Original Article

ONLINE OPINION ON GOVERNMENT POLICIES REGARDING COVID-19 BY HEALTH CARE WORKERS OF PAKISTAN

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ABSTRACT:

Introduction: COVID-19 emerged in December 2019 and has spread quickly and aggressively and became a major health concern worldwide. The main aim of this study was to assess and evaluate online the opinion of health care workers (HCWs) regarding policies of government of Pakistan in the management of the COVID-19 pandemic.

Material and Methods: A self-designed electronic questionnaire was created using Google Forms. The questionnaires were distributed to HCWs via e-communication apps and social media. The collected data was coded, entered, and assessed using SPSS version 20. Statistical relationship of the opinion of HCWs in association with education level was evaluated using the Pearson Chi-square test and two-sided Fisher exact test. $p \leq 0.05$ was considered statistically significant.

Results: A total of 625 participants sent their responses. Almost half of the study participants were of 15-24 years of the age range, and 24.6% were Bachelor in Medicine and Bachelor in Surgery (MBBS). More than 90% of HCWs expressed that the Government should restrict travelling from the affected countries and provide free screening nationwide. The 42.2% of HCWs were not satisfied with the Government measures and 44% HCWs disagreed that Government institutions will be able to control the pandemic. 88.5% of HCWs agreed with the effective communication strategies of authorities about COVID-19, and they showed satisfaction that public health messages were clearly delivered to the public, whereas, 81.8% of HCWs were not satisfied with the public response. A significant association was seen between the level of education and demand for a free screening of COVID-19 by the Government ($p = 0.000$) and satisfaction level about the Government precautionary measures for the prevention of the spread of COVID ($p = 0.006$).

Conclusion: Majority of the HCWs were satisfied with the awareness strategies and communication by the Pakistani Government, but were not satisfied by the public response to these strategies and measures. The mainstream of HCWs also demanded travel ban, free screening, information of suspected cases to the health authorities. However, they also expressed their concern that the Government institutions will not be able to control the pandemic.

Key Words: COVID-19, Pandemic, Prevention

INTRODUCTION:

2019-nCoV, a viral infectious disease emerged from Wuhan, China, in December 2019 and was later named as Severe Acute Respiratory Syndrome Corona virus-2 (SARS CoV-2). It was declared a global pandemic by the World Health Organization (WHO) on Mar 11, 2020. Since then, socioeconomic, religious and cultural life is being rearranged globally with an improved understanding of this disease and its management. 15 million confirmed cases and 618 thousand deaths, had been reported by Jul 23 2020, due to COVID-19 in 213 countries.[1] COVID-19 is highly communicable as it is transmitted through respiratory droplets and close contact with infected persons. Air borne transmission of virus is also reported in some close settings which is observed due to certain medical conditions and treatment procedures.[2] The risk of increased disease severity is highly

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associated with underlying chronic disease as well as elderly age. WHO reported mild symptoms in more than 80% patients who recovered without any medical intervention. Up to 20% infected patients showed severe illness like septic shocks, organ failure and shortness of breath and 2% cases were fatal.[3] Being easily and highly transmissible, COVID-19 is being proved to be a worldwide ongoing threat for social and economic infrastructure. As world took time to understand the nature of disease, the measures taken to control and treat the disease were also delayed. Preventive measures were taken all over the world to contain the spread of virus within countries as well as across the borders and included halting flight operation and shutting down borders for people and trade, restricting domestic transport and travelling, baning the religious, public gatherings and imposing lock downs and curfew.[4] All these steps with suspension of economic activities, had lead to negative socioeconomic consequences and have posed a major threat to the global economy.[5] According to the World Bank, global economy will be shrinking by 5.2% by the end of this year representing the deepest recession since World War II, secondary to workers falling sick, restriction on internal and cross borders trade and overwhelmed healthcare system.[6] Disease propagation within Pakistan is not different from the global context. Pakistan is sharing borders with Iran, Afghanistan, China and India. Pakistan has strong relations with China in terms of trade and religious attachments with Iran. First two COVID-19 cases in Pakistan were also from outside Pakistan and UAE. Intensive travelling among the countries could be a strong cause of disease propagation in Pakistan, thus government of Pakistan had shut down its border with China and placed strict screening on Iran-Pakistan border.[7] Pakistan uses 2% of its GDP for healthcare sector as compared to average 10% globally. Pakistan focuses on health sector sporadically especially in response to such episodes.[8] So, Pakistan's health system may not scale up for timely detection and treatment of disease outbreaks. Along with unsound health system Pakistan had to deal with political, social and religious contexts too.

