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KNOWLEDGE AND PRACTICE TOWARDS COVID-19 AMONG ELDERLY RESIDING IN SELECTED AREA OF URBAN AND RURAL COMMUNITY, KAMRUP, ASSAM: A COMPARATIVE STUDY

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ABSTRACT The knowledge andpractice towards COVID-19 play a major role in prevention and control of COVID-19 and thus reduce disease burden in the society.Due to the high probability of infection, complications, co-morbidity and mortality in older people, it seems necessary to focus on their level of knowledge and practices towards COVID-19. **Aim:** The aim of the study was to assess and compare the level of knowledge and practice towards COVID-19 among elderly residing in selected area of urban and rural community,Kamrup,Assam. **Methods and materials:** The research approach adopted for the study was quantitative researchapproach. Non experimental comparative research design and interview method was used in this study.Purposive sampling technique was used to select the samples.The study was conducted in the selected area of urban and rural community,Kamrup,Assam,who fulfilled the inclusion criteria.The tools used for the study were structured knowledge questionnaire and practice questionnaire in the form of inventory checklist to assess the level of knowledge and practice towards COVID-19 among elderly . **Result:**The study revealed that in the urban community, majority i.e 88% of the elderly had adequate knowledge,12% of the elderly had moderately adequate knowledge towards COVID-19 and in terms of practice towards COVID-19,majority i.e 88% of the elderly had adequate practice,12% of the elderly had moderately adequate practice.Whereasin the rural community,majorityi.e 94% of the elderly had adequate knowledge,6% of the elderly had moderately adequate knowledge towards COVID-19 andin terms of practice towards COVID-19, majority i.e 68% of the elderly had adequate practice,32% of the elderly had moderately adequate practice .There was no significant difference in the level of knowledge towards COVID-19 but there was significant difference in the level of practice towards COVID-19 among elderly between urban and rural community.There was positive co-relation between the knowledge and practice towards COVID-19 among elderly residing in urban and rural community.In the urban community it was found that there was significant association between the level of knowledge towards COVID-19 withoocupation,religion and type of family of the elderly and also there was significant association between the level of practice towards COVID-19 with previous information regarding COVID-19 of the elderly. None of the demographic variableshad statistically significant association with the level of knowledge and practice towards COVID-19 among elderly residing in rural community.

KEYWORDS : Knowledge, Practice, COVID-19, Elderly

INTRODUCTION:

Corona virus disease 2019(COVID-19) is a respiratory infection caused by severe acute respiratory syndrome corona virus 2 (SARS-CoV-2) originating in Wuhan China in 2019.COVID-19 has rapidly spread worldwide, and it was officially declared to be a pandemic by the World Health Organization(WHO) on March 11, 2020.[1]

Although all age groups are at high risk for developing COVID-19,elderly are the most vulnerable group for developing COVID-19 infection due to their decreased immunity,age related changes in the bodysystem and body reserves. Along with that,multiple associated co-morbidities like diabetes, hypertension, chronic kidney disease and chronic obstructive pulmonary diseasesetc and course of diseases also tends to be more severe in case of elderly resulting in higher mortality.[2] According to early estimates by China's National Health Commission (NHC),about 80% of those who died due to COVID-19 were over the age of 60 years.[3] Due to the high probability of infection, complications, and mortality in older people, it seems necessary to focus on health activities in this segment of society . Therefore, it is needed to be more aware of older people's health status in this situation.

Measurement of the public's knowledge and practices will help to provide a better understanding of the COVID-19 and the establishment of health-promoting and preventive strategies.Knowledge, practice studies provide baseline information to determine the type of intervention that may be required to change misconceptions and adopt healthful practice towards COVID-19.Public knowledge and awareness towards practice about COVID-19 are essential in suppressing its pandemic status.Hence,the study was aimed at assessing and comparing the level of knowledge and practice towards COVID-19 among elderly residing in selected urban and rural community .

OBJECTIVES:

1.To assess the knowledge and practice towards COVID-19 among elderly residing in selected urban and rural community of Kamrup, Assam.

2. To compare the knowledge and practice towards COVID-19 among elderly residing in selected urban and rural community of Kamrup, Assam.

3.To find out the correlation between knowledge and practice towards COVID-19 among elderly residing in selected urban and rural community of Kamrup ,Assam.

4.To find out the association between knowledge and practice score towards COVID-19 among elderly residing in selected urban and rural community of Kamrup, Assam with selected demographic variables.

REVIEW OF LITERATURE:

Section I: Literature related to COVID-19.

ChakrabortyK,Chatterjee M (2020)conducted a cross sectional study on psychological impact of COVID-19 pandemic on general population in West Bengal.The aim of the study was to assess the psychological impact of COVID-19 pandemic on general population in west Bengal.The results showed that near about 71.8% and one-fifth i.e 24.7% of the respondents felt more worried and depressed respectively.52.1% were preoccupied with the idea of contracting COVID-19 and 21.1% of the respondents were repeatedly thinking of getting themselves tested for the presence of COVID-19 despite having no symptoms.Majority i.e 69.6% of the respondents were worried about financial loss they were incurring during the period of lockdown.[4]

Section II: Literature related to knowledge towards COVID-19.

Yang k, Liu H,MaL,WangS,TianY,Zhang F et. al. (2020) conducted a study on knowledge, attitude and practice of residents in the prevention and control of COVID-19: An online questionnaire survey.The aim of the study was to explore the status quo and the influencing factors of resident's knowledge,attitude and practice in the prevention and control of coronavirus disease in China. A total of 919 valid questionnaires were collected. The scoring rates of resident's knowledge,attitude and practice were 85.2%, 92.9% and 84.4% respectively. Main factors influencing residents'knowledge included gender and occupation; while those influencing attitude were occupation,family economic level and knowledge; and those influencing practice includedplace of residence, occupation, with or without chronic disease, knowledge and attitude.Mass media was the primary approach for people to learn the knowledge and informationof COVID-19. Difficulties or challenges faced were mainly lack of protective equipments,concerns about the risk of prevention and

control, impact on daily life, work and study,lack of