



Original Article



## Factors Influencing Stigmatization among Staff Survivors of Covid-19

Jacob Abebrese<sup>1</sup>, Ruth Boatemaa<sup>2</sup>, Chukwuma Chinaza Adaobi<sup>3</sup>

<sup>1</sup>Presbyterian University Ghana, P. O. Box 59, Kwahu, Abetefi

<sup>2</sup>Korle-bu Teaching Hospital, P. O. Box KB 77 Korle -Bu, Accra

<sup>3</sup>Catholic University of Ghana, Fiapre-Sunyani, P. O. Box 363, Bono Region, Ghana

### Corresponding author:

Jacob Abebrese. MD, PhD.

E-mail: [abebresejacob@gmail.com](mailto:abebresejacob@gmail.com)

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### Managing Editors

Prof. Kwadwo Adinkrah-Appiah

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**Jacob Abebrese. MD, PhD.**

**Abstract:** The novel coronavirus (2019-nCoV, or COVID-19) epidemic first broke out in Wuhan and has been spreading in whole China and the world. The number of new infections and deaths are increasing, which became public health concern. The main objective of the study is to assess factors influencing stigmatization among staff survivors of Covid-19 at the Korle-Bu Teaching Hospital. The study was conducted at Korle-Bu Teaching Hospital. A descriptive study was employed as the study type and a cross-sectional study as the design. The population for the study consisted of staff survivors of Covid-19 at Korle-Bu Teaching Hospital. A convenient sampling technique was used to select 335 participants arrived at using Yamane's formula. Structured questionnaires were used to collect the data. Data was analyzed using STATA version 16 software. Frequencies, percentages, and regression analysis was used and at 0.05 significance level. The study found an adequate knowledge of health workers and stigmatization. Participants scored an average percentage concerning the items used to measure the survivors and stigma. The logistic regression analysis showed that there was an established factor that determined stigma among health workers at Korle-Bu Teaching Hospital. Survivors of Covid-19 are a global challenge among health workers and are mostly stigmatized due to their poor knowledge of Covid-19.

**Keywords:** Covid-19, stigmatization, stigmatization among staff, korle-bu teaching hospital

## 1. INTRODUCTION

The novel coronavirus (2019-nCoV, or COVID-19) epidemic first broke out in Wuhan and has been spreading in whole China and the world. The number of new infections and deaths in Wuhan is still increasing, which has posed major public health and governance concerns. A series of mandatory actions have been taken by the municipal and provincial governments supported by the central government, such as measures to restrict travel across cities, case detection and contact tracing, quarantine, guidance and information to the public, detection kit development, etc. Challenges such as lacking effective drugs, insufficient hospital services and medical supplies, logistics, etc. have much alleviated with the solidarity of the whole society. The pandemic will be ended with the continuous efforts of both national and international multispectral bodies (Zhu et al., 2020).

On December 31, 2019, the World Health Organization (WHO) was informed of a cluster of pneumonia cases in Wuhan City, Hubei Province of China. Illnesses have since been linked to a disease caused by a previously unidentified strain of coronavirus, designated Coronavirus Disease 2019, or COVID-19. The disease has spread to several other countries, including the United States. As of March 2, 2020, tens of thousands of people have been infected and over 2,500 have died. Both WHO and the U.S. Centers for Disease Control and Prevention (CDC) post frequent updates on the outbreak(March, 2020).

The COVID-19 pandemic is taking a tremendous toll on humanity. This is evident not only in Terms of the significant loss of life but also the negative impact on the world economy caused By the uncertainty and disruptions to economic activities related to the lockdown and other containment measures(No et al., 2020). Indians back home experienced being stigmatized by their neighbours when their homes were stamped “quarantined.” Home-quarantined individuals have reported similar experiences when the Delhi Government decided to put up notices outside their homes (Bhattacharya et al., 2020). Strengthened surveillance was implemented in France on 10 January 2020 to identify imported cases early and prevent secondary transmission. Three categories of risk exposure and follow-up procedure were defined for contacts (Stoecklin et al., 2020). Recently, the outbreak of various infectious diseases has significantly impacted the lives of millions of people. These diseases have not only strained our medical and public health facilities but also burdened economists, scientists, and politicians in responding to financial hardships, the discovery of vaccines, and dealing with public anxieties and expectations, respectively(Khan & Khan, 2021).

