

Received: December 2023 Accepted: January 2024

DOI: <https://doi.org/10.58262/ks.v12i2.446>

COVID- 2019– Awareness and Knowledge among Health Workers: An Effort to Combat with Covid-19 Pandemic in Malakand Region, Pakistan

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Abstract

Novel corona virus 2019 spread in the globe and all the nations are on alert to fight against this pandemic. Since Dec 2019, total 784 cases of novel -CoV had been reported in Pakistan till 23 March, 2020 with 6 recoveries and 5 deaths. This cluster, has been reported in under develop country (Pakistan) mostly in the south-western parts. The data was collected from that parts on health care worker's awareness and attitudes towards the control of Novel-CoV might be helpful when health programs are arranged. A questionnaire comprising 6 demographic, 8 knowledge, 8 attitudes and 6 precautions items were given. Three hundred and thirty health workers (82.5%) responded the questions. The participant's age range was 24–65 years. Male 58.4 % (n=193) were in majority than females 41.5% (n=137). The participants included 29.6% (n=98) physicians, 31.8%(n=105) public health officers and 38.4% (n=127) paramedics. 55.4 % (n=183) were working in referral hospitals and 44.5% (n= 147) in primary health care centers. Most of the respondents were having experience 11-20 years 42.1% (n=139) followed by 21 & above years 37.8%(n=125) and the least were in the age 1-10 years 20% (n=66). Of the respondents 65.7% (n=217) were from urban areas and that of 34.2% (n=113) from rural health care centers. The majority, 76.6% (n=253) were aware that the infection is a viral. Regarding mode of transmission 63.3% (n=209) were voted for its transmission due to droplets after sneezing. A majority of participants 31.2% (n=103) agreed for shortness of breath to be the symptoms, 26.6% (n=88) flu like, 23% (n=76) headache and 19% (n=63) with high temperature. In the response of question "what happens for COVID disease" 92.1% were responded that occurs flu like symptoms, 3.63% (n=12) were said for sudden death and 4.24% (n=14) were of the view that it affects the human once in life. Most of the respondents 76.3% (n=252) were agreed that more than three days it take to appear the symptoms after the infection. Majority of the respondents 74.8% (n=247) were have voted for PCR tests for diagnosis. Regarding medication 48.7% (n=161) were of the view that it can be treated with antiviral, 22.1% (n=73)

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by use of antibiotics, 12.4% (n=41) through antipyretic medications. In response to the question that “What resource lacking to treat patients with COV disease? 48.1% (n=159) medication needed to treat, 27.8% (n=92) sufficient training is needed, 18.1% (n=60) Instrument needed to treat, 5.75% (n=19) access to laboratory tools were responded. Of the 330 health workers 94.8% were familiar with WHO guidelines of novel corona virus. In response to the question “Can COV may prevent me from travelling” 90.9% were agreed. When asked the question “The government should restrict travel to the areas of the disease” 100 % (n=330) were of the viewed. Most of the individuals 97.2% were of the view that the government should isolate infected patients in special established hospitals. Majority of the health workers 99.3 % (n=328) were said that the government must be decide to close the schools if the number of corona cases increases. On asking the question “Can COV be treated?” 61.5% were having the opinion that CoV disease can be treated. Regarding availability of vaccination 99.6% were agreed that vaccines are available for treating the novel COV –disease. Against the question “Are there adequate resources available to treat COV disease?” 97.5% were of the view that adequate resources are not available for treating the disease. Regarding the prophylaxis of the disease 95.7% (n=316) were agreed to wash hands regularly, 71.8% were agreed that Avoiding touching the eyes, nose, and mouth, 93% agreed on the statement “Covering nose and mouth with a tissue paper when coughing or sneezing” 85.1% were agreed on the point “Throw tissue paper in the trash after use it”, 96.3% were agreed on “Use face mask to cover the mouth and nose in crowded areas, 88.1% were agreed that stop normal activities such as going to work, school, travel, shopping when symptoms appear. The health workers in Malakand region showed a high level of information and helpful attitude toward novel -CoV. The knowledge level was difference in between many professions about the infection. Periodic educational involvements and professional campaigns are still required. Any interventions should be directed towards the non-physician and non-nursing professions.

