

Experiences of COVID-19 Preventive Practices among Hotels and Public Guesthouse Supervisors, Cleaners and Waitress in Jimma Zone Southwest Ethiopia

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Abstract

Background: In hotels, Guesthouse, there is a frequent interaction between staffs and clients during the stay of visitors, travelers or other clients. This interactions between supervisors, cleaners, waiters and visitors/travelers in hotels and public guest houses call for specific attention and precautionary measures because the visitors or travelers are highly prone for COVID-19 during their movement. This research also aims to identify the gaps on the experience, preventive measures and practices of public guesthouse Supervisors, Cleaners and waitress to Control COVID-19 in Jimma zone Southwest Ethiopia.

Objective: The general objective of this study is to assess experience of prevention practices on COVID- 19 among hotels and public guesthouse Supervisors, Cleaners and waitress in Jimma zone Southwest Ethiopia.

Method: A Cross sectional study design was conducted among supervisors, Cleaners and waitress of hotels and guest houses in Jimma zone Southwest Ethiopia. EpiData version 4.4 and SPSS version 25 was used for data entry and analysis, respectively. Descriptive statistics and ordinal multiple logistic regressions were employed to describe associated factors and control potential confounders. The ordered Hosmer - Lemeshow test was accounted to check the overall model fit.

Result: A total of 399 participants were included in this study with the response rate of 94.4%. The median (IQR) age of the respondents was 28 (25 - 32) years, with a minimum and maximum age of 17 and 68 years, respectively. The Role of participants in the hotel and guest houses were associated with the experience of prevention practices of COVID-19; supervisor (AOR = 0.051, 95% CI: 0.012 - 0.22), waiters (AOR = 0.421, 95% CI: 1.056 - 1.138), managers (AOR = 0.206, 95% CI: 0.046 - 0.915). Status of testing for COVID-19 (yes) (AOR = 0.447, 95% CI: 0.245 - 0.816). Availability of necessary materials (AOR = 4.542, 95% CI: 1.76 - 11.723).

Conclusion: The experience of preventive practices among supervisors' waiters and cleaners in this study was relatively good but the levels of desirable preventive practices is still low. The variable, the Role of participants in the hotel and guest houses, Status of testing for COVID-19, Availability of necessary materials vaccination status, age category, and monthly income category were a significant predictor factors of experience of preventive practices among supervisors' waiters and cleaners.

Keywords: COVID-19; Clients; Prevention Measure; Jimma Zone; Hotels and Public Guesthouses

Background and Rationale

Coronavirus disease 2019 (COVID-19) is an infectious disease caused by the novel severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) [2]. It was first discovered in the Hubei province of China in December 2019. COVID-19 virus is transmitted from person-to-person through respiratory droplets, direct contact with an infected individual, or indirect contact with a surface or object that is contaminated with respiratory secretions [17]. The distribution of COVID-19 pandemic is still in an increasing rate. According to WHO December 29/2021 report globally there have been 281,808,207 confirmed cases of COVID-19 including 5,411 759 deaths reported. And a total of 8,687,202 doses have been administered. In the continents of Africa there have been 7,164,485 confirmed cases as of 27, December 2021. Ethiopian is one of the affected countries for which the first confirmed COVID-19 on March 13-2020 and the number of newly confirmed cases in 2021 also increasing gradually, but in an increasing rate. The 28 December 2021 reports of COVID-19 Data Repository by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University shows as 410,000 confirmed COVID-19 case and 6,916 deaths are found in Ethiopia. The vaccination statuses of COVID-19 in Ethiopia also too poor as WHO's report as of 27 December 2021, only 10,894,936 vaccine doses have been administered.

Hotels and public guesthouses are places where there is a high degree of daily interaction among guest's and staffs. From the public services hotels and public guest houses are the front one that a number of customers or clients are daily visited from different area. This daily movement of customers may increase the distribution of covid-19 while they design and implement high prevention measure. Hence the lodging of guests entails services like food and beverage, cleaning, activity organization. The interactions specific to these establishments (guest-guest, guest-staff, and staff-staff) that require specific attention [11]. Hence the guests or clients might be coming from a different area including from other country this movement has a great roll to increase the distribution of COVID-19 pandemic. Despite the fact that if there is national and international guidelines of identifying the symptomatic individuals and methods of COVID-19 prevention measure the accommodation sector must be protect the health of their staffs as well as their client from Coronavirus disease (COVID-19) by preparing their own protection measure [13]. In order to minimize the risk of contaminating guest house and Hotels have responding effectively to infection diseases, exploring their hygiene and health care practices during COVID-19 [8].