According to Ortenzi et al., (2020) study conducted in Italy reported its first two cases of COVID-19 at the end of January 2020, and approximately a month later the epidemic spread quickly in the Italian population. As of 27 March, Italy reported 80,589 cases. It was the third country worldwide in terms of total number of cases, after the USA and China, despite its markedly smaller population size (Ortenzi et al., 2020). The Italian case can provide some useful insights for the overall understanding of the pandemic, and analyzing its epidemiological situation, as well as interventions taken and their expected impact (both in terms of disease spread and socio-economic consequences) may contribute to generating questions and hypotheses Ortenzi et al., 2020). On 5 March 2020, South Africa recorded its first case of imported COVID-19. Since then, cases in South Africa have increased exponentially with significant community transmission (Moonasar et al., 2021). The pandemic reached South Africa later than most of the world, but despite the delay, it has still had a wide-reaching impact on all South Africans. President Ramaphosa declared a state of national disaster on 23 March 2020 and indicated that there would be a total national lockdown of the country starting on 26 March 2020 to curb new infections and flatten the curve of the virus (Africa & Maluleke, 2020). Between March and August, South Africa reported the highest number of cases on the African continent (Moonasar et al., 2021).

On 12 March 2020, Ghana recorded its first two cases of the coronavirus (Ghana Health Service (GHS, 2020). In a statement issued by the Ministry of Health, both individuals returned to Ghana from Norway and Turkey. Following the first cases, the country witnessed a slow steady increase also imported in the country. On 21st March 2020, after Ghana had recorded 21 cases, the President in a national address restricted travel by ordering the closure of Ghana's sea, land and air borders to human traffic effective from midnight of 22nd March 2020. The restrictions on travel and the closure of borders continued until it was reviewed on 1st September 2020. In an address to the nation on 30th August 2020, the President of Ghana announced that air borders were reopening to human traffic from the 1st of September 2020. The President further announced that land and sea borders continue to remain closed until further notice. The majority of cases were in the two most populated cities of Accra and Kumasi (City et al., 2020).

Research about the coronavirus disease 2019 (COVID-19), has epidemiology and socio-economic impact on populations worldwide and has gained attention. However, there is a dearth of empirical knowledge in low- and middle-income settings about the pandemic's impact on survivors, particularly the tension of their everyday life arising from the experiences and consequences of stigma, discrimination and social exclusion, and how they cope with these behavioural adversities (Atinga et al., 2021). Stigma against survivors of Covid-19 (and their families) has emerged as a major issue in Ghana, which in turn affects our response. There exist widespread misconceptions and fear of people who have survived Covid-19, as they are believed to pose a health risk to others. Survivors of Covid-19 are widely avoided and stigmatized. As a result, people with Covid-19 symptoms are often reluctant to be tested, for fear of being

stigmatized if the result is positive (Atinga et al., 2021). To address the stigma against Covid-19 survivors, Plan International Ghana (PIG) collaborated with a local filmmaker and the Ministry of Health to produce a powerful video showing the harmful effects of stigma. The video can be viewed here (*Addressing Stigma against Covid-19 Survivors in Ghana*, 2020).

## 2. MATERIAL AND METHODS

### Study Setting/Context

Korle Bu Teaching Hospital, the premier tertiary healthcare facility in Ghana, was established on October 9, 1923. The facility was built under the administration of Sir Frederick Gordon Guggisberg, then, the Governor of the Gold Coast, as a General Hospital to attend to the health needs of the people. Korle Bu, in the local Ga parlance, means 'the valley of the Korle Lagoon'. Shortly after its establishment, Korle Bu witnessed an increase in hospital attendance as a result of the proven efficacy of hospital-based treatment. This surge in accessing the Hospital's services used to result in serious congestion compelling the Government to set up a committee to assess and make recommendations for its expansion in 1953.

The Hospital gained teaching hospital status in 1962 when the School of Medicine and Dentistry, formerly the University of Ghana Medical School, was established to train doctors. Currently, the Korle Bu Teaching Hospital, which is the third biggest referral centre in Africa, has 2,000 beds, 21 clinical and diagnostic departments and three Centres of Excellence. It also has an average outpatient attendance of 1,500 with about 250 inpatient admissions. The clinical and diagnostic departments include Internal Medicine and Therapeutics, Child Health, Surgery, Obstetrics and Gynaecology, Anaesthesia, Family Medicine/Polyclinic, Accident & Emergency, Psychiatry, Reconstructive Plastic Surgery and Burns Centre and Accident & Orthopaedics. Others are Pharmacy, Pathology, Laboratory and Radiology.

