Assessment of Knowledge, Attitude and Practices of Paramedic Health Care Workers Towards COVID-19 Pandemic

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ABSTRACT

Mankind is experiencing another remarkable involvement in the quickly spreading COVID-19 pandemic. Besides, the sickness fundamentally influences regular daily existence, bringing about a financial emergency. Moreover, the highest risk of getting COVID-19 is for the front line Healthcare workers (HWS). Therefore, utmost importance to evaluate their knowledge, attitudes, and practices (KAP) regarding COVID-19 is needed. An online Cross-sectional research design was utilized for the study. An aggregate of 100 paramedic health workers (Nurses, Pharmacist, Lab technician and Allied health technicians) were chosen using a convenient sampling technique. Data were gathered among eligible healthcare workers through an online survey by electronic distribution of self-administered questionnaire developed by the investigator. The results depict that 80% had adequate knowledge, 84.6% had a positive attitude towards COVID-19 and 88% of participants had appropriate practice related to COVID-19. There was a positive relationship noted among knowledge and attitude(r=0.114), attitude-practice(r=0.283) and knowledge-practice(r=0.177) at p<.05 and p<.01 level respectively. The outcome found that there is no huge affiliation found between selected demographic variables such as age, residence, marital status and source of information but gender and years of experience was significantly associated with knowledge and practice (p=5.18) at p<0.01 and profession was significantly associated with attitude (p=10.92) at p<0.001.

INTRODUCTION

Covid 2019 (COVID-19) is the expanding respiratory illness brought about by a novel COVID. It was first uncovered in Wuhan, China, in December 2019 (Zhong et al., 2020; Spagnuolo et al., 2020). The World Health Organization (WHO) articulated the novel (COVID-19) erupt an overall pandemic on March 11, 2020 (WHO, 2020).

India is the second most packed country with a general population thickness of 382 individuals/square km (National Institution for Transforming India, 2011). Ongoing updates reveal a case pile of 35, 42,733 with 63,498 COVID-19 passings, the 3rd higher on the planet (World Health Organization, 2019). SARS-cov-2 can spread through human-to-human transmission and aberrant contact with tainted objects (Lotfi et al., 2020). SARS-CoV-2 can be transmitted through body liquid
beads from the mouth or nose, which can spread when an individual with COVID-19 hacks, sniffs, and talks. Droplets commonly can’t cross over in excess of six feet (very nearly two meters). (Lotfi et al., 2020) SARS-CoV-2 remains intact and infectious in beads and can be suspended noticeable all around for up to three hours (Lotfi et al., 2020; van Doremalen et al., 2020). Additionally, defiled beads can stay in articles, for example, plastic, steel, copper, and cardboard (van Doremalen et al., 2020).

An individual can get infected on the off chance that they contact the surface polluted with SARS-CoV-2 items and, at that point, connect with mucous layers, for example, the eyes, nose, or mouth (Lotfi et al., 2020). A precise survey on COVID-19 patients indicated that people with hypertension, diabetes, cardiovascular and respiratory framework illnesses were the most risk groups. (Yang et al., 2020) patients with chronic obstructive pulmonary disease have a five-overlap expanded danger of extreme COVID-19 infection. (Lippi et al., 2020) The fundamental manifestations of this COVID-19 incorporate high temperature, dry hack, weakness, myalgia and shortness of breath. The serious phase of COVID-19 is described by ARDS, septic stun, bleeding and coagulation dysfunction (Zhong et al., 2020; Spagnuolo et al., 2020). Infrequently, indications including migraine, muscle torment, sore throat, loss of taste (ageusia) or smell (anosmia), hemopty-sis, and diarrhea were watched (Wang et al., 2020). Until now, there is no antiviral remedial treatment or immunization that has been suggested for COVID-19 (Koc et al., 2020).

Essential preventive measures incorporate customary hand washing, social separation, and respiratory cleanliness (covering mouth and nose while hacking or sniffing) (World Health Organization, 2020c,a). Presently, there is no accessibility of any demonstrated explicit treatment or avoidance procedure to battle against COVID-19. (Cunningham et al., 2020) Non-drug intercessions like; isolate of exposed people, separation of suspected/affirmed cases, and refinement of the overall populace about control measures are the main accessible choices to restrict the spread of this new virus (Lai et al., 2020). Healthcare workers (HCWs) of all levels are associated with caring about patients with this profoundly communicable microbe. COVID-19 has posed serious work-related health risks to HCWs due to their recurrent contact with infected persons (Gan et al., 2020). HCWs are the frontier of COVID-19 pandemic reaction and are presented to risks like microorganism exposure, long working hours, mental misery, exhaustion, word related burnout (World Health Organization, 2020b). The absence of awareness and errors among HCWs lead to a postponed diagnosis, the spread of illness and lack of disease control practice. A few thousand HCWs have just been contaminated, chiefly in China (Gan et al., 2020). Forestalling intra medical clinic transmission of this transferable sickness is subsequently a need. In the midst of the current pandemic, which has given a few rules, and began online courses and instructional meetings to bring issues to light and readiness with respect to counteraction and control of COVID-19 among HCWs (Bhagavathula et al., 2020).

