Scholarly Research Journal for Humanity Science & English Language,
Online ISSN 2348-3083, SJ IMPACT FACTOR 2019: 6.251, www.srjis.com
PEER REVIEWED & REFEREED JOURNAL, AUG-SEPT, 2020, VOL- 8/41

KNOWLEDGE AND ATTITUDE TOWARDS COVID-19 PANDEMIC AMONG BUSINESS PERSONS OF BIRTAMODE, JHAPA, NEPAL

Bhakti Prasad Subedi

Lecturer, Population Studies, Mechi Multiple Campus, Bhadrapur, TU

subedibhakti@yahoo.com, bhakti.subedi@memc.tu.edu.np

Abstract

The objective of the study was to assess the knowledge and behavior towards COVID-19 among the small business persons in the study area. This study tried to acknowledge the proper knowledge gap between the macro and micro level population and researches. This study was based on the field survey conducted for a week among the respondents. Out of the purposively selected 80 respondents 80% were male and 20% were female. Among the total respondents, 85% respondents were in the 45-64 years age group. Higher the percentage of male had information, ideas, effects, preventive measures, importance of preventive measures, currently practicing habit of preventions towards COVID-19 than females. Some confusion and forgetfulness about transformation of COVID-19 between the people and use of preventive measures were prevailing in the respondents.

Keywords: *to assess, based on, use of, COVID-19*

Introduction

Corona virus disease (COVID-19) is an infectious disease most of the people who infected with the COVID-19 virus have been experiencing mild to moderate respiratory illness and recover without requiring special treatment. But old, child and other aged people those with underlying medical problems like cardiovascular disease, diabetes, chronic respiratory disease, and cancer are more likely to develop extent severe sickness. COVID-19 disease doesn't differentiate people in terms of age, sex, religion, culture, prosperity and vulnerability. Therefore the proper knowledge, positive attitude and sincerity in practice of causes, effects and preventive measures are the common duties and responsibilities for all people. At present, there is no final successfulness in the development of vaccines for COVIT-19 treatment although the best efforts for developing vaccines are going on by multiple inventors in different countries.

Corona virus disease 2019 (COVID-19) is an emerging respiratory disease caused by a single-strand, positive-sense ribonucleic acid (RNA) virus, severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) virus (Masters, P. S., 2019). Guan, et al. (2019);

Huang, C. et al. (2020); Chen, N. et al. (2020); Wang, D., Bo, H. & Chang, H.F.Z.X. (2020); Tong, Y. et al. (2020) and Chan, et al. (2020) consolidated that the individuals with confirmed SARS-CoV-2 have clinical symptoms of fever, cough, and shortness of breath with an incubation period of 14 days following exposures to the virus. Chen, N. et al. (2020); Wang, D., Bo, H. & Chang, H.F.Z.X. (2020) and Guan, W. J. et al. (2020) examined the causes of morbidity and death. The authors found that COVID-19 causes morbidity in the range of mild respiratory illness to severe complications characterized by acute respiratory distress syndrome, septic shock, and other metabolic and hemostasis disorders and death. Murthy, S., Gomersall, C. D. & Fowler, R. A. (2020); Zhou, F. et al. (2020) and Wu, C. et al. (2020) concluded that most of the fatal cases and severe illnesses like acute respiratory distress syndrome (ARDS) occurred in older adults and people who have underlying medical co morbidities like diabetes, cancer, hypertension, heart, lung, and kidney diseases. A systematic review on COVID-19 patients showed that individuals with hypertension, diabetes, cardiovascular and respiratory system diseases were the most vulnerable groups (Yang, J. et al., 2020). Chronic obstructive pulmonary disease patients have a five-fold increased risk of severe COVID-19 infection (Lippi, G. & Henry, B. M., 2020). The highly contagious characteristics of COVID-19 makes it harsher and dangerous, and causes a high fatality rate and rapid spread of the viruses from China to more than 210 countries around the world, including Ethiopia. Consequently, on March 11, 2020, the World Health Organization (WHO) declared that COVID-19 is a pandemic disease (Weiss, P. & Murdoch D. R., 2020). Furthermore, the disease significantly affects everyday life, resulting in a socio-economic crisis (Qualls, N., Levitt, A. & Kanade, NW-J., 2017). According to the WHO report, to date more than 5.5 million cases and 353, 334 confirmed deaths were recorded in the world (W.H.O., 2020). Even though the number of cases and deaths in Africa particularly in Ethiopia seems low, it may increase alarmingly than that of reports in Europe and America unless appropriate intervention is implemented. So far, no successful anti-viral treatment or vaccine has been reported. Therefore, applying the preventive measure to control COVID-19 infection is the utmost critical intervention (Baloch, S., Baloch, M. A., Zheng, T. & Pei, X., 2020).