The Hospital also provides sophisticated scientific treatment procedures in various subspecialties such as Neurosurgery, Pediatric surgery, Dental/Oral maxillofacial, Ophthalmology, Ear, Nose & Throat (ENT), Renal, Orthopaedics, Oncology, Dermatology, Reconstructive Plastic Surgery, Cardiothoracic Surgery and Radiotherapy & Nuclear Medicine. Currently, the Korle Bu Teaching Hospital has 14 Sub-BMCs, namely, Obstetrics and Gynaecology, Medicine, Surgery, Trauma & Orthopaedics, National Reconstructive Plastic Surgery and Burns Centre, Pathology, Child Health, Polyclinic, Laboratory, Anaesthesia, Radiology, Psychiatry, Accident & Emergency and Allied Surgery Sub-BMCs. Providing excellent healthcare services, training, research and advocacy. To be the preferred tertiary and quaternary healthcare organization of excellence. Customer satisfaction. Respect for one another and the rights of our clients.

### Study Design

This study employed a descriptive cross-sectional design in Korle Bu Teaching Hospital. According to Levin Kate (2014), Cross-sectional studies are carried out at one-time point or over a short period. They are usually conducted to estimate the prevalence of the outcome of interest for a given population, commonly for public health planning (Levin, 2014). The advantage of a cross-sectional study is that it provides a clear 'snapshot' of the outcome and the characteristics associated with it, at a specific point in time. Cross-sectional designs focus on studying and drawing inferences from existing differences between people, subjects, or phenomena. Studies cannot be utilized to establish cause-and-effect relationships. The design was also used to collect information on a large scale, cheaply and within a short period. The short comers have not affected the study in any way. This design was used to provide information on the stigmatization of staff survivors of Covid-19 infections.

### Study Population

According to Davis (2021), a study population is a complete set of people with a specialized set of characteristics. The current study target staff who were affected by Covid-19 at Korle-Bu Teaching Hospital. The facility has a total of 7100 health workers of which 1302 were affected with Covid-19. The study will include all health workers affected by Covid-19, aged 18 years and above working at Korle-Bu Teaching Hospital and exclude health workers who were not affected by Covid-19.

### **Sampling and Sample Size Calculation**

According to Umair (2018), Sample Size is a subset of the population of interest such that the inferences and study findings from the sample represent real associations in the population of interest. Sampling is the process of selecting a statistically representative sample of individuals from the population of interest. To obtain the sample size for the current study, Yamane's (1967) formula for sample size calculation was used. This formula was used because the total population is known.

### **Sampling Techniques**

A convenient sampling technique would be used for this study. Convenience sampling (also known as Accidental Sampling) is a nonprobability or nonrandom sampling where members of the target population meet specific practical criteria, such as easy accessibility, geographical proximity, availability at a given time, or the willingness to participate are included for the study (Etikan, 2016). According to Lisa (2008), it is referred to the researching subjects of the population that are easily accessible to the researcher. Convenience samples are sometimes regarded as 'accidental samples' because elements may be selected in the sample simply as they happen to be situated, partially or administratively, near where the researcher is conducting the data collection. Convenience Sampling is affordable and accessible, and the subjects are readily available. The researcher must describe how the sample would differ from the randomly selected one. The main assumption associated with convenience sampling is that the target population members are homogeneous (Etikan, 2016). The interview will be conducted at the respondent's health facilities.

### **Data Collection Tool / Instrument**

Respondents were interviewed with a structured questionnaire in English. The questionnaire was self-administered with the assistance of four trained Research Assistants. The researcher met the respondents in their respective service units early in the morning before the morning staff meeting (between 7-8 am) then introduced themselves and explained what the research is about. The respondents willing to participate in the study signed the consent form. After signing the consent forms, the researcher then give the questionnaires and assisted them in answering the questions raised by respondents and also ensured every participant understand every question. Once they completed the questionnaires, they put them in the box provided and then the original completed questionnaires were kept in a secured and locked room. The questionnaire comprises four sections; sections A, B, C and D. section A will include the socio-demographic characteristics of the participants, Section B: staff knowledge of Covid-19, Section C: management-related factors influencing Covid-19 and Section D: facility-related factors Covid-19 among staff.

### **Data Analysis**

Stata version 16 was the tool used for the data entry. Thus, data (primary) after being cleaned were entered using Microsoft Excel (version 2013). Data was later cleaned and exported to Stata for analysis. Findings were therefore illustrated on tables and graphs with percentages and frequencies. Data analysis was based on descriptive and inferential statistics to be able to determine the relationship between the characteristics of staff survivors and the stigmatization in Korle Bu Teaching Hospital.