Amidst to current pandemic, WHO has issued several guidelines and also started online courses and training sessions to raise awareness and preparedness regarding prevention and control [12]. In addition to WHO, National institute of Health (NIH), Ethiopian, also published several recommendations aimed to reduce occupational spread of infection. Although educational campaigns have increased their awareness regarding COVID-19 yet it remains unclear to what extent this knowledge can be put into practice and to what extent this practice actually reduces COVID-19 infection spread. The experience and prevention practice survey on hotels and public guest houses provides a suitable format to evaluate existing programs and to identify effective strategies for behavior change in society [5].

To ensure the health and safety of clients and their staffs Hotels and guest houses must give ongoing briefing and enhanced operating protocols for their staffs and clients. Studying this briefing and protocol are essential for the safety and health of clients as well as prevention of covid-19. On the other hand, at this time the prevention practices of COVID-19 in Ethiopia are too poor while the distribution of the pandemic is rapid. Especially on the public sectors like hotels and public guest houses we had observed a number of individual sets collectively without any prevention measure.

There is a limited study towards experience and prevention measure of COVID-19 among hotels and public guest houses in the country as a whole and there was no study done in the study setting till now even in the country level on the assessment, experience, preventive measures and practices of public guesthouse Supervisors, Cleaners and waitress in setting. Therefore, this study is considered pertinent because it takes in to consideration the prevention practices of hotels found in Jimma zone and its application to the area of the surrounding makes it a pioneer study in the region. The study also very useful for policy maker's researchers as well as the government looking to improve the competencies of supervisors, cleaners and waiters through exemplary strategic prevention practices.

Materials and Methods

Study settings

A Cross-sectional study was conducted on supervisors, Cleaners and waitress working on hotels and public guest houses in Jimma zone Southwest Ethiopia from February 1st 2022, April 30th 2022.

Population

The source population of this study was all Supervisors, Cleaners and waitress who have working on hotels and public guesthouse in Jimma zone. Supervisors, Cleaners and waitress on duties in the selected hotels and guest houses during the data collection period were randomly selected for interview.

Sample size determination and sampling procedures

The sample size (n) required for the study were calculated using a single population proportion formula [6], by considering the following assumptions. $Z_{\alpha/2}$ = critical value for normal distribution at 95% confidence level which equals 1.96 (Z value at $\alpha = 0.05$), d = margin of error 0.05, and $P = 50\%$ because estimation proportion experience, preventive measures and practices of public guesthouse Supervisors, Cleaners and waitress towards COVID-19. Based on the formula of the sample size, the representative sample size was 384. And a 10% none respondent rate was added to 384. The final sample size will be 423. In Jimma Zone, standard Hotels and mini-hotels provide pension services/guest house for voyagers and passengers. For the present study, the number of standard Hotels and mini-hotels which are providing pension services had obtained from Jimma zone city administration office. Ten representative hotels (eight standard and 2 Guesthouses) were selected using purposeful sampling methods, based on the flow of customers to get pension services and our sample size were allocated proportionally for Hotels and Public guest house.

Data collection tools and techniques

Structured questioner was used for quantitative data, the questionnaire was adapted from tools developed by WHO training material for the transmission, detection, prevention, response, and control of COVID-19 and by modifying the tools from similar studies [4,9]. The questionnaire were include socio- demographic characteristics, experiences, Prevention measures and practice of the participants towards Covid-19. The questioner were first developed from different studies in English and then translated into Afan Oromo and Amharic languages and back-translated into English by independent translators for consistency in meaning. The guide was prepared concerning the research question starting from general and moving to specific, taking into consideration the local knowledge and cultural sensitivities.

Measurement

The experience of prevention practices commonly recommended for COVID-19 prevention methods was measured using fifteen five Likert-item questions about the health and food safety practice of restaurant managers were used. The five Likert-item questions were with the responses of never, rarely, sometimes, often, and always, each weighting 1 - 5 scores, respectively, which are classified as weak (which are classified as weak (the cumulative score < 34) acceptable (the cumulative score between 35 - 64) and desirable levels of prevention practice (the cumulative score > 64) [12].

