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Original Article

Covid-19 Prevention Practices And Associated Factors Among Workers in Yirgalem Agro-Industry Park, Sidama Regional State, Ethiopia: A Cross-Sectional Study

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ABSTRACT

Introduction: The COVID-19 outbreak resulted in millions of cases and deaths with an incredible pace of spread. It has been a global public health crisis since December 2019. Though the work behaviors of some organizations can facilitate more ways for the mode of transmission, the potential work areas for the risk of infection are not identified yet. Designing intervention strategies based on the risky assessment findings of a specific population or organization is better. The problem is more significant in developing countries. This study aimed to assess the prevention practices and associated factors of COVID-19 among workers in Yirgalem Agro-Industrial Park, Sidama Regional State; Ethiopia, 2020

Methods: Cross-sectional study was conducted from June 15th to August 15th, 2020. Yirgalem Agro-Industrial Park had 233 workers during the study period and data were collected from all of them. Collected data were entered into Epi Data 3.1 and exported to SPSS 22 for analysis. Factors associated with the practice of prevention were then analyzed.

Results: Among the respondents, 91.8%, 75.1%, and 48.9% had good knowledge, positive attitudes, and good practice toward COVID-19 prevention strategies respectively. Multivariate regression revealed that age, spiritual or sin, training, knowledge, attitude, opposition to wearing, ordinary residents, and hoping leaders can win against COVID-19 were predicted practices of COVID-19 prevention strategies

Conclusion: The practice of COVID-19 prevention strategies was so poor and needed adequate attention. Age, spiritual/sin as a cause, prior training, knowledge, attitude, opposing mask-wearing, and belief in whether to defeat COVID-19 or not were identified as the predictors. It is so important to revamp the current practices and assure the implementation of the standard as expected.

Keywords: Attitude, COVID-19, Ethiopia, Knowledge, Practice, Yirgalem agro-industry

Introduction

Coronaviruses are viruses of a large family that is known for resulting in illness ranging from the common cold to more severe disease like Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS).[1,2] The most aggressive human coronavirus is the one that causes fatal lung disease, Severe Acute Respiratory Syndrome (SARS), and it is called SARS-CoV. World Health Organization called the current coronavirus "2019 nCoV" i.e. 2019 novel coronavirus or COVID-19. Globally, it resulted in more than three million attacks and closer to a million deaths within a short period with incredible spread. Its recent outbreak occurred in Wuhan,

China for the first time.[3]

According to the 2020 World Health Organization data, it is a global pandemic disease resulting in enormous public health impact and tremendous economic and social crisis which is generating stress throughout the population. Everybody in the population is susceptible to this disease. However, some factors increase susceptibility. Since there is no identified treatment yet, delaying transmission or reducing the risk of the outbreak is paramount important in decreasing its diversified impacts on different sectors. Various modes of prevention like wearing masks, hand hygiene practices, social (physical) distancing, case detection, contact tracing, and quarantines have been recommended to reduce its risk of transmission.[4]

During the first week of the COVID-19 pandemic attack, the prevention methods were misperceived in the USA. There was also, unawareness, not engaging in social distancing, and negligence in practicing protective behaviors.[5] This may be due to unawareness as finding from China evidenced peoples' knowledge, attitude, and practice towards COVID-19 positively affects adherence to control measures. In this region, most Chinese of high economic status especially women were knowledgeable about COVID-19, hold an optimistic attitude and have appropriate practices for its prevention.[6] Since its emerging time, the world has been striving to find a solution to tackling the infection. Nevertheless, all trials and efforts brought no solution for this pandemic infection to date. Though developed countries are found to be the unique victim of the problem, developing countries including Ethiopia are significantly vulnerable to the disease. The spread of the infection is escalating vigorously and COVID-19-related deaths have been reported in 52 African countries.[7]

The potential work areas for the spread of the infection are not clearly stated. On top of this, many things including the mode of transmission, the reservoir, and sources of infection remain unclear about Covid-19. Due to the gap in data, risk assessment of the infection is still vague.[8] Thus, this study aims to assess the risky behaviors of COVID-19 infection that will serve as input for the reduction of the infection in the organization, particularly in manufacturing companies.