### **Instrument validity and reliability**

Validity: According to Golfashni (2011), validity is the extent to which an instrument measures what it purports to measure. The questionnaire was sent to expert including my project supervisor for corrections of ambiguities to ensure that, it measures what it was intended to measure.

Reliability: According to Golfashni (2011), reliability is the extent to which measurements are repeatable when different people measure on different occasions, under different conditions, supposedly with alternative instruments which measure the construct or skill". It can also be defined as the degree to which the measure of a construct is consistent or dependable (Golfashni, 2011). To ensure reliability in the current study, pretesting of the tools was done.

## **3. RESULTS**

Both descriptive and logistic regression analyses were performed to investigate factors influencing stigmatization among staff survivors of Covid-19. The regression analysis involved unadjusted and adjusted. In the unadjusted, all

variables under study were regressed whilst in the adjusted; only variables that were significant in the unadjusted were used.

**Table 1: Socio-demographic Characteristics of Respondents**

Variable	Frequency	Percentage (%)
<b>Age (in years) n=335</b>		
18-24	48	14.33
25-34	144	42.99
35-44	105	31.34
45-54	27	8.06
55 and above	11	3.28
<b>Gender (n=335)</b>		
Male	71	21.19
Female	264	78.81
<b>Educational status (n=335)</b>		
Certificate	40	11.94
Diploma	116	34.63
First degree	132	39.40
Masters	47	14.03
<b>Marital status (n=335)</b>		
Single	98	29.25
Married	184	54.93
Divorced	47	14.03
Separation	3	0.90
Widowed	3	0.90
<b>Years of experience (n=335)</b>		
1-5 years	181	54.03
6-10 years	111	33.13
11 years and above	43	12.84
<b>Religion (n=335)</b>		
Christianity	233	66.87
Islam	90	26.87
Tradition	12	6.27

**Source: Field data (2023)**

Table 1 presents the background characteristics of staff in the study. The result shows that 42.99% of the respondents were between the ages 25-34 years, followed by 35-44 indicating 31.34% and 18-24 representing 14.33% respectively. Majority 78.81% of the respondents were female whilst 21.19% represented males. On the educational background of the respondents, 39.40% had completed their first degree followed by 34.63% indicating diploma and 14.03% with their masters. Almost half and little 54.93% of the respondents were married, 29.25% were single and 14.03% represented those divorce. Concerning years of their experience, 54.03% of the respondents had worked for 1-5 years, 33.13% have been in the service for 6-10 years and at least 12.84% represented 11 years and above. Christians formed 66.87% out of the overall respondents interviewed, followed by 26.87% Islam and 6.27% represent traditional religion.



**Table 2 Individual-related factors**

<b>Variable</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Staff having adequate knowledge of Covid-19 (n=335)</b>		
Yes	275	82.09
No	3	0.90
Not sure	57	17.01
<b>Practising overall hand hygiene compliance behaviour in the hospital (n=335)</b>		
Yes	275	82.09
No	19	5.67
Not sure	41	12.24
<b>Proper frequent wearing of facemasks in the hospital (n=335)</b>		
Yes	293	87.46
No	6	1.79
Not sure	36	10.75
<b>Frequent use of gowns in the hospital (n=335)</b>		
Yes	195	58.51
No	101	29.85
Not sure	39	11.64
<b>Practising physical and social distancing (n=335)</b>		
Yes	209	62.39
No	54	16.12
Not sure	72	21.49

**Source: Field data (2023)**

Table 2, assesses the behaviours of staff who survived covid-19 portrayed. It was reviewed that, 82.09% of the respondents had more knowledge of covid-19 whilst 17.01% did not know covid-19. More than half 82.09% of the respondents practice hand hygiene compliance, and 12.24% were not sure of complying with hand hygiene. Almost 87.46% frequently wear their facemask and 10.75% of the respondents were not sure. On frequent use of gowns in the hospital, majority 58.51% of the respondents indicated yes and 29.85% also responded no. Concerning the practice of physical and social distancing, more than half and little 62.39% of the respondents practising whilst 21.49% were not sure of adhering to social distancing.