Data collection procedure

The data were collected in face-to-face interviews by experienced data collectors. The data collectors and supervisors were trained on the data collection tool, the objective of the study, how to ensure confidentiality of information, and how to prevent transmission of COVID-19 during the interview. To reduce the risk of COVID-19 transmission during data collection, the data collectors used necessary personal protective equipment (PPE) such as facemasks and glove were worn by all data collectors and participants; and alcohol and sanitizers were used.

Data quality assurances

Conceptual and operational definitions of terms was used according to the objective of the study. The questioner was prepared in English and translated to dominant local languages Amharic and Affan Oromo and back to English by language expertise. Training was given to data collectors. A pretest was conducted on 5% of the samples and made some amendment of the questioner was done after the pilot test. Facilitators and supervisors were assigned to control and guide the data collection and sample collection process, and by so doing it were increase the chances of consistency in data collection. The data were cleaned and checked for completeness and consistency before data entry and double data entry was done.

Data management and analysis

The collected data were entered into Epi-data 3.1 and was exported to Statistical Package for Social (SPSS version 25) for farther analysis. Descriptive statistics was conducted to identify the frequency and percentage, and Ordinal logistic regression was conducted to determine the association between dependent and independent variables. All variables with P-value < 0.25 in the bivariate logistic regression analysis were directly entered in to the Ordinal multivariable logistic regression analysis, the cofounding effects was controlled by ordinal multiple logistic regressions. The crude and adjusted odds ratios with a 95% confidence interval had reported to measure the strength of the association. The parallelity assumption of the final ordinal logistic regression model was checked by the parallel cell's method and the chi-square-value were not significant; indicates that the assumption is fulfilled.

Result

Socio-demographic and economic mic characteristics of study participants

In this study a total of 399 study participants were participated, yielding a response rate of 94.3%. The median (IQR) age of the respondents was 28 (25 - 32) years, with a minimum and maximum age of 17 and 68 years, respectively. More than half (53.1%) of the participants were within age category of 26 - 35 years old and three-fifths (60.4%) of participants were females. Out of total respondents, half (50.1%) of them were married. Regarding the marital status, more than half (53.4%) and 110 (27.6%) of the respondents were Orthodox and Muslim religion followers, respectively. From the total participants, 171 (42.9%) of them had completed primary education and the majority (90.5%) of them live in Jimma town. The income of the respondents was measure in Ethiopian birr and 182 (45.6%) of them earned monthly income of 1000 and less (Table 1).

Of the total respondents, two-thirds (66.4%) of them live with one up to four people in their house and majority (86%) of them work in private hotel. Concerning the role of the participants in their work place, nearly half (48.4%) of them were waitress. Out of total respondents, nearly two-thirds (65.9%) of them worked for two up to five years and almost four-fifths (79.9%) of the respondents spent eight hours per day in their work (Table 1).

Health related conditions of the study participants

Out of the 399 respondents, 16 (4%) of them had no-communicable chronic disease, of which nine (32.1%) had hypertension and seven (25%) of them had heart diseases. From the total respondents, only 11 (2.8%) of them had health insurance. Almost all of the respondents had heard about COVID-19 disease, except only one respondent who responded as s/he hadn't heard about COVID-19 disease. The source of information were television and social media, which were reported by nearly two-third (65.3%) and 81 (20.4%) of the respondents, respectively. Nearly half (51.9%) of the respondents were tested for COVID- 19 and 38 (18.4%) of them had positive test result (Table 2).

More than four-fifths (83.5%) of the participants were responded that they will go to the health facilities for treatment if they to get COVID-19, followed by 58 (14.5%) responded as they will treat themselves at home. Of the total respondents, almost all (95.5%) believe that COVID-19 preventive measures will protect them from acquiring the disease and more than half (52.1%) of them responded that they feel insecure when someone stands around them. Almost all (95.2%) of the respondents were listening and following the government