The COVID-19 infection does have various modes of transmission. The work behaviors of some organizations can facilitate more ways for this mode of transmission. Thus, any prevention and intervention strategies shall base on these correspondent risky behaviors to bear effective results.

In Yirgalem Agro-Industry Park, different categories of people in terms of educational status, socio-economic differences, and cultural practices were involved in the job. The foreigners who might have traveled to their home country where there is a high epidemiologic distribution of the disease were also part of the workers in this industrial park. Besides, it is believed that behaviors (practices) like overcrowding in a certain place, transportation of many passengers in a single bus, daily traveling of workers with a possible risk of contact, and greeting practices like hugging each other and hand-shaking are common among the workers. Again, nothing is known concerning the knowledge, attitude, and practice towards the infection prevention of COVID-19 in the area.

This study aimed to assess the prevention practices and associated factors of COVID-19 among workers in Yirgalem Agro-Industrial Park, Sidama Regional State; Ethiopia. The finding of this study will also be inferred for a similar organization like other factories and an interventional project will be designed with Hawassa University and Yirgalem Hospital Medical College to tackle the spread of the infection. Other government and non-government organizations that are concerned with the subject matter can use the result of this study to design their intervention strategies. Moreover, as there is a significant gap concerning this disease, the study finding will serve as baseline information for the country as well as other parts of the world and other researchers interested in the related issues can use it as scientific literature.

Methods

An Institutional based Cross-sectional study was conducted in Yirgalem Agro-Industrial Park, southern Ethiopia to assess risky behavior for COVID-19 at the workplace. The Yirgalem Industrial Park is found in Abosto kebele, Dale

Woreda, Sidama Regional State; about 320 Kilometers far from the capital of Ethiopia. It had many sheds from which few of them engaged in active work. The functioning sheds were involved in producing juices and other manufacturing. The study period was from June 15th to August 15th, 2020. All workers of Yirgalem Agro-Industrial Park were taken as the source population and all active workers during the study period were the study population.

The data extraction tool was developed after reviewing various literature and WHO protocols that were developed for the assessment of potential risk factors for the 2019 novel coronavirus. The tool incorporated the Knowledge, attitude and practice questions. The consistency of the tool was checked by translating the tool to the local language and then back to English as well as through conducting a pretest on 5% of the sample size. The training was given on the objective of the project, how to approach participants, handle the information and keep confidentiality. Data collectors used personal protective equipment and kept recommended COVID-19 protocols during interviews. In this study, workplace behavior was measured as "risky" if industry park workers did not adhere to all covid-19 prevention protocols. Completeness and clarity of the collected data were assured daily by the supervisor.

The outcome variable was Covid-19 prevention Practice. Potential risk factors were selected based on different literature. Accordingly; suspected risk factors include Age, sex, mask utilization, place of residence, Religion, educational status, marital status, Droplet, smoking, isolation, crowd ness, Distancing, prickling nose/eyes, touching the mouth, workers health status, etc. The overall assessment was based on the primary data collected from the eligible participants involved in the study. The census method was used for data collection.

Yirgalem Agro-industrial Park had 233 workers during the study period which was an addressable population size

The collected data were cleaned, coded and entered into Epi data version 3.1. Then, it was exported to SPSS version 22 software packages for analysis. Any errors identified during analysis were corrected using the assigned code numbers. Presence of missing values and outliers were checked through descriptive analysis. The knowledge, attitude and practice score of the respondents were analyzed based on their respective questions. Then their score was analyzed as Good or adequate knowledge, poor or inadequate knowledge, Favorable/unfavorable attitude, and good or poor practices based on their average mean score. Factors associated with the practice of COVID-19 prevention were primarily analyzed using binary logistic regression and then variables with p-value <0.25 were analyzed in multivariable logistic regression analysis with a 95% confidence interval and finally p-value <0.05 was considered statistically significant. The odds ratios together with their corresponding 95% confidence intervals were interpreted accordingly

To ensure the quality of the data to be collected; a pretest was done on 5% (12 Industrial workers) before the actual study and followed by required modification. Supervision was done by the principal investigator during the whole process of data collection. Daily evaluation of the data for completeness was undertaken accordingly. Then, all the collected data were checked for completeness and consistency during the data management, storage and analysis.