There are some studies relating to knowledge, attitude and practice towards COVID-19 in Nepali community based on web and online survey, for health worker and students of higher level etc. That type of research done by Paudel, S., Shrestha, P., Karmacharya, I. and

Pathak, O.K. (2020) as an online cross-sectional study. The authors analyzed that the majority of the participants mentioned they wash their hands (85.7%) after sneezing or coughing and cover their mouth and nose with their elbows or tissue (93.73%) while sneezing and coughing and this practice was significantly different across occupation (p=0.026). About 77.02% of the participants had rarely or sometimes touched their face, nose, and mouth, while about 23% had frequent face, nose, and mouth touching habit. No doubt to add the knowledge of information about COVID-19 through such type of studies. But the knowledge, attitude and practice motives towards COVID-19 of general people is lacking. Therefore, this study tries to fulfill the gap between the coverage of the study from higher level to local level. This study aims to assess the knowledge and behavior towards COVID-19 among the general occupational people. For accomplishing the objective, the research questions are: Are the respondents well informed about COVID-19 and its preventive measures? Whether the respondents act positive behave for practicing preventive measures of COVID-19?

Methods and Materials

This study is based on field survey conducted from September 11 to 17, 2020 at Birtamode Market area surrounding of Mukti Chowk. All the business persons residing in the above limited areas were the sources of population. Among them, purposively selected business persons who were available during the time of data collection were the study population. Therefore, the sample frame was 102 business persons and the sample size was 80 with 95% confidence level and 5% margin of error.

Data were collected using structured questionnaire. The questionnaire includes gender and age group as characteristics of sample population. Apart these, knowledge, attitude and behavior towards COVID-19 and its prevention related questions were administered in the questionnaire. Awareness, attitude and behavior towards COVID-19 related questions containing dichotomous type (yes/no) and multiple choice answer type were: Have you heard about COVID-19? Have you any idea about its effect? Have you any idea about prevention of COVID-19? What do you think about prevention of COVID-19 pandemic? Which method of prevention of Covid-19 is important? Which of the following preventive measures of COVID-19 have been using by you? Do you think corona virus is not transferring within your own relatives? Do you think measures of COVID-19 are not necessary? And are you mostly forgetting to use of preventive measures of COVID-19?

Collected data were edited and coded, after coding data were entered in the Microsoft Office Excel for analysis purposes. After that, data were analyzed using descriptive statistics and calculated by the use of frequency, percentage and mean of basic characteristics of the sample respondents. Cross tabulation with Chi-Squared (X^2) test were used to identify the association between responses regarding in favor and not favor of knowledge and attitude towards COVID-19.