Pakistan's Government has implemented many strategies to control and prevent COVID-19 viral infection. These include partial and smart lockdown, closure of non-essential services like hotels, shops, restaurants and shopping malls etc. Government and private institutions, academic institutes, schools, colleges, and universities remained closed to avoid crowds and virus spread. Online classes and work from home were introduced and implemented. Public and religious gatherings were banned or restricted, social distancing and mask-wearing were trended, and people were made to stay home through partial and smart lockdown, but a complete lockdown was not imposed.[9] For the country's emergency preparedness, OPDs of many hospitals were directed to close and only selective surgical procedures were performed. Specific hospitals and health care establishments were designated to manage COVID-19 suspected and infected patients.[10] Public awareness was created and extended through print and electronic media. The Government used innovative smart solutions and technology to aware common people. Messages were sent in cooperation with telecommunication companies. Helplines were there to answer queries and help. Along with public awareness centers, quarantine centers and testing facilities were established.[11] Curfew and the complete lockdown was avoided in economic perspectives, but prices of commodities and essential goods grew due to false facts, rumors, fear, and misinformation spread through social media.[12] However COVID-19 outbreak also exposed gaps, flaws, and fractures in the healthcare system globally which didnot have any design and capability to cope with such a crisis. The timely unavailability of personal protective equipment for healthcare workers all over the world has debunked the actual condition of the healthcare system. Healthcare workers,

having administrative, educational, and clinical roles were at high risk of getting an infection during patient care or medical procedure, and they could also be a potential source of spreading the infection to the community (their families as well as other patients). A study shows healthcare workers as an important group being the cause of virus spread.[13] Knowledge and awareness of HCWs regarding nature and handling techniques of this disease are quite important to contain the virus in a healthcare setting and to provide better care to the patients. High-level training and availability of preventive equipments such as N-95 respirators, goggles, protective clothing, gloves, surgical masks, and face shields must be ensured for health workers treating and taking care of COVID-19 patients.[14]

Being front line fighters, HCWs are the most affected ones in terms of disease burden handling in hospitals, clinics, or other healthcare facilities, providing patient care and prevention of infection. Hence, we have conducted this questionnaire-based study, which to the best of our knowledge, is the first in Pakistan to explore and evaluate the opinion of HCWs on the effectiveness of policies of the Pakistani Government against COVID 19.

MATERIAL AND METHODS:

A cross-sectional survey was carried out among HCWs of Punjab, Pakistan, from May 1 to May 15, 2020. During this social distancing period, it was not feasible to do a community-based sampling survey. So as an alternative; an electronic questionnaire was used to collect data via a web-based survey. An online google survey was used to gather reliable data. The ethical review committee of Akhtar Saeed Medical and Dental College, Lahore, approved the study processes and method.

Based on the objectives of the study, a 13-item survey instrument was devised after a thorough search of the literature. Demographic variables included age, gender, marital status, education, and employment status. The second section was specifically designed to assess the HCWs attitude towards Pakistani Government policies during this pandemic. A total of 660 participants sent their responses. Incomplete forms were discarded (35), and only complete forms (625) were included in this study for statistical analysis. The collected data was coded, entered, and assessed using SPSS 20 version. Frequencies were presented through tables and figures. The statistical relationship was evaluated among attitudes of HCWs in association with education level using the Pearson Chi-square test and two-sided Fisher exact test. The p-value ≤ 0.05 was considered statistically significant.

RESULTS:

Among 625 HCWs, majority were females (n = 444; 71%). The most frequent age range was from 15-24 years of age (n = 316; 50.6%) and 52.8% of them were unemployed. The detail of other demographic characteristics is given in (Table-1).

