or anti-viral medicine has been invented. In this cross-sectional survey, an assessment of myths and misconceptions towards COVID-19 was carried out among the University students at SMBB Medical University. In the present study, we give an insight into the misconceptions and myths towards COVID-19 among university students at SMBB Medical University Larkana Sindh Pakistan, and to our best knowledge, this is the first study conducted to assess the level of myths and misconceptions among the university students in Pakistan. It was found in the present study that the majority of the students had extensive knowledge about COVID-19 and against the myths or misconceptions as the majority of the students responded correctly and similar results were found in studies conducted in several countries including India, Jordan, Vietnam, and China where respondents had extensive knowledge about COVID-19 [24-28].

Another study conducted in Pakistan among the healthcare professionals to assess knowledge, attitude, and perceived behaviors about COVID-19 showed similar results where healthcare professionals had extensive knowledge about COVID-19 [29], while on the contrary, if we compare our results with a study conducted in Bangladesh among the university students where the information of university students about COVID-19 was low or moderate [30]. In this study most of the respondents obtained data about COVID-19 from social media, which is similar to another study conducted in Pakistan among the healthcare providers about COVID-19 [31]. Another study revealed the same results where pharmacists in Pakistan utilized social media to receive information about COVID-19. On the contrary, in a study, university students used literature and media as a source of gaining information about COVID-19 in comparison to our study also they knew about the symptoms and unavailability of the vaccine in the same study, which is similar to our study [32, 33].

As only 196 students participated in this survey, therefore this study can be performed on a large scale for further evaluation of the concept of myth vs. reality of COVID-19. Medical personnel is at risk because of COVID-19 contagious nature, even knowing that it can be transmitted from the patient is asymptomatic.

## CONCLUSION

Overall the students had good sound knowledge regarding the myths and realities of the COVID-19, therefore, it is the responsibility of Public Health Care providers to spread this knowledge into every part of the country through social media and other sources at their disposal.

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