

Knowledge, Attitude and Practice towards COVID 19 Infection among Sudanese Medical Personale, June 2020

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Abstract

Introduction: This was cross sectional hospital based study conducted to assess knowledge; attitude and practice towards COVID 19 infection among medical personals including 201 participants, sampling technique was random sample collection and data collected using a structured questionnaire containing demographic data and questions to assess knowledge, attitude and practice.

Regarding participants, 62.7% were females and 37.3% were males. Age group as following: 39.8% were (20 - 30) years old, 37.8% (31 - 40), 21.8% (41 - 50) and the rest more than 50 years old.

Speciality 58.2% were medicine as general and 26.8% as dentists and the rest pharmacists, nursing and laboratory technicians. Their working experiences by years 47.8% (2 - 5) years and 28.8% less than one year and the rest more than 5 years, we found that the level of knowledge 88% is good, well attitude 66% and fair level of practice 66% (see result part).

Statement of the Problem: As of March 1, 2020, 79,968 patients in China and 7169 outside of China had tested positive for coronavirus infection 2019 (COVID-19). Among Chinese patients, 2873 deaths had occurred, equivalent to a mortality rate of 3.6% (95% CI 3.5 - 3.7), while 104 deaths from COVID-19 had been reported outside of China (1.5% [1.2 - 1.7]). However, these mortality rate estimates are based on the number of deaths relative to the number of confirmed cases of infection, which is not representative of the actual death rate; patients who die on any given day were infected much earlier, and thus the denominator of the mortality rate should be the total number of patients infected at the same time as those who died. Notably, the full denominator remains unknown because asymptomatic cases or patients with very mild symptoms might not be tested and will not be identified [3].

Purpose of the Study: To assess knowledge attitude and practice of covid 19 infection among Sudanese medical staff.

Methodology: Descriptive cross sectional hospital based study conducted on Sudanese medical staff sample size 201. Simple random sampling and collected using google form paper and analyzed by SPSS v16.

Findings: Almost two third of participants were female and their age (20 - 40) years old and most of them were doctors and quarter of them dentists and the rest pharmacists, nurses and lab technicians. Their work experience half about (2 - 5) years and the rest less than one or more than 5 years and there is association between work experience and knowledge level. Almost 95% of them with good knowledge background. 80% and 66%with appropriate attitude and practice respectively.

Keywords: Knowledge; Attitude; Practice; COVID 19

Abbreviation

Moh: Ministry of Health

Introduction

Coronaviruses are enveloped 120- to 160-nm particles containing an unsegmented genome of positive sense, single stranded RNA, 27 - 32 kb in size; the nucleocapsid is helical, 9 - 11 nm in diameter. Coronaviruses resemble ortho myxoviruses but have petal-shaped surface projections arranged in a fringe, similar to a solar corona, Coronavirus nucleocapsids develop in the cytoplasm and mature by budding into cytoplasmic vesicles. These viruses have narrow host ranges.

Most human corona viruses cause mild acute upper respiratory tract illnesses- "colds"-but a new corona virus identified in 2003 causes a severe acute respiratory syndrome (SARS) [1].

In late December 2019, a novel corona virus disease was identified and responsible for the new cases of pneumonia in Wuhan, China. The virus was initially named as 2019 novel corona virus (2019-nCoV) by the WHO, then was later on updated as SARS-CoV-2 and the name of the disease as corona virus disease 2019 (COVID-19). On the 11th of March 2020, the WHO has declared COVID-19 as a global pandemic and most of the countries worldwide have registered COVID-19 cases, including Jordan. The SARS-CoV-2 is an enveloped non-segmented positive sense RNA virus. Around six corona viruses have been identified to infect humans namely the α -CoVs HCoV-229E, HCoV-NL63, β -CoVs HCoV-HKU1 and HCoV-OC43 responsible to cause mild respiratory symptoms similar to that associated with the common cold, while SARS-CoV-2, SARS-CoV, and MERS-CoV are implicated to cause lethal respiratory infections. The origin of COVID-19 stick to a food market in Wuhan, China where bats were proposed to be implicated to be the source of SARS-CoV-2 based on its 96.2% genomic similarity with the bat corona virus COV RaTG13. SARS-CoV-2 invades lower respiratory tract cells using the angiotensin-converting enzyme 2 (ACE2) receptor.