Table-1: Showing the Demographic Information of HCWs

Variables	n = 625	%
AGE OF HCWs (years)		
15 - 24	316	50.6
25 – 34	238	38.1
35 – 44	49	7.8
45 – 54	7	1.1
55 - 64	15	2.4
GENDER		
Male	181	29
Female	444	71
MARITAL STATUS		
Married	187	29.9
Single	438	70.1
EMPLOYMENT STATUS		
Private Job	235	37.6
Govt. Job	56	9
Un-employed	330	52.8
Retired	4	0.6

In this study, the majority of participants were MBBS doctors (n = 154; 24.6%), followed by Bachelor in Dental Surgery (BDS) doctors (22.2%). (Figure-1)

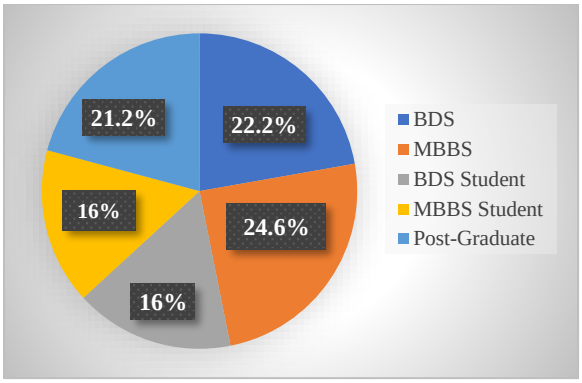

Figure-1: Percentages of Education Level Among HCWs

As shown in table 2 majority of HCWs 617 (98.7%) answered that the Government should restrict traveling from the affected countries to avoid the spread of disease in Pakistan, whereas 3 (0.5%) were uncertain and 5 (0.8%) disagreed with this. The mainstream of HCWs 596 (95.4%) answered that the Government of Pakistan should provide free screening nationwide, though n = 13 (2%) HCWs have disagreed on this question.

Regarding, the opinion to inform the suspected COVID-19 case to the health authorities 618 (98.9%) participants agreed, however (1.1%) participants were uncertain; about treating COVID-19 patient at home majority of HCWs n = 300 (48%) responded that COVID-19 should be treated at home, while 247 (39.5%) did not agree in treating COVID-19 patients at home.

About 286 (45.8%) participants were satisfied with the Government precautionary measure to avoid the spread of COVID-19 in the country, however, 42.2% were not satisfied with the Government measures and (12%) were not sure that either the Government precautionary measures are adequate to avoid the spread of COVID-19 in the country or not.

Regarding ability of Government institutions to control the pandemic, 44% of HCWs disagreed while 31.8% agreed and were satisfied.

In this study, 81.8% of HCWs were not satisfied with the public response towards the COVID-19 pandemic, whereas 88.5% of HCWs replied that authorities communicated very well about COVID-19 and delivered public health messages to the public.

In the current study, the level of education was significantly associated with satisfaction for government policies regarding free screening of COVID-19 (p=0.000) and measures to prevent the spread of COVID-19 (p=0.006) (Figure-2).

