



Improving knowledge and assessing the awareness about Covid-19 testing among dental students - A questionnaire-based survey

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Article History:

Received on: 20 Jun 2020
Revised on: 17 Jul 2020
Accepted on: 02 Aug 2020

Keywords:

dental students,
COVID testing,
COVID-19,
awareness

ABSTRACT

The study aims to assess the knowledge and create awareness of COVID testing among dental students. A survey-based questionnaire was done to generate understanding of COVID testing. A questionnaire containing 15 questions was prepared and circulated online using Google forms. Statistical analysis was done using SPSS software. The results were obtained, and the data were analysed. The Overall awareness of all the sub groups was good with more than 90% of the population being aware of the various parameters for Covid testing. The study concludes that even though the awareness was reported to be adequate, various measures have to be taken towards improving the knowledge and continuous updates have to be provided regarding COVID testing to the dental students.



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ISSN: 0975-7538

DOI: <https://doi.org/10.26452/ijrps.v11iSPL1.2856>

Production and Hosted by

IJRPS | www.ijrps.com

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INTRODUCTION

Coronavirus or SARS COV2 is one of the major pathogens that primarily targets the Human respiratory system. There have been previous outbreaks of coronavirus which includes the severe acute respiratory syndrome (SARS-COV) and the middle east respiratory syndrome (MERS-COV) which have also been characterised as a significant public health threat (Rothan and Byrareddy, 2020). These cases of viral infection occurred at regular intervals. The origin of the MERS- COV is the same as SARS- COV

with infection in bats transmitted into camels with further transmission to humans (Wang *et al.*, 2020; Crawford, 2006; Al-Mohaissen, 2017; Elrggal *et al.*, 2018).

In the absence of therapeutic drugs or vaccines for 2019 new coronavirus disease, it is essential to detect the disease at an early stage and immediately isolate the infected person from the healthy population (Wang *et al.*, 2020). According to the latest guideline published by the Chinese government (Chung, 2020). The diagnosis of COVID-19 must be confirmed by the reverse transcription-polymerase chain reaction (RT-PCR) or in sequencing for respiratory or blood specimens, As the key indicator for hospitalisation.

As recently reported, chest CT demonstrates typical radiographic features in almost all COVID 19 patients, including ground glass or patchy consolidation, and (or) interstitial changes with a peripheral distribution (Huang, 2020). Those typical features were also observed in patients with negative results but clinical symptoms. It has been noted in small-scale studies that the current RT-PCR testing has limited sensitivity, while chest

CT may reveal pulmonary abnormalities consistent with COVID 19 in patients with initial negative RT-PCR results (Tramini *et al.*, 2010; Si, 2019; Xie, 2020).

