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The Impact of Covid 19 on Health Care Professionals in Federal Teaching Hospital Gombe, Gombe State Nigeria

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Abstract:- COVID 19 is a term used to denote Corona virus disease which manifested in the year 2019 by World Health Organization (WHO). Corona virus is a seasonal virus that thrives in the cold weather. In Gombe state Nigeria, the coldest season is the harmattan weather which starts from November to February. This weather is associated with increase infections like cold, catarrh, feve,r asthma and recently COVID 19. The symptoms of these diseases include sneezing, coughing, and running nose. COVID 19 spreads through droplets from the nose of an infected person. Preventive measures against this disease include regular washing of hands, physical distancing, and the use of face mask in public places. The World Health Organization declared the disease a pandemic that has affected the human population. Health care professionals became challenged by the increase in demand for health care. The challenge became worse due to fear of contacting the disease in the process of health care delivery, stigma and discrimination associated with working in COVID isolation center. This impacted health care professionals physically and psychologically. They became more vulnerable to COVID 19 infection than the general public due to frequent contact with the affected individuals. The study found out low level of morbidity among health care professionals in Federal Teaching Hospital Gombe with one death of a physician. This was largely achieved due to training and motivation given to health care professionals working in the isolation center and within the hospital, funding support from government, and prompt response given to suspected cases with in the hospital. The study also found out medical supplies like ventilators, test kits, drugs and health care personnel were inadequate in the isolation center. Thus the study recommends adequate staffing and supplies of medical equipment's in the isolation center for prompt response to outbreak of contagious diseases like COVID 19. In addition the Federal Teaching Hospital is a dynamic institution that requires researches to highlight prospects and challenges facing the medical profession for positive changes. In this context, there is need for adequate enlightenment among health care professionals and hospital staff to cooperate and respond to researchers with interest in health and illness situation once ethical clearance is obtained from the management of the hospital.

Keywords*: Health, Disease, virus, Health care professional, COVID 19, Stigma, Discrimination, Morbidity, Mortality*

I. INTRODUCTION

Corona viruses belong to the coronaviridae family in the Nidovirales order. Corona represents crown-like spikes on the outer surface of the virus, thus it was named as corona virus. Corona viruses are minute in size (65 -125nm in diameter and contain a single-stranded RNA as a nucleic material, size ranging from26 to 32kbs in length (M A Shereen etal 2020). In human, several corona viruses are known to cause illness in animals or humans. In humans several corona viruses are known to cause respiratory infections ranging from the common cold to more severe diseases such as Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS).

The first human cases of COVID-19 were first reported by officials in Wuhan city of China in December, 2019. Retrospective investigations by Chinese authorities have identified human cases with onset of symptoms in early December. The most common symptoms of the virus infection according tothe world umbrella body for health include fever, dry cough, and tiredness. Less common symptoms are aches and pains, sore throat, diarrhea, conjunctivitis, headache, loss of taste, or smell, a rash on skin or discoloration of fingers and toes. Serious symptoms of the disease include difficulty in breathing or shortness of breath, chest pain or pressure and loss of speech or movement.COVID-19 spreads primarily through droplets of saliva or discharge from the nose of an infected person through coughs, sneezes or speaks(WHO, 2020).

Some of the earliest known cases had alink to a whole-sale market in Wuhan. Many of the initial patients were stall owners, market employees, or regular visitors to the Wuhan market. Environmental samples taken from the market in Wuhan city was the source of this outbreak or at least played the initial amplification of the outbreak. The market was closed on 1st January, 2020. From Wuhan city in China corona virus became a global pandemic across societies of the world with many countries having a fair share of the outbreak (WHO 2020).

Nigeria Center for Disease Control (NCDC, 2020) reported the first confirmed case of COVID-19 in Nigeria on 27th February 2020, when an Italian citizen in Lagos tested positive for corona virus. On March 9th 2020 a second case was reported in Ewekoro, Ogun state, a Nigerian citizen who had contact with the Italian citizen. Following these new developments, on 9th March, 2020, President Muhammadu

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Buhari established a presidential task force for the control of the virus in the country(Agbakwuru Johnbosco 2020), Gombe state recorded its first five (5) positive index cases on Monday 20th April, 2020. Following the outbreak of corona virus in the state, the Gombe state house of assembly recommended a total lock-down.