Data Analysis and Results

TABLE 1 Age and sex composition of the respondents

Characteristics	Overall	Male	Female
Gender N (%)			
Male	64 (80.0)	_	_
Female	16 (20.0)	_	_
Age group N (%)			
18-24	10 (12.5)	8 (12.5)	2 (12.5)
25-44	22 (27.5)	17 (26.6)	5 (31.3)
45-64	34 (42.5)	28 (43.8)	6 (37.5)
65^+	14 (17.5)	11 (17.1)	3 (18.7)
Age			
Mean (SD)	49.19 (18.20)	49.30 (18.08)	48.75 (18.69)
Median	49.21	49.50	47.83

Table 1 depicts the background characteristics of the respondents within the categories of overall, male gender and female gender with their percentage. Out of the total 80 respondents, the age range was 18-84 years. Among them, 64 (80%) were male and 16 (20%) were female respondents. There was no remarkable influence of age in the knowledge and behavior of covid-19. The highest number 34 (42.5%) respondents were in the 45-64 years age category with 28 (43.8%) male and 6 (37.5%) female. The second highest number 22 (27.5%) respondents with 17 (26.6%) male and 5 (31.3%) female were fall in 25-44 years age category. The third largest number 14 (17.5%) respondents with 11 (17.1%) male and 3 (18.7%) female were in the 65 and above year's age category. The least number 10 (12.5%) including 8 (12.5%) male and 2 (12.5%) female respondents were fall under the 18-24 years of age category. The mean age of respondents was 49.19 year with 18.20 standard deviation and mean

age for male was 49.30 and for female 48.75 years. A slight difference of standard deviation was found for male 18.08 and for female 18.69 years. Likewise, median age of respondents was 49.21 for all, 49.50 for male and 47.83 years for female were presented in table 1.

Table 2 displays the responses about simple information, knowledge, ideas and prevention of the respondents about COVID-19. Seventy two (90.0%) respondents out of 80 responded they ever having heard of COVID-19. Among the total only 8 (10.0%) were not informed about covid-19. Among the male respondents 61 (95.3%) were informed and 3 (4.7%) were not informed about COVID-19. Of the 16 female respondents 11 (68.8%) were heard and 5 (31.2%) were not heard about COVID-19. A Chi-Square test of independence was performed to examine the relation between responses according to sex towards knowledge of COVID-19. The relation between the responses was significant, X^2 (1, N= 80) = 10.03, p=< .05. Male were more likely to aware about COVID-19. The respondents who had idea about effects of COVID-19 were 58 (90.6%) male and 7 (43.8%) female. In contrast, having no knowledge about effects of COVID-19 were 6 (9.4%) in male and 9 (56.2%) in female. The knowledge about effects of COVID-19 for male and female were significantly associated, X^2 (1, N= 80) = 18.46, p=< .05 with P-value .000.

Among the total respondents who had idea about prevention of COVID-19 were 42 (65.6%) male and 8 (50.0%) female. Remaining 22 (34.4%) male and 8 (50.0%) female respondents had no any idea about prevention of COVID-19. There was not significant (p=< .05), Chi-Square with .248 p-value. In the context of respondents thinking about preventive measures of COVID-19, 20 (31.2%) male and 4 (25.0%) female thought it was very important. Twenty (31.2%) male and 4 (25.0%) female respondents thought that preventive measures of COVID-19 were important. Twelve (18.8%) male and 3 (18.8%) female respondents thought it was somewhat important. Among the total respondents, 8 (12.5%) male and 3 (18.7%) female responded preventive measures of COVID-19 were less important. Likewise, 4 (6.3%) male and 2 (12.5%) female thought that preventive measures of COVID-19 were not important. These 5 options of preventive measures of COVID-19 was statistically not significant X^2 (4, N= 80) = 1.36, p< .05 with P-value .850.

TABLE 2 Relationship between responses to whether in favor and not in favor of knowledge and behavior of Covid-19 Pandemic