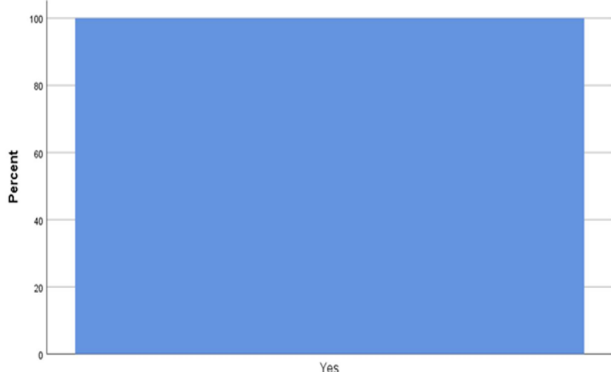


Figure 1: 100% of the participants were aware of COVID 19

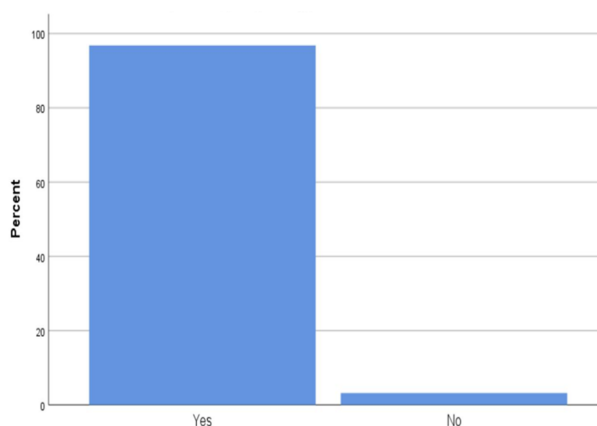


Figure 4: 97% of students having adequate supplies of routine medication

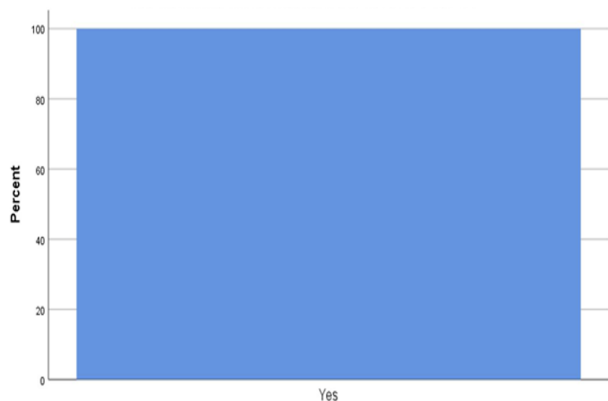


Figure 2: 100% of the participants are the precautions to stay safe from COVID 19

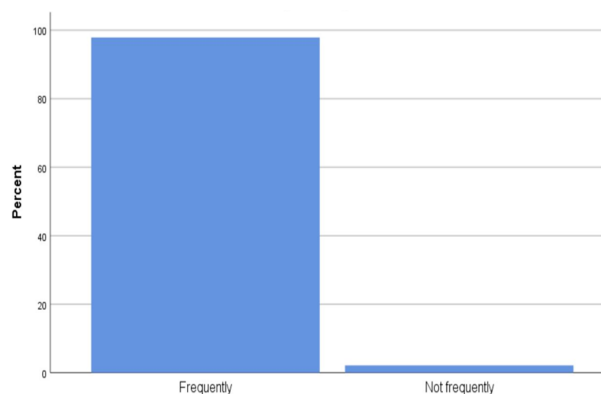


Figure 5: 98% of students wash their hands frequently and 2% don't wash frequently

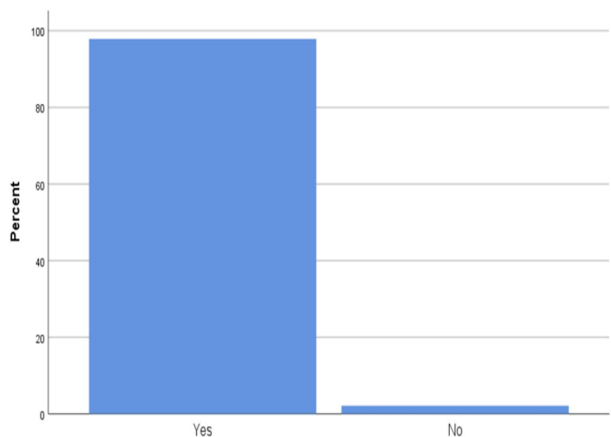


Figure 3: 98% of students who think COVID is a dangerous virus and 2% don't think

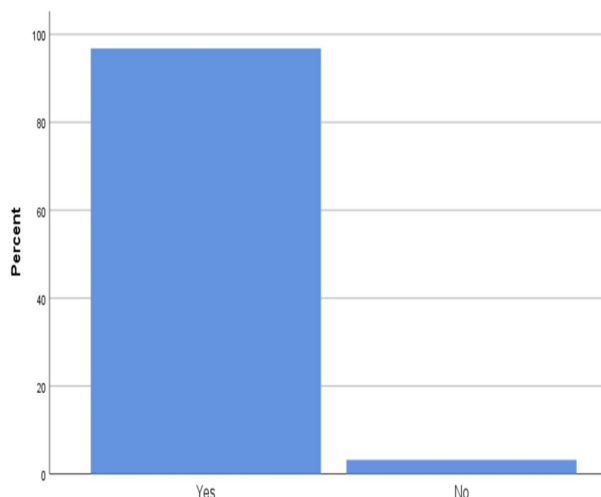


Figure 6: 97% of student participants who are under home quarantine

Many awareness studies have been conducted among dental students, but this study is unique and first of this kind (Ahad and Gheena, 2016; Gunasekaran and Abilasha, 2016; Prasanna and

