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RESEARCH ARTICLE

COVID-19 AND COMMUNITY'S RISK AWARENESS: ARE WE REALLY READY TO CONTAIN THIS PANDEMIC?

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ABSTRACT

Background: The covid-19 is a newly emergent infectious disease. The currently prevalent pandemic situation arising from this disease necessitates that everyone be cognizant about its dynamics & methods of its prevention. The engagement in preventive behaviors against this virus plays a crucial role in protecting people from contracting the disease. **Objective:** To seek level of awareness regarding preventive measure for Covid-19 & its association to various socio-demographic characteristics of study population. **Methods:**

Setting: Community residing in Qasimabad Hyderabad, Pakistan.

Design: Descriptive cross-sectional study

Duration: Three months i.e. from March, 2020 to May 2020

Sample Size & Sampling Technique: The research was conducted on 735 residents of Qasimabad, Hyderabad selected through convenience sampling.

Data Collection & Analysis: Data collected on performed questionnaire & analyzed in SPSS version 22.0 by computing proportions, means \pm s.d and by applying Chi-square test of significance. **Results:** Out of 735 participant 92.1% were male, 51.7% participants' age was between 21 to 30 years and most of participants i.e. 49.7% were having undergraduate level education. Almost all i.e. 100% had heard about the corona virus. 52% participant said that this disease is a fatal disease, the 94.7% population had knowledge about the sign and symptoms of virus. Most of participant i.e. 95.5% were scared from the deadly virus. We found more strong association between age & adoption of preventive measures against covid-19 pandemic e.g. practice of frequent hand washing ($p < 0.01$), practice of using face mask in public places ($p = 0.03$); social distance was found as the most neglected preventive strategy for covid-19; it was found in our study that it was not associated to age ($p = 0.18$), gender ($p = 0.13$) or educational status ($p = 0.24$). **Conclusion:** Preventive measures play a vital role in controlling a pandemic. The community is well aware & practicing all preventive measures but still there are few gaps like practicing social distancing which need to be improved in study population.

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INTRODUCTION

The Corona virus is the cause of one of most dangerous pandemic ever observed in the world which has brought massive damage to the human race after the World War II.

In Pakistan, the first case was reported on 26th February 2020 and the situation worsened in country in just three months' duration. The global health crisis precipitated by covid-19 has now taken a turn thus influencing the socio-economic fabrics of the nations¹. Many factors are responsible for the rapid increase in cases such as poor health infrastructure, less spending on human development and inadequate health related equipment but the main reason is the implementation of safety precaution².

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Japan reported lesser number of active covid-19 patients during this pandemic just because of its peoples' high level of awareness regarding prevention of community transmission of corona virus³. Indeed, prevention is better than cure. The knowledge, attitudes and practices (KAP) of the people toward covid-19 is critical to understanding the epidemiological dynamics of the disease and the effectiveness, compliance and success of IPC measures adopted in any country⁴. There is a need for targeted health education as a response strategy to covid-19 in low-income settings, and it is important that strategies are contextually relevant⁵. The awareness about disease dynamics is very poor, even among the wealthier and more educated parts of the population⁶. This is of utmost importance in the absence of any effective antiviral therapy against this deadly disease as the more people are aware of the mode of transmission and preventive measures, the better their behavior in preventing and curtailing the spread of the disease⁷. The current study was an attempt to explore the level of understanding about dynamics of covid-19 among common people.

Objectives: To determine level of awareness regarding preventive measure for covid-19 and its association to various socio-demographic characteristics of study population.

MATERIALS AND METHODS

Study Setting: Community residing in Qasimabad Hyderabad, Pakistan.

Study Design: Descriptive Cross-Sectional Study.

Duration of Study: Three months i.e. from March, 2020 to May 2020.

Sample Size and Sample Technique: Seven hundred & thirty five subjects were approached through non probability convenience sampling method.

Data Collection tool& Data Analysis: A preformed, pre-tested questionnaire having Chronbach's reliability index of 7.6 was used to collect data. The data was analyzed in SPSS version 22.0 by computing proportions, means \pm s.d. Associations between various socio-demographic variables & preventive measures adopted were analyzed by applying Chi-square test.

Variables

Demographic Variables

-]) Gender
-]) Age
-]) Educational Status

Variables of Special Interest

-]) Heard about covid-19
-]) Fatal disease
-]) Being scared about disease
-]) Awareness regarding clinical presentation of disease
-]) Practice of using hand sanitizers
-]) Practice of frequent hand washing
-]) Practice of using face mask at public places

-]) Knowledge about keeping social distance

RESULTS

Regarding socio-demographic profile of study participants, 92.1% were males and only 7.9% were female participants. Around 51.7% research participant belonged to the age of 21-30 years; 21.5% research respondent were intermediate, 49.7% were undergraduate and 28.8% were graduate in the study. All of the participants have heard about covid-19 pandemic.