Familiarity & behavior	Male N (%)	Female N (%)	P-value
Heard about Covid-19			**.001**
Yes	61(95.3)	11(68.8)	
No	3(4.7)	5(31.2)	
Idea about effects of Covid-19			**.000**
Yes	58(90.6)	7(43.8)	
No	6(9.4)	9(56.2)	
Idea about prevention of Covid-19			**.248**
Yes	42(65.6)	8(50.0)	
No	22(34.4)	8(50.0)	
Thinking about prevention of Covid-19			**.850**
Very Important	20(31.2)	4(25.0)	
Important	20(31.2)	4(25.0)	
Somewhat Important	12(18.8)	3(18.8)	
Less Important	8(12.5)	3(18.7)	
Not Important	4(6.3)	2(12.5)	
Important methods of prevention of Covid-19			**.005**
Washing hand by soap water	40(62.5)	2(12.5)	
Use Sanitizer	8(12.5)	4(25.0)	
Putting/wearing mask	4(6.3)	4(25.0)	
Maintaining social distance	6(9.3)	2(12.5)	
All of the above	6(9.4)	4(25.0)	
Currently using preventive measures of Covid-19			**.746**
Washing hand by soap water	16(25.0)	4(25.0)	
Use Sanitizer	14(21.9)	2(12.5)	
Putting/wearing mask	18(28.1)	4(25.0)	
Maintaining social distance	8(12.5)	4(25.0)	
All of the above	8(12.5)	2(12.5)	

Cross tabulation with Chi-Square analyses were performed between responses regarding in favor and not in favor of knowledge and behavior of prevention of COVID-19 related

questions given by all the respondents (N = 80).

Responses about important methods of prevention of COVID-19, 40 (31.2%) male and 2 (12.5%) female supported the washing hand by soap water. Eight (12.5%) male and 4 (25.0%) female supported to use sanitizer. Putting/wearing mask for prevention of COVID-19 was supported by 4 (6.3%) male and 4 (25.0%) female respondents. Maintaining social distance measure was supported by 6 (9.3%) male and 2 (12.5%) female respondents. But 6 (9.4%) male and 4 (25.0%) female respondents were supported to all above preventive methods. Views on the preventive measures of COVID-19 was statistically significant with P-value .005, X^2 (4, N= 80) = 14.55, p< .05. The practical using habits of preventive measures of COVID-19 in the respondents 16 (25.0%) male and 4 (25.0%) female have been using washing hand by soap water. Sanitizer user respondents were 14 (21.9%) male and 2 (21.5%) female. The highest 18 (28.1%) male and 4 (25.0%) female respondents were putting/wearing mask. Eight (12.5%) male and 4 (25.0%) female respondents responded they were maintaining social distance. Remaining 8 (12.5%) male and 2 (12.5%) female respondents were maintaining all the above preventive measures of COVID-19. But statistically the result was not significant at p< .05 with X^2 (4, N= 80) = 1.94, P-value .746.

TABLE 3 Distribution of age group of the respondents according to their knowledge/awareness about COVID-19

Responses	**Age group(Yr.)**				**P-value**
	18-24	**25-44**	**45-64**	**65+**	
	N (%)	**N (%)**	**N (%)**	**N (%)**	
Corona Virus is not transferring within relatives					**.983**
Yes	3(30.0)	7(31.8)	12(35.3)	5(35.7)	
No	7(70.0)	15(68.2)	22(64.7)	9(64.3)	
Preventive measures of Covid-19 are not necessary					**.227**
Yes	2(20.0)	8(36.4)	17(50.0)	8(57.1)	
No	8(80.0)	14(63.6)	17(50.0)	6(42.9)	
Forgetting to use the preventive measures					**.288**
Yes	5(50.0)	10(45.5)	14(41.2)	10(71.4)	
No	5(50.0)	12(54.5)	20(58.8)	4(28.6)	

Cross tabulation with Chi-Square analyses were performed between age groups and responses towards COVID-19 knowledge/awareness among total respondents (N = 80).

Table 3 portraits the insightfulness, understanding and sincerity of the respondents towards COVID-19 according to age group (either sex). Among the total 80 respondents, 3 (30.0%) of 18-24, 7 (31.8%) of 25-44, 12 (35.3%) and 5 (35.7%) of 65 and above age group respectively were puzzled to support the statement that Corona virus is not transferring within relatives. But 7 (70.0%) of 18-24, 15 (68.2%) of 25-44, 22 (64.7%) of 45-64 and 9 (64.5%) of 65 and above years age group respectively were not supported to the response Corona virus is not transferring within relatives. But the relationship between the responses was not statistically significant.