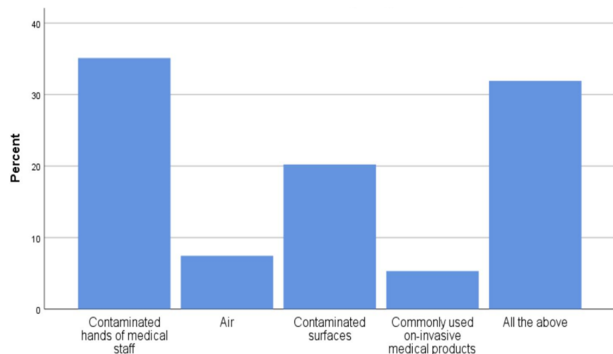


Figure 7: 68% contaminated hands of medical staff, 34% hair, 51% contaminated surfaces, 32% commonly used on invasive medical products pathogens in hospitals comprising

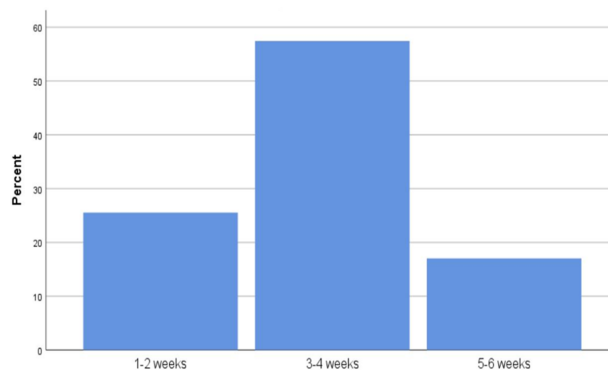


Figure 10: 60% of recovery time for corona virus disease, 3-4 weeks, 24% 1-2 weeks, 16% 5-6 weeks

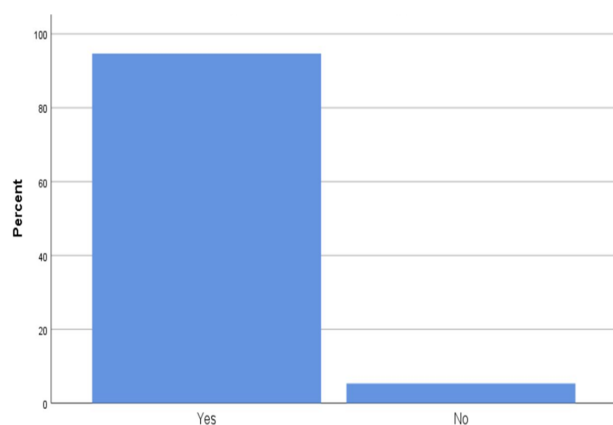


Figure 8: 95% of dental students about COVID testing

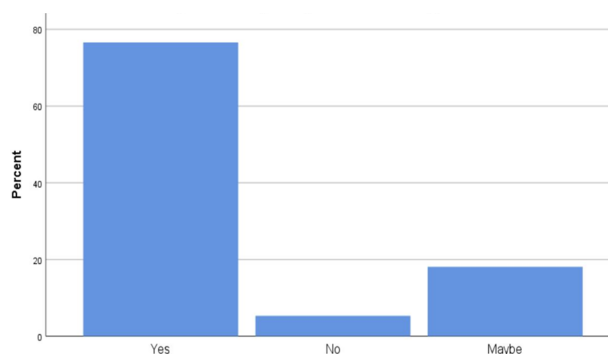


Figure 11: 78% of students thinking the spread of COVID can be stopped and 17% maybe yes

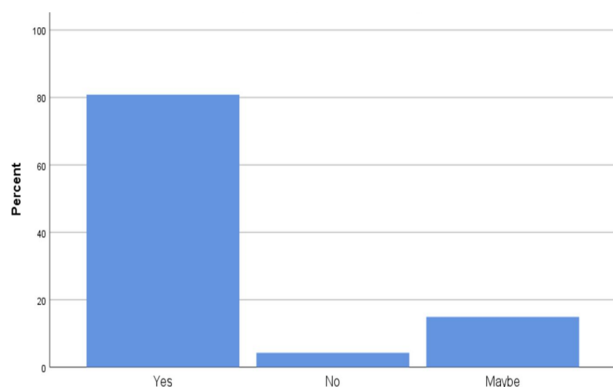


Figure 9: 82% of dentists think they can test a COVID patient and 14% maybe others no

Gheena, 2016; Hannah, 2018; Manohar and Abilasha, 2019; Palati *et al.*, 2020; Uma, 2020). And also many teeth related studies used in the identification of various parameters have been done among dental students (Sukumaran and Padavala, 2018; Abitha and Santhanam, 2019; Harrita and Santhanam, 2019; Palati *et al.*, 2019).