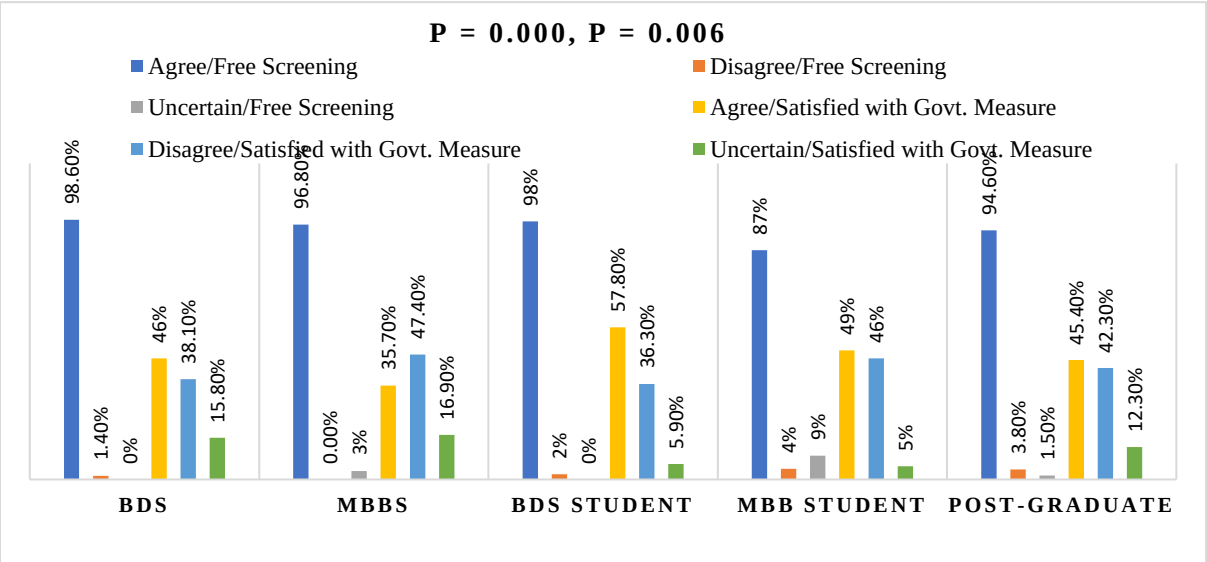

Figure-2: Association Between Education Level and Satisfaction Regarding Government Policies and Free Screening.

Table-2: Attitude of HCWs (n = 625) towards Pakistani Government Policies

VARIABLES	n (%)
The Government Should Restrict Travels From The Affected Areas To Avoid	
Agree	617 (98.7)
Disagree	5 (0.8)
Uncertain	3 (0.5)
Is it important to report a suspected case to health authorities?	
Agree	618 (98.9)
Uncertain	7 (1.1)
Can corona infection be treated at home?	
Agree	300 (48)
Disagree	247 (39.5)
Uncertain	78 (12.5)
The government should provide free screening nationwide?	
Agree	596 (95.4)
Disagree	13 (2)
Uncertain	16 (2.6)
Satisfaction with the government precautionary measures to avoid the spread of novel covid 19	
Agree	286 (45.8)
Disagree	264 (42.2)
Uncertain	75 (12)
Perception about government institutions ability to control pandemic	
Agree	199 (31.8)
Disagree	275 (44)
Uncertain	151 (24.2)
Satisfaction with public response to covid 19	
Agree	24 (3.8)
Disagree	511 (81.8)
Uncertain	90 (14.4)
The authorities communicate evidently and steadily regarding covid-19 and deliver public health basis for their conclusions	
Agree	533 (88.5)
Disagree	14 (2.2)
Uncertain	58 (9.3)

DISCUSSION:

COVID -19 is the pandemic of the century that no country or healthcare organization foresaw and hence prepared for ahead of time. The global spread of COVID-19 has generated aggressive medical and public health responses, including testing, screening, contact tracing, social distancing, travel restrictions and orders to staying at home when sick or exposed, yet many members of the society have distrust in the policies of the Government.

This study was conducted in the middle phase of the pandemic in the country from May 1 to May 15, 2020. Pakistan, at this point, was one of the first countries transitioning from lifting up the lockdown to opening the country in stages, as well as heading towards its peak of the COVID-19 cases. China and Spain lifted the lockdown after the peak passed.[15] However, Pakistan had a strict lockdown before the surge of cases, but then owing to economic pressures, the Government decided to implement smart lockdown only in disease concentrated areas while still facing the threat of an explosion of COVID -19 cases.[16] HCWs, who were forefront fighters and one of the major stakeholders in the policy-making against COVID-19 showed a lot of concern on the decision to lift the lockdown. Since this topic is not much addressed, we were unable to find enough data to compare. Hence more local and international studies need to be conducted for evaluation of Government policies on COVID-19.

