Awareness and Attitudes toward COVID-19 Pandemic among Elderly Population of West Bengal

Mohan Chandra Dolai[1]*, Sahana Jana[2], Amit Kumar Maiti[2], Amita Adak[2], S. K. Md. Murtaja Alam[2], Nandini Mishra[2], Kakali Bera[2]

Abstract

Background: COVID-19 has emerged as a pandemic and it has had unprecedented negative impact on elderly population. A lack of awareness and poor understanding of the disease may result in rapid transmission of the disease. This study aimed to investigate the awareness and attitude toward COVID-19 among elderly population in West Bengal, India. **Methods:** This cross-sectional study was conducted with the help of an online questionnaire and sent to elderly population of West Bengal. The study comprised a series of questions regarding demography, family composition, awareness, attitudes, and practices as precautionary measures from COVID-19. **Results:** A total of 212 elderly respondents participated in this study comprising 55.66% of males and 44.34% are females. Overall 75.58 ± 3.21 respondents showed good knowledge and awareness about COVID-19. Avoiding social gathering (84.43%), preference to stay in home (76.89%), and wearing mask (74.06%) were the most common preventive measures taken by respondents that were followed using sanitizing (58.96%) and avoiding traveling (24.64%). Significantly more educated and employed respondents showed more considerable knowledge of the disease awareness. **Conclusion:** The study respondents showed adequate basic knowledge and awareness of COVID-19. There is a strong need to implement periodic educational interventions and training programs on infection control practices.

Keywords: Attitude, Awareness, COVID-19, Elderly, West Bengal

Asian Pac. J. Health Sci., (2022); DOI: 10.21276/apjhs.2022.9.4.47

Introduction

Now, we all are truly worried about a term "COVID-19 Pandemic," the majesty of SARS-CoV-2 virus or commonly known as coronavirus. Coronavirus has mutated and recombined behavior in nature, causing respiratory, enteric, hepatic, and neurologic diseases in human physique.[1] The common symptoms of COVID-19 include fever, breathing difficulty, cough, lethargy, headache, myalgia, sore throat, and muscle pain.

In consequences of COVID-19 outbreak, the WHO declared it a global pandemic on March 12, 2020.[2] Since then, it has spread to 220 countries and territories with 178,837,204 confirmed cases and more than 3,880,450 individuals have died globally.[3] India, with second-largest population in the world, is also suffering severely from COVID-19 disease with a high risk of morbidity.[1] At present, the number of COVID-19 cases grew exponentially in India and has recorded 30,028,709 positive cases with 390,660 deaths by June 23, 2021.[3] The highest number of confirmed cases was reported from Maharashtra (5,987,521) followed by Karnataka (2,815,029), Kerala (2,829,460), Tamil Nadu (2,436,819), Andhra Pradesh (1,857,352), Uttar Pradesh (1,704,678), West Bengal (1,485,438), Delhi (1,432,778), and other states and UTs.[4] Among the confirmed cases, majority of them are senior citizen aged 60 years and more. However, now, new variants of COVID-19 increased more risk for all age groups[5] including aged mostly. The previous studies revealed that the pandemic has had an unprecedented negative effect on the lives of elderly people, especially those with multiple associated comorbidities such as hypertension, diabetes, cardiovascular disease, chronic kidney disease, chronic respiratory disease, and cancer.[6,7] The progression of illness and risk of death is 3 times higher in the older age group.[8]Another study highlighted that mortality rate of COVID-19 was 8.1 times higher among those 55–64 years and more than 62 times higher

[1]Department of Anthropology, Haldia Government College, West Bengal, India.

[2]Department of Anthropology, Vidyasagar University, West Bengal, India.

Corresponding Author: Dr. Mohan Chandra Dolai, Assistant Professor, Department of Anthropology, Haldia Government College, Debhog - 721 657, Haldia, West Bengal, India. Phone: +91-7557021090. E-mail: saratmohan@rocketmail.com

among those ages 65 or older through an ecological study in 16 countries. They also find out that men's mortality rate was 77% higher than women.[9]

Due to its recent mutated characteristics[5] and delay vaccination process in our country, non-pharmaceutical appropriate approaches remain key to dealing with the virus. It includes some general ideas and practices to be followed in daily life such as physical distancing, use of mask, frequent sanitization of hands, and avoid touching face and eyes are all aiming to prevent the transmission. Therefore, to control the spread of the disease, knowledge and awareness of the virus among the aged are vital in preventing and suppressing this disease because they are more prone to infection.