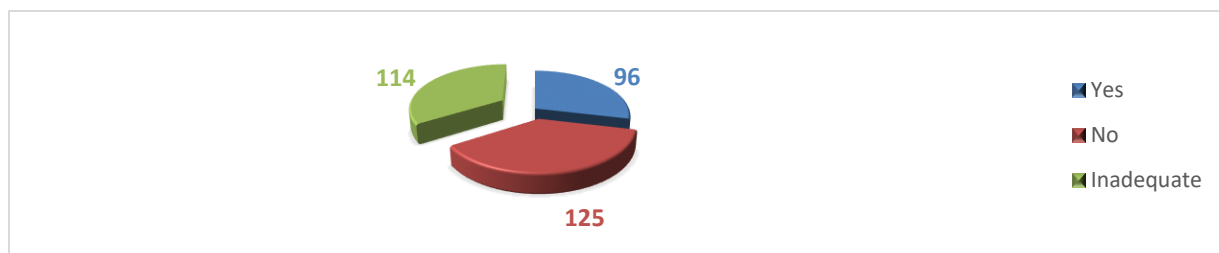
**Table 3 Management-related factors**

<b>Variable</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Standard procedures and guidelines for staff in the hospital on Covid-19 (n=335)</b>		
Yes	211	62.99
No	60	17.91
Not sure	64	19.10
<b>Provision of PPE for staff on Covid-19. (n=335)</b>		
Yes	158	47.16
No	85	25.37
Inadequate	92	27.46
<b>Availability of PPEs for all staff in the hospital (n=335)</b>		
Yes	126	37.61
No	209	62.39
<b>No Provision of insurance coverage for all staff during Covid-19 (n=335)</b>		
Yes	89	26.57
No	173	51.64
Not sure	73	21.79

**Source: Field data (2023)**

Table 3, presents management-related factors towards covid-19. It was indicated that 62.99% of the respondents were provided with SOPs for covid-19, and 19.10% were not sure of any provision of SOPs. Majority 47.16% of the respondents were provided PPEs, whilst 27.46% indicated that the PPEs were inadequate. However, 37.61% stated that PPEs were available for use and 31.34 indicated that the PPEs were limited in supply. Based on the provision of insurance for staff during covid-19, almost 51.64% stated that no life insurance was made to cover them whilst 26.57% responded yes.

**Figure 1: Provision of quality leadership during Covid-19**



**Source: Field data 2023**

This figure shows the provision of quality leadership during covid-19 at the hospital. Out of 335 respondents, majority 125(37.31%) indicated that no leadership guidance was given, 114(34.03%) also said provision of leadership was inadequate whilst 96(28.66%) responded yes.

**Table 4: Facility-related factors**

<b>Variable</b>	<b>Frequency</b>	<b>Percentage (%)</b>
<b>Educating staff of the hospital on Covid-19 (n=335)</b>		
Yes	255	76.12
No	61	18.21
Inadequate	19	5.67
<b>Reduced number of staff at post per shift in the hospital (n=335)</b>		
Yes	236	70.45
No	94	28.06
Inadequate	5	1.49
<b>Reduced number of working hours per shift in the hospital (n=335)</b>		
Yes	202	60.30
No	111	33.13
Inadequate	22	6.57
<b>Regular screening of staffs suspected on Covid-19 in the hospital (n=335)</b>		
Yes	169	50.45
No	115	34.33
Not sure	51	15.22
<b>Frequent disinfection of all contact surfaces in the hospital (n=335)</b>		
Yes	223	66.57
No	70	29.90
Not sure	42	12.54
<b>Isolation and quarantine of infected staff (n=335)</b>		
Yes	265	79.19
No	24	7.16
Not sure	46	13.73
<b>Full vaccination of healthcare providers (n=335)</b>		



Yes	244	72.84
No	30	8.96
Not sure	61	18.21

**Source: Field Data 2023**

Table 4 presents facility-related factors. It was reviewed that, almost 76.12% of the respondents were educated on covid-19, and 18.21% stated no. Concerning the staff at post per shift, 70.45% said staff were reduced to prevent them from getting covid-19, whilst 28.06% also responded no. More than half 60.30% of the respondents indicated that their working hours were reduced, and 33.13% represent no. Almost half 50.45% were screened regularly for covid-19 suspected, and only 34.33% were not screened regularly. On frequent disinfection of all contact surfaces in the hospital, more than half 66.57% responded yes and 29.90% also responded no. With regard to the isolation and quarantine of infected staff, 79.19% stated that isolation and quarantine were done and 13.73% were not sure. Full vaccination of healthcare providers was assessed, and it was found that 72.84% represented full vaccination whilst 8.96% were not vaccinated.