The site of infection determines the route of transmitting the virus among people directly via the respiratory droplets and secretion and indirectly through contaminated inanimate surfaces. Based on the epidemiological investigations, the incubation period of the SARS-CoV-2 is between 1 - 14 days and the virus has been found to be contagious in the asymptomatic patients. The COVID-19 infection is more prominent in the elderly people with underlying diseases and the clinical presentations include fever, cough, malaise and acute respiratory distress syndrome in few patients which may eventually leads to death. However, in adults and children the disease is usually presented with mild flu-like illness. Rapid respiratory transmission of the disease necessitates the practice of strict respiratory precautions for its prevention. Therefore, the current study aims to assess the knowledge, attitude and practice regarding COVID-19 among medical and non-medical students and to evaluate the general satisfaction towards the governmental policies for the disease confrontation. The findings of this study are expected to help in many aspects such as, better planning for awareness campaigns, guide different health authorities accordingly to modulate their policies as needed and to correct some untoward behaviors in order to stop the spread of the virus which may result in rapid control and containment of the ongoing pandemic [2].

Justification

We are interested to study the knowledge attitudes and practice of all medical field personale as the first line to eradicate the disease in hospitals and community.

Problem Statement

As of March 1, 2020, 79 968 patients in China and 7169 outside of China had tested positive for coronavirus disease 2019 (COVID-19). Among Chinese patients, 2873 deaths had occurred, equivalent to a mortality rate of 3.6% (95% CI 3.5 - 3.7), while 104 deaths from COVID-19 had been reported outside of China (1.5% [1.2 - 1.7]). However, these mortality rate estimates are based on the number of deaths relative to the number of confirmed cases of infection, which is not representative of the actual death rate; patients who die on any given day were infected much earlier, and thus the denominator of the mortality rate should be the total number of patients infected at the same time as those who died. Notably, the full denominator remains unknown because asymptomatic cases or patients with very mild symptoms might not be tested and will not be identified [3].

Objectives of the Study

General objective

To assess knowledge attitude and practice of covid 19 infection among Sudanese medical staff.

Specific objectives:

- To assess the level of knowledge of the medical staff about covid 19 infection.
- To identify the attitude of the medical staff towards covid 19 infection.
- To determine the practice of the of the medical staff towards covid 19 infection.

Methodology

Study design

Descriptive cross sectional hospital based.

Study setting and population

The study was conducted on Sudan among all medical personale.

Inclusion and exclusion criteria

Include all medical staff doctors, nurses, pharmacists, dentists and laboratory technicians. Exclude non-medical staff.

Sample size and technique

201 samples and simple random sampling technique used.

Data analysis

Data was analyzed by SPSS v16.

Results

Age	20 - 30 yrs	31 - 40 yrs	41 - 50 yrs	More than 50 yrs
	80	76	44	1
Gender	Male	Female		
	76	126		
Speciality	Medicine	Dentist	Pharmacy	Nurse and lab
	117	54	22	8
Experience yrs	Less than 1 yr	2 - 5 yrs	More than 5 yrs	
	57	96	48	

Table 1: Shows socio demographic data of the participants (N = 201)

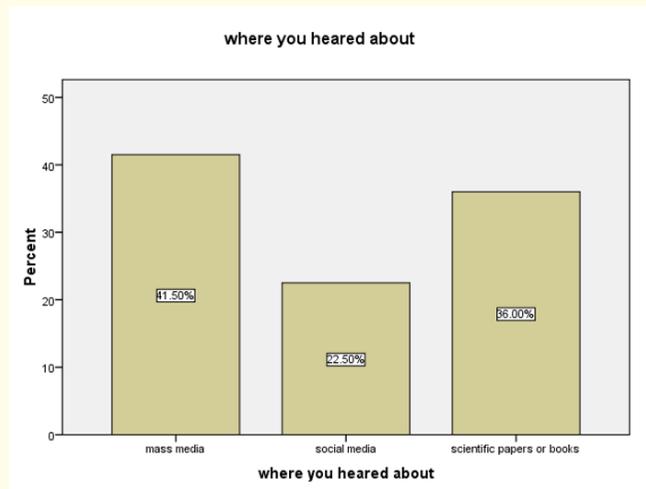


Figure 1: Shows the Source of the information (N = 201).

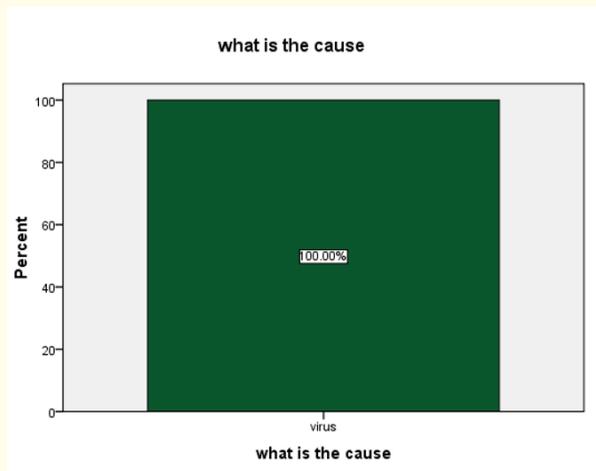


Figure 2: Show the causative agent of COVID 19 (N = 201).