Data from NCDC as at 16th July 2020, revealed a total number of confirmed cases in Gombe as 537 cases, out of this number 40 are active cases, 475 patients have recovered and discharged while 22 deaths were recorded in the state. Total number of confirmed cases in Nigeria as at 17th July, 2020 according to Nigeria Center for Disease Control (NCDC) was 34,854 cases, active cases was 19,793. While discharged patients 14,292 and 769 deaths were recorded.

Healthcare systems around the world are being challenged by increasing demand for care of people with COVID-19, compounded by fear, stigma, misinformation and limitations on movement that disrupts the delivery of health care for all conditions. In the early phases of the COVID-19 outbreak, many health systems were able to maintain routine service delivery in addition to managing a relatively limited COVID-19 case-load. As demands on systems increased, healthcare professionals increasingly became infected by COVID-19 infection. These impacts negatively on the morale of the health care professionalsand their ability to deliver health care services. Work place risk assessment by World Health Organization categorizes health care professionals and their job as high exposure risk because their jobs have high potential for close contact with people who are known or suspected of having COVID-19, as well as contact with objects and surfaces possibly contaminated with the virus. Examples of such scenarios outside the health facilities include, the transportation of persons known or suspected to have COVID-19 in an enclosed vehicles without demarcation between the driver and the passenger, providing domestic services or homecare for people with COVID-19 and contact with dead bodies of persons who were known or suspected of having COVID-19 at the time of their death.

Hence, the study is set out to investigate the situation in Federal Teaching Hospital in Gombe and the impact on the health care team managing and treating the victims of the pandemic. The study will address the following objectives:

(a) To find out the total number in Federal Teaching Hospital Gombe of, mortality as a result of COVID -19 among the patients and the health care team, and the total number of discharged patients.
(b) To find out the availability of medical equipments, drugs, and hospital personnel in the Federal Teaching Hospital Gombe.
(c) To find out the consequences of health care delivery on health care professionals saddled with the responsibility of delivering health care services to the victims of COVID -19.

II. LITERATURE REVIEW

COVID 19 has impacted health care professionals physically, and psychologically. They are more vulnerable to COVID 19 infection than the general population because of being frequently in contact with affected individuals. Health care professionals have been required to work under stressful conditions, without proper protective equipment and had to take difficult decisions involving ethical implications. In the United States black health care professionals are disproportionately impacted by the pandemic due to staff shortage, poor working conditions and poor mental health care system (Winfield, Adia Harvey 2020). Health and social systems across the globe are struggling to cope. The situation is especially challenging in humanitarian, fragile and low income countries like Nigeria and Gombe state where health and social systems are already weak. Services to provide sexual and reproductive health care risk being sidelined, which will lead to higher maternal morbidity and mortality (WHO, UNFPA, UNICEF 2020). In March 2020, 9% of those infected with COVID 19 in Italy were health care professionals (Mitchel, Gemma 2020). In May 2020, the International Council of Nurses reported that at least 90,000 health care workers have been infected and more than 260 nurses had died in the COVID pandemic (ICN 2020). In March 2020, one in four doctors in the United Kingdom were off sick, in isolation or caring for a family member with COVID 19 (ITV News, 2020). The United Kingdom's government also announced that retired healthcare professionals be brought out of retirement to help during the COVID crisis.

Shortcomings of personal protective equipment have also been reported in many countries (Taegtmeyer, Miriam, Wingfield, Tom 2020). Similarly a study in Singapore showed that healthcare workers caring for patients with COVID 19 reported anxiety, depression and stress (Tan, Benjamin Y.Q etal 2020). Increasing work demands on healthcare professionals conflict with their duties to family and friends, which causes psychological stress. Healthcare professionals reported being anxious about having to self-isolate, quarantine or becoming ill.

Globally, women make up 70 percent of workers in the health and social sector. Women are playing a disproportionate role in responding to the disease, including as front line healthcare workers (as well as carers at home and community leaders and mobilisers). In some countries, COVID-19 infections among female health workers are twice that of their male counterparts (UN Women 2020). Women are still paid much less than their male counterparts in almost all countries and hold fewer leadership positions in the health sector. Masks and other protective equipment designed and sized for men leave women at greater risk of exposure.\ (UN Women 2020). The World Health Organization has given the following key recommendations to decrease the spread of COVID-19 among healthcare workers:

- Training healthcare workers to identify respiratory diseases
- Providing increased access to personal protective equipment
- Providing psychological support to health workers
- Routinely conducting hospital surveillance
- Recognizing that every healthcare system can have gaps