Ethical clearance was received from the Institutional Review Board of Hawassa University, College of Medicine and Health Science. A consent format was distributed and informed consent was obtained from each respondent before data collection. The confidentiality of the study participants was not disclosed. All collected data were first coded and then locked in a separate room before undertaking data entry. No personal identifier was included in the data collection formats

Results

A total of 233 study populations participated; giving a response rate of 100%. The majorities 143 (61.4%) of the study participants were males and more than half (56.2%) of them were unmarried. The minimum and maximum ages of the study participants were 18 and 80 with a mean and standard deviation of 28.25 ± 7.4 years. More than

three fourth (81.5%) of the study participants live in Yirgalem town and the majority (55.8%) were followers of the protestant Religion. Other religions indicated in the table include apostles, Wakefata and Pagan. Around one-third (38.2%) of the study, participants had the educational status of attending college and above while few (4.7%) of them had no formal education. Primary, secondary and College and above level education in Ethiopia represents grades 1-8, Grades 9-10 and profession-specific education respectively (Table 1).

Table 1: Socio-demographic Characteristics of the respondents by Sex, age, marital status, Religion and Residents, Yirgalem, Sidama Region, Ethiopia 2020 (n = 233)

Characteristics		Frequency (%)
Sex	Male	143(61.4)
	Female	90(38.6)
Age	15-24	63(27)
	25-34	116(49.8)
	35-44	34(14.6)
	≥45	20(8.6)
Marital status	Unmarried	131(56.2)
	Married	102(43.8)
Religion	Protestant	130(55.8)
	Orthodox	51(21.9)
	Muslim	17(7.3)
	Catholic	14(6)
	Others	21(9)
Residence	Yirgalem	191(82)
	Hawassa	23(9.9)
	Other	19(8.2)
Education	No formal education	11(4.7)
	Primary education	61(26.2)
	Secondary education	72(30.9)
	College & above	89(38.2)

According to the finding of the knowledge assessment; almost all (91.8%) participants had good knowledge and about three fourth (72.5%) of the study participants did not know as children need to take measures to prevent COVID-19. The mean knowledge score of the participants was 20.23±1.46. More than 6% of the study participants did not consider crowdedness as one way of COVID-19 transmission (Table 2).

Table 2: Knowledge of the participants towards COVID-19 Prevention, Yirgalem, Sidama Region, Ethiopia, 2020 (n=233)

Characteristics		Frequency (%)
Spread via droplet	Yes	206(88.4)
	No	27(11.6)
Smokers are at risk	Yes	210(90.1)
	No	23(9.9)
Isolation is effective way	Yes	211(90.6)
	No	22(9.4)
Ordinary resident should wear mask	Yes	220(94.4)
	No	13(5.6)
Children not need to take measure	Yes	64(27.5)
	No	169 (72.5)
Individuals needs to void crowded place	Yes	218 (93.6)
	No	15(6.4)
Contacted person need to be isolated	Yes	222(95.3)
	No	11(4.7)
Washing hand is advised	Yes	222 (95.3)
	No	11(4.7)
Distancing	Yes	227(97.4)
	No	6(2.6)
Avoid prickling eyes, nose and touching the mouth	Yes	218(93.6)
	No	15(6.4)
All develop severe disease	Yes	161(69.1)
	No	72(30.9)

According to the findings of the attitude assessment; the majority (75.1%) of the study participants had a positive attitude on COVID-19 prevention strategies and about 24.5% of the study participants did not think that COVID-19 will be controlled. The mean attitude score of the study participants was 20.89±5.45. More than half (54.1%) of the respondents said that the cause of COVID-19 is sin while about half (42.9%) of the study respondents said that traditional medicine can cure this disease. More than one-third (52.8%) of the study participants said that the WHO can win the challenges of attitude (Table 3).