**Table 5 Regression analysis of the association between socio-demographic characteristics and the stigmatization**

stigmatization	Unadjusted			Adjusted		
	Odd Ratio (RO)	P-Value	95% CL	Odds Ratio (AOR)	P-Value	95% CL
<b>Age (ref= 18-24)</b>						
25-34	0.0512	0.061	0.0104-0.2510	0.6836	0.693	0.1034-4.5192
35-44	0.0555*	0.001	0.0111-0.2510	0.0915*	0.030	0.0106-0.7883
<b>Education (ref= certificate)</b>						
Diploma	0.3733*	0.024	0.1583-0.8803			
Degree	0.2768*	0.004	0.1154-0.6635	0.0646*	0.001	0.0136-0.3060
Masters	1.4482	0.418	0.5910-3.5487	0.1095*	0.001	0.0284-0.4211
				6.4855*	0.042	1.0714-3.2578
<b>Marital status (ref= single)</b>						
Married	1.9934	0.080	.9198-4.3199	1.2619		0.2118-7.5184
Cohabitant	2.3198	0.39	1.0419-5.1648	0.2353	0.079	0.0165-3.3492
					0.268	
<b>Experience (ref= 1-5 years)</b>						
6-10 years	13.333*	0.005				
11 years and above	2.9493*	0.059	1.3063-4.5910	6.7484*	0.012	1.5303-2.7578
			1.3161-6.6087	9.9184*	0.403	2.1361-4.0522
<b>Religion(ref=Christianity)</b>						
Islam	1.1675	0.649	0.6097-2.2358		+	+
Traditional	4.0521	0.003	1.5875-10.3317			

**Source: Field data (2023)**

NB: (\* = significant difference) (P. value =0.05) (... = not applicable) (+ = not used in adjusted)

Age was highly significant in this study (P<0.05). The ODDS of staff ages 35-44 years on stigmatization was 0.0915 times less than staff ages 18-24 (AOR=0.0915, 95% CI=0.0106-0.7883). The study also found a significant relationship

between education and stigmatization ( $P < 0.05$ ). Staff who have diploma had an odds of 0.0646 times less than primary and masters ( $AOR = 0.0646$ , 95%  $CI = 0.0136-0.3060$ ). The current study found a significant relationship between working experience and stigmatization. The ODDs of staff with 6-10 years of stigmatization was 6.7484 times more than 1-5 years and 11 years and above ( $AOR = 0.0646$ , 95%  $CI = 0.0136-0.3060$ ). However, the study found no significant relationship between marital status and religion.

**Table 6. Regression Analysis of Factors influencing stigmatization among health workers**

Stigmatization	Unadjusted				Adjusted		
	Odd Ratio (RO)	Ratio	P-Value	95% CL	Odds Ratio (AOR)	P-Value	95% CL
Staff education (ref=yes) No Inadequate	5.9128 0.3326		0.001 0.231	3.1643-11.0489 0.2010-.5501	2.1474* 1.3029	0.047 0.645	1.0095-4.5676 0.4231-4.0120
Staff reduction (ref=yes) No Inappropriate	3.2187* 0.3484		0.001 0.073	1.8047-5.7407 0.1749-.6941	2.2327* 0.3763	0.017 0.069	1.1537-4.3209 0.1807-0.7838
Reduced working hours (ref= yes) No Inappropriate	0.6047 0.2784		0.115 0.232	0.3233-1.1312 0.1993-0.3889	1.2065 4.6008	0.550 0.071	0.6515-2.2313 2.5329-8.1251
Frequent disinfection (ref= yes) No Not sure	1.0747 2.0777		0.844 0.059	0.5248-2.2005 0.9731-4.4364	2.8628* 4.6008	0.002 0.080	1.3073-6.2692 1.7726-1.9414
Isolation (ref= yes) No Not sure	0.3349* 3.4132		0.009 0.231	0.1473-0.7615 1.7331-6.7219	4.0415* 2.7419	0.015 0.055	1.3111-2.4579 0.9796-7.6750

Source: Field data (2023)

NB: (\* = significant difference) ( $P$ . value =0.05) (... = not applicable) (+ = not used in adjusted)

The study found no significant relationship between reductions in working hours and stigmatization. However, the study found a significant relationship between staff education, staff reduction at the post, frequent disinfection and isolation during this study ( $P < 0.05$ ). The ODDS of staff not being given education were 2.1474 times more than staff that were given education on Covi-19 ( $AOR = 2.1474$ , 95%  $CI = 1.0095-4.5676$ ). Moreover, staff who always report working were

3.2187 times more than staff who come to work (AOR=0.3917, 95% CI=1.1537-4.3209). Staff who were isolated for being infected were 0.3349 less than staff who were not isolated (AOR=0.3349, 95% CI=1.3111-2.4579).