The Centers for Disease Control and Prevention has issued guidance on preventing transmission and reducing job stress in response to the COVID-19 pandemic for healthcare workers (CDC, 2020):

- Implement telehealth protocols where possible
- Screen everyone entering a healthcare facility for COVID-19 symptoms
- Use appropriate face coverings dependent upon the procedure (i.e. N95s for aerosol-generating procedures)
- Establish a plan to identify and track suspected and confirmed cases to promptly impose quarantine measures
- Re-arrange waiting areas and install barriers to encourage physical distancing
- Practice hand hygiene and frequent disinfection of surfaces

The Centers for Disease Control also issued guidelines on managing job stress:

- Stay in communication with coworkers and supervisors about job stress
- Maintain a consistent sleep and meal schedule
- Get exercise and make time for hobbies outside of work
- Take breaks from watching, reading, and listening to the news
- Practice mindfulness techniques, such as breathing exercises and meditation
- Talk to a mental health professional if needed

United Nation Population Fund also recommends that all women and girls must have access to a continuum of sexual and reproductive health services, including antenatal, prenatal and postnatal care, and screening tests according to national guidelines and standards (UNPF, 2020).

III. PREVENTIVE MEASURES FOR ALL WORKPLACES

According to World Health Organization universal measures for preventing transmission of COVID-19 that apply to all workplaces and all people at the workplace, such as Health care professionals, Employers, managers, workers, contractors, customers and visitors, include the following:

(a) Hand hygiene

- Regular and thorough hand washing with soap and water or hand hygiene with alcohol-based hand-rub before starting work, before eating, frequently during the work shift, especially after contact with co-workers or customers, after going to the bathroom, after contact with secretions, excretions and body fluids, after contact with potentially contaminated objects (gloves, clothing, masks, used tissues, waste), and immediately after removing gloves and other protective equipment butbefore touching eyes, nose, or mouth.
- Hand hygiene stations, such as hand washing and hand rub dispensers, should be put in prominent places around the workplace and be made accessible to all staff, contractors, clients or customers, and visitors along with communicationmaterials to promote hand hygiene.

(b) Respiratory hygiene

- Promote respiratory etiquette by all people at the workplace. Ensure that medical face masks and paper tissues are available at the workplace, for those who develop a runny nose or cough at work, along with bins with lids for hygienic disposal.
- Develop a policy on wearing a mask or a face coveringin line with national or local guidance. Masks may carry some risks if not used properly. If a worker is sick, they should not come to work. If a member of staff or a worker feels unwell while at work, provide a medical mask so that they may get home safely. Where masks are used, whether in line with government policy or by personal choice, it is very important to ensure safe and proper use, care and disposal.

(c) Physical distancing

- Introduce measures to keep a distance of at least 1 metre between people and avoid direct physical contact with other persons (i.e. hugging, touching, shaking hands), strict control over external access, queue management (marking on thefloor, barriers).
- Reduce density of people in the building (no more than 1 person per every 10 square meters),physical spacing at least 1 meter apart for work stations and common spaces, such as entrances/exits, lifts, pantries/canteens, stairs, where Congregation or queuing of employees or visitors/clients might occur.
- Minimize the need for physical meetings, e.g. by using teleconferencing facilities.
- Avoid crowding by staggering working hours to reduce congregation of employees at common spaces such as entrances or exits.
- Implement or enhance shift or split-team arrangements, or teleworking
- If a person observes the WHO recommended at least 1-meter physical distance from others, this converts to approximately 10 square meterarea around them.

IV. SPECIFIC MEASURES FOR HEALTH CARE PROFESSIONALS, WORKPLACES AND JOBS AT HIGH RISK

In addition to the measures above, for high-risk work activities and jobs, the following measures should be implemented according to World Health Organization (WHO):

- Assess the possibility of suspending the activity;
- Adherence to hygiene before and after contact with any known or suspected case of COVID-19, before and after using PPE;
- Use of medical mask, disposable gown, gloves, and eye protection for workers who must work in the homes of

people who are suspected or known to have COVID-19. Use the protective equipment when in contact with the sick person, or respiratory secretions, body fluids, and potentially contaminated waste.

- Training of workers in infection prevention and control practices and use of personal protective equipment;
- Avoid assigning tasks with high risk to workers who have pre-existing medical conditions, are pregnant, or older than 60 Years of age.