Variables	Category	Frequency (%)	Variables	Category	Frequency (%)
Age (in years) Mean (IQR) = 28 (25 - 32)	17 - 25	123 (30.8%)	Residence	Jimma town	361 (90.5%)
	26 - 35	212 (53.1%)		Agaro town	36 (9.0%)
	≥ 36	64 (16.0%)		Others	2 (0.5%)
Sex	Male	158 (39.6%)	Monthly income (ETB)	≤ 1000	182 (45.6%)
	Female	241 (60.4%)		1001 - 2500	174 (43.6%)
Marital status	Single	189 (47.4%)		≥ 2501	43 (10.8%)
	Married	200 (50.1%)	How many people live in your house?	Live alone	74 (18.5%)
	Divorced	10 (2.5%)		1 - 4	265 (66.4%)
Religion	Orthodox	213 (53.4%)		≥ 5	60 (15.0%)
	Protestant	73 (18.3%)	Where do you work?	Government hotel	21 (6.8%)
	Muslim	110 (27.6%)		Private hotel	343 (86.0%)
	Others	3 (0.8%)		Guest house	29 (7.2%)
Educational status	No formal education	11 (2.8%)		What is your role in the Hotel/Guest house?	Supervisor
	Read and write	30 (7.5%)	Waitress		193 (48.4%)
	Primary education	171 (42.9%)	Cleaner		102 (25.6%)
	Secondary education	130 (32.6%)	Owner		14 (3.5%)
	College and above	57 (14.3%)	Manager		28 (7.0%)
Residence	Jimma town	361 (90.5%)	When you work most of the time?	Others	41 (10.3%)
	Agaro town	36 (9.0%)		Day	217 (54.4%)
	Others	2 (0.5%)		Night	21 (5.2%)
Monthly income (ETB)	≤ 1000	182 (45.6%)		Years of service	Both
	1001 - 2500	174 (43.6%)	≤ 1 years		62 (15.5%)
	≥ 2501	43 (10.8%)	2 - 5 years		263 (65.9%)
How many people live in your house?	Live alone	74 (18.5%)	Duration of the work hours per day	≥ 6 years	74 (18.5%)
	1 - 4	265 (66.4%)		≤ 8 hours	319 (79.9%)
	≥ 5	60 (15.0%)		> 8 hours	80 (20.1%)

Table 1: The descriptive statistics result of socio-demographic variables of among supervisors, cleaners and waitress in jimma zone soweth west Ethiopia, February 1st 2022, April 30th.

regulations about COVID-19 prevention and control (Table 2).

Variables	Category	Frequency (%)
Chronic non-communicable diseases	Yes	28 (7.0%)
	No	371 (93.0%)
Do you have health insurance?	Yes	11 (2.8%)
	No	388 (97.2%)
Chronic non-communicable disease	Diabetes mellitus	6 (21.4%)
	Hypertension	9 (32.1%)
	Heart disease	7 (25.0%)
	Chronic lung disease	3 (10.7%)
	Others	3 (10.7%)
Have you Heard about Covid-19?	Yes	398 (99.7%)
	No	1 (0.3%)
Source of information	Social media	81 (20.4%)
	Health professionals	22 (5.5%)
	Television	260 (65.3%)
	Radio	19 (4.8%)
	Others	16 (4.0%)
Have you been tested for COVID-19?	Yes	207 (51.9%)
	No	192 (48.1%)
COVID-19 test result	Positive	38 (18.4%)
	Negative	169 (81.6%)
Where do you go for treatment if you get Covid-19?	Health facilities	333 (83.5%)
	Traditional healer	3 (0.3%)
	Self-treatment	58 (14.5%)
	Others	5 (1.3%)
Do you believe the preventive measures are protective?	Yes	381 (95.5%)
	No	18 (4.5%)
Do you feel insecure if someone stands around you?	Yes	208 (52.1%)
	No	191 (47.9%)
Do you listen and follow government regulations	Yes	380 (95.2%)
	No	19 (4.8%)

Table 2: Descriptive results of health-related variables among supervisors, cleaners and waitress in Jimma zone southwest Ethiopia.

The descriptive statistics of the preventive practice of COVID-19

From the total 399 participants the maximum score of the prevention practice was 75 and the minimum score were 15. The average scores from the ten prevention practice item questions were 42.64 and the standard deviation of 10.7 (Table 4).