So this study was aimed to evaluate the knowledge, attitude and practice of Healthcare workers on COVID-19 pandemic and thereby recognize successful methodologies for conduct change in the public arena.

MATERIALS AND METHODS

A quantitative research approach with a cross-sectional descriptive research design was used to assess the KAP study at Saveetha Medical College and Hospital. A total of 100 paramedic health care workers, including Nurses, pharmacists, and allied health professionals, were selected as eligible study participants by using a convenience sampling technique. The data collection was done after obtaining ethical clearance from the Institutional Ethical Committee of Saveetha Institute of Medical and Technical Sciences. The participants were explained separately about the purpose of the study and E-generated informed consent was obtained from them. Subsequent to obtaining the consent of the participants, a self-administered semi-structured questionnaire was developed as formulated and circulated online to collect data from the health care workers through online regarding demographic variables, knowledge, attitude and practice on COVID-19 pandemic. Online survey tool (Google forms) was utilized to circulate the online-study. The connection for getting to the survey was spread by the researchers utilizing the participant’s email id and looked after secrecy. Their answers were recorded carefully based on namelessness to keep away from social attractive quality inclination. Data analysis was done using descriptive and inferential statistics. Descriptive analysis was used to describe the demographic characteristics using frequency and percentage. Inferential statistics including Karl Pearson’s correlation coefficient was utilized to discover the relationship between the knowledge, attitude and practice and Chi-square was used to associate between the level of knowledge, attitude and practice with the selected demographic variables.
RESULTS AND DISCUSSION

A total of 100 individuals participated in the study. We included paramedic health care workers like (Nurses=60, Pharmacists=10, Lab technician=10 and Allied health technicians=20) in our study to assess the knowledge, attitude and practice regarding COVID-19.

Table 1: Frequency & distribution of study participants

| Characteristics        | Frequency | Percentage |
|------------------------|-----------|------------|
| Age                    |           |            |
| 21-30 years            | 45        | 45         |
| 31-40 years            | 32        | 32         |
| >40 years              | 23        | 23         |
| Gender                 |           |            |
| Female                 | 64        | 64         |
| Male                   | 36        | 36         |
| Profession             |           |            |
| Nurses                 | 38        | 38         |
| Pharmacist             | 20        | 20         |
| Lab technician         | 18        | 18         |
| Allied health technician| 24        | 24         |
| Years of experience    |           |            |
| <5 years               | 42        | 42         |
| 5-10 years             | 36        | 36         |
| >10 years              | 22        | 22         |
| Residence              |           |            |
| Urban                  | 88        | 88         |
| Rural                  | 12        | 12         |
| Marital status         |           |            |
| Married                | 48        | 48         |
| Single                 | 52        | 52         |
| Source of information  |           |            |
| Social media           | 35        | 35         |
| Television             | 27        | 27         |
| Newspaper              | 16        | 16         |
| Hospital               | 22        | 22         |

Table 2: Comparison between knowledge, attitude and practice of paramedic health workers on Covid-19

| Variable               | Correlation Coefficient | P-Value |
|------------------------|-------------------------|---------|
| Knowledge-Attitude     | 0.114*                  | .002    |
| Attitude-Practice      | 0.283*                  | .004    |
| Knowledge-Practice     | 0.177**                 | .01**   |

Correlation significant at p<0.05 level and **highly significant at p <0.01 level

Figure 1: Assessment of Knowledge, Attitude and Practices of paramedic health care workers towards COVID-19 pandemic

Section A

Demographic distribution of study participants

A total of 100 individuals partook in the study. The results discovered that the vast majority of participants, 45% have a place with the age gathering 21-30 years. As for sex, 64% were females. Most of the participants, 52% were single. 88% of the participants residing in urban areas and the remaining 12% belonged to rural areas. Regarding profession, the majority of the participants, 38% were Nurses. As for years of experience, the majority of them 42% of participants had less than <5years of experience. With regards to the source of information almost 35% of participants get aware of coronavirus through social media, 27% participants use Television to acquire information about the corona, 16% of participants use newspaper and 22% of participants get information in hospitals. Also, 87.68% (N=363) of HCWs utilized web-based media as their primary wellspring of data, trailed by radio and TV (45.89%, N=190) announced by (Saqlain et al., 2020). These discoveries are steady with different examinations which detailed that most of the HCWs utilize web-based media to look for data on COVID-19 (Bhagavathula et al., 2020), (Table 1).