About half (48.9%) of the respondents were not practicing COVID-19 prevention strategies. For instance, 24.3% of the study participants were not wearing personal protective equipment while 39.9% of them occasionally wear their protective equipment. Only 29.6% and 31.3% of the study participants always use alcohol/water and soap after touching a man and a product respectively as per the recommendations. One-third (33%) of the study respondents always practice recommended hand hygiene and 25.5% of the study respondents use alcohol/water and soap before touching a man as per the recommendation (Table 4).

Table 3: Attitude of the participants towards COVID-19 Prevention, Yirgalem, Sidama Region, Ethiopia, 2020 (n=233)

Characteristics		Frequency (%)
Do you think COVID-19 will be controlled	Disagree	57(24.5)
	Neutral	29(12.4)
	Agree	147(63.1)
WHO@ can win	Disagree	82(35.2)
	Neutral	28(12)
	Agree	123(52.8)
The cause of COVID-19 is Sin	Disagree	77(33)
	Neutral	30(12.9)
	Agree	126(54.1)
You oppose wearing a mask	Disagree	58(24.9)
	Neutral	26(11.2)
	Agree	149(63.9)
Affected by COVID-19 information	Disagree	88(37.8)
	Neutral	27(11.6)
	Agree	118(50.6)
Traditional medicine cures COVID-19	Disagree	90(38.6)
	Neutral	43(18.5)
	Agree	100(42.9)

Table 4: Practice of the participants towards COVID-19 Prevention, Yirgalem, Sidama Region, Ethiopia, 2020 (n=233)

Characteristics	Rarely	Occasionally	Most of the time	Always as recommended
Practice recommended hand-hygiene	10 (4.3%)	25(10.7%)	121(51.9%)	77(33%)
Use alcohol/water & soap before touching a man	19 (8.2%)	65(27.9%)	90(38.6%)	59(25.3%)
Use alcohol/water & soap after touching a man	17(7.3%)	61(26.2%)	86(36.9%)	69(29.6%)
Use alcohol/water & soap after touching the product	24(10.3%)	61(26.2%)	75(32.2%)	73(31.3%)
Wear PPE	57(24.5%)	93(39.9%)	33(14.2%)	50(21.5%)

According to the findings of bivariate analysis sex, Age, Marital status, educational status, spiritual cause or sin, training, Good knowledge, positive attitude, Mask wearing, and Traditional Medicine as a cure were significantly associated with COVID-19 prevention practices. But, after running a multivariate analysis, Age, spiritual cause or sin, training, knowledge, attitude, mask-wearing, ordinary residents mask wearing and winning chance of COVID battle were remain significantly associated with the COVID-19 prevention practices at 95% confidence interval and p-value <0.05.

The odds of practicing COVID-19 prevention strategies among workers of age 45 years or more was about 7 times (AOR=6.86; 95% CI: 1.51-31.21) compared to workers aged 15 years to 24 years. There were 75% fewer odds of practicing COVID-19 prevention strategies among workers who agree that the cause of COVID-19 is spiritual or sin (AOR=0.25; 95% CI: 0.11-0.56) compare to Workers who disagree that the cause is spiritual or sin.

The odds of Practicing COVID-19 prevention strategies were 55% less among trained workers (AOR=0.45; 95% CI: 0.22-0.92) compared to the workers who hadn't taken COVID-19-related training. There were 97% fewer odds of practicing COVID-19 prevention strategies among workers who had poor knowledge (AOR=0.03, 95% CI: 0.01-0.27) compared to workers who had good knowledge. Similarly, there were 88% fewer odds of practicing COVID-19 prevention strategies among workers who had negative attitudes (AOR=0.12; 95% CI: 0.05-0.34) compared to industrial park workers who had a positive attitude toward COVID-19.