In terms of demographics, there was active participation by females as compared to males. 71% were females which confirms the new trend of female education, and their representation in the education system as students and professionals which is comparable with the study carried out in Lahore, Pakistan which also stated that 71.5% of HCWs were female,[17] while other knowledge, attitude and practice studies conducted in Pakistan and China are in contrast with this study.[18,19]

Another encouraging aspect of this study was the involvement of younger age groups, which shows the political and public health awareness among young professionals, a similar trend observed in other developed countries. The most participation was from 15-24 years of age (50.6%), which is supported by the studies conducted in Pakistan by Khan and his colleagues and Saqlain and his colleagues, where 50.9% and

74.9% of participants were below the age of 30 years.[17,18] Respectively, it is in contrast with a study conducted in India which reported 88.1% of HCWs who participated were between 18-30 years of age.[20] In present study the least participation was reported by age group of 45- 54 (1.1%) which is even lower than 55-64 years of age (2.4%), this is in contrast with the study carried out in China where participants greater than nine years of experience had the most response (36.0%).[19] The reason for the higher participation of the two younger age groups could possibly be that our survey instrument was distributed electronically and these age groups are tend to indulge more in the use of electronic devices and social media, but the reason of less participation by the middle age groups needs to be probed into more.

24.6% HCWs were MBBS doctors, and 22.2% were BDS doctors, and this is similar with the results reported in Chinese and Pakistani studies[18,19] whereas, the study carried out in India stated that 33.3% were medical students and 9.1% were dental students which is in comparison with the existing study.[20]

In this study, 9% were working in the Government sector, while 37.6% were employed in the private sector, and this is in contrast with the study conducted in Pakistan where 12.58% of the participants were Government employees, and 7.61% were from the private sector.[17] Another striking finding of the present study was that 52.8% of the participants were unemployed, out of which 32.35% were students, and 20.5% were doctors, which is a conceivable matter of concern. Thus, this raises another crucial research question, whether this unemployment was precipitated by Covid-19. Travel is the single most important contributor to COVID-19 transmission.[21]Absolute travel bans tend to increase anxiety and affect the travel of indispensable resources and their timely movement. However, according to our study, most of the HCWs (98.7%) supported the travel ban by the Government from the affected areas to avoid the spread of disease in the country. There are very limited studies carried out on the opinion of HCWs on the travel ban for the COVID-19 pandemic. In contrast, a study conducted in India found that most (98 %) of the participants thought social distancing is essential to stop the virus from spreading.[22] but, 88.7 % of them considered traveling within the country to be safe during the pandemic. Studies conducted on the association of communicable diseases with travel ban suggest a positive outcome when combined with other preventive measures. A study conducted by CDC on Ebola, and a study conducted by WHO (2014) on the spread of influenza, both reported that travel ban can be effective if applied extensively and timely, along with other supporting necessary measures like risk assessment and management program at the borders and traveler's education.[23, 24]

Pakistan, like most of the other developing countries, faced a huge economic crisis due to shut down businesses. The country reported a loss of $ 5.3 billion to $9.6 billion in the fourth fiscal quarter alone, with an expected shrink of $15 billion as a result of the pandemic.[25] Crushed under the pressure of shrinking GDP growth from 5.8% in 2018 to 0.98% now, Pakistan looks towards its strategic allies like China and Saudi Arabia, after WHO and International Monetary Fund (IMF) for stability[6] However, surprisingly despite being in the healthcare system and aware of the economic situation and healthcare budget of the country which was 2.90% of the total % of GDP in 2017, the majority of HCWs answered that Pakistan Government should provide free screening nationwide (95.4%).[6] Developed Countries like China with GDP of $ 13.61 trillion provided both testing and treatment for free, while USA despite having a GDP of $ 20.54 trillion in 2018, although offered free testing but charged in thousands for the treatment. Italy and the UK with GDP of $ 2.855 trillion and $ 2.084 trillion respectively in 2018, and also known for their world-class healthcare systems have been providing free screening through the Government hospitals, but in the private setup testing cost up to $ 460 in

UK.[6,26] While Pakistan, with a GDP of $ 314.6 billion (2018) and Government Debt to GDP ratio of 84.04%, also offered free testing to the suspects and contacts of the suspects.[6] However, private healthcare services in Pakistan charged up to $ 47.01 for testing of COVID-19, which is comparatively cheaper and more extensive as compared to its neighboring country, India. India with an economic worth of $ 2.719 trillion (2018), strictly tested suspects only with a travel history from an affected country, and their contacts. While the Indian private healthcare sector charged up to $ 60.22 for testing. [6,27] Pakistan, despite being a smaller economy under debt, still offered free national screening to the suspects and contacts, which is according to the suggestion of the HCWs of Pakistan, comparable to the world's largest economies.