Variables (Experience Items)	Response	
	Yes, N (%)	No, N (%)
Are there any screening services for COVID-19 on the main gates of your hotel?	118 (29.8)	281 (70.2)
Are there hand washing facilities like soap, water and other detergents?	352 (88.2)	47 (11.8)
Are the tables, chairs, doors and other materials in the bed room sanitized daily?	273 (68.4)	126 (31.6)
Are the tables, chairs, doors and other materials in the hotel sanitized after the usage of every other customer?	271 (67.9)	128 (32.1)
Are the setting arrangements of chairs and tables with the recommendation of COVID-19 protocol?	194 (48.6)	205 (51.4)
Are your customers keeping their distance when they are getting services?	95 (23.8)	304 (76.2)
Are your customers wearing masks when they are getting services?	78 (19.5)	321 (80.5)
Are the circulation of airs or windows and doors are open when necessary?	325 (81.5)	74 (18.5)
Are there any facilities for physical activities in the hotel?	34 (8.5)	365 (91.5)
Are the service providers at your hotel properly applying COVID-19 protocol when they provide services to the customers?	214 (31.1)	275 (68.9)

Table 3: Frequency and percentage distribution of COVID-19 infection prevention practices among supervisors, cleaners and waitress in Jimma zone soweth west Ethiopia.

	N	Range	Minimum	Maximum	Mean	Std. Deviation
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
Prevention practices score	399	60	15	75	42.64	10.703

Table 4: The descriptive statistics of the preventive Practice of COVID-19 from the thirteen item scores among supervisors, cleaners and waitress in Jimma zone soweth west Ethiopia.

The prevalence of the levels of experience of prevention practice on COVID-19

The overall Prevalence of the weak levels of experience on prevention practices of COVID-19 were 3.01% and the maximum levels of prevalence was the acceptable labels of experience of prevention practices that is 76.69% followed by the desirable levels of experience on the prevention practices of COVID-19 that is 20.30% (Figure 1).

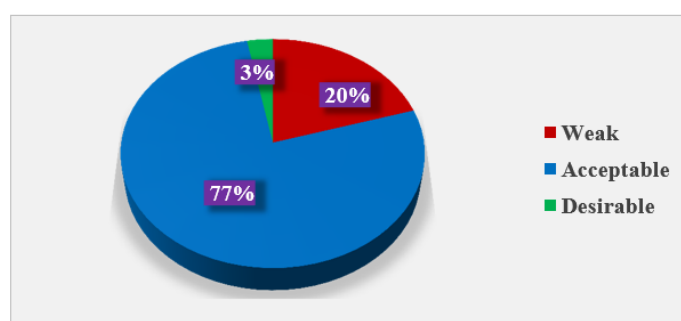


Figure 1: Levels of experience of prevention practice on COVID-19 among supervisors, waitress and cleaners working on hotels and public gust houses in Jimma zone south west Ethiopia.

The distribution of levels of experience prevention practice on COVID-19 across sex of participants

Female participants were had the maximum levels of experience on the prevention practices of COVID-19. Howe ever the minimum number of participants who had minimum desirable levels of experience on the prevention practices of COVID-19 were females (Figure 2).

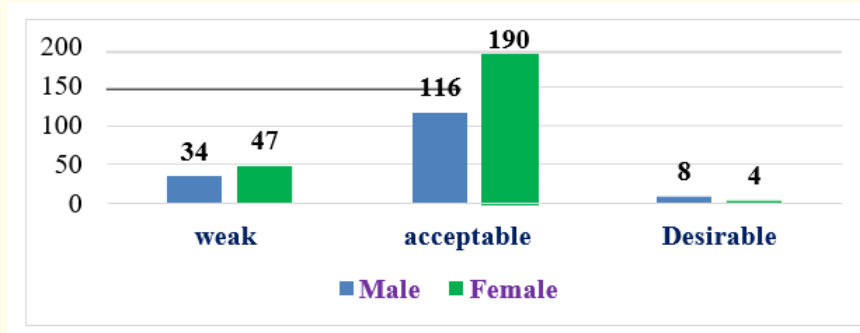


Figure 2: The distribution of levels of experience prevention practice on COVID-19 across sex of participants.

Distribution of the experience of preventive practices across the role of participants in the hotels and public gust houses

The maximum number of participants who were had acceptable levels of experience on the prevention practices of COVID-19 were waiters followed by cleaners. On the other hand, the maximum number of participants who had weak levels of practices also waitress followed by supervisors. Owners and cleaners were had the maximum levels of desirable levels of experience on the prevention practices of COVID-19 (Figure 3).

