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Knowledge and Attitude Towards COVID-19 Vaccine Among Women of Reproductive age Group of Urban Community of East Sikkim

Edi KHATUN[1], Binita KHATI[2] and Arkierupaia SHADAP[3]*

[1]*MSc Nursing, Sikkim Manipal College of Nursing, Sikkim Manipal University, Sikkim.*
[2]*Professor, Sikkim Manipal College of Nursing, Sikkim Manipal University, Sikkim.*
[3]*Associate Professor, Sikkim Manipal College of Nursing, Sikkim Manipal University, Sikkim.*
**Corresponding Author*

Abstract

Introduction: *COVID-19 is an infectious disease which is caused by coronavirus. Several vaccines have been approved for the use to recover against coronavirus disease (COVID-19) have been distributed in different regions globally. This descriptive study was conducted to assess the knowledge and attitude towards COVID-19 vaccine.* ***Methods:*** *A total of 445 women of reproductive age group of urban community were involved in the study. A systematic sampling technique was used. Data collection was done after prior institutional ethical permission and consent from participants. The data was analyzed using descriptive and inferential statistics.* ***Results:*** *Study revealed majority 358 (80.5%) had good knowledge, 69 (15.5%) with average knowledge and 18 (4%) had poor knowledge regarding COVID-19 vaccine. Majority 403 (90.6%) had favorable attitude and 42 (9.4%) had unfavorable attitude towards COVID-19 vaccine.* ***Discussion:*** *A vaccine provides the best hope for a permanent solution to control the pandemic. However, to be effective, a vaccine must be accepted and used by a large majority of population and in addition to that, the attitude towards vaccine especially among reproductive age group should be positive.*

Keywords: *Knowledge, Attitude, COVID-19 Vaccine, Women, Reproductive Age, Urban Community.*

BACKGROUND

The SARS-CoV-2 virus causes Coronavirus Disease (COVID-19), which is an infectious disease. COVID-19 can make anyone sick and cause to get very ill or die at any age. When an infected person coughs, sneezes, speaks, sings, or breathes, the virus spreads in little liquid particles from their mouth or nose and the larger respiratory droplets to smaller aerosols are among the particles (1).

Before the outbreak in Wuhan, China, in December 2019, no one had heard of this new virus or sickness (2).

Since its introduction, COVID-19 has become a global issue, with 532,201,219 confirmed cases and 6,305,358 deaths recorded to the World Health Organization as of June 10, 2022. A total of 11,854,673,610 vaccination doses have been administered as of June 6, 2022.From 3 January 2020 to June 2022, WHO recorded 43,205,106 confirmed cases of COVID-19 in India, with 524,747 deaths. A total of 1,962,351,204 vaccine doses has been delivered as of June 6, 2022(3).

Every year, vaccines save millions of lives.At least seven different vaccines were introduced across the three platforms on February 18, 2021 all over the country (4).

COVID-19 vaccines are safe, according to World Health Organization, getting vaccinated will protect people from acquiring severe COVID-19 disease and also prevent from dying. After being vaccinated, it may encounter some minor side effects, which are evidence that our bodies are developing protective mechanisms (5).

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A vaccine provides the best hope for a permanent solution to control the pandemic. However, to be effective a vaccine must be accepted and used by a large majority of population and in addition to that the attitude towards vaccine especially among reproductive age group should be positive. Women of reproductive age are more likely to refuse the vaccination, as they are especially worried about long-term side effects on their reproductive health. As a result, it's critical to learn about women of reproductive age groups' understanding, attitudes, and acceptance of the COVID-19 vaccine. Thus, the present study aimed to assess the knowledge and attitude towards COVID-19 vaccine among women of reproductive age group of urban community of East Sikkim.

METHODS

A descriptive research design was adopted. A total of 445 women of reproductive age group of urban community were selected for the study using a systematic sampling technique. A validated structured knowledge questionnaire and attitude scale was used to assess the knowledge and attitude towards COVID-19 vaccine. The validity and reliability of tools was done by Split half and Cronbach's alpha formula and it was found to be reliable. Main data collection was done after prior institutional ethical permission and consent taken from the participants. The data was analyzed using descriptive and inferential statistics.

RESULTS

The study revealed majorities 85(19.2%) of women were in age group of 15-23 years, majority 231(51.9%) of women was married and majority 348(78.2%) of women belongs to Hinduism. With regard to educational qualification, majorities 245(55.1%) were graduate and 128(18.7%) were in other job, majority 210(47.2%) had income of Rs 11,000-25,000 per month and majorities 418(93.9%) were living in nuclear family. Table 1 shows, result COVID 19 infected and vaccination related.