Keywords: Novel -CoV, knowledge, health care workers, attitudes, infection, Sneezing, hospital

Introduction

Historically, it has been evident that corona viruses have transmitted from one to other through different ways such birds, with humans being particularly in danger to corona infection and transmission of the virus (Schoeman and Fielding, 2019). The previous layers of outbreaks of the infection as Severe Acute Respiratory Syndrome-Coronavirus “SARS-CoV” and Middle East Respiratory Syndrome-Coronavirus “MERS-CoV” in (2003 and 2015), show a serious resemblance to COVID-19, which was first time reported in Wuhan, China (WHO, 2020).

For the first time it was reported in the city of Wuhan, the capital of Hubei province in China at the last week of December 2019 (Carlos et al., 2020). The spreading rate of the infection is very high and infect many countries such as Vietnam and many other neighbor countries, therefore the COVID-19 infection was clearly declared a Public Health Emergency of International Concern by World Health Organization (WHO). In 18 May 2021, 163 million or more than novel corona cases have been reported, with also more than 3.39 million deaths recognized to COVID-19, making it one of the lethal epidemics in world record (CDC,2020; WHO, 2021).

In Pakistan, the first case originated in Karachi on 26 February 2020. Until now, 886184 cases of COVID-19 infection have been confirmed and the death cases were reached to 19856 (corona Wikipedia,19/5/2021). Due to this infectious disease the public sector was suffered of anxiety in Pakistan due to the rapid speed of suspected cases and the virus erratic future. Currently, the specified treatment is not available, but the research is being started to prepare the vaccine for the control of pandemic. It is therefore, the strategies are made to reduce the spreading rate of infection and answer to the challenges which facing during the epidemic

threats. As CDC mentions, coronavirus are very rapidly spreads mainly from one person to other by close contact or shaking the hands or transmitted by touching the objects that the virus is present here (CDC, 2020).

The sign and symptoms of COV patients, the WHO reported that more than 80 percent patients of COVID-19 showed mild infection which recovered without any medical treatment due to strong immunity, while 20% of corona cases had a severe sickness which includes shortness of breath, body weakness, failure of many organ, high fever and it has been reported that an 2% of corona cases can be fatal due to deficiency of oxygen level (WHO, 2020).

The increasing of infection and reach to sever stage is due to the high age of person and with underlying chronic disease. Need prophylaxes to protect from being exposed to COVID-19. Washing hands with soap and water for three minutes, sanitize the hands and also using face masks, isolating the infected ones from healthy peoples are the best method of controlling the hazardous infection (CDC,2020 and WHO, 2020). In addition, healthcare workers (HCWs) are more chances to getting the corona infection due to exposing in infected environment and also the source of transmission in the healthy community. Previous literature showed that HCWs had no information and attitude toward MERS CoV (Sameer et al., 2018; Abdullah et al., 2016).

Three hospitals are referral hospitals including district headquarter hospital Timergara, district headquarter hospital Chakdara, district headquarter hospital Batkhela, and district g=headquarter hospital Saidu Sharif, Swat. These hospitals facilities are available with senior doctor, so that give a good response to major medical issues to all corona patients.

The responsibility for teaching and research, as well as supporting the medical staff to treat those peoples who suffer from corona virus infection in HCMC. The significance of this helpful facility, and from white evidence obtained from Wuhan province in China that HCWs were at a severe threat of infection within medical facilities and also a great menace to transmit COVID-19 agent to other peoples within the public areas. The current study explores to assess the knowledge and attitude toward COVID-19 among HCWs at District 2 Hospital in HCMC. The findings of the present study will provide a fruitful authority to organize the best seminars to update information and deliver the best knowledge and practice to control the worldwide issue (COVID-19).

So far, with in a year corona virus has lock downed the globe and putting the whole world on alert. At present regarding the awareness and knowledge on 2019-nCoV is scarce. In this study, we did a comprehensive exploration of the knowledge, attitude and practices among the health workers at Malakand region, Pakistan.

Materials and Methods

Study Place

This study was carried out among health workers attending head quarter hospitals of Malakand region, Pakistan between 12 to18 March 2020. Participation of the health workers including physicians, public health officers and paramedics were on voluntary basis and anonymous. The sample size was considered significant when the margin error is 5 percent, a confidence of interval (CI) is 95%, and the probable response rate of seventy percent to most of the key themes. The lowest size of sample estimated for the present study was 188. A total of three hundred health workers in accounting for errors and non-respondents.

Sampling Methods

The used method of sampling was cluster type, which was done in two stages. The initial stage was a purposive collection of health workers as a clusters and the final stage was by applying a suitability sampling method. The health workers were convinced for obtaining the oral consent from the participants with full confidence and ethics, followed the system of administration of KAP survey. Only those participant were involved who fulfilled the insertion and rejection conditions and agreed were included.