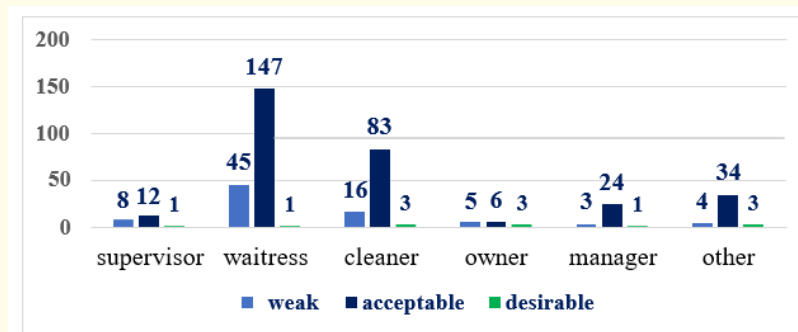


Figure 3: The distribution of levels of prevention practice across roles of participants.

Bivariable and multivariable ordinal logistic regression output table on the dependent variable

The primary objectives of this study were to identify the factors associated with dependent variable levels of experiences of COVID-19 preventive practices among hotels and public guesthouse supervisors, cleaners and waitress in Jimma zone Southwest Ethiopia. To address this objective and asses the association between dependent and independent variable both bivariable ordinal logistic regression for

the selection of candidate variables at 25% significant level and multi variable ordinal logistic regression for final analysis was used. From the bivariable logistic regression analysis, the variable: The working role, medical condition, tested for COVID-19, believe the preventive method is productive, follow government regulation, providing the necessary materials, government check, posted poster, infected customer, vaccination statues, age category, monthly income category and family size were the candidate variables at 25% level of significant and directly entered in to the multivariable ordinal logistic regression analysis. From the multivariable ordered logistic regression analysis, the role of participants that is (supervisors, waiters and managers, statues of testing COVID-19, availability of necessary materials, vaccinated statues, age category and monthly income category were significantly associated with the levels of experiences of COVID-19 preventive practices (Table 5).

Weak Frequency (%)	Level of COVID-19 prevention practice				COR	AOR	Sig	95%CI (AOR)	
	Acceptable	Desirable						Lower	Upper
	Frequency (%)	Frequency (%)							
The Role of participants in the hotel and/or gust houses.	Supervisor	8 (9.9%)	12 (3.9%)	1 (8.3%)	0.156	0.051	0.000	0.012	0.22
	Waitress	45 (55.6%)	147 (48.0%)	1 (8.3%)	0.246	0.421	0.009	1.056	1.138
	Cleaner	16 (19.8%)	83 (27.1%)	3 (25.0%)	0.472	0.563	0.322	0.181	1.753
	Owner	5 (6.2%)	6 (2.0%)	3 (25.0%)	8.952	0.462	0.399	0.077	2.778
	Manager	3 (3.7%)	24 (7.8%)	1 (8.3%)	0.698	0.206	0.038	0.046	0.915
	Other	4 (4.9%)	34 (11.1%)	3 (25.0%)	Ref	Ref	Ref	Ref	Ref
Medical condition of participants.	Yes	14 (17.3%)	14 (4.6%)	5 (41.7%)	3.025	0.517	0.224	0.179	1.495
	No	67 (82.7%)	292 (95.4%)	7 (57.3%)	Ref	Ref	Ref	Ref	Ref
Have you been tested for COVID- 19?	Yes	55 (67.9%)	144 (47.1%)	8 (66.7%)	0.523	0.447	0.009	0.245	0.816
	No	26 (32.1%)	162 (52.9%)	4 (33.3%)	Ref	Ref	Ref	Ref	Ref
Preventive methods are productive?	Yes	70 (86.4%)	300 (98.0%)	11 (91.7%)	6.319	2.361	.24	.564	9.888
	No	11 (13.6%)	6 (2.0%)	1 (8.3%)	Ref	Ref	Ref	Ref	Ref
Government regulations?	Yes	74 (91.4%)	295 (96.4%)	11 (91.7%)	2.138	1.446	.544	.44	4.752
	No	7 (8.6%)	11 (3.6%)	1 (8.3%)	Ref	Ref	Ref	Ref	Ref
The hotel provides necessary materials	Yes	25 (30.9%)	259 (84.6%)	7 (58.3%)	13.159	4.542	.002	1.76	11.723
	No	56 (69.1%)	47 (15.4%)	5 (41.7%)	Ref	Ref	Ref	Ref	Ref
The Govt officials check your hotels.	Yes	43 (53.1%)	260 (85.0%)	9 (75.0%)	5.379	1.482	.356	.643	3.418
	No	38 (46.9%)	46 (15.0%)	3 (25.0%)	Ref	Ref	Ref	Ref	Ref
posted posters	Yes	26 (32.1%)	228 (74.5%)	7 (58.3%)	6.834	1.234	.634	.519	2.938
	No	55 (67.9%)	78 (25.5%)	5 (41.7%)	Ref	Ref	Ref	Ref	Ref
Infected customer	Yes	27 (33.3%)	118 (38.6%)	11 (91.7%)	1.804	1.398	.351	.691	2.831
	No	54 (66.7%)	188 (61.4%)	1 (8.3%)	Ref	Ref	Ref	Ref	Ref
Vaccinated	Yes	58 (71.6%)	243 (79.4%)	8 (66.7%)	1.772	4.542	.002	1.76	11.723
	No	23 (28.4%)	63 (20.6%)	4 (33.3)	Ref	Ref	Ref	Ref	Ref
Age category	17-25	42 (51.9%)	79 (25.8%)	2 (16.7%)	Ref	Ref	Ref	Ref	Ref
	26-35	31 (38.3%)	175 (57.2%)	6 (50.0%)	2.862	1.7	.117	.876	3.302
	> = 36	8 (9.9%)	52 (17.0%)	4 (33.3%)	4.063	2.649	.008	1.881	7.97