In view of the above background, this study was conducted to assess the awareness of coronavirus disease (COVID-19) among senior citizen of West Bengal, India. Absence or little number of

such awareness and attitudinal studies on elderly population was also tempted to us to conduct this study.[10,11]

MATERIALS AND METHODS

Study Area and People

This is a cross-sectional study in which primary information was collected from 212 elderly respondents (118 males and 94 females) from 16 districts of West Bengal, namely, Bankura, Birbhum, Burdwan Purba, Darjeeling, Hooghly, Howrah, Jalpaiguri, Jhargram, Kolkata, Malda, Nadia, North 24 Parganas, Paschim Medinipur, Purba Medinipur, Purulia, and South 24 Parganas.

Sampling and Data Collection

A non-probability sampling, particularly snowball technique, was adopted to recruit study respondents through online survey with Google Forms. This sampling method is particularly suitable during this pandemic situation where the mobility and physical contact of the population discouraged. All authors first prepared separate list of prospective respondents individually from their kin groups, neighbors, and friends. Whereas, listing of prospective respondents was selected on the basis of inclusion criteria, that is, 60 years or above of their age, having own mobile phone or smartphone, especially for online survey, and they should be literate one for online survey. From the said list, the researcher individually makes a call and was explained the purpose of this study to get their consent. Side by side, objective-based questions, or variables were developed in Google Forms which automatically generated a link (https://docs.google.com/forms/d/e/1FAIpQLScuRRxhJXGS4OHvQ79uAn4x4oeResIiYtEKG1JSzqbAqZ9bAw/formResponse). After getting their verbal or written consent through cellphone or WhatsApp message, pre-designed survey questionnaire link sent in their respective e-mail and/or WhatsApp number. In addition to distributing the survey link on e-mail and WhatsApp, the authors were used snowball sampling,[12] in turn, the said link was forwarded by these enlisted respondents to their contacts (relatives, neighbors, and friends). The goal was to collect as representative of a sample as possible in a short period of time and in this pandemic situation.

The Google Forms link was first circulated on August 18, 2020, at 09:25 IST and kept open for responses till August 31, 2020, at 24:00 IST. On the basis of online survey, a total of 218 responses were received but out of total responses, six were incomplete. Hence, the actual response was 212.

Four questions were adopted to estimate awareness level of COVID-19 and another four for accessing attitude toward such pandemic situation were prescribed in the survey schedule/questionnaire. Moreover, by the survey, the authors also collected basic sociodemographic information (age, gender, marital status, literacy, occupation, and family composition). Awareness of the respondents was assessed through a self-developed weightage scale comprising four questions. Each question has three grades, that is, yes/daily, frequently/rarely, and no/never. A response "Yes/Daily" was rewarded with "3" point, "Frequently/Rarely" rewarded with "2," and "No/Never" assigned with "1" point. Hence,

the total awareness score ranged from 4 to 12; whereas higher score indicating more awareness on COVID-19. The Cronbach's alpha coefficient was followed to measure internal reliability of the awareness questionnaire and/or schedule. The Cronbach's alpha coefficient was 0.726, which indicates acceptable internal reliability for these four questions.

The information collected by telephonic interview as well as by online survey was tabulated, analyzed, and interpreted statistically. Statistical software SPSS (SPSS 16.0, Chicago, IL) was used for analysis of data. The significance level was set at $P < 0.05$ for all analyses.

RESULTS

Sociodemographic Characteristics

The present study recruited a total of 212 respondents [Table 1] comprising 55.66% of male and the remaining (44.34%) are female with mean age 66.63 and 71.79 years, respectively. A majority of the respondents (56.60%) belongs to age range of 60–69 years, 28.30% are in of 70–79 years, whereas others are belong in the age group 80 years and more. In addition, maximum respondents (63.21%) are currently married, 34.91% are widowed (maximum of them are widow), and only 2.13% of female respondents are separated. Majority of the respondents (91.98%) are literate and only 08.02% are illiterate. Furthermore, currently, 63.21% of elderly respondents are employed, among them, a substantial proportion is pension holders followed by farming, non-government jobs, and business.