Section B

Assessment of Knowledge, Attitude and Practices of paramedic health care workers towards COVID-19 pandemic

The current assessment results display that a large portion 80% had adequate knowledge, 12% had moderate knowledge and 8% had inadequate knowledge followed by 88% of participants had appropriate practice and 12% had inappropriate
practice. Whereas, 84.6% of participants had a positive attitude towards COVID-19 and remaining 15.5% had a negative attitude towards COVID-19 (Figure 1).

An investigation results comparable with the cross-sectional study conducted by (Zhang et al., 2020) among 1357 health care workers’ (HCWs) across 10 clinics in Henan, China on knowledge, practices, and attitude in regards to COVID illness 2019 (COVID-19). The outcomes show that of those overviewed, 89% of HCWs had sufficient information on COVID-19, over 85% dreaded self-disease with the infection, and 89.7% followed right practice with respect to COVID-19 (Zhang et al., 2020). Also, Ferdous et al. (2020) surveyed KAP towards COVID-19 through Online-based cross-sectional examination directed among Bangladesh inhabitants selected by means of web-based media. Of the 2017 overview members, 57.9% belongs to the age gathering of 21–30 years and living in metropolitan regions (69.8%). The review uncovered that 48.3% of members had more exact knowledge, 62.3% had more positive attitudes, and 55.1% had more successive works on with respect to COVID-19 anticipation (Ferdous et al., 2020).

The same results were also consistently reported by Saqlain et al. (2020) demonstrated that Health workers have great information (93.2%), good attitude and good practice (88.7%) with respect to Covid-19 (Saqlain et al., 2020). Likewise, A cross sectional examination led by Kamineni et al. (2020) conducted a survey to assess knowledge on COVID-19 among the nursing and allied health experts working in a tertiary hospital. An organized poll involved 25 inquiries created by examiners was directed to 177 health experts that incorporate nursing and allied health experts. The significant discoveries of the examination uncovered that among the 177 nursing and allied health experts, 92.1% of them has sufficient information with respect to the present worldwide epidemic and 7.9% had moderate information (Kamineni et al., 2020). Similarly, Al-Hanawi et al. (2020) evaluated that most of the participants were knowledgeable about COVID-19. The mean COVID-19 knowledge, attitude and practice score was 17.96, (SD = 2.24), 28.23 (SD = 2.76) and 4.34 (SD = 0.87) respectively (Al-Hanawi et al., 2020).

**Section C**

**Relationship between knowledge, attitude and practice of paramedic health workers on Covid-19**

Similarly, Saqlain et al. (2020) reports that there is a significant positive linear correlations found between knowledge–attitude ($r = 0.106$), knowledge–practice ($r = 0.142$) and attitude–practice ($r = 0.174$) (Saqlain et al., 2020) and also results consistent with the examination conducted by Alahdal et al. (2020) shows significantly positive correlation between awareness-attitude ($r = 0.132$) and attitude-practice($r = 0.149$) at p-value < 0.001 (Alahdal et al., 2020).

**Section D**

**Association of the level of knowledge, attitude and practice with their selected demographic variables**

Results discovered was there is no association found between selected demographic variables such as Age gathering, habitation, conjugal status and source of information but sex and years of experience was significantly associated with knowledge and practice at(p=5.18) at p<0.01 and profession was significantly associated with attitude (p=10.92) at p<0.001.

Huynh et al. (2020) likewise found that attitude in regards to COVID-19 was not associated with age ($P=0.151$), sex ($P=0.129$) and experience ($P=0.453$), however, found a critical relationship among attitude and profession Huynh et al. (2020). Alahdal et al. (2020) also found gender to be statistically significant with both knowledge and practice at p<0.05 (Alahdal et al., 2020).

**CONCLUSIONS**

The examination found by far most of HCWs had a satisfactory degree of knowledge, good attitude and were rehearsing securely more often. To make progress against the spread of COVID-19, the adherence to the control measures by the Health Providers and the general population are significant. The awareness, attitude and practices of the health workers on COVID-19 disease will assume a crucial part in controlling this pandemic. This may assume an essential part in forestalling COVID-19 among HWS and stop the spread of contamination to the network.

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**Conflict of Interest**

The authors declare that they have no conflict of interest for this study.
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