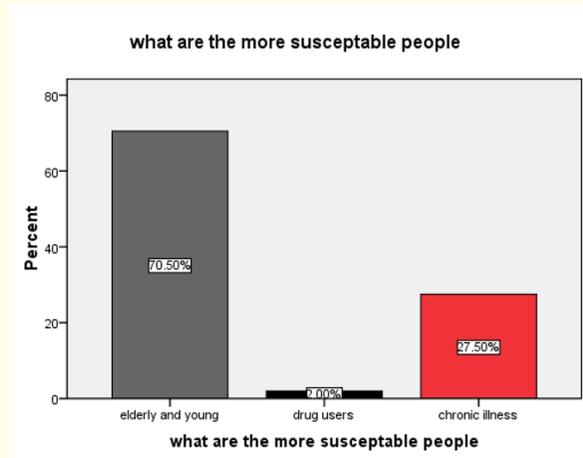


Figure 3: Shows the most Susceptible persons to be infected with COVID 19 (N = 201).

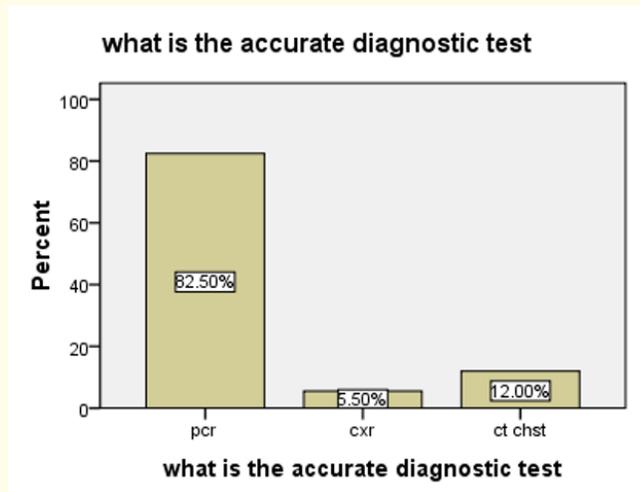


Figure 4: Shows the most accurate diagnostic test (N = 201).

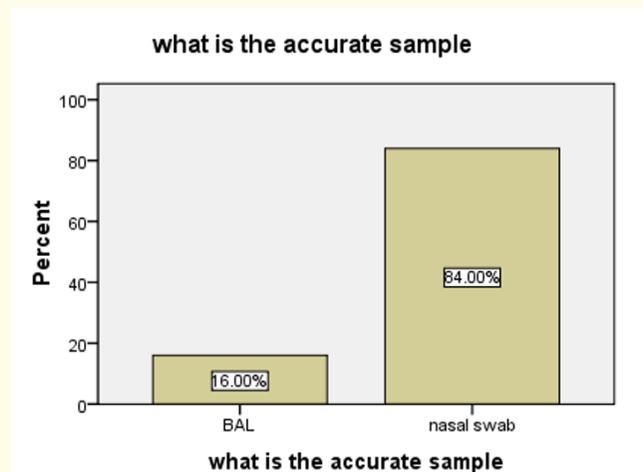


Figure 5: Shows the most accurate sample (N = 201).

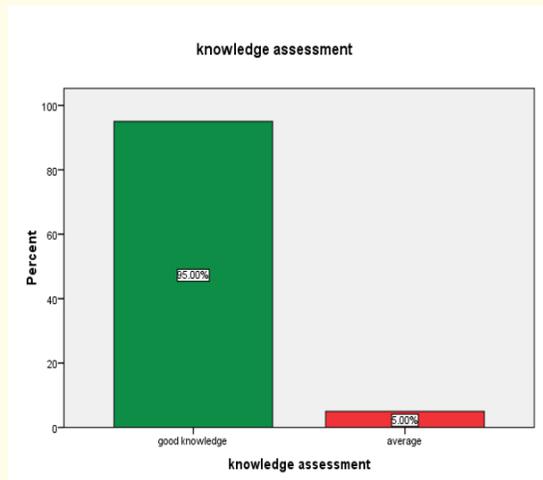


Figure 6: Shows the overall knowledge assessment among Sudanese medical staff (N = 201).