The odds of practicing COVID-19 prevention strategies among Industrial park workers who were neutral to opposing mask-wearing were reduced by 78% compared to workers who disagree to oppose mask-wearing (AOR=0.22; 95% CI: 0.06-0.85). There were 90% fewer odds of practicing COVID-19 prevention strategies among workers who said ordinary residents should wear masks compared to their counterparts (AOR=0.10; 95% CI: 0.01-0.79). The odds of practicing COVID-19 prevention strategies among workers who said leaders can win the COVID-19 battle was three times (AOR=3.03, 95% CI: 1.30-7.07) more compared to their counterparts (Table 5).

Table 5: Multivariate Logistic Regression analysis results for practicing COVID 19 prevention strategies, Yirgalem, Sidama Region, 2020 (n = 233)

Variables	Categories	Practice		Crude OR (95% CI)	Adjusted OR (95% CI)
		Good N (%)	Poor N (%)		
sex	Female	36(40)	54(60)	0.56(0.33-0.95)*	0.53(0.26-1.08)
	Male	78(54.5)	65(45.5)	1	1
Age	15-24	21(33.3)	42(66.7)	1	1
	25-34	60(51.7)	56(48.3)	2.14(1.13-4.06)*	2.07(0.86-4.98)
	35-44	20(58.8)	14(41.2)	2.86(1.21-6.76)*	2.19(0.69-6.91)
	≥45	13(65)	7(35)	3.71(1.29-10.69)*	6.86(1.51-31.21)*
Residence	Yirgalem	97(50.8)	92(49.2)	1	1
	Hawassa	11(47.8)	12(52.2)	0.89(0.37-2.11)	1.43 (0.45-4.53)
	Other	6(31.6)	13(68.4)	0.45(0.16-1.23)	0.51(0.44-1.79)
Marital status	Unmarried	55(42)	76(58)	0.53(0.32-0.89)*	0.62(0.30-1.28)
	Married	59(57.8)	43(42.2)	1	1
Educational status	No formal	5(45.5)	6(54.5)	0.59(0.17-2.09)	2.15(0.30-15.28)

	Below college	57(42.9)	76(57.1)	0.53(0.31-0.92)*	1.36(0.66-2.81)
	College/above	52(58.4)	37(41.6)	1	1
Caused by Spiritual or sin	Disagree	52(67.5)	25(32.5)	1	1
	Neutral	18(60)	12(40)	0.72(0.30-1.73)	0.85(0.27-2.67)
	Agree	44(34.9)	81(65.1)	0.26(0.14-0.47)***	0.25(0.11-0.56)**
Get Trained	Yes	66(55.9)	52(44.1)	1	1
	No	48(41.7)	67(58.3)	0.56(0.34-0.95)*	0.45(0.22-0.92)*
Knowledge	Poor	2(10.5)	17(89.5)	0.12(0.02-0.48)**	0.03(0.01-0.27)***
	Good	112(52.3)	102(47.7)	1	1
Attitude	Negative	17(29.3)	41(70.7)	0.33(0.18-0.63)**	0.12(0.05-0.34)***
	Positive	97(55.4)	78(44.6)	1	1
oppose mask wearing	Disagree	37(63.8)	21(36.2)	1	1
	Neutral	10(38.5)	16(61.5)	0.36(0.14-0.92)*	0.22(0.06-0.85)*
	Agree	67(45)	82(55)	0.46(0.25-0.87)*	0.42(0.17-1.01)
Residents should wear mask	Yes	105(47.7)	115(52.3)	0.41(0.12-1.36)	0.10(0.01-0.79)*
	No	9(69.2)	4(30.8)	1	1
Leaders can win COVID battle	Disagree	45(54.9)	37(45.1)	1.50(0.86-2.64)	3.03(1.30-7.07)*
	Neutral	14(50)	14(50)	1.24(0.54-2.81)	0.99(0.32-3.05)
	Agree	55(44.7)	68(55.3)	1	1
Isolation & Treatment Reduce spread	Yes	100(47.4)	111(52.6)	1	1
	No	14(63.6)	8(39.4)	1.94(1.78-4.82)	1.79(0.47-6.78)
Traditional medicine can cure COVID	Disagree	53(58.9)	37(41.1)	1	1
	Neutral	27(62.8)	16(37.2)	1.18(0.56-2.49)	2.49(0.86-7.20)
	Agree	34(34)	66(66)	0.36(0.20-0.65)*	0.58(0.27-1.25)