Monthly income category	< = 1000	55 (67.9%)	127 (41.5%)	3 (25.0%)	Ref	Ref	Ref	Ref	Ref
	1001 - 2500	21 (25.9%)	148 (48.4%)	5 (41.7%)	3.117	2.427	.007	1.276	4.62
	> = 2501	5 (6.2%)	31 (10.1%)	4 (33.3%)	9.274	6.823	.004	1.835	25.369
Family size category	Live alone	28 (34.6%)	70 (22.9%)	4 (33.3%)	Ref	Ref	Ref	Ref	Ref
	1 - 4 people	41 (50.6%)	192 (62.7%)	4 (33.3%)	1.544	1.1	.791	.544	2.225
	> = 5 people	12 (14.8%)	44 (14.4%)	4 (33.3%)	1.686	1.444	.484	.517	4.037
The dependent variable level of prevention practice									
Weak						.816	-	-1.22	2.853
Acceptable						6.905	-	4.765	9.045
Desirable						Ref	Ref	Ref	Ref

Table 5: Association between covariates and levels of experiences of COVID-19 preventive practices among hotels and public guesthouse supervisors, cleaners and waitress working on hotels and public guest house in Jimma zone southwest Ethiopia.

Ref = Reference Category.

Discussion

This study was aimed to assess the level of experience of the preventive measure among supervisors’ waiters and cleaners working in the selected public and governmental hotels and guest houses in Jimma zone south west Ethiopia. To the best of our knowledge this study is the first mixed - meted study by using ordinal logistic regression model towards the experience of prevention practices on COVID-19 among hotels and restaurants. In this study the majorities of participants. In this study, the majority of participants were had a primary level of education the result was similarly concluded by the study done in the eastern and south west parts of Ethiopia [3,14]. The findings of this study also showed that the main source of information for the study participants was from television and the majority of the respondents know common symptoms of COVID-19 disease and its prevention method. This result was supported by the study done in the south west Ethiopia [14].

The interest variable the levels of experience of prevention practice in this study were categorize in to three categories that are weak prevention practice, acceptable prevention practice and desirable prevention practice. most of the findings done in different continents of the world were used only two categories of the prevention practice. Accordingly, the desirable levels of prevention practice in this study are takes as comparable category with the good levels of prevention practice from the other findings.

The prevalence of the levels of acceptable level of prevention practice in this study were higher (76.69%), this findings was supported by the study done in Iranian restaurant workers [10], followed by the desirable level of prevention practice (20.30%). The finding was consistent with the other studies conducted in south west Ethiopia (21.2%) [14]. However, this finding is lower than a study conducted in northern Ethiopia, a study on College Students in Amhara Region and a study in Pakistan (48.8%, 65%, 88.7%) respectively [7,15,16]. The possible reasons of this difference might be the way of categorizing the levels of prevention practice from those all findings were only in two categories however, there were three categories in this study or it could be due to the difference in study time and the difference levels of knowledge and attitude towards the study participants.