Table 1: Frequency and percentage distribution on COVID 19 infected and vaccination related among the sample characteristics

[N=445]

Variables/Items		Frequency	%
Have you ever been infected with COVID-19?	Yes No	45 400	10.1 89.9
Has anyone been infected with COVID-19 in your family	Yes No	77 368	17.3 82.7
Is everyone vaccinated against COVID-19 in your family	Yes No	417 28	93.7 6.3

The level of knowledge, mean, median, Standard deviation and mean % regarding COVID-19 vaccine among women of reproductive age group is shown in table 2.

Table 2: Frequency and percentage distribution of knowledge, mean, median, Standard deviation and mean % regarding COVID-19 vaccine among women of reproductive age group

[N=445]

Level of knowledge	Freq.	(%)	Score/ range	Mean	Median	SD	Mean %
Poor knowledge	18	4	12 4-16	12.37	13	2.759	77.3
Average knowledge	69	15.5					
Good knowledge	358	80.5					

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Table 3 depicts that majority 403(90.6%) of reproductive age group had favorable attitude and 42(9.4%) had unfavorable attitude towards COVID-19 vaccine with obtained score range between 19-68 with median of 41 and mean knowledge score was 39.50 (SD=6.081) and mean percentage was 79%.

Table 3: Frequency and percentage distribution of attitude, mean, median, Standard deviation and mean % regarding COVID-19 vaccine among women of reproductive age group

[N=445]

Level of attitude	Frequency	(%)	Score/range	Median	Mean	SD	Mean %
Unfavourable	42	9.4	49 19-68	41	39.50	6.081	79
Favourable	403	90.6					

Table 4 shows the correlation using spearman brown and revealed r=0.327 which indicate moderate positive correlation between knowledge and attitude towards COVID-19 vaccine among women of reproductive age group and (p=0.318) was statistically non-significant at p<0.05 level of significance.

Table 4: Correlation between knowledge and attitude towards COVID-19 vaccine among women of reproductive age group

[N=445]

Correlation	Mean	SD	r value	p value
Knowledge	12.37	2.759	0.327	0.318^{NS}
Attitude	39.50	6.081		

*p<0.05 level of significance

Table 5 shows association between knowledge regarding COVID-19 vaccine among women of reproductive age group with selected demographic variables. Variables like religion (χ^2=18.64, df=6) and occupational status (χ^2=30.03, df=8) was found statistically significant at p<0.05 level. Other demographic variables were found to be statistically non-significant at p<0.05 level.

Table 5: Association between knowledge regardingCOVID-19 vaccine among women of reproductive age group with selected demographic variables

[N=445]

Demographic variables	Characteristics	Knowledge			χ^2 value	df	P value
		Poor	Average	Good			
Age (in years)	15-23 24-32 33-41 42-49	2 10 5 1	14 35 16 4	69 183 93 13	1.715	6	0.944^{NS}
Marital status	Unmarried Married	8 10	3 37	174 184	0.215	2	0.898^{NS}
Religion	Hinduism Christianity Islam Buddhism	11 0 0 7	59 2 1 7	278 19 3 58	18.64	6	0.004*
Educational Qualification	PG and above Graduate Secondary Primary	0 9 3 6	3 32 10 24	4 204 49 101	6.475	6	0.372^{NS}

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Occupational status	Government job Private job Self employed Housewife Others	2 6 5 4 1	19 9 9 17 15	30 84 53 79 112	30.03	8	0.002*
Monthly family income	≤ 10,000 11,000 – 25,000 26,001 – 40,000 ≥ 40,001	6 8 2 2	25 25 3 16	94 117 30 57	8.028	6	0.236^{NS}
Type of family	Nuclear family Joint family	17 1	64 5	337 21	0.202	2	0.904^{NS}
Have you ever been infected with COVID-19?	Yes No	3 15	9 60	33 325	1.818	2	0.403^{NS}
Has anyone been infected with COVID-19 in your family	Yes No	3 15	9 60	65 293	1.062	2	0.588^{NS}
Is everyone vaccinated against COVID-19 in your family	Yes No	16 2	66 3	335 23	1.162	2	0.559^{NS}

*p<0.05 level of significance NS-Non significant

Table 6 shows association between attitude regarding COVID-19 vaccine among women of reproductive age group with selected demographic variables. Variables like type of family (χ^2=0.019, df=1) and infected with infected COVID 19 (χ^2=0.001, df=1) was found statistically significant at p<0.05 level. Other demographic variables were found to be statistically non-significant at p<0.05 level.