V. THEORETICAL FRAME WORK

The theory of anchor to the study is the biomedical model of health and illness. According to Annandale (1998) health constitutes the freedom from disease, pain, or defect, making the normal human condition "healthy". The model focuses on the physical processes such as pathology, biochemistry, and physiology of the disease. This excludes psychological, environmental and social influences. The theory is suitable for this study because it centers on physicians, healthcare professionals and hospitals. Individuals as patients and health care workers in the hospital. Medical science and technology constitute the working tools. COVID 19 manifests in abnormal functioning of the human body with clear signs and symptoms. Healthcare professionals employ medical science and technology to restore the affected part of the human body to normal functions. This may impact negatively on the health status of the health care giver if adequate protective health care equipment is not provided to the health care professional.

VI. METHODOLOGY

The Federal Teaching Hospital Gombe is located within city of Gombe, the capital of Gombe, Gombe state. It is one of the 36 states of the Federal Republic of Nigeria. It is located between latitude 10 degrees and 11 degrees North within the Sahel Savannah belt. It has a population of 2,365.040 (2006 census) people and an area of 18,000 square Km. The temperature averages 30 degree centigrade with an annual rainfall of 1200mm. The predominant occupations of its people are agriculture and livestock rearing.

The health institution was upgraded by the federal government from Federal Medical Center to Federal Teaching Hospital on 1st January, 2014 to enable the hospital be used for training of medical students of Gombe state university (Premium times, 2014). The hospital was established in1996 by the federal government. The various clinical departments run specialist and sub-specialist clinics from Monday to Friday on 24 hour basis and overall outpatient attendance is about 1,750 patients per week.

There are 11 main wards in the hospital including the amenity ward. Services provided to citizens by the Federal Teaching Hospital Gombe through various service windows according to Servicom Index Report (2007) include:

- Anaesthesiology
- Chemical pathology
- Community medicine/family planning
- General outpatient Department
- Internal medicine
- Paediatrics
- Obstetrics & Gynaecology
- Surgery
- ENT (Ear, Nose, Throat)
- Opthalmology & Blood transfusion
- Nursing services
- Histhopathology
- Accident & Emergency/Casualty
- Family Medicine
- Special clinic
- Microbiology & Parasitology
- Medical Records
- Physiotherapy
- Radiology/Xray
- Pharmacy
- Psychiatry
- Dental & Maxillo- Facial care unit
- Haematology
- Dietetics and
- COVID 19 isolation center.

The break-down of health care professionals working in Federal Teaching Hospital Gombe include the following:

S/N	Type of Health Care Professional	Total Number
1	Physicians	200
2	Optometrists	2
3	Radiographers	9
4	Medical Physicists	2
5	Nurses/Midwives	360
6	Laboratory Scientists	35
7	Public Health Care Workers/Health Assistants	160
8	Pharmacists	21
9	Physiotherapists	8
	Total	**797**

Source: Federal Teaching Hospital Gombe Registry (2020)

The study employed the simple random sampling technique in selecting the 120 sampled populations among the health care team in the isolation center and other sections of the hospital. Ninety-nine (99) questionnaires were collated and analyzed. The health care team includes physicians, Nurses, Lab scientists, Assistant physician/nurse and Public Health Care Workers delivering health care in the isolation center. The method of data collection used was Questionnaire and key informant interviews. Questionnaires were distributed to the health care team actively engaged in the isolation center, while five (5) key managers of the unit were interviewed.

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VII. ANALYSIS AND INTERPRETATION OF DATA

Table one: Socio-Demographic characteristics of respondents

Age	**Frequency**	**Percentage**
21-25 years	4	4%
26-30 years	11	11.1%
31-35 years	31	31.3%
36-40 years	38	38.4%
41-45 years	9	9.1%
46 years and above	6	6.1%
Total	99	100%
Gender	Frequency	Percentage
Male	62	62.6%
Female	37	37.4%
Total	99	100%
Religion	Frequency	Percentage
Islam	68	68.7%
Christianity	30	30.3%
Traditional	1	1.0%
Total	99	100%
Marital status	Frequency	Percentage
Single	26	26.3%
Married	72	72.7%
Divorced	1	1.0%
Total	99	100%
Occupation	Frequency	Percentage
Physician	15	15.2
Nurse	33	33.3
Lab scientist	13	13.1
Public health worker	38	38.4
Total	99	100%
Experience years on the job	Frequency	Percentage
1-5 years	20	20.2%
6-10 years	39	39.4%
11-15 years	15	15.2%
16-20 years	22	22.2%
21 years and above	3	3.0%
Total	99	100%

Source, Field work 2020

The data on age showed within the age bracket of 40 years old (69.7%). The data consists of more males than females (62.6%) and more muslim respondents than christains (68.7%). Also majority of the respondents are married (72.7%). The data consists of more views of nurses and public health care professionals totaling (71.7%) of the responses. This is in agreement with the spread and distribution of health care professionals obtained from the hospital registry. Years of experience on the job indicated about 39.4% of the respondents have spent between 6-10 years offering health care to patients in the hospital.