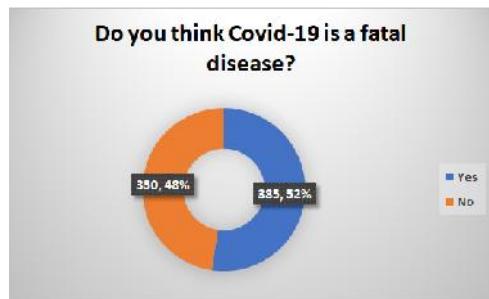


Figure 1.Perception about fatal nature of covid-19

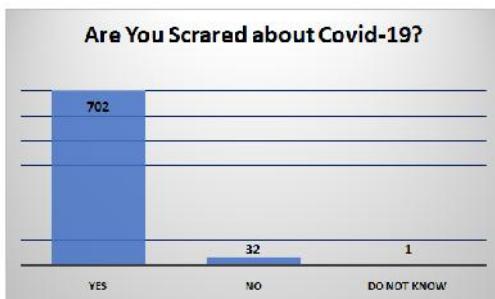


Figure 2. Being scared about covid-19

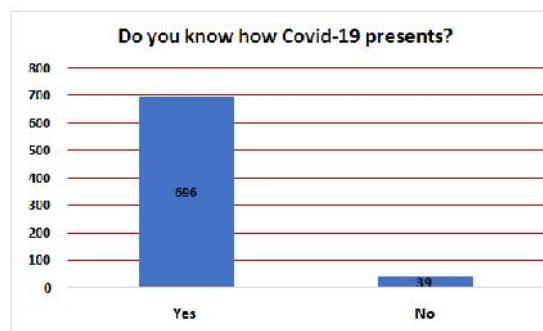


Figure 3. Awareness regarding clinical presentation of covid-19

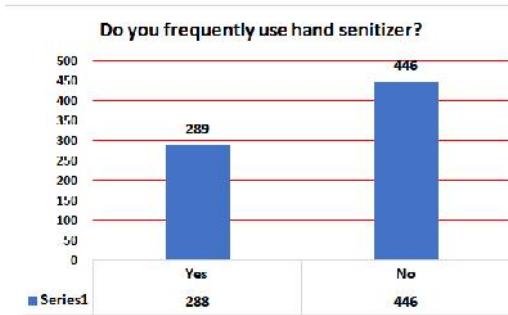


Figure 4. Practice of using hand sanitizers

Table 1. Relationship of socio-demographic variables to control measures for covid-19

Socio-demographic variables	Control Measures against Covid-19	p-value
Age > 30 years	Heard about Covid-19	< 0.01*
	Fatal disease	< 0.01*
	Being scared about disease	< 0.001*
	Awareness regarding clinical presentation of disease	< 0.05*
	Practice of using hand sanitizers	0.91
	Practice of frequent hand washing	< 0.01*
	Practice of using face mask at public places	0.03*
	Knowledge about keeping social distance	0.18
	Heard about Covid-19	< 0.05*
Gender: Being male	Fatal disease	0.01*
	Being scared about disease	0.02*
	Awareness regarding clinical presentation of disease	0.96
	Practice of using hand sanitizers	0.95
	Practice of frequent hand washing	0.27
	Practice of using face mask at public places	0.02*
Educational up to schooling	Knowledge about keeping social distance	0.13
	Heard about Covid-19	0.01*
	Fatal disease	0.03*
	Being scared about disease	0.04*
	Awareness regarding clinical presentation of disease	0.15
	Practice of using hand sanitizers	0.13
Practice of frequent hand washing	Practice of frequent hand washing	0.61
	Practice of using face mask at public places	0.04*
	Knowledge about keeping social distance	0.24

DISCUSSION

This study examined if risk awareness for covid-19 and demographic characteristics were associated with engagement in preventive behaviors. Despite the fact that almost all participants have heard about covid-19 pandemic, fifty two percent participants labelled it as a deadly disease (FIGURE NO:I)and 95.51% participants were scared about this disease (FIGURE NO:II).There were statistically significant associations between all the three selected socio-demographic variables i.e. age > 30 years, being males , educational status upto school level with being aware about the covid-19 as being a deadly disease(p-values 0.01, 0.01 & 0.03 respectively) and also being scared about this pandemic(p< 0.001, 0.02 & 0.02 respectively). In a study conducted in Bangladesh, the majority of the participants (96.7%) agreed that 'covid-19 was a dangerous disease⁸.