#### 4. DISCUSSION

##### **Knowledge of ART and PMTCT among the study respondents**

This study attempts to explore COVID-19-related behavioural factors among its survivors. The preliminary findings suggested that 82.09% of the survivors had adequate knowledge of covid-19. This is consistent with Yeboah et al., (2021) study conducted in Ghana. Their study found that 69.9% of the people had an adequate level of knowledge of COVID-19. The reason for this adequate knowledge can be attributed to covid-19 intensive education throughout the country. The Ministry of Health and the Ghana Health Service have used television, radio and social media to educate the citizenry about the virus, and this has informed our assumption and argument of increased access to COVID-19 information among the public. Findings in Gurbuz et al., (2021), study revealed that healthcare workers failed to adhere to hand hygiene practices. This is inconsistent with the current study. It was found that 82.09% always complied with hand hygiene behaviour. The study is consistent with studies done in the United States and the United Kingdom by Bhatt et al., (2020). Hand hygiene practices help the staff from contracting covid-19.

The study found that 87.46% and 58.51% of the health workers complied with facemasks and gowns respectively. This disagrees with the findings from (Masterton et al., 2021), lack of knowledge was found to be associated with lower compliance with goggles and gown use among HCWs. Hand hygiene as well as glove and mask use are easy and common to conduct, but many HCWs may not know when and how to use goggles and gowns correctly. Therefore, training regarding goggles and gown use should always be strengthened, which was also suggested by a previous study that reported that training could improve facial protective equipment use (Nichol et al., 2013). The current study found the usage of gowns among respondents to be high. Thus, majority stated that gowns were used to protect the staff from contracting Covid-19. In addition, almost all of the study participants were practising physical and social distancing.

The study finding was consistent with a quantitative study, which was a design study by Elhadi et al., (2021) reported that knowledge and attitude among health workers were good, thus 80% considered using facemasks, and 63.2% also practising social distancing as a protective measure against COVID-19. Similar to the study findings, another study investigated the practice of COVID-19 preventive measures as critical in the control of the COVID-19 pandemic. The authors found various interventions have been implemented globally such as partial lockdowns, contact tracing, self-isolation or quarantine, and promotion of public health measures including hand hygiene, respiratory protocols, and social distancing to curb the spread of the virus (Tii et al., 2021). A study by Sakr et al., (2021) to assess the identified health worker's barriers to Covid-19 adherence, found that the government imposition of different measures such as partial lockdowns such as closed borders creating testing and treatment centres as well as announcing rules to prevent the spread of COVID-19 related to social distancing and the use of personal protective equipment (PPE) made people aware of Covid-19. In addition, Successful control of COVID-19 infection will require a change of individual behaviour, and this is influenced by people's understanding of the characteristics of the disease and its preventive measures. (Tii et al., 2021).

##### **Management-related factors**

Effective management was promoted by greater involvement of all staff in sharing learning and knowledge of the outbreak, developing trust and teamwork and fostering collective leadership (Al Knawy et al., 2019). In assessing the management of Covid-19, it was established that standard procedures and guidelines were given to the staff. The study revealed that more than half of the participants indicated that health professionals followed protocols. Most of the participants stated that health professionals had PPEs for protection against Covid-19. A good number of the participants, further, stated that, though the staff was supplied with PPEs it was inadequate in supply. Almost half of the participants debated that, no insurance package for staff during the Covid era. The findings from the current study are in contravention of the existing literature concerning covid-19 insurance packages for health workers since the literature reported most health workers were covered (Gakii, Menza & Maoga, 2019). Although, previous studies have

revealed that healthcare workers generally PPEs were available (Ishimaru et al., 2021). However, the current study found evidence inconsistent with other studies.