Table 6

Demographic variables	Characteristics	Attitude		Chi-square	df	P value
		Favourable	Unfavourable			
Age (in years)	15-23 24-32 33-41 42-49	11 19 9 3	74 209 105 15	2.964	3	0.397^{NS}
Marital status	Unmarried Married	21 21	193 210	0.068	1	0.795^{NS}
Religion	Hinduism Christianity Islam Buddhism	31 3 1 7	317 18 3 65	1.832	3	0.608^{NS}
Educational Qualification	PG and above Graduate Secondary Primary	1 23 8 10	6 222 54 121	1.563	3	0.668^{NS}
Occupational status	Government job Private job Self employed Housewife Others	5 7 5 11 14	46 92 62 89 114	1.585	4	0.811^{NS}
Monthly family income	≤ 10,000 11,000 – 25,000 26,001 – 40,000 ≥ 40,001	13 18 3 8	112 192 32 67	0.483	3	0.923^{NS}
Type of family	Nuclear family Joint family	36 6	382 21	5.496	1	0.019*

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Have you ever been infected with COVID-19?	Yes No	10 5	35 72	9.572	1	0.001*
Has anyone been infected with COVID-19 in your family	Yes No	5 37	72 331	0.945	1	0.331^{NS}
Is everyone vaccinated against COVID-19 in your family	Yes No	40 2	377 26	0.184	1	0.668^{NS}

*p<0.05 level of significance NS-Non significant

DISCUSSION

Findings of the present study showed 80.5%, 15.5% & 4% of reproductive age group had good, average and poor knowledge respectively regarding COVID-19 vaccine. However, a contradicted study conducted in Bangladesh shows inadequate knowledge among the general population but more positive attitudes towards COVID-19 vaccine (6).

A community-based cross-sectional study among 492 participants in Ethiopia found the level of good knowledge; positive attitude and intention to accept the COVID-19 vaccine were 74%, 44.7%, and 62.6% respectively (7).

In a pre-campaign cross-sectional study revealed the knowledge of COVID-19′s symptoms; mode of transmission, and attitudes toward the disease was adequate. Researchers also revealed88.4% had heard of the vaccine, 59.3% advise others to take it, 56.8% would take it themselves, and 47.5% would take a second dose. Males and Omani were more willing to be vaccinated. The history of chronic disease, source of vaccine knowledge, and educational level were factors that affected the willingness to accept the vaccine (8).

CONCLUSION

COVID-19 is an infectious disease, caused by the recently discovered corona virus. In the midst of a COVID-19 pandemic WHO and partners were working together on the response- to track the pandemic, advise on critical interventions, distribution of medical supplies to those who were in need- they were racing in the development and transportation of safe and effective vaccines. Even though the present study revealed that majority of women of reproductive age group had good knowledge and favorable attitude towards COVID-19 vaccines. However, the health care worker can still promote the importance of vaccination on prevention of COVID-19 and also motivate those few percentages of community people thus help them develop a favorable and positive attitude towards COVID-19 vaccine. To reduce the vaccine hesitancy and increase the uptake, the policymakers need to design a well-researched immunization strategy to remove the vaccination barriers. To improve acceptance of vaccine among the community people, false reports and misconceptions about the COVID-19 vaccines must be dispelled. Dissemination of information can be carried out by healthcare professionals through any form/mode of communications thus, get people expose to the actual scientific facts.

Conflicts of Interest: None

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References

1) Coronavirus disease COVID-19. World Health Organization,2021. available from www.who.int
2) World Health Organization. 2020. 2019-nCoV outbreak is an emergency of international concern;
3) India: WHO Coronavirus disease (COVID-19) Dashboard, 2022. available from www.covid19.who.int
4) COVID-19 vaccines. World Health Organization,2022. available from www.who.int
5) Side effects of COVID-19 vaccine, 2020.available from www.who.int
6) Islam S, Siddique AB, Akter R, Tasnim R, Sujan SH, Ward PR, et al. Knowledge, attitudes and
7) perceptions towards COVID-19 vaccinations: a cross- sectional community survey in Bangladesh.2021;1–11.
8) Abebe H, Shitu S, Mose A. Understanding of COVID-19 Vaccine Knowledge, Attitude, Acceptance, and Determinates of COVID-19 Vaccine Acceptance Among Adult Population in Ethiopia. Infect Drug Resist. 2021 Jun 1; 14:2015-2025. doi: 10.2147/IDR.S312116. PMID: 34103948; PMCID: PMC8179743.
9) Al-marshoudi S, Al-balushi H, Al-wahaibi A, Al-khalili S, Al-maani A. Knowledge, Attitudes, and Practices (KAP) toward the COVID-19 Vaccine in Oman: A Pre-Campaign Cross-Sectional Study. 2021;1–14.