Discussion

An Institutional based cross-sectional study was conducted to examine the status of preventive practices and associated factors at Yirgalem Agro-Industrial Park. According to the findings of this study, 91.8% of the study participants had good knowledge, 75.1% had a positive attitude, and about half (48.9%) of them had good preventive practices for the prevention of COVID-19. Having good knowledge (91.8%) was higher than the studies conducted in Jimma University Medical Center (41.3%), Amhara region (70%), Gondar 82.8%, Uganda (82.4%), China (89%), and Pakistan (90.7%) (41.3%).[6,9-13] The reason behind the variations might be the time difference at which those studies were conducted. The studies in Jimma, Gondar, and Amhara were conducted in the early stage of the pandemic, thus, the awareness of the disease had not this much disseminated in the early stage. The study in Pakistan was almost similar and its study time could also justify it. The finding was lower than the study conducted in Pakistan 93.2% and Nigeria 99.5%.[14,15] The possible reasons for this variation might be due to changes in the study period, settings, population, and data collection mechanism. The major stated COVID-19 prevention strategies by the study participants were distancing, isolation of suspected individuals, wearing a mask, hand washing, and avoiding touching the nose/mouth before washing hands which was consistent with the recommended strategies for COVID-19 prevention.[4,5] This could be taken as the existence of better awareness of COVID-19 prevention strategies among the Industry park workers. Majorities (88.4%) of the participants stated as COVID-19 spreads through respiratory droplets which was almost in line with findings

from Jimma University medical center (95.1%).[9] The report that indicated all individuals infected by novel coronavirus can develop the severe disease (69.1%) was supportive of the findings from Bangladesh where young children can even develop the complication to the extent of getting died of it.[16]

The proportion of people believing that the COVID-19 pandemic will be controlled at the end (63.1%) was slightly higher compared with the proportion of people believing the same in the Bangladesh Study (41.7%).[16] Changes in the study period, settings, and variations in study participants might be the justification for the differences. More than three fourth (75.1%) of the study participants had a positive attitude towards COVID 19 which was almost in line with the study conducted in Pakistan (82.16%), (90%), but it was lower than the study finding in Ethiopia (94.7%).[10,14,17] The justification for this variation might be due to the study population and setting. A study from Nigeria reported as a significant number of the participants (25.06%) had shown poor attitudes toward COVID-19.[18] However, the majority of the respondents in this study had a positive attitude toward the COVID-19 pandemic and this is higher than those having a moderate attitude in Iran.[19] Unlike the current study, Study in Nigeria was conducted in the early stage of the Pandemic when lack of awareness may be the reason for having a poor attitude. In addition, the reason for the variation from a study in Iran may be the category of attitude classification which was in the Likert scale while this study only dichotomized the Attitude, thus, the percentage distribution may be less when the class of the category is increased Attitude, thus, the percentage distribution may be less when the class of the category is increased.

There were differences in proportion between practices of COVID-19 prevention strategies in this study (48.9%) and findings from Northern Ethiopia, and Addis Ababa where 62%, 67%, and 49% of the respondents had good practice of prevention strategies respectively.[11,20,21] The reason for the difference can be the variation in profession that the study in Amhara was conducted on health professionals who have direct professional linkage with that issue and this may support them to have relatively better practices. On the other hand, respondents in Addis Ababa were an urban population that might have good access to information and technology. Late nationwide training on COVID-19 prevention strategies following its spread could be considered as the reason for almost closer proportion with the findings of Addis Ababa.

Practicing COVID-19 prevention strategies was significantly associated with age, belief in the spiritual cause, prior training, knowledge, attitude, Opposing mask-wearing, and belief in defeating COVID-19. The odds of practicing COVID-19 prevention strategies among workers of age 45 years or more was about 7 times compared to workers aged 15 years to 24 years (AOR=6.86; 95% CI: 1.51-31.21). This finding was consistent with the study conducted in Northwestern Ethiopia and Uganda.[12, 13] This might be since chronic medical illness increases with age and the existence of those chronic illnesses increase the severity of COVID-19. Adherence to COVID-19 prevention strategies might be due to the fear related to this fact.

