

## Awareness of Telemedicine During COVID 19

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### Abstract

With the emergence of COVID -19 pandemic, the care of patients was affected. Not only was the OPDs closed but all elective procedures were stopped as well. As a result, many hospitals introduced telemedicine. Hence, there was need of a survey to assess the impact of these new changes on the public and to assess how people perceive telemedicine. An online survey was conducted by using google forms. A total of 384 people participated in the survey. Results have demonstrated that OPD closure affected only 30 % of the people, and about 80 % of the participants were afraid to visit the hospital in the fear of getting infected. The study has shown that people are open to the idea of telemedicine and it was perceived very positively by the public.

**Keywords:** telemedicine; OPDs; coronavirus disease

**Abbreviations:** OPDs - Outpatient Department, COVID 19 - Coronavirus disease; WHO - World Health Organization

### Introduction

Coronavirus disease (COVID 19) is a highly contagious disease caused by the novel coronavirus also known as SARS-CoV-2. The disease emerged in Wuhan, China and has so far involved around 215 countries. In March 2020, the World Health Organization (WHO) characterized COVID19 as a pandemic [1]. As of July 2020, worldwide 15,234,496 cases were recorded, out of which there were 622,570 deaths. A total of 267,428 cases were reported in Pakistan [2].

Closure of outpatient departments (OPDs) and elective surgeries were also ordered by the government to protect both the healthcare providers and the patients, and this led to a decrease in the number of patients tended to. Emergency facilities, however, remained

functional. Due to these factors, seeking medical attention for non-emergency conditions seem to be restricted. Healthcare facilities must always be accessible to everyone and appropriate measures must therefore be taken to be able to provide medical attention to the population in need. Hence, telemedicine was introduced by almost all the hospitals in the country.

There is a need for a survey, that studies the impact of COVID 19 on accessibility of health care. We plan to analyze the percentage of people affected and identify how telemedicine is perceived by the people of Pakistan and if they find it as a useful alternative in this pandemic.

### Methods

A cross-sectional study was conducted on the public of Pakistan. The sample size of 384, was calculated using an online sample size calculator (OpenEpi, Version 3, open-source calculator). The anticipated frequency was left as 50 % as no previous studies were done to be able to get a value, with a margin of error of 5 % and a confidence level of 95 %.

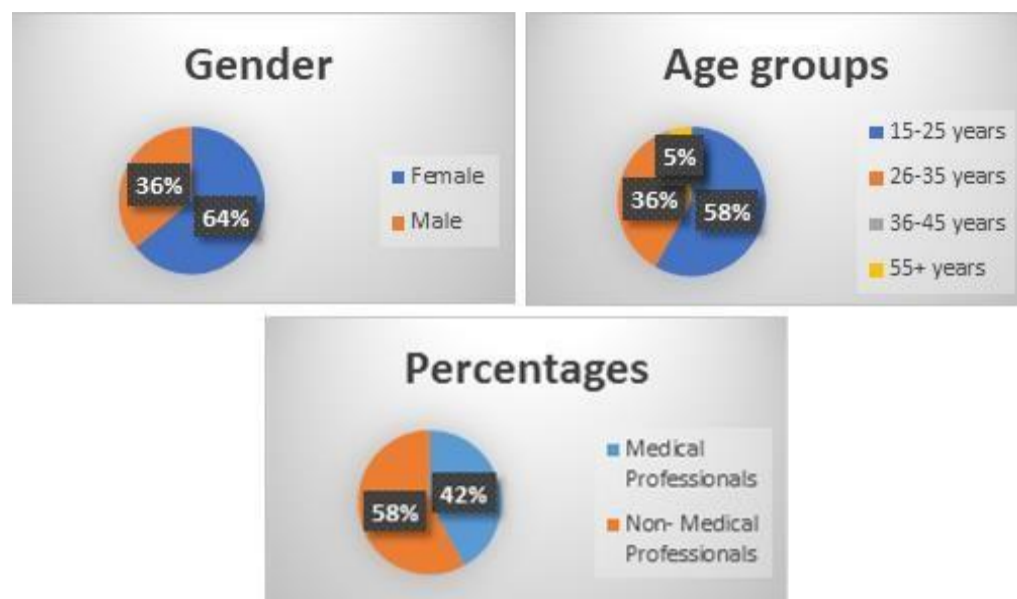
Inclusion criteria included individuals of all ages and both genders.