Therefore, a critical challenge is to determine how dental emergencies institutions should respond to

the changes in the general population created by COVID-19 epidemic. In this study, we have aimed to create awareness and assess the knowledge about Covid testing among dental students which is of great importance in the current scenario.

MATERIALS AND METHODS

A sample size of 100 respondents participated in this study. A cross-sectional observational online-based study was Conducted using google forms with a dichotomous response and multiple-choice questions. The study was approved by the Institutional Review Board of Saveetha Dental College. The questionnaire contained 15 questions based on Covid-testing. The data was collected, tabulated and statistically analysed using SPSS Software. The association of data was carried out using the chi-square test. It involves both statistical and percentage analysis and the results were in the form of a bar graph with a conclusion. The independent variables used were geographical location, while the dependent variable included knowledge and awareness.

RESULTS AND DISCUSSION

The results were collected, and the data was analysed. Majority of the students were aware of COVID and precautions were taken. Their medical history was examined and overall gave a favourable report.

Figure 12, The graph shows that 68% male participants and 26% female participants were aware of COVID-19. Pearson’s Chi-square value-0.000, p value-0.000 (<0.05) hence significant.

Figure 13, X-axis represents the gender and Y-axis represents the number of participants. The graph shows that 67% participants of the male and 25% participants of the female were aware of COVID testing. Pearson’s Chi-square value-0.389, p value-0.533 (>0.05) hence not significant.

Figure 14, X-axis represents the gender and Y-axis represents the number of participants. The graph shows that 66% participants of the male and 26% participants of the female were aware that COVID is a dangerous virus. Pearson’s Chi-square value-0.781, p value-0.377 (>0.05) hence not significant.

Figure 15, X-axis represents the gender and Y-axis represents the number of participants. The graph shows that 60% participants of the male and 20% participants of the female were aware of testing Covid patients. Pearson’s Chi-square value-1.975, p value-0.373 (>0.05) hence not significant.

Figure 16, X-axis represents the gender and Y-axis represents the number of participants. The graph shows that 54 participants of the male and 21 participants of the female were aware of the spreading of the virus. Pearson’s Chi-square value-0.111, p value-0.946 (>0.05) hence not significant.

The graph showed that 100% of the participants

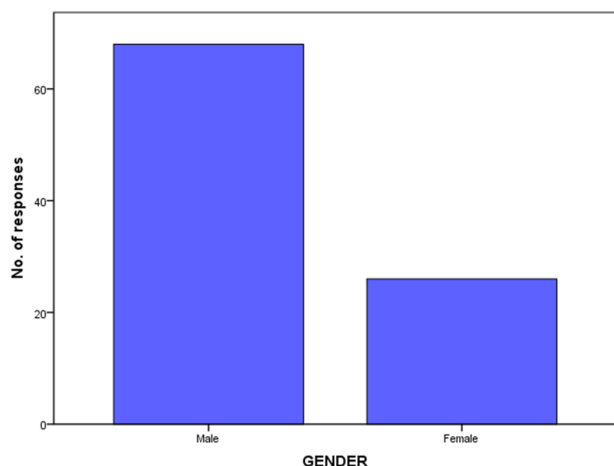


Figure 12: X-axis represents the gender and Y-axis represents the number of participants