There were 75% fewer odds of practicing COVID-19 prevention strategies among workers who agree that the cause of COVID-19 is spiritual or sin (AOR=0.25; 95% CI: 0.11-0.56) compare to Industrial workers who disagree that the cause is spiritual or sin. COVID-19 is zoonotic and tends to be transmitted between animals to humans and humans to humans through droplets, close contact, or other means, and as stated those study participants who didn't know this reality was not practicing COVID-19 prevention strategies.[17]

The odds of Practicing COVID-19 prevention strategies were 55% less among untrained Industrial park workers (AOR=0.45; 95% CI: 0.22-0.92) compared to the workers who took COVID-19-related training. This finding was consistent with the finding of a study conducted in Zambia.[22] It is also logical to believe that having prior COVID-19 training increases workers' awareness and is basic for practicing COVID-19 prevention strategies. There were 97% fewer odds of practicing COVID-19 prevention strategies among workers who had poor knowledge (AOR=0.03, 95% CI: 0.01-0.27) compared

to workers who had good knowledge. This study finding was in line with the study conducted in northern Ethiopia.[13] This might be since getting awareness or knowledge on COVID-19 prevention strategies precedes the practice of COVID-19 prevention strategies.

The attitude of a human being is the result of his or her judgment towards something.[23] The majority of people who judged something as positively could practice the event better and the reverse is true for the majority of people who judged something negatively.[24] Our study supported such facts and reported that the odds of practicing COVID-19 prevention strategies among workers who had negative attitudes were 88% less compared to industrial park workers who had a positive attitude toward COVID-19. This finding was consistent with various studies conducted in Ethiopia, Egypt, China, and Saudi Arabia and all studies revealed that favorable attitudes towards COVID-19 preventive measures were significantly associated with good adherence to COVID-19 mitigation measures.[20,25-27]

The odds of practicing COVID-19 prevention strategies among Industrial park workers who were neutral to opposing mask-wearing were reduced by 78% compared to workers who disagree to oppose mask-wearing (AOR=0.22; 95% CI: 0.06-0.85). This might be due to the reason that mask-wearing is among the first line of COVID-19 prevention strategies and being neutral for mask-wearing means that those industrial workers had less likely to implement or practice other COVID-19 prevention strategies. There were 90% fewer odds of practicing COVID-19 prevention strategies among workers who said ordinary residents should wear masks compared to their counterparts (AOR=0.10; 95% CI: 0.01-0.79). This indicates the awareness gap among the respondents because ordinary people are expected to have less risk of exposure compared to those people around risk-prone areas. The odds of practicing COVID-19 prevention strategies among workers who said leaders can win the COVID-19 battle was three times (AOR=3.03, 95% CI: 1.30-7.07) more compare to their counterparts. This indicates that the hope in world leaders and technology motivated those people to adequately practice COVID-19 Prevention Strategies.

Limitations of the Study

This study has its limitation. Generalization of the study findings to other Agro-industrial workers in the country is impossible since this study was conducted only in one institution (i.e. Yirgalem Agro-Industrial Park). Some degree of selection bias may not be ruled out since the participation was voluntary and the chance of participating is high among those who had a better understanding or attitude towards the practice of COVID-19 prevention strategies. This could lead to an overestimation of the practice.

As this is an institutional-based cross-sectional study, the limitations that come up with this type of study design need to be taken into consideration in interpreting the results/findings.

Conclusions

According to the findings of this study, 91.8% of the study participants had good knowledge, 75.1% had a positive attitude and about half of them (48.9%) had good preventive practices for the prevention of COVID-19. Practicing COVID-19 prevention strategies was significantly associated with age, belief in spiritual/sin as a cause, prior training, knowledge, attitude, Opposing mask wearing and belief in whether to defeat COVID-19 or not. The top management of the Yirgalem Agro Industry is better to conduct awareness creation/intensive training activities on COVID-19 prevention strategies and then enforce policies for effective implementation.

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