Exclusion criteria were individuals age less than 15 years.

A convenient nonprobability sampling technique was used, and an online simple structured questionnaire was prepared for collecting the required data. Data were analyzed using SPSS software version 25. The filling and completion of the questionnaire will be regarded as implied consent of the participant. As the questionnaire will be provided online, there will be no breach of privacy, and confidentiality will be maintained. No financial or ethical issues or risks will be associated with this study.

## Results

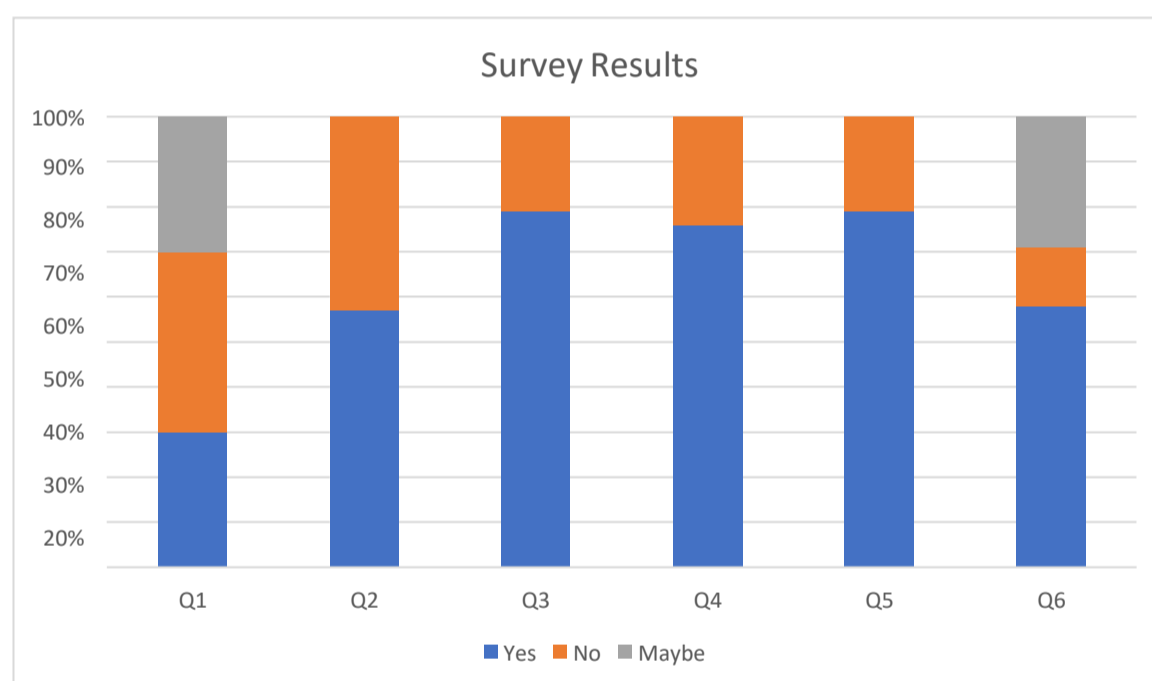
The survey was conducted online by using google forms. 384 people participated in the survey. Detail demographic data is shown in **figure1**.



**Figure 1:** Demographic information of the participants

Results of the survey areas demonstrated by the graph chart in **figure 2**. Participants were asked questions regarding OPD closure and telemedicine. Questions regarding their perception of OPD closure and the effect it had on their accessibility of care were inquired.