Population Study

Six hospitals were identified in the study region. All hospitals (fixed for data collection) were contacted and informed about the project of COV-19, and they approved to cooperate in data collection. Of the six hospitals three were headquarter hospitals, the majority of the participants were from the head quarter hospitals 89.7% (202/225) and only 10.3% (23/225) from other, respectively.

Measuring Tool

The interviews was continued up to 90 minutes, and the analysis of data were process by thematic analysis technique. An interview questionnaire was drawn by researchers after a thorough search of literature based on the most recent and available information. The questionnaire is formed 29 questions present in appendix A, arranged into four parts written in English and no need to be translated into the local language, the first part include six questions about personal data including age, sex, profession, practice settings, experience, zone live in. The second part is formed of ten questions to know the knowledge of health workers. The third and fourth parts include 6 questions each to know the attitude and precautions of health workers.

Approval of Ethics and Informed Consent

The ethical approval was issued from the Research Ethical Review Committee at University of Malakand and all the headquarter hospitals (Saidu Sharif, Timargara and Batkhela) before intervention in the study. Designed the questionnaire anonymously, and every respondent give informed consent. The data were kept secretly and the results did not identify the respondents personally.

Analysis of Data

Data is analyzed by putting in to the tables, simply the values and percentages were having been calculated otherwise the statistical analysis will be carried out when needed in publication.

Results

Demography of the Participants

Three hundred and thirty respondents responded the questions. The age range of the participants was 24 to 65 years. Table first shows the basic characteristics of the respondents. Male 58.4 % (n=193) were in majority than females 41.5% (n=137). The study group included 29.6% (n=98) physicians, 31.8 % (n=105) public officers and 38.4% (n=127) paramedics. 55.4 % (n=183) were working in referral hospitals and 44.5% (n= 147) in primary health care centers. Most of the respondents were having experience 11-20 years 42.1 % (n=139) followed by 21 & above years 37.8% (n=125) and the least were in the age 1-10years 20% (n=66). Of the respondents 65.7% (n=217) were from urban areas and that of 34.2% (n=113) from rural health care centers.

Table 1: Demographic Features of the Participants (n = 330).

Variables (V)		Frequency (F)	Percentage (%)
Age (Years)	21-40	210	63.6
	41-60	97	29.3
	61-& above	3	0.90
Sex	Male	193	58.4
	Female	137	41.5
Profession	Physicians	98	29.6
	Public health officer	105	31.8
	Paramedics	127	38.4
Practice settings	Health center	147	44.5
	Referral hospital	183	55.4
Experience (Years)	1-10	66	20
	11-20	139	42.1
	21 & above	125	37.8
Zone live in	Urban	217	65.7
	Rural	113	34.2

Participant's Knowledge

The second table shows the knowledge among health workers. The majority, 76.6% (n=253) were aware that the infection is viral, 6.66% (n=22) were familiar that it is due to immunodeficiency and 16.6% (n=55) were of the view that it is infectious. Regarding mode of transmission 63.3% (n=209) were voted for its transmission due to droplets after sneezing, 23.6% (n=78) were said that it is transmitted due to touching and shaking of hands with infected person, 7.87% (n=26) were viewed for the uses of objects which already used by viral infected person and 5.15% (n=17) were agreed for its transmission through sexual route. A majority of participants 31.2% (n=103) agreed for shortness of breath to be the symptoms, 26.6% (n=88) flu like, 23% (n=76) headache and 19% (n=63) with high temperature. In the response of question "what happens for COV disease" 92.1% were responded that occurs flu like symptoms, 3.63% (n=12) were said for sudden death and 4.24% (n=14) were of the view that it affects the human once in life. Most of the respondents 76.3% (n=252) were agreed that more than three days it take to appear the symptoms after the infection. Majority of the respondents 74.8% (n=247) were have voted for PCR tests for diagnosis. Regarding medication 48.7% (n=161) were of the view that it can be treated with antiviral, 22.1% (n=73) by use of antibiotics, 12.4% (n=41) through antipyretic medications. In response to the question that "What resource lacking to treat patients with COV disease? 48.1% (n-159) medication needed to treat, 27.8% (n=92) sufficient training is needed, 18.1% (n=60) Instrument needed to treat, 5.75% (n=19) access to laboratory tools were responded.

Table 2: Responses to Knowledge Items.