Some peoples' opinion in the society is hearing that preventive measures of COVID-19 are not necessary, it may overcome itself. Likewise, respondents in the study area also responded as that grounds by supporting statement "preventive measures of COVID-19 is not necessary" and vice-versa. Two (20.0%) of 18-24, 8 (36.4%) of 25-44, 17 (50.0%) of 45-64 and 8 (57.1%) of 65 and above age group respectively responded Yes. In contrast, 8 (80.0%) of 18-24, 14 (63.6%) of 25-44, 17 (50.0%) of 45-64 and 6 (42.9%) of 65 and above age group respectively negatively reacted about preventive measures of COVID-19 are not necessary. The relationship between the responses was statistically not significant.

Most of the respondents supported to preventive measures of COVID-19, but practically they failed to use. Nearly 50.0% respondents (39 out of 80) were forgetting to use of preventive measures of COVID-19 and 51.3% (41 out of 80) respondents were not forgetting to use preventive measures of COVID-19. Five (50.0%) of 18-24, 10 (45.5%) of 25-44, 14 (41.2%) of 45-64 and 10 (71.4%) of 65 and above age group respectively were forgetting to use the preventive measures. Similarly, 5 (50.0%) of 15-24, 12 (54.5%) of 25-44, 20 (58.8%) of 45-64 and 4 (28.6%) of 65 and above age group respectively were not forgetting to use of preventive measures of COVID-19. Even relationship between the responses was not statistically significant.

Discussion

The emerging infectious disease COVID-19 poses a significant threat to all sectors of the society. General public as in the study area are suffering from various problems created by the emerging and expanding nature of COVID-19 pandemic. At present in the absence of vaccine, various preventive measures play an essential role in reducing and controlling of infection and disease. The controlling and preventive measures are affected by the knowledge and behaviors of the people. There are differences in the socio-economic, religious, cultural

and education of the population in different countries. Most of the developed and some developing countries have modern socio-economic situation while many developing countries have their poor and average socio-economic setting. Therefore, the result of the studies in the same issues also differs between each other.

The fact and figures in this study depicts that more male (95.3%) heard about COVID-19 than female (68.8%). Among the total, 90.6% male have idea about effect of COVID-19 against the 50.0% female. Idea of the respondents about prevention of COVID-19 was also higher in male (65.6%) than in female (50.0%). In the thinking about prevention of COVID-19 related issues, 31.2% male and 25.0% female responded very important, equal 31.2% male and 25.0% female responded important, 18.8% male and 18.8% female said somewhat important, 12.5% male and 18.7% female said less important and 6.3% male and 12.5% female responded not important. This indicates that 93.7% male and 87.5% female respondents have the positive thinking about prevention of COVID-19. Similar study done by Akalu et.al (2020) almost all patients (99.2%) heard about the pandemic COVID-19.

In the context of feeling towards the important methods of prevention of COVID-19 majority (62.5%) male and 12.5% female supported the washing hand by soap water. Eight (12.5%) male and 4 (25.0%) female supported to use sanitizer. Putting/wearing mask for prevention of COVID-19 was supported by 4 (6.3%) male and 4 (25.0%) female respondents. Maintaining social distance measure was supported by 6 (9.3%) male and 2 (12.5%) female respondents. But currently practicing of preventive measures of COVID-19 is different from their attitudes. Only 25.0% male and 25.0% female were applying the washing hand by soap water. A slight different study done by Akalu et al. (2020) in Northeast Ethiopia analyzed the majority (73.2%) of the study participants perceived that washing hands frequently for 20 seconds with soap or using sanitizer is very easy. More than half (51.7%) of the study participants perceived that practicing physical distance is very difficult. Two hundred sixty-five (65.5%) study participants reported that they washed their hands with soap frequently. The majority (71.7%) of the respondents had avoided handshaking. Only one third (36.6%) of the study participants used face mask during leaving their home. Practicing physical distancing was the least 121 (29.9%) practiced preventive measure.