Key informant interviews were conducted with five (5) key officials in the management of COVID–19 isolation center, Federal Teaching Hospital Gombe. The center was initially set-up to cater for any eventuality before the outbreak of the pandemic.. With the outbreak of COVID-19 pandemic all over the world, the center served as isolation center for COVID-19 to curb and control the spread of the virus. The isolation center is managed by Thirty (30) health care professionals. The breakdown showed the center has four (4) physicians, eleven (11) nurses, fourteen (14) public health experts and one (1) laboratory scientist. The age range of the patients is between 18 - 60 years old.

As at the time of filling this study, (9-9-2020) the isolation center recorded 181 suspected cases. Thirty-nine were confirmed cases. At the end of the two (2) weeks of isolation of these suspected cases twenty-nine (29) more cases were recorded as positive cases bringing the total number of confirmed cases in the isolation center to sixty-eight (68). Twelve mortalities were also recorded. Fifty-six recovered and discharged from the hospital. The remaining suspected cases were discharged after two (2) weeks of isolation with no sign nor symptom of COVID-19. There was only one female among the confirmed patients. There were no health care professional that got infected on duty in the isolation center as such no recovery and no death of a health care professional working in the isolation center was recorded. It was gathered that this was largely due to constant training on management and care for COVID-19 patients given to the health care professionals and prompt provision of protective care equipments. In a situation where protective care equipment is out of stock, health care workers wait for the supply of more protective health care equipment before attending to patients. This simply means no protective care equipment, no treatment and care for COVID-19 patients. This gingered the management to make adequate provision of equipments. It was also learnt that palliatives were given to families of the affected patients to encourage their family members to accept isolation and treatment. Hazard allowances were paid for only two (2) months with an outstanding one (1) month payment.

The study also revealed the essence of setting up the isolation center was to take out the affected person from the general population for treatment. This strategy was adopted to stop transmission of the virus from person to person. The record from the management team showed twenty-six health care professionals got infected with COVID-19 in Gombe state with one (1) physician losing his life due to COVID-19 complications. Seven (7) physicians got infected with the virus, three (3) nurses, and one (1) public health worker. In Gombe specialist hospital three (3) nurses, two (2) physicians got infected with COVID-19. The private health sector in Gombe also recorded two (2)nurses, two (2) laboratory technicians and one (1) hospital attendant with COVID -19 infections. The health care workers responded to treatment, recovered and discharged. Treatment and feeding were given free for all COVID-19 patients in the isolation center including consumables like tooth paste, toilet soap etc. Patients with underlying diseases like

diabetes, high blood pressure paid treatment of these diseases.

Table two: Information on Covid 19 and Stigma

Respondents views on whether they have received any training on management of Covid 19	**Frequency**	**Percentage**
Yes	58	58.6%
No	41	41.4%
Total	99	100%
Respondents views on whether they faced any stigma and discrimination as a result of working in the isolation centre	Frequency	Percentage
Yes	56	56.6%
No	43	43.4%
Total	99	100%
Respondents opinions on whether they felt any fear associating with giving care to Covid 19 patients	Frequency	Percentage
Yes	47	47.5%
No	52	52.5%
Total	99	100%
Respondents views on whether they have being paid hazard allowance	Frequency	Percentage
Yes	80	80.8%
Partially	19	19.2%
Total	99	100%
Opinions of the respondents on the challenges they faced in the course of carrying out their responsibilities	Frequency	Percentage
Lack of medical equipments	55	55.6%
Stigmatization from the public	21	21.2%
Non-cooperation of patients and relatives	11	11.1%
Late retrieval of covid 19 results	4	4.0%
Low voluntary turn out	2	2.0%
Poor hazard allowance	6	6.1%
Total	99	100%
Respondents views on whether the Covid 19 treatment is free	Frequency	Percentage
Yes	88	88.9%
Partially	11	11.1%
Total	99	100%