Furthermore, they were also queried regarding their knowledge and acceptability of telemedicine. **Figure 2** has demonstrated the participant's point of view on about mentioned points.



**Figure 2:** Survey results as answered by the participants.

Q1: Has OPD closing affected you negatively? Q2: Was it a good decision to close OPD?

Q3: Are you afraid of getting infected if you visit hospital/clinic? Q4: Do you know about telemedicine check-up?

Q5: Do you find them beneficial?

Q6: Should telemedicine continue in future?

## Discussion

Ever since the onset of the pandemic, telemedicine is the hot topic of interest. Telemedicine is the expansion of the technology to provide medical care to people remotely [1]. Its use in COVID pandemic is important to lower the risk of infectivity and spread of infection. Many countries have switched to telemedicine for non-emergent cases. We present the first study demonstrating the effect of the closure of health care facilities and their effect on the people of Pakistan. We conducted this online survey to assess people's knowledge and perspective on telemedicine. Our results have shown that COVID-related closing of OPDs has negatively affected many

people; mostly at level 1 on the scale of 1-5. Most of the people were afraid to visit OPD in the fear of getting infected so preferred to use telemedicine. In addition, the patient appreciated the idea of telemedicine and found it to be convenient and would like to use these services again.

Not only Pakistan but many other countries adopted telemedicine. A survey conducted by Kalra G for patient feedback on the acceptability of teleconsultations in ophthalmology practice has shown that patients found it to be timesaving, and the majority of the patients agreed to consider it for future eyecare encounters [2]. Similarly, a

survey conducted to assess the satisfactory level of telemedical counseling in patients with epilepsy, have found patients to be satisfied with it [3]. A postal survey was sent to all patients who had received telemedicine sessions for the management of hyperthyroidism. This survey has demonstrated that the use of telemedicine is desirable to most patients if adequate time slots are dedicated to the telemedicine sessions [4]. A Retrospective observational cohort study was performed to determine if patient satisfaction differs between video vs. in-person visits. The survey concluded that patient satisfaction with video visits is high [5].

Similarly, medical professionals have also shown acceptability towards Telemedicine. An online survey was conducted on doctors, nurses, and other medical professionals in Germany. Telemedicine was widely accepted there [6]. Another cross-sectional survey was conducted online among Egyptian psychiatrists. Egyptian psychiatrists are interested in Electronic mental health (EMH) and believe web-based platforms can become part of the solution for the Egyptian mental health care system [7].

Our study and the literature review have demonstrated that

### Conclusion

In conclusion, people are open to the idea of telemedicine and would prefer it as an alternative in this global pandemic. It remains to be seen how these benefits are valued as traditional methods of care

telemedicine could be an upcoming revolution in medical care. However, it has some advantages as well as disadvantages. Telemedicine is more convenient than traditional methods, especially in a pandemic. It is found to be more patient, and doctor centered. The patient can discuss their problems from the comfort of home and doctors can see patients whenever it is convenient for them.

Telemedicine is more cost-effective as it reduces travel expenditure. Multidisciplinary visits can also become much easier and can include specialists from different geographic locations. Fewer staff and patients would be present in the hospital hence will help to control the pandemic [8]. Diagnosing, treating, and triaging patients can be done easily and rapidly. On the other hand, some telemedicine users might not have robust internet access and it might create some new challenges for doctors who are less tech-savvy. Technical difficulties might affect the patient-physician relationship. There is also potential overuse of medical services by patients since access to care is so easy and convenient. There is an increased chance of misdiagnosing and overprescribing of medications [9].

delivery resume. Now is the time for us to implement these services and make usage of telemedicine.

**Declaration of Interest:** Nil

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### Author's contribution

AZ, TF - Conception of study

AZK, HM - Experimentation/study conductionSN, JM - Statistical Analysis

AS - Facilitation/ Material analysisSAS - Critical review

SM - Manuscript writing

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