However, consistent with the current study finding, there was COVID-19 planning guidance based on traditional infection prevention and industrial hygiene practices. It focuses on the need for employers to implement engineering, administrative, and work practice controls and personal protective equipment (PPE). This guidance is intended for planning purposes. Employers and workers should use this planning guidance to help identify risk levels in workplace settings and to determine any appropriate control measures to implement. Additional guidance may be needed as COVID-19 outbreak conditions change, including as new information about the virus, its transmission, and its impacts, becomes available (Document et al., 2020). A study found a pleasant encouragement of healthcare leaders to follow the preventive medicine evidence; ensure their staff are properly prepared for their role practically and psychologically, provide basic equipment and training, and empower teams to support each other with a particular focus on helping supervisors feel confident to speak to team members about their mental health. Leaders must provide staff with frank information about what lies ahead while simultaneously positively emphasizing how important their roles are and the organisation's honest commitment to support them (Greenberg & Tracy, 2020). According to Stoker, Garretsen, & Soudis, (2019), the effectiveness of leaders during and after the COVID-19 crisis should examine an array of activities, including the degree to which remote leaders are persuasive if they (a) clearly state their values that will guide institutional actions; (b) understand and openly discuss the travails and hopes of their organizations; (c) clearly communicate an ambitious vision of the direction that the unit will head toward; and, (d) demonstrate confidence that strategic goals can be achieved.

#### **Facility-related factors**

Healthcare workers play a critical role in fighting the COVID-19 pandemic and are at greater risk of COVID-19 virus infection in the line of duty (Eyram et al., 2021). The current study found that almost all the participants were given education on Covid-19. About 70% of the Health workers were reduced for each post per shift. Half of the health workers indicated that they screened regularly. The study is inconsistent with a study conducted by Bergeron et al., (2020) revealed that Healthcare workers commonly reported elevated workloads, which impacted their psychosocial well-being. They cited increased hours and weekend shifts, additional time taken to manage PPE and increased paperwork as frequent sources of stress. In Cape Coast, Ghana, research posited that the use of personal protective equipment (PPE) such as a glove, gown or apron, and surgical mask protect health workers from getting Covid-19 (Id et al., 2021). The study found limited evidence on the type of personal protective equipment (PPE) that offers the best protection, the appropriate use of PPE can significantly reduce the infection risk associated with caring for patients with COVID-19 (Min & Moon, 2021). Another author found that healthcare systems are under pressure to limit the spread of the novel coronavirus, and a big part of this responsibility has been shouldered by healthcare workers (HCWs) (Birhanu et al., 2021). A study established that infections are likely due to occupational hazards; workers becoming infected while caring for patients suggests the shortage or inappropriate use of PPE may be at the root of part of these infections (Savoia et al., 2020).

The study found that 79% of the respondents were isolated and quarantined for Covid infections. It was also established that full vaccination was done for the staff. The study is consistent with a study conducted by Min & Moon, (2021). However, the study is inconsistent with a study reported that the isolation of suspected staff helped in the spreading of the virus (Razu et al., 2021). The regression analysis also indicated that socio-demographics was a good predictor of stigma, and age, followed by staff education and working experience. Thus, health worker's demographics; age, education and experience significantly determined stigmatization among health workers at Korle-Bu Teaching Hospital. Similar to the study, several studies have found a relationship between social demographics and health workers and stigma. For instance, a study by Khanal et al., (2020) showed stigma faced by health workers was significantly associated with higher odds of experiencing age of 34-45 years. Inconsistent with the current study finding, the stigma of health workers, revealing details of age, profession, education, working overtime and awareness about government incentives was not statistically significant. This led to a devastating reaction from staff, making staff survivors lose trust in testing for Covid-19. In addition, there was a significant association between health workers and stigmatization.

## 5. CONCLUSION

Survivors of Covid-19 are a global challenge among health workers and are mostly stigmatized due to their poor knowledge of Covid-19. Based on these, the following conclusion was drawn from the main finding. They are: Knowledge of Covid-19 are likely to reduce stigmatization and promotes good relationship among workers. The provision of logistics could also help health workers from getting any infections at the workplace. The study found a significant association between staff education, staff reduction at the post, frequent disinfection and isolation. This meant that the stigma of health workers had an effect in the sense that stigmatization of health workers had a poor outcome on their services.

## 6. RECOMMENDATION

1. Ghana Health Services in collaboration with Teaching Hospital need to strengthen stigmatization education, especially for a survivor of Covid-19 at Korli Bu Teaching Hospital and its environs to improve upon staff knowledge on the occurrence of any Pandemic. Education should focus on how to curb stigma among health workers.
2. MOH and management of the Hospital need to advise healthcare workers to put up a good attitude as required per the mission and visit statement of the institution. Management should strengthen supervision and institute reporting channels to deal with health workers who put up bad attitudes to deter health workers due to stigma.
3. The Ghana government should put in stringent measures to ensure that the health workers are complied with so that other health care workers with stigma can be dealt with so that it serves as a deterrent to others.

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### Data Availability

Data used for this research is available upon request from the corresponding author.

### Notes

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