Source, Field work 2020

The data on stigma and discrimination associated with giving care to COVID 19 patients revealed high rate of stigma associated with the job. 56.6% of the respondents' received stigma related behaviours towards them from family and friends. Majority of the health care professionals also indicated they had no fear when posted to COVID 19 isolation center to give care to the patients (52.5%). The data on hazard allowance was impressive as 88.9% of the health care professionals indicated that they have received payments. Only 19.2% of them revealed partial payment. The study also recorded lack of adequate medical equipments and stigma from the public as key work challenges in the isolation center. Majority of the responses (88.9%) revealed that treatment of COVID 19 is free in the isolation center. On training, majority (58.6%) of the responses affirmed that they received training on COVID 19 management prior to working in the isolation center.

The interview segment gathered that at the initial stage of the pandemic, health care professionals working in COVID-19 isolation center in Federal Teaching Hospital Gombe suffered stigma and discrimination from family, friends and the larger members of society; however this subsided with passage of time.Challenges faced by the

health care professionals in in Federal Teaching Hospital, Gombe include:

(a) Difficulty in convincing travelers coming to Gombe state from other states with no symptom of COVID-19 to accept isolation. This led to demonstration by patients.

(b) At the initial stage of the pandemic, there were no testing centers in Gombe. Specimen had to be taken to Abuja, physicians and patients had to wait for a longer period of time for results. However COVID-19 protocols and guidelines changed where patients were isolated at home. The situation greatly improved.

(c) Incentive paid to health care professionals was abysmal. Hazard allowance paid to Federal Teaching Hospital health care workers were paid for only two (2) months, while non for state health care workers. Stipend paid to health care workers by the state government every two (2) weeks later stopped, health care workers continued to work for the sake of saving lives.

(d) COVID-19 pandemic created limited work force in the hospital. This is because for every health care worker affected a vacuum is created, the affected worker assumes sick role together with all colleagues who came in to contact with the affected worker in the unit.

(e) In some instances, COVID-19 patients refused admission in the isolation center, reject being infected even when the test results indicate positive.

(f) Relatives of dead patients also reject safe burial. It was a lot of struggle to convince them.

(g) Managing the isolation center is time consuming on the part of the health care professionals.

Irrespective of the above challenges, Gombe state has recorded great success in controlling the virus. The state is one of the best states in this regard with only twenty-three recorded mortalities. Most of these mortalities occur as a result of delay in seeking medical health care.

Table three: Information on the availability of medical equipment's, drugs and health care personnel

Personal protective wear	**Frequency**	**Percentage**
Adequate	56	56.6%
Not adequate	41	41.4%
None	2	2.0%
Total	99	100%
Ventilators	Frequency	Percentage
Adequate	35	35.4%
Not adequate	48	48.5%
None	16	16.1%
Total	99	100%
Test kits	Frequency	Percentage
Adequate	39	39.4%
Not adequate	36	36.4%
None	24	24.2%
Total	99	100%
Face masks	Frequency	Percentage
Adequate	66	66.7%
Not adequate	29	29.3%
None	4	4.0%
Total	99	100%
Hand sanitizers	Frequency	Percentage
Adequate	73	73.7%
Not adequate	26	26.3%
None	0	0%
Total	99	100%
Water	Frequency	Percentage
Adequate	90	90.9%
Not adequate	9	9.1%
Total	99	100%
Detergent	Frequency	Percentage
Adequate	82	82.8%
Not adequate	17	17.2%
Total	99	100%
Disinfectant/Air freshener	Frequency	Percentage
Adequate	63	63.6%
Not adequate	31	31.3%
None	5	5.1%
Total	99	100%
Drug	Frequency	Percentage

Adequate	50	50.5%
Not adequate	49	49.5%
Total	99	100%
No. of healthcare personnel	Frequency	Percentage
Adequate	54	54.5%
Not adequate	45	45.5%
Total	99	100%

Source, Field work 2020

Data on COVID 19 medical supplies to the isolation center showed no adequate ventilators, test kits, drugs and health care personnel.

VIII. CONCLUSION

In conclusion coronavirus in fections in Gombe, Gombe state Nigeria are on the low side. The impact on the general population was mild as not many deaths were recorded. This is largely due to the hot climatic conditions in the region which kills the virus. The impact on health care professionals also was mild as very few morbidities and mortalities were recorded. In addition to the hot climatic conditions of the region, measures taken by the state government, federal government, and hospital management contributed to low COVID 19 fatalities in the state.

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