The reason behind this similarity could be that the two studies were conducted in the same geographical area of South East Asian sub-continent where the level of awareness &levels of other determinants of awareness regarding infectious diseases could be the same. Another study carried out in very early days of this pandemic, revealed participants showing their serious concerns about the potential risk of infection transmission; the participants of that research were also scared of this disease as being a life-threatening danger⁹.In one of the online survey in Bangladesh, 98.6% of the participants had heard about the disease¹⁰.All these findings throw light on the higher level of awareness among common people regarding existence of a newly emerging disease. These findings in turn encourages us to draw more results regarding level of preventive measures adopted by same group of population. Related to the awareness regarding clinical picture of covid-19, around 94.69% participants were knowing about the clinical picture i.e. cough, fever & breathing difficulty (FIGURE NO: III). This finding is a way of identifying the missed window of opportunity that can be appropriately utilized while doing counselling to those who are not prepared to adopt the preventive measures against this disease.

A research on the similar objectives revealed that the knowledge of fever and cough as covid-19 symptoms was high, but only 42% mentioned difficulty breathing as a symptom of this disease¹¹. The WHO has suggested very simple & cost-effective preventive methods to contain this pandemic¹².In our study, participants generally showed a positive attitude towards measures that can be followed to prevent the transmission of this disease. Surprisingly, data revealed several notable patterns of findings pertaining to preventive behaviors. There were 60.68% participants who were practicing using hand sanitizers (FIGURE NO:IV), frequent hand washing (47.0%)(FIGURE NO: V), using face mask in public places (98.50%) (FIGURE NO: 6).The subgroups tend to differ in their engagement in preventive behaviors across the socio-demographic strata. Regarding age of the study participants, there were 48.3% participants who belonged to age group >30 years. We found more strong association between age and adoption of preventive measures against covid-19 pandemic e.g. practice of frequent hand washing (p< 0.01), practice of using face mask in public places (p=0.03)(Table-I).The World Health Organization (WHO) has very strongly recommended putting cloth face coverings for the public, especially in areas where there is significant community-based transmission¹³.The current study found that males were more in practice of using face mask at public places(p=0.02). However, gender of participants showed no relation to practice of frequent hand washing (p=0.27) and to the practice of using hand sanitizers (p= 0.95).These findings are partially consistent with other such type of studies which showed that belonging to older age was associated with a higher chance of adopting preventive behaviors during a pandemic involving respiratory type diseases¹⁴.Our finding is also consistent with recent research on covid-19 showing that older people were more prone to adopt preventive measures against covid-19 disease¹⁵. Contrary to this, another research concluded that age-group of 16–29 years was significantly associated with knowledge about the preventive measures against covid-19 disease¹⁶.The difference between these studies might be attributed to a larger sample size in the latter study.

Similar reason could be responsible for the contrasting findings revealed in another study which showed females as being more significantly associated to adopting preventive measures against respiratory type diseases¹⁷. Contrasting to this, Saqlain et al. found that participants' attitudes towards preventive measures for an infectious disease were not affected by age and gender¹⁸. Lesser education level i.e. up to schooling was also highlighted in our study as associated with practice of using face mask at public places ($p=0.04$). Lesser education status was also endorsed as the main determinant in deciding about the preventive measures adoption by the study participants in several studies¹⁹. Few other studies found no consensus about the rationale of use of face masks in public places to prevent the spread of covid-19 disease^{20,21}. This indicates a significant education gap likely reflecting suboptimal public health information and dissemination of effective preventive message regarding covid-19 disease to the communities.

Unfortunately and surprisingly, in our study keeping social distance was found as the most neglected preventive strategy for covid-19; it was found in our study that it was not associated to age ($p=0.18$), gender ($p=0.13$) or educational status ($p=0.24$). In one of the research it was found that 99.6% participants were in favor of social distancing but only half of them were practically following social distancing⁹. The current research offers a simplified look on level of awareness regarding preventive strategies for covid-19 disease across various socio-demographic strata of community; this will help in chalking out more public health education programs and interventions targeting certain subgroups of population which are consistently identified as less likely to adopt preventive measures during a pandemic. Secondarily, this will help in identifying more effective strategies that can be used to induce and promote self-protective behaviors in communities.

Conclusion

During the covid-19 pandemic, engagement in preventive behaviors is the only cost-effective preventive measure against this disease. Our data showed that there is a greater tendency for people to engage in some preventative behaviors than others. Although there is evidence showing that, as the pandemic progresses, individuals develop greater awareness of the health risk posed by the virus and engage in protective behaviors with increasing frequency; however there are certain windows of opportunity where still there is a gap in knowledge which is needed need to be bridged.

Glossary of Abbreviations

- Covid-19:** Corona Virus Disease -19
IPC: Infection Prevention & Control
KAP: Knowledge, Attitude & Practices
S.d: Standard deviation
WHO: World Health Organization

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