	Virus	253	76.6
The causes of infection is	Immunodeficiency	22	6.66
	Infectious diseases	55	16.6
	Sneezing with droplets	209	63.3
	Closeness and Touching with infected person	78	23.6
The disease is transmitted through	The uses of objects which already used by infected person	26	7.87
	Sexual route	17	5.15
	signs like seasonal flu	88	26.6
What are the symptoms of COV disease?	headache	76	23.0
	Shortness in breathing	103	31.2
	High temperature	63	19.0
	PCR	247	74.8
What is the reliable diagnostic technique through which CoVID can be confirmed?	ELISA	72	21.8
	Viral culture	11	3.33
	By using antibiotics	73	22.1
What type of drugs available for the treatment of CoVID?	Anti-pyretic	41	12.4
	use pain killer	55	16.6
	Anti-viral	161	48.7
What resource lacking to treat patients with COV disease?	Sufficient training	92	27.8
	Medication needed to treat	159	48.1
	Instrument needed to treat	60	18.1
	Access to laboratory tools	19	5.75

Participant's Practices

Of the 330 health workers 94.8% were familiar with WHO guidelines of novel corona virus. In response to the question "Can COV may prevent me from travelling" 90.9% were agreed. When asked the question "The government should restrict travel from healthy site to the areas of corona infection" 100 % (n=330) were of the viewed. Most of the individuals 97.2% were of the view that the government should isolate infected patients in special hospitals. Majority of the health workers 99.3 % (n=328) were said that the regime must be prepared to close the schools if the number of corona cases increases. On asking the question "Can COV be treated?" 61.5% were having the opinion that CoV disease can be treated. Regarding availability of vaccination 99.6% were agreed that vaccines are available for treating the novel COV – diseases. Against the question "Are there adequate resources available to treat COV disease?" 97.5% were of the view that adequate resources are not available for treating the disease.

Table 3: Practice Towards Novel COV-2019 Diseases Prevention among the Respondents.

	Yes	No
Are you familiar with the WHO's clinical management guidelines of corona virus?	313(94.8)	17(5.15)
Can COV may prevent me from travelling	300(90.9)	30(9.09)
The government should restrict travel from and to the areas of the disease	330(100)	0
The government should separate infected patients in special established hospitals	321(97.2)	9(2.72)
The government must be mentally prepared to close the schools if the corona cases increases	328(99.3)	2(0.60)
Can COVID be treated?	203(61.5)	127(38.4)
Is vaccination available for COV infection?	329(99.6)	1(0.30)
Are there adequate resources available to treat COV disease?	8(2.42)	322(97.5)

Participant's Precaution

Regarding the prophylaxis of the disease 95.7% (n=316) were agreed to wash hands regularly, 71.8% were agreed that Avoiding touching the eyes, nose, and mouth, 93% agreed on the statement "Covering nose with mouth in tissue paper when coughing or sneezing" 85.1% were agreed on the point "Throw tissue paper in the trash box after use it", 96.3% were agreed on "Use face mask to cover nose and mouth in crowded places., 88.1% were agreed that restrict normal daily life activities such as going to work, school, travel, shopping when symptoms appear.

Table 4: Precaution Towards Novel COV-2019 Disease among the Respondents.

	Agree	Strongly agree	Disagree
Washing hands regularly	316(95.7)	12(3.67)	2(0.60)
Avoid touching the key parts such as eyes, nose, and mouth	237(71.8)	69(20.9)	24(7.27)
Covering mouth and nose with a tissue paper when coughing and sneezing	307(93.0)	23(6.96)	0
Throw tissue paper in the trash box after used	281(85.1)	49(14.8)	0
Use face mask to cover mouth and nose in crowded places and family members	318(96.3)	12(3.63)	0
Avoid normal routine activities such as going to work, school, travel, shopping when symptoms appear. ...	291(88.1)	39(11.8)	0

Discussion

The present research study is believed to be the first of its kind among health workers of Malakand region, Pakistan. A few studies have been conducted to show the KAP of SARS and MERS CoVs towards the awareness and control (Asaad et al., 2019; Medani et al., 2018; Khan et al., 2023a; Khan et al., 2023b). However, there are still limited information on the knowledge, attitudes, and precautionary practices toward novel corona virus 2019. With an increasing prevalence rate of new corona virus 2019 disease among the public of Pakistan, there is a serious need to gather a crucial data for effective control and preventive plans. Nowadays, Novel corona virus 2019 is the main heading in the social media and public discussion, especially among corona patients and health care workers. This survey was aimed to collect data from health workers in Malakand region, Pakistan, efforts to inform on awareness and attitudes towards the stoppage and control of infectious disease caused by novel COV-2019. The findings of the present study may be useful when planning health education programs about this emerging infectious viral disease.