Knowledge/awareness about COVID-19 according to age group indicates that there is some haziness in the society about transformation, preventive methods and use of the preventive measures. In the question corona virus is not transferring within the relatives, the

responses were 30.0% of age 18-24, 31.8% of age 25-44, 35.3% of age 45-64 and 35.7% of 65 and above age group supported the above statement. In the question preventive measures of COVID-19 are not necessary, 20.0% of 18-24, 36.4% of 25-44, 50.0% of 45-64 and 57.1% of 65 and above age group of the respondents responded yes. In the question forgetting to use of the preventive measures, 50.0% of 18-24, 45.5% of 25-44, 41.2% of 45-64 and 71.4% of 65 and above age group of the respondents said yes. This situation indicates that knowledge/awareness about COVID-19 and its prevention is prevailing in the society but practically they did not taking seriously. Similar to this finding, a study in Kingdom of Saudi Arabia by Al-Hanawi et al. (2020) showed that, for knowledge of COVID-19, age groups 30–39, 40–49, 50–59 and ≥60, are more knowledgeable about COVID-19 than the reference group (18–29). All variables for age groups 30–39 ($\beta = 0.047$; $p < 0.001$), 40–49 ($\beta = 0.041$; $p < 0.001$), 50–59 ($\beta = 0.057$; $p < 0.001$) and ≥60 ($\beta = 0.051$; $p < 0.001$), are statistically significant at the 1% level. However, attitudes follow a different trend. Only the age group 50–59 ($\beta = -0.021$; $p < 0.001$) is significantly different from baseline. In practices for COVID-19, age groups 30–39 ($\beta = 0.039$; $p < 0.001$), 40–49 ($\beta = 0.033$; $p < 0.05$), and 50–59 ($\beta = 0.051$; $p < 0.001$), are associated with good practices.

Conclusion

Precisely, knowledge, attitude and practice towards COVID-19 in the respondents had moderate level they had positive response to practicing of preventive measures. However, there was difference in terms of gender. There were more males heard about COVID-19 than females. There was more males had ideas about prevention of COVID-19 than females. More males thought that preventive measures of COVID-19 was important than females. More males supported washing hand by soap water as popular measures of prevention. But practically, both the male as well as female respondents missed to preventive measures mostly. In the transformation, prevention and practice of preventive measures related context, 44-64 and 65 and above year's age group of the respondents were more knowledgeable than other age group. Findings of this study emphasis to enhance the awareness program towards COVID-19 for all the people irrespective of gender, race, culture and economic condition. For that, Central Government, State Government and specially the Local Government bodies including their every sector especially health workers can play the vital role. Exclusive task force should be established at local level for improving

knowledge about COVID-19 particularly design and implement to targeted community amongst the most affected groups.

References

Akalu, Y., Ayelign, B. and Molla, M. D. (2020). Knowledge, Attitude and Practice Towards COVID-19 among Chronic Disease Patients at Addis Zemen Hospital, Northwest Ethiopia. 24 June 2020 Volume 2020:13 Pages 1949-1960 https://doi.org/10.2147/IDR.S258736

Al-Hanawi, M. K., Angawi, K., Alshareef, N., Qattan, A. M. N., Helmy, H. Z., Abudawood. Y., Alqurashi, M., Kattan, W. M., Kadasah, N. A., Chirwa, G. C. & Alsharqi, O. (2020). Knowledge, Attitude and Practice Toward COVID-19 Among the Public in the Kingdom of Saudi Arabia: A Cross-Sectional Study. Public Health, 27 May2020 https://doi.org/10.3389/fpubh.2020.00217

Baloch, S., Baloch, M. A., Zheng, T. & Pei, X. (2020). The coronavirus disease 2019 (COVID-19) pandemic. J Exp Med. 2020;250:271–278. doi:10.1620/tjem.250.271