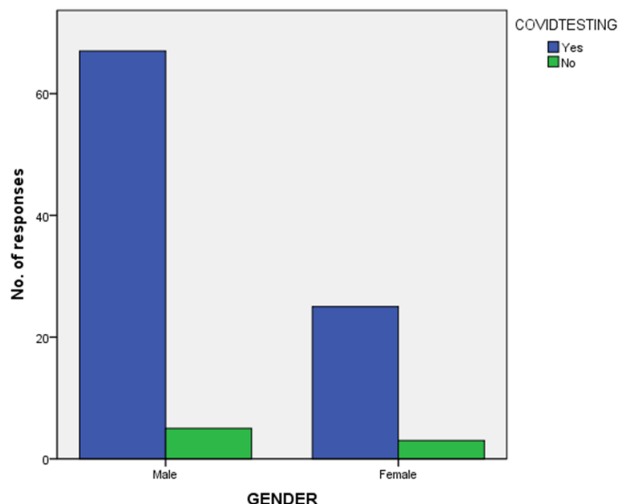


Figure 13: The association of gender with awareness of COVID testing

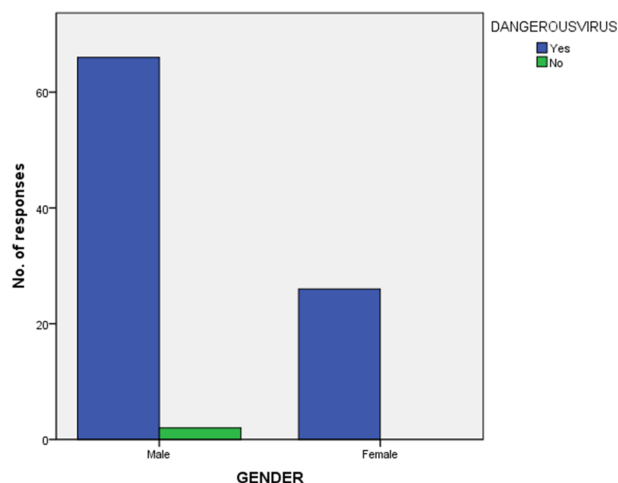


Figure 14: The association of gender with awareness of COVID is a dangerous virus

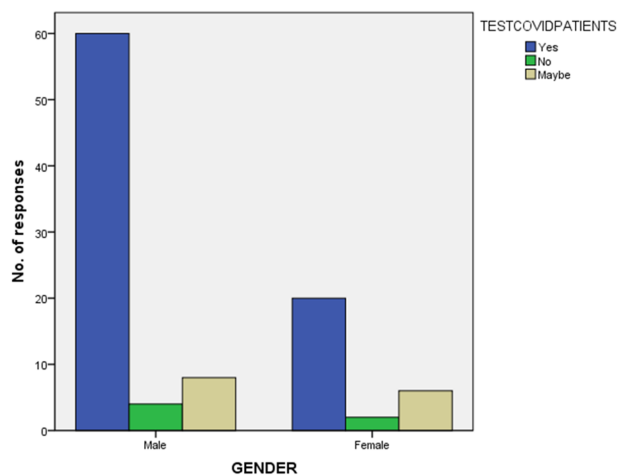


Figure 15: The association of gender with awareness of testing COVID patients

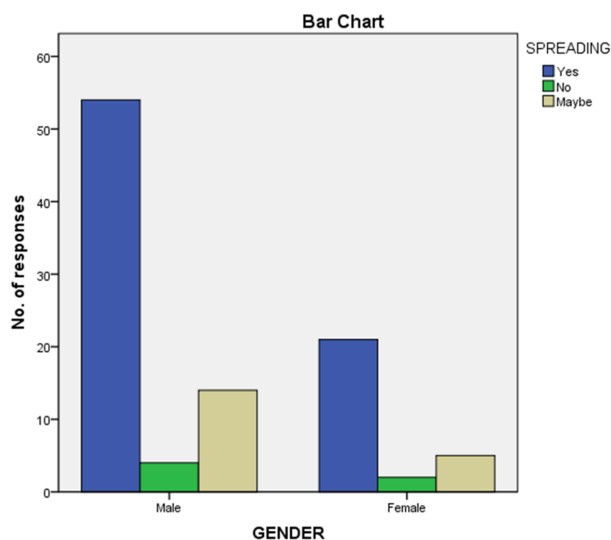


Figure 16: The association of gender with awareness of spreading of virus

were aware of COVID 19 (Figure 1). 100% of the participants are following the precautions to stay safe from COVID 19 (Figure 2). The percentage of students who think COVID is a dangerous virus is 98% and 2% don't think (Figure 3). The percentage of students having adequate supplies of routine medication is 97% (Figure 4). The percentage of students who wash their hands frequently is 98%, and 2% don't frequently wash (Figure 5). The percentage of participants who are under home quarantine is 97% (Figure 6). The percentage of the main transmission for pathogens in hospitals comprising 68% contaminated hands of medical staff, 34% hair, 51% contaminated surfaces, 32% commonly used on invasive medical products (Figure 7). The awareness among dental students about COVID testing is 95% aware (Figure 8). The percentage of dentists think they can test a COVID patient comprising 82% yes, 14% maybe and others no (Figure 9). The percentage of recovery time for coronavirus disease comprising 60% 3-4 weeks, 24% 1-2 weeks, 16% 5-6 weeks (Figure 10). The percentage of students thinking the spread of COVID can be stopped is 78% yes and 17% maybe (Figure 11).