The current study findings revealed that 76.6% of the participants knew the causes of disease when compared with findings of the same on MERS-CoV infection before and after health education intervention reported 94% and 94.7% of health care providers in Mecca, Saudi Arabia (Nour et al., 2017). In the response of a question “causes of respiratory tract infection” 80% of the respondents were claimed it for virus (Goni et al., 2019). The correct answers for causative agent of Corona infection among the health care workers of Makkah hospitals was 94% (Nour et al., 2015). Against the question “MERS-CoV is a viral infection” was voted by 92.2% of the health care workers in South Western Saudi Arabia (Asaad et al., 2019).

In current study about the mode of transmission “the disease is transmitted via” Sneezing with droplets was responded by 63.3% of the respondents, response of the similar question was 94% and 97.7% pre and post education intervention among health care providers in Mecca, Saudi Arabia (Nour et al., 2017). The general knowledge of students about MERS-CoV was 65.6% regarding the transmission (Medani et al., 2018). The response against of a question “the MERS-CoV is caused by alpha corona virus” among health care workers at King Khalid University Hospital, Riyadh, Saudi Arabia was favored by 24.7% physicians, 27.8% nurses, 24.6% pharmacists and 29.6% technicians (Albarrak et al., 2019). Air is the main transmissible factor in response of “Flu-like illnesses are spread by was reported by 85.3% (Goni et al., 2019). Transmission from infected person to another was responded by 94% healthcare providers towards MERS-CoV infection at Makkah hospitals, KSA (Nour et al., 2015). In another study “MERS-CoV is spread through close contact with viral infected person or animal was replied “yes” by 91.2% (Asaad et al., 2019).

Regarding sign and symptoms of the novel CoV-2019 “shortness in breathing” was favored by highly 31.2% in present research. The fever, cough and shortness of breath are the hallmark symptoms of MRES-CoV was replied by 92% physicians, 94.4% nurses, 95.4% pharmacists and 88.9% technicians (Albarrak et al., 2019). A question “Common symptoms of MERS-CoV infection include fever, cough, and dyspnea” was voted by 97.6% of the health care workers (Amri et al., 2020). In a study conducted among the Hajj and Umrah Pilgrims from Malaysia against the question “What are the difficulties of flu-like illnesses? answered by 64.4% (Goni et al., 2019). The statement “Fever, cough and shortness and complication in breathing are symptoms of MERS was replied “yes” by 83.9% of the respondents (Asaad et al. 2019).

In current study 92.1% of the respondents were favored flu like symptoms when asked “What happens for COV disease? This was in agreement with the same “Do you think MERS-CoV

is a dangerous disease was endorsed “yes” by 84.1% of the male primary school in Almajmaah City, Saudi Arabia (Medani et al., 2018). Leukopenia and thrombocytopenia are common laboratory findings among cases of MERS-CoV infection was favored by 89.4% of the stakeholders (Amri et al., 2020). MERS-CoV infection can cause death/ severe illness was voted by 89.7% physicians and 87.2% other than health care workers (Alsubaie et al., 2019). MERS could be fatal (Yes) was replied by 81.2% (Saad et al., 2019). In the response of “By what tests can COV be confirmed?” 74.8% were of the view for PCR, the same was asked from the health professionals King Khalid University Hospital, Riyadh, Saudi Arabia and were documented 79.6% physicians, 77.8% nurses, 76.9%pharmacists and 82.7% technicians (Albarrak et al., 2019).

How can it be treated? Was answered with antiviral by 48.7% in present investigation, however other studies demonstrate the same as antibiotics are the first treatment was responded by 69.1% physicians, 77.8% nurses, 56.1% pharmacists and 69.9% technicians in a study conducted in King Khalid University Hospital, Riyadh, Saudi Arabia (Albarrak et al., 2019). No specific treatment is available was replied by 85.7% physicians and 75% other than health care workers (Alsubaie et al., 2019). Antibiotics are the first line treatment was replied as 71.7% of the health care workers (Asaad et al., 2019). In a study 100% respondents were of the view that ‘hand washing’ is the principle tool for prevention (Amri et al., 2020).