From the final ordered logistic regression model outputs of this study, the role of study participants in the guest house and/or hotels were a statistically significant predictor factor on the level of experience on prevention practices. Accordingly, when individuals become a supervisor from other category of roles, we expected 0.051 times increase in the ordered odds of being in desirable labels of experience on prevention practices, given that all of the other variables in the model are held constant.

When the study participant becomes a waiter from other category of roles, we expected that 0.421 times increase in the ordered odds of being in desirable labels of experience on prevention practices, given that all of the other variables in the model are held constant. This finding was supported by the study conducted in Iranian restaurant workers [1,10]. Likewise, when the study participant becomes an owner of the business from other category of roles, we expected 0.206 times increase in the ordered odds of being in desirable labels of experience on prevention practices as compared to weak and acceptable levels of experience, given that all of the other variables in the model are held constant.

The other significant associated factor in this study were the statuses of testing for COVID-19, when individuals tested for COVID-19 the ordered odds of being in desirable labels of experience on prevention practices are 0.447 times greater with the combined weak and acceptable labels of experience of prevention practice, given that all of the other variables in the model are held constant.

The status of supplying the necessary materials by the hotels and/or guest house also the one that is significantly associated with the experience on prevention practices on COVID-19. When the hotel and /or the guest house effectively provides the necessary preventive materials, the ordered odd of desirable levels of experience of preventive practices is expected that 4.542 times increase from the counter parts.

This study also showed that the participants age category was significantly associated with the levels of preventive practices. When the participates age category lays greater than or equal to 36, the ordered odds of being desirable levels of experience of preventive practice are expected to be 2.649 times increase.

Moreover the findings of this study revealed that monthly income category of study subjects was significantly associated with the levels of experiences of preventive practices. Accordingly, if the average monthly income of participants is above 2500 ETB, the ordered odds of desirable levels of experience of prevention practices is expected to be 6.823 times mor likely from the counter parts. Likewise, when the average monthly income of participants is in between 1000 - 2500 ETB, we are expected that the ordered odds of desirable levels of experience of prevention practices is 2.427 times greater as compared to weak and acceptable levels of experience of preventive practice.

The vaccination statues of participant also the significant predictor variable for experience on prevention practices, when the study participants going to vaccinated, we expected that 4.542 times increase in the ordered odds of being in desirable labels of experience on prevention practices, given that all of the other variables in the model are held constant.

Therefore, the results of this study can be useful for the hotel and/or the gust house industry to create new ways and planning for future intervention to help early control the spread of the pandemic and for breaking the cycle of COVID-19 in the communities.

Conclusion and Recommendation

The low experience of preventive measure and/or preventive practice on COVID-19 among supervisors' waiters and cleaners had a great public health implication; if they are infected with COVID-19, there will be a high risk of spreading the disease to the community because they frequently come in contact with many people due to the nature of their work. Accordingly, this study was aimed to assess the levels of experience of preventive practices on COVID-19 among supervisors' waiters and cleaners. The acceptable levels of experience of preventive practices among supervisors' waiters and cleaners in this study was good it is more than 75% but the levels of desirable preventive practices are still low. The variable, the role of participants in the hotel and gust houses, status of testing for COVID-19, availability of necessary materials vaccination status, age category, and monthly income category were a significant predictor factors of experience of preventive practices among supervisors' waiters and cleaners. Thus all governmental and non-governmental concerned bodies working on the area of prevention and control of COVID-19 should give attention to the population to enhance compliances with the specified prevention measure through addressing these significant predictors. Despite the fact that the wide spread of infection among supervisors' waiters and cleaners with COVID-19 has an important public health implication, law enforcement bodies shall employ a required mechanism to monitor the implementation of all recommended prevention measures.

Data Availability

The datasets used and World Health Organization (WHO, 2020) analyzed during the current study are available from the corresponding author on any reasonable request.

Ethical Statement

Prior to conducting the study, ethical clearance was obtained from Jimma University IRB/committee. Authorized cooperation letter was written from Jimma University IRB/committee to Jimma Zone city Administration Offices. A request for permission letter having detailed explanation of the research itself, the reasons for the research and kind of research that would be conducted in the study area was approved by authorities at City administration. Informed consent was obtained from individual participants. All the interviews with subjects were handled confidentially after getting informed consent of the participants and assuring the confidential nature of the responses. The right of the participants to refuse answering for a few or all of the questions were respected.

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Conflict of Interest

The authors declare that there are no any competing interests.

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