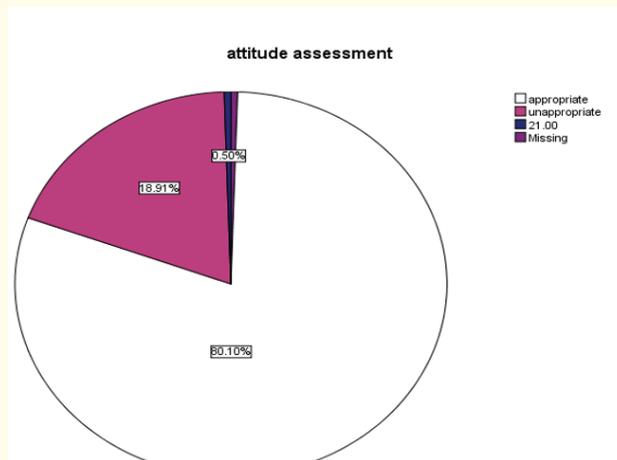


Figure 7: Shows the overall attitude assessment among Sudanese medical staff (N = 201).

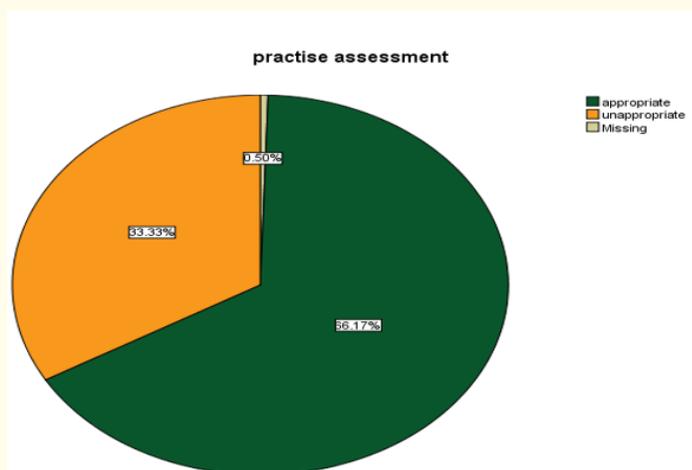


Figure 8: Shows the overall practice assessment among Sudanese medical staff (N = 201).

Discussion

This was cross sectional hospital based study conducted to assess knowledge; attitude and practice towards COVID 19 infection among medical personals including 201 participants, sampling technique was random sample collection and data collected using a structured questionnaire containing demographic data and questions to assess knowledge, attitude and practice.

Regarding participants, 62.7% were females and 37.3% were males. Age group as following: 39.8% were (20 - 30) years old, 37.8% (31 - 40) 21.8% (41 - 50) and the rest more than 50 years old.

Speciality 58.2% were medicine as general and 26.8% as dentists and the rest pharmacists, nursing and laboratory technicians. Their working experiences by years 47.8% (2 - 5) years and 28.8% less than one year and the rest more than 5 years.

To assess knowledge, the participants were asked about (the causative agent, the most susceptible persons, main symptoms and signs, the most accurate diagnostic sample and test the rout of infection, is there a definitive cure or vaccine and how to prevent the infection) on assessing the knowledge by scoring system using the above questions the overall knowledge assessment showed that 95% of participants were with good knowledge and 5% with average knowledge. And there is strong association between level of knowledge and working experience and this by common sense has to be so.

On identification of attitude towards COVID 19 infection, we asked about (what is your attitude on dealing with someone comes to you on emergency and having symptoms and signs suggesting the infection and what to do if you get the same scenario, what you think about MoH instructions regarding the COVID19 and the strategy of stay home if it applicable and what do you think about infection rate in our country), and the overall assessment for attitude showed that 80% with appropriate attitude nearly to 20% with an inappropriate attitude. Regarding the practice participants were asked about (what to do if you come from outside and when cough and sneezing, shaking hands and washing hands behaviors, on dealing with patients suspected to be covid 19 infected and how to deal with them, and did you apply all instructions regarding corona virus infection on dealing with patients and yourself) the overall assessment showed that 66% appropriate and 33% inappropriate practice on regard to deal with the catastrophe.

Conclusion

There is good knowledge about COVID 19 infection by the practice and attitude showed some below average response and this means that we all as medicals get concern about the knowledge site with no regard or less to our attitude and practice.

Bibliography

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2. Hamed Alzoubi., *et al.* "COVID-19 - Knowledge, Attitude and Practice among Medical and Non-Medical University Students in Jordan". *Journal of Pure and Applied Microbiology* 14.1 (2020): 17-24.
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