Chan, J. F., Yuan S., Kok, K., et al. (2020). A familial cluster of pneumonia associated with The 2019 novel coronavirus indicating person-to-person transmission: a study of a family cluster. Lancet. 2020; 395 (10223):514–523. doi:10.1016/S0140-6736(20)30154-9

Chen, N., Zhou, M., Dong, X., et al. (2020). Epidemiological and clinical characteristics of 99 cases of 2019 novel corona virus pneumonia in Wuhan, China: a descriptive study. Lancet. 2020;395(10223):507–513. doi:10.1016/S0140-6736(20)30211-7

Guan, W., Hu, N. Z. et al. (2019). Clinical characteristics of corona virus disease 2019 in China. N Engl J Med. 2020;2020:1–13. doi:10.1056/NEJMoa2002032

Guan, W. J. Ni., Z. Y., Hu, Y., et al. (2020) . Clinical characteristics of 2019 novel corona virus infection in China. MedRxiv. 2020;1.

Huang, C., Wang Y, Li X. et al. (2020). Articles clinical features of patients infected with 2019 Novel corona virus in Wuhan, China. Lancet. 2020;395(15):497–506. doi:10.1016/S0140-6736(20)30183-5

Lippi, G. & Henry, B. M. (2020). Chronic obstructive pulmonary disease is associated with severe coronavirus disease 2019 (COVID-19). Respir Med. 2020;167(March): 105941. doi:10.1016/j.rmed.2020.105941

Masters, P. S. (2019). Corona virus genomic RNA packaging. Virology. 2019; 537 (August) 198–207. doi:10.1016/j.virol.2019.08.031

Murthy, S., Gomersall, C. D. & Fowler, R. A. (2020). Care for critically ill patients with COVID-19. Clin Rev Educ. 2020;1–2. doi:10.1001/jama.2020.3633

Qualls, N., Levitt, A. & Kanade, NW-J. (2017). Community Mitigation Guidelines to Prevent Pandemic Influenza — United States. Vol. 66; 2017: 2017.

*Paudel, S., Shrestha, P., Karmacharya, I. & Pathak, O.K. (2020). Knowledge, attitude, and practices (KAP) towards COVID-19 among Nepalese residents during the COVID-19 outbreak: An online cross-sectional study. DOI:**10.21203/rs.3.rs-31044/v1***

Tong, Y. Ren, R., Ph. D. et al. (2020). Early transmission dynamics in Wuhan, China, of novel coronavirus–infected pneumonia. N Engl J. 2020;382(13):1199–1207.

doi:10.1056/NEJMoa2001316

Wang, D., Bo, H. & Chang, H.F.Z.X. (2020). Clinical characteristics of 138 hospitalized patients with 2019 novel coronavirus–infected pneumonia in Wuhan, China. JAMA. 2020;323(11):1061–1069. doi:10.1001/jama.2020.1585

Weiss, P. & Murdoch D. R. (2020). COVID-19: towards controlling of a pandemic. Lancet. 2020;6736(20):1015–1018. doi:10.1016/S0140-6736(20)30673-5

W.H.O. (2020). Coronavirus Disease. World Health Organization, 2020.

Wu, C., Chen, X., Cai, Y., et al. (2020). Risk factors associated with acute respiratory distress syndrome and death in patients with coronavirus disease 2019 pneumonia in Wuhan, China. JAMA Intern Med. 2020;1:1–10. doi:10.1001/jamainternmed.2020.0994

Yang, J., Zheng, Y., Gou, X, Pu, K. & Chen Z. (2020.). Prevalence of co morbidities in the Novel Wuhan corona virus (COVID-19) infection: a systematic review and meta-analysis. Int J Infect Dis. 2020;94:91–95. doi:10.1016/j.ijid.2020.03.017

Zhou, F., Yu, T., Du, R., et al. (2020). Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan, China: a retrospective cohort study. Lancet. 2020;395(10229):1054–1062. doi:10.1016/S0140-6736(20)30566-3