Table 1: Sociodemographic characteristics of the study population

Variables	Male	Female	Total
Respondents	118	94	212
Mean age (years)	66.63	71.79	68.97
Age range (years)	60–98	60–97	60–98
Age group (years)			
60–69	56.78	56.38	56.60
70–79	27.97	28.72	28.30
80+	15.25	14.89	15.10
Marital status			
Unmarried	00.85	01.06	00.94
Married	86.44	34.04	63.21
Widowed	12.71	64.90	35.85
Education			
Primary	09.32	36.17	23.11
Upper primary	15.25	25.53	19.81
Secondary	29.66	12.77	22.17
Higher secondary	11.86	04.26	08.49
Undergraduate	13.56	03.19	08.96
Postgraduate	16.10	02.13	09.91
Others	00.85	02.13	01.42
Illiterate	03.39	13.83	08.02
Occupation			
Farming	25.42	0.00	14.15
Business	13.56	0.00	07.55
Pension	21.19	27.66	24.06
Non-government job	20.34	02.13	12.26
Others job	02.54	08.51	05.19
Unemployed	16.95	61.70	36.79
Living arrangement			
Alone	00.85	03.19	01.89
With spouse	22.03	05.32	14.62
With spouse and children	64.41	28.72	48.58
With children	12.71	62.77	34.91

Awareness on COVID-19 Pandemic

Respondent's awareness-related aspects were measured through direct questions [Table 2]. The mean (SD) awareness score of the respondents is 09.84 (±2.92) which indicates that most of them are aware on COVID-19. In connection with avoiding traveling from the house, 76.89% of respondents gave a negative response or they prefer to stay at home rather than traveling. The rate of avoidance is showed more among females than males. Hence, males are more frequently visited concerned places than their female counterpart. In addition, the practice of avoiding social gathering is significantly different between males and females; females (87.23%) are avoided social gathering more practically than males (82.20%). In particular, a positive response is received from about 3/4th of respondents on wearing mask. Whereas, it also revealed that there are 05.66% of respondents who are forget to use it. About 60% of respondents use hand sanitizer when they go outside and 13.68% are frequently used but 05.19% forget to use sanitizer. Statistically gender and these four awareness variables are significant at 5% level.

Table 2 shows that females are more aware regarding the avoidance of gathering and use of mask than males. It is fact that

Table 2: Frequency of awareness on different measures for COVID-19 pandemic

Sex and awareness					
Variables	Response (s)	Male	Female	Total	Chi-square; P value
Frequency outing	Never	19.49	31.91	24.64	31.135; 0.001
	Rare	31.36	31.91	31.75	
	Daily	29.66	17.02	24.17	
Avoid gathering	Yes	82.20	87.23	84.43	5.437; 0.066
	No	14.41	09.57	12.26	
	Frequently	03.39	03.19	03.30	
Use mask while traveling/outing	Yes	72.88	75.53	74.06	8.670; 0.034
	No	08.47	12.77	10.38	
	Frequently	11.02	08.51	09.91	
Use sanitizer while traveling/outing	Yes	64.06	56.38	58.96	9.881; 0.020
	No	22.03	22.34	22.17	
	Frequently	10.17	18.09	13.68	

Age and awareness					
Variables	Response (s)	60–69 years	70–79 years	80+years	Chi-square; P value
Frequency outing	Never	16.39	27.42	39.29	34.006; 0.019
	Rare	33.61	29.03	32.14	
	Daily	27.87	24.19	17.86	
Avoid gathering	Yes	90.98	83.87	67.86	19.825; 0.002
	No	06.56	09.68	17.86	
Use mask while traveling/outing	Yes	88.52	77.42	60.71	1.114; 0.025
	No	04.92	11.29	35.71	
	Frequently	04.10	04.84	03.57	
Use sanitizer while traveling/outing	Yes	53.28	45.16	35.71	1.073; 0.044
	No	34.43	43.55	46.43	
	Frequently	07.38	06.45	17.86	

Education and awareness					
Variables	Response (s)	Illiterate	Primary level	Secondary and above	Chi-square; P value
Frequency outing	Never	22.50	25.25	19.18	19.258; 0.376
	Rare	30.00	30.30	35.62	
	Daily	30.00	28.28	19.18	
Avoid gathering	Yes	75.00	89.90	86.30	23.445; 0.074
	No	17.50	04.04	10.96	
Use mask while traveling/outing	Yes	60.00	87.88	84.93	34.180; 0.010
	No	27.50	06.06	08.22	
	Frequently	12.50	06.06	05.48	
Use sanitizer while traveling/outing	Yes	30.00	41.41	68.49	46.906; 0.161
	No	65.00	42.42	19.18	
	Frequently	05.00	09.09	05.48	