Chi-square test was done in comparison with the age of the respondents. The graph shows that 68 participants of the male and participants 26 of the female were aware of COVID-19 (p-value-0.000 (<0.05) hence significant) (Figure 12). The graph shows that 67 participants of the male and 25 participants of the female were aware of COVID testing (p-value-0.533 (>0.05) hence not significant) (Figure 13). The graph shows that 66 participants of the male and 26 participants of the female were aware that COVID is a dangerous virus (p-value-

0.377 (>0.05) hence not significant) (Figure 14). The graph shows that 60 participants of the male and 20 participants of the female were aware of testing Covid patients (p-value-0.373 (>0.05) hence not significant) (Figure 15). The graph shows that 54 participants of the male and 21 participants of the female were aware of the spreading of the virus (p-value-0.946 (>0.05) hence not significant) (Figure 16).

In the present study, 67% participants chose contaminated hand or medical staff as the primary transmission mode for pathogens in a hospital which is similar to the previous article where contaminated hand was highlighted. (Habib, 2020) In the present study majority of the participants were aware of COVID testing as per the reported evidence of preceding studies that showed similarly stated response variance among students from two health schools in one city (Velayo *et al.*, 2014). In the current study, 68% of dentists think that they can test COVID patients. To deliver the best possible treatment to the patients, clinical training given to dental students should be mandatory (Sheriff and Santhanam, 2018). In the present study 70% of respondents chose 14 days as the waiting time for symptoms of COVID, the previous article also approved with the results (Guckenberger *et al.*, 2020; Trathen and Gallagher, 2009). Testing capability determines how many cases a country can confirm. Insufficient testing under reports instances and deaths (Yang, 2020). More importantly, as economies reopen, insufficient trying out relinquishes management of COVID-19 because new virus clusters elude detection and spark new outbreaks (Brown *et al.*, 2020; Yang, 2020).

According to the World Health Organization, if more than 10% of results come back positive, checking out capability is insufficient; test positivity higher than 10% method, many active infections are being missed. Nobel laureate economist Paul Romer has cautioned that 30 million daily exams are needed to reach the 10% positivity threshold in the United States (Mackenzie, 2020). The Rockefeller Foundation Testing Action Plan projects five million tests with the aid of early June, growing to 20 million in the following four months (Blairon *et al.*, 2020; Brown *et al.*, 2020; Yang, 2020). Even the bottom estimates advocate 750,000 to 900,000 molecular assessments could be wanted each day — more than double what is presently available (Davies, 2020).

The big scale of trying out now needed is a result of government failure at the beginning of the outbreak to quickly implement trying out, monitoring and tracing measures — collectively with social dis-

tancing — to restrict the community unfold of SARS-CoV-2 (Blairon *et al.*, 2020). In the countries where lockdown became decisive and stringent tracking, and tracing methods had been put in place — Taiwan, South Korea, Hong Kong and Singapore — subsequent significant testing has been unnecessary (Davies, 2020).

The microbial disease implications can change with the climate, and hence the disease prevalence varies in different regions of the world (Sarbeen and Gheena, 2016). The knowledge about handling the specimen for testing is also important for successful testing (Krishnan, 2018; Sheriff and Santhanam, 2018). Overall knowledge about various recent diagnostic methods is also essential for improving the current status of testing for covid-19 (Shree *et al.*, 2019).

CONCLUSIONS

This study concludes that dental students have taken awareness and measures for COVID testing. The present study has some limitations, like the study population can be more precise if the sample size and population is widened to a larger area. The awareness about covid-19 testing is the need of the hour. It requires high precision and rapid methods to enhance the efficacy of the current health system facilities in the current crisis of a pandemic.

ACKNOWLEDGEMENT

Nil.

Conflict of Interest

Nil.

Funding Support

Nil.

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