In the present study in response of “What resource lacking to treat patients with COV disease? 48.1% were replied that sufficient medications are lacking. The questions “Are you familiar with the WHO’s clinical management guidelines of corona virus” 94.8% of the respondent agreed to yes. Can COV may prevent me from travelling was agreed by 90.9% of the respondents. The nCoV-2019 management includes social distancing from one another, the actions which control infection, quarantines setup, restrictions of traveling, institute closing, workplaces, game stadiums and shopping malls. Social distancing is very important for any individuals by staying at home, traveling is completely stop to other areas and no-contact of hands shaking (WHO, 8 March, 2020). Model for COVID-19, Many of the provincial governments are now assuming social distancing (mostly 6 feet) in areas affected by the corona virus (CNN, 8 March, 2020; Public health matters 9 March, 2020).

Older and those with long term health issues such as diabetes, heart problem, lung disorder, hypertension, and weak immunity faces induce the risk of serious infection mainly complications in respiration and had been directed by the US CDC to isolate and stay home in the areas of corona outbreak (Knowing the threats for COVID-19;CDC, 11 Feb, 2020). The government should isolate viral infected patients in special prepared hospitals 97.2% in the present study. The government has already announced time by time the infected and even the suspected patient should be stayed in quarantine for up to the confirmation of the cases or recovery however there are no enough facilities available for establishing a separate hospital to the patients.

On 20 March, the 10,000-bed setup was managed by Pakistan Army force in the field hospital at Karachi city Expo Centre to separate from other and treat the corona patients. The expenditure was done by afforded by the provincial government (set up by Pakistan Army force in Karachi field hospital, 20 March, 2020). Three days later, the setup of isolation medical ward and quarantine center was done in Jinnah Postgraduate Medical College, which provided tests (without cost) of corona suspected with results display in 7-8hrs of sample provided (JPMC, 23 March, 2020). The Prime Minister of AJK, Raja Farooq Haider stated that the installation of screening machines was done at any point of view of entry and quarantine facilities were being build up in all the districts of Azad Jammu Kashmir (Samaa. 14 March 2020). The Punjab

government open the health emergency on twelfth March in important cabinet meeting. Due to availability of pilgrim the government prepared other quarantine facility in the terminal district of Punjab, Dera Ghazi Khan (education vocations 13 March 2020). On 23 March, The announced of lockdown by Chief Minister in overall Punjab Province from 24 March till to 6 April and shopping markets, public connection were still closed and pillion riding was strictly prohibited (CM, Punjab, 23 March, 2020). Announcement of 1,000 bed in hospital would be setup in Lahore while 5 other hospitals were designated for corona patients across the whole province in the next day while the rescue teams started cleaning of towns and cities. In the same day, 150 or more pilgrims arrived in Faisalabad from the neighbor country, Iran through Taftan border to be used as a separated center. Four hundred and fifty pilgrims were return in the Agricultural University campus to made the quarantine. The largest quarantine center was established by government in the Industrial Estate of Multan to separate the returning pilgrims with three thousand rooms. It has 1247 new pilgrims in quarantine center as of the day. After that 50 bed hospital was also setup to aid the quarantine center (150 or more pilgrims from Taftan border reaching to Faisalabad, 23 March, 2020).

In present research 99.3% of the respondents were agreed that government must be decide to close the schools (govt and private) if the cases increases. In this regard On first March, the Chief Minister of Sindh announced the closed of all educational departments (government and private) in Sindh until thirteen March ("Schools remain closed in Sindh until thirteen March; "Sindh govt extends vacancies (closure) of educational departments up to March 13) which was later extended until 30 May ("Sindh govt extends vacancies of educational institutions up to May 30). The Baluchistan Government established a 14-member nominal committee in the end of January to tackle the outbreak (Nagri et al., 2020). Schooling study have been closed till the last day of March. The Baluchistan Minister Sardar Yar Mohammad Rind indicated that "strict action will be taken against the opening of schools and do not obey the rules". The Government of KP was decided to close all private and government sectors until 5th April and postponed all public gatherings and useful meeting until further notification as a precautionary measure (KP govt announces to closed the higher and lower education institutions among coronavirus fears till to 5th April). On twelfth March, the medical emergency was set by government in different regions of the provinces due to more cases were reported in other places and further closed educational institutes until 5th April and other activities were also completely banned as a defensive measure. On fourteen March, the local government of AK open the health emergency after the important conference of National Security Council and notified the closure of educational institutions up to six April and examinations were postponed. It was concluded that no adequate resources were available to treat COVID-19, its however, the individual man power is available in the form of health professionals, army forces and etc. to fight against the outbreak.

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