Regarding the importance of reporting suspected cases of COVID-19 to the health authorities, 98.9% participants believed that they should be reported. Although the response has been very encouraging on opinion towards reporting, a separate study should be conducted to determine the practice, quality and trend of reporting. Even, if regular and strict reporting of the suspects is being observed, the confirmation can only be done through lab testing. Currently, worldwide, no country knows the exact number of COVID-19 cases, as only lab tested positive cases are confirmed COVID-19 cases. The lab testing of a country depends on various factors like the capacity of lab testing, the severity of COVID -19 strain and the tendency of the public to get tested. So, the true number of COVID-19 cases in any country may be much higher than the tallies we have till now.[28] On June 13th 2020, Pakistan conducted 29, 546 tests, the greatest number so far, and reported 6825 new cases. However, on July 25th 2020, the newly reported cases have dropped to 1226/day, with a relative decline in the number of tests conducted 23,254 tests/day.[29] Hence, it is crucial that further studies must be conducted to establish other criteria for confirming positive cases, attitudes towards testing as well as to determine the effectiveness of the in-place reporting system.

Regarding practicing management of COVID-19 patients at home, CDC released guidelines on May 8th 2020.[30] Pakistan also announced that patients without hypoxia could be isolated and treated at home on April 2nd 2020. China also used home quarantine as a strategy for isolation of contacts.[31,32] But in current study, almost 57.4% HCWs still believed that COVID-19 patient should not be managed at home, while 25.3% were of the opinion that COVID-19 patients could be treated at home.

Although Pakistan was able to restrict its COVID-19 cases in May, despite being neighboured by the major outbreak areas at the time, China and Iran, only 45.8% participants were satisfied with the Government's precautionary measures to avoid the spread of COVID-19 in the country, while 42.2% were unsatisfied and 12% were unsure. In terms of confidence in the Government institute to control the pandemic, only 31.8% of HCWs agreed, while 44% did not believe in the Government and this was in contrast to a study conducted in another developing country Nepal, in which majority of the participants (80%) had confidence that their Government will be able to control COVID-19 in the country.[33] While a study conducted in China, a developed country 90.8% believed that the country would be successful at controlling the pandemic and 97.1% had confidence that China can win the battle against the virus.[33] Nonetheless, despite showing lesser confidence in the Government, 88.5% of HCWs were of the opinion that authorities had communicated and delivered public health messages effectively regarding COVID-19. The reason for this distrust and unrest among HCWs in current study could be because of the decision of Government to lift the strict lockdown despite the approaching COVID- 19 peak and foreseeing the lack of adherence to the preventive measures by the public.[12] This concern of HCWs is proved by this study where the

majority (81.8%) of HCWs were dissatisfied by the public response towards the COVID-19 pandemic. WHO in June has also suggested the re-implementation of lockdown, considering the lack of compliance by the public.[34] Hence, this study shows that HCWs were satisfied with the effective communication of Pakistani Government regarding COVID-19 however, they did not agree with the policies and the decision of the Government to ease the lockdown due to lack of compliance by the public.

CONCLUSION:

This study was possibly the first in the region and among the first few to explore the opinion of HCWs on Government policies on COVID -19. According to this study, HCWs were unsure of the ability of the Government institutes to control the pandemic in the country; however, were satisfied with the Government's performance on public awareness. The current study reports one factor of this lack of confidence in HCWs, which is; the lack of proper practice of preventive measures by the public, but it may also be due to the policies of the Government. Pakistan made some unprecedented decisions and strategies. Hence, it is crucial that evaluations and comparisons be made with the policies of the other countries which were successful or not, at arresting the disease. Such comparisons will allow us to find effective evolved strategies to prevent and better prepare for similar situations in future.

AUTHOR'S CONTRIBUTION:

SM: Supervisor of study and study design
RC: Study design and conception of an idea
ZR: Data analysis and Drafting article
SB: Drafting article
QT: Data collection
SH: Data collection

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