Employment and awareness				
Variables	Response (s)	Employed	Unemployed	Chi-square; P value
Frequency outing	Never	12.90	26.67	27.436; 0.037
	Rare	25.81	34.67	
	Daily	35.48	21.33	
Avoid gathering	Yes	87.10	85.33	18.632; 0.288
	No	11.29	08.00	
Use mask while traveling/outing	Yes	82.26	81.33	38.338; 0.032
	No	08.06	12.00	
	Frequently	09.68	01.33	
Use sanitizer while traveling/outing	Yes	45.16	50.00	35.622; 0.060
	No	37.10	39.33	
	Frequently	08.06	06.67	

*Significant at 5% level

with the advancement of age, they restricted themselves from traveling/outing. Therefore, the frequency of avoiding gathering, use mask, and sanitizer are less important among the advanced aged respondents. There is a significant association ($P > 0.05$) between advancing age and avoidance of social gathering, use of mask, and sanitizer. The study highlighted that literate respondents are more aware on COVID-19 precautionary measures than the illiterates. Particularly, it is found that the level of awareness is high among those who had attained more educational standard. Out of four awareness variables, only use of mask is statistically significant ($P > 0.05$) with literacy. It also revealed that employed respondents are more aware than the unemployed. Statistical correlation between awareness and employment status is significant at 5% level. However, avoidance of gathering and use of sanitizer while traveling are not significantly associated with employment.

From the study, it revealed that about 75% of the respondents do not prefer to travel for any purpose in this pandemic situation but remaining, that is, about 1/4th of the total respondents traveled for many purposes [Table 2]. Most frequently they visited their neighbor's house (31.25%), next frequently (25.63%) visited shops to collect daily essential commodities. Whereas, a sizable percentage (18.13) of respondents visited financial institutions such as bank, cooperative society, and post office and others (24.99%) visited public distribution stores (PDS), relative's house, medical stores, tea shops, administrative offices, religious places, etc. [Table 3]. It is seen from Table 3 that the males are more frequently visited financial institutions, shops for daily necessary goods, PDS, administrative offices, medical stores, and tea shops; whereas, females are for their neighbor's

house, relative's house, religious place, and hospitals even in this pandemic.

Practices and Attitudes on COVID-19

In this section, the authors are trying to focus respondent's experience, practices, and attitudes toward COVID-19-related issues. Table 4 highlights the respondent's nature of hygienic practices during this pandemic situation. Among the studied respondents, 37.74% always washed face, hands, and legs after returning at home from outside; whereas, 17.92% used sanitizer, 10.38% changed used garments and take a bath, 09.91% only sanitized hands and changed used garments, 08.96% sanitized hands, washed face, and changed used garments, 07.55% only sanitized hands and take bath, 04.25% sanitized hands, washed face and legs, and only 03.30% did nothing though they go outside.

About more than half (54.09%) of the respondents those who have been visited any place for any purpose during this pandemic situation are neglected and or ill-treated by their family members and neighbor [Table 5]. Their family members and neighbor do not easily accepted them due to COVID-19 transmission pathway. Mostly, they are verbally assaulted (24.53%) then 23.27% of respondent's family and neighbor group maintained safe distance for few days if they travelled. About 5% of respondents are totally isolated from their family members even they also physically assaulted (01.26%) in their family. However, 45.91% of the respondents are not faced any difficulty neither by family nor by neighbor.

Table 6 shows that the safety measures should be taken by the respondents if any one of their family, relatives, or friends be diagnosed as COVID-19 positive. In case of COVID-19-infected individual, majority of the respondents (48.58%) immediately will be isolated themselves or maintained a safe distance whereas 28.30% and 23.11% will be avoided physical contacting and traveling, respectively. However, in case of relatives, 42.45% of respondents are stated that they should be avoided to visit their relative's house if anyone diagnosed as COVID-19 positive; and a sizable respondents (38.68%) should make safe distance from the infected ones. If the family members of the respondents diagnosed as COVID-19 positive, majority (49.53%) of them should be maintained complete isolation and will take necessary steps to admit in hospital/nursing home. The table under discussion also shows that 41.04% of respondents should be avoided to travel and 26.42% should be maintained a safe distance from the infected one.

Table 7 represents the steps what should be taken by the respondents if anyone from their family, relatives, and friends will

Table 3: Distribution of respondents according to place of visit*

Place of visit	Male		Female		Total	
	n	%	n	%	n	%
Financial institute	21	22.11	08	12.50	29	18.13
Administrative offices	05	05.26	00	00.00	05	03.13
Grocery shop	37	38.95	04	06.25	41	25.63
Medical stores	08	08.42	04	06.25	12	07.50
Public distribution system	13	13.68	03	04.69	16	10.00
Saloon/Parlor	03	03.16	---	---	03	01.88
Relative's house	04	04.21	10	15.63	14	08.75
Neighbor's house	17	17.89	33	51.56	50	31.25
Religious places	01	01.05	03	04.69	04	02.50
Hospital/nursing home	---	---	03	04.69	03	01.88
Tea stall	05	05.26	02	03.13	07	04.38
Other places	05	05.26	02	03.13	07	04.38

*Multiple answers are received

Table 4: Hygienic practices by the respondents after traveling

Preference	Male		Female		Total	
	n	%	n	%	n	%
Only sanitized hands	23	19.49	15	15.96	38	17.92
Washed face, hands, and legs	42	35.59	38	40.43	80	37.74
Sanitized hands and take bath	11	09.32	05	05.32	16	07.55
Sanitized hands and changed used garments	09	07.63	12	12.77	21	09.91
Sanitized hands, washed face, hands, and legs	02	01.69	07	07.45	09	04.25
Sanitized hands, washed face, and changed used garments	13	11.02	06	06.38	19	08.96
Changed used garments and take bath	13	11.02	09	09.57	22	10.38
Nothing	05	04.24	02	02.13	07	03.30
Total	118	100.00	94	100.00	212	100.00

return at home after COVID-19 recovery. In that respect, most of the respondents (47.64%) are stated that they should make a safe distance for long time, whereas about 32% are agreed to accept him/her after few days' home isolation. From the table, it also found that 08.49% should not communicate with them even verbal and remaining 04.72% should immediately accept the recovery patient without any hesitation.

DISCUSSION

It is more important to senior citizen to keep protected themselves from the infection of COVID-19. The use of masks, frequent hand sanitizing, avoiding social gatherings, maintaining physical distance, etc., are better measures for protection from this infection.[2] The present study emphasized on the issues of awareness, attitudes, and practices of this disadvantageous group or those who are more prone to COVID-19 infection.

The data collected from 212 elderly respondents (118 males and 94 females) to know the awareness, attitude, and practices related to COVID-19 pandemic. From the study, it revealed that in response to statement, that is, their preference to stay at home rather than to go outside, positive responses reported by majority of them (79.66% of males and 73.40% of females). Similarly, 82.20% of males and 87.23% of females reported that they prefer to avoid social gathering, 72.88% of males and 75.53% of females reported always prefer to wearing mask regardless of the presence or absence of symptoms, and 64.06% of males and 56.38% of females prefer to use sanitizer while they travel. Therefore, participant's awareness for preventing the transmission of COVID-19 is up to the satisfactory level (09.84 out of 12 of awareness score) according to this study.

Level of awareness among this group is far better than some other studies.[13-16] The study also shows that participant's age, sex, educational level, and employment status are significantly associated with their awareness. Respondents with higher levels of education are more aware compared with low level of education even among illiterates. Increasing incomes are also positively correlated with better awareness. In agreement with this study, other studies found similar findings, as knowledge toward COVID-19 is significantly lower among less educated and lower-income adult respondents in Saudi Arabia,[17] Egypt,[18] China,[19] the USA,[20] and Nepal.[21]

Similarly, occupational liability and procurement of essential commodities contribute to traveling concerned places. The respondents who are employed (24.17%) in different organization are compelled to visit regularly and here males are outnumbered (29.66%) than females (17.02%). They also maintained the COVID-19 protection measures, that is, use of mask, physical distance (wherever possible), and sanitizing. In the previous paragraph, it stated that the awareness of respondents toward COVID-19 was satisfactory but they are compelled to travel and compromised with deviation from health measures.

Data from this study revealed that the respondents who visited different places not only use mask, sanitizer, and maintained a safe distance but simultaneously they also washed face, hand, leg, and changed used cloths even taken bath when they returned to their home. It is also reported that the respondents are insulted, verbally assaulted, avoided, and even isolated by their kith and kin if anyone unnecessarily traveled any places in this pandemic situation as reflected by the studies.[11,22-24]

Respondent's awareness and attitude regarding COVID-19-infected individual are also assessed and it was revealed that immediate measures such as maintain safe distance, avoid contacting with infected individual, isolation, and making an arrangement for hospitalization will be prime concerned. Their future concern will vary on the basis of degree of kinship or relation between them. However, after recovery from COVID-19, most of the family members, neighbors, and friends (about 56%) should not be accepted them without completion of limitations by the patient; but others immediately be accepted in the social life.

Table 5: Attitude of kin and neighbor toward those who traveled in the Pandemic

Reaction	Male		Female		Total	
	n	%	n	%	n	%
No reaction	41	43.16	32	50.00	73	45.91
Verbal assault	24	25.26	15	23.44	39	24.53
Maintain distance	22	23.16	15	23.44	37	23.27
Isolated	07	07.37	01	01.56	08	05.03
Physical assault	01	01.05	01	01.56	02	01.26
Total	95	100.00	64	100.00	159	100.00

Table 6: Measures if anyone diagnosed as COVID-19 positive

Type	Measures	Male		Female		Total	
		n	%	n	%	n	%
Neighbor	Safe distance	62	52.54	41	43.62	103	48.58
	Avoid to contact	37	31.36	23	24.47	60	28.30
	Avoid to travel	19	16.10	30	31.91	49	23.11
	Total	118	100.00	94	100.00	212	100.00
Relative	Safe distance	45	38.14	37	39.36	82	38.68
	Avoid to contact	17	14.41	23	24.47	40	18.87
	Avoid to visit their house	56	47.46	34	36.17	90	42.45
	Total	118	100.00	94	100.00	212	100.00
Family Members	Safe distance	37	31.36	19	19.39	56	26.42
	Avoid to travel	42	35.59	45	45.92	87	41.04
	Partial isolation and treatment	23	19.49	16	16.33	39	18.40
	Completely isolation and treatment	58	49.15	47	47.96	105	49.53
	Immediate admit in hospital/ nursing home	26	22.03	36	36.73	62	29.25

Table 7: Measures after return at his/her home from COVID-19 recovery

Measures	Male		Female		Total	
	n	%	n	%	n	%
Make distance long time	53	44.92	48	51.06	101	47.64
No communication even verbal	12	10.17	06	06.38	18	08.49
Immediate accept him	07	05.93	03	03.19	10	04.72
Accept him or her after few days	40	33.90	28	29.79	68	32.07
Nothing to say what will the situation	06	05.08	09	09.58	15	07.08
Total	118	100.00	94	100.00	212	100.00

Conclusion

Based on the above results, it concludes that most of our golden citizens in different districts of West Bengal, India, are informed and well aware about the precautionary measures for COVID-19 disease and have good knowledge regarding the COVID-19. Therefore, they showed a satisfactory level of awareness and positive attitudes toward coronavirus with an obvious difference in awareness level between various socioeconomic variables. It is tempted the authors that most of the previous works conducted among adults and medical students but significantly a very few research works were covered senior citizen or older adults. Therefore, this disadvantageous and more susceptible segment in our society is left behind from researchers. Hence, more concern on this segment is required from researchers end to highlight the magnitude of their problems within family and outside family as well as to know their knowledge and awareness and attitudes on COVID-19. In addition, continuous awareness campaigns by government and non-government agencies are essential to improve their knowledge and attitude toward this emerging infection disease.

Acknowledgments

Copyright and Permission Statement

References

1. Ghosh S, Mostafavi E, Vernet-Crua A, Webster TJ. Nanomaterial approaches for the prevention, diagnosis and treatment of COVID-19: A paradigm shift. J Nanomater Mol Nanotechnol 2020;9:280.
2. World Health Organization. Coronavirus Disease Pandemic. Geneva: World Health Organization; 2020. Available from: https://www.who.int/emergencies/diseases/novel-coronavirus-2019 [Last assessed on 2020 Apr 16].
3. World Health Organization. WHO Coronavirus (COVID-19) Dashboard. Geneva: World Health Organization; 2021a. Available from: https://www.covid19.who.int [Last assessed on 2021 June 24].
4. Government of India. COVID-19 State Wise Status-myGOV 2021. Available from: https://www.mygov.in/corona-data/covid19-statewise-status [Last assessed on 2021 Jun 24].
5. World Health Organization. Tracking SARS-CoV-2 Variants. Geneva: World Health Organization; 2021b. Available from: https://www.who.int/en/activities/tracking-SARS-CoV-2-variants [Last assessed on 2021 Jun 24].
6. Shahid Z, Kalayanamitra R, McClafferty B, Kepko D, Ramgobin D, Patel R, et al. COVID-19 and older adults: What we know? J Am Geriatr Soc 2020;68:926-9.
7. Weiss RS. Retirement, marriage, and social isolation. Illness Crisis Loss 2005;13:75-84.
8. Liu Q, Luo D, Haase JE, Guo Q, Wang XQ, Liu S, et al. The experiences of health-care providers during the Covid-19 crisis in China: A qualitative study. Lancet Glob Health 2020;8:790-8.
9. Yanez ND, Weiss NS, Romand JA, Treggiari MM. Covid-19 mortality risk for older men and women. BMC Public Health 2020;20:1742.
10. Jalan S, Gayathri R, Vishnu Priya V, Kavitha S. Awareness on self isolation to prevent COVID 19 infection among elderly people of Tamilnadu-a Survey. Int J Cur Res Rev 2020;12:160-4.
11. Kowsalya B, Sundara RT. Elders' dignity and challenges during covid-19 pandemic. Indian J Gerontol 2021;35:314-26.
12. Goodman LA. Snowball sampling. Ann Math Statist 1961;32:148-70.
13. Alahdal H, Fatemah B, Reem A. An analytical study on the awareness, attitude and practice during the COVID-19 pandemic in Riyadh, Saudi Arabia. J Infect Public Health 2020;13:1446-52.
14. Huynh G, Nguyen TN, Tran VK, Vo KN, Vo VT, Pham LA. Knowledge and attitude toward COVID-19 among health care workers at district 2 Hospital, Ho Chi Minh City. Asian Pac J Trop Med 2020;13:260-5.
15. Olum R, Chekwech G, Wekha G, Nassozi DR, Bongomin F. Coronavirus disease-2019: Knowledge, attitude, and practices of health care workers at Makerere university teaching hospitals, Uganda. Front Public Health 2020;8:181.
16. Rabbani SA, Mustafa F, Mahtab A. Middle east respiratory syndrome (MERS): Awareness among future health care providers of United Arab Emirates. Int J Med Public Health 2020;10:8-13.
17. Al-Mohrej OA, Al-Shirian SD, Al-Otaibi SK, Tamim HM, Masuadi EM, Fakhoury HM. Is the Saudi public aware of middle east respiratory syndrome? J Infect Public Health 2016;9:259-66.
18. Abdelhafiz AS, Mohammed Z, Ibrahim ME, Ziady HH, Alorabi M, Ayyad M, et al. Knowledge, perceptions, and attitude of Egyptians towards the novel coronavirus disease (COVID-19). J Community Health 2020;45:881-90.
19. Zhong BL, Luo W, Li HM, Zhang QQ, Liu XG, Li WT, et al. Knowledge, attitudes, and practices towards COVID-19 among Chinese residents during the rapid rise period of the COVID-19 outbreak: A quick online cross-sectional survey. Int J Biol Sci 2020;16:1745-52.
20. Wolf MS, Serper M, Opsasnick L, O'Conor RM, Curtis L, Benavente JY, et al. Awareness, attitudes, and actions related to Covid-19 among adults with chronic conditions at the onset of the U.S. outbreak: A cross-sectional survey. Ann Intern Med 2020;173:100-9.
21. Singh DR, Sunuwar DR, Karki K, Ghimire S, Shrestha N. Knowledge and perception towards universal safety precautions during early phase of the covid-19 outbreak in Nepal. J Community Health 2020;45:1116-22.
22. Makaroun LK, Bacharch RL, Rosland AM. Elder abuse in the time of COVID-19-increased risks for older adults and their caregivers. Am J Geriatr Psychiatry 2020;28:876-80.
23. Chang ES, Levy BR. High prevalence of elder abuse during the covid-19 pandemic: Risk and resilience factors. Am J Geriatr Psychiatry 2021;29:1152-9.
24. Du P, Chen Yu. Prevalence of elder abuse and victim related risk factors during the covid-19 pandemic in China. BMC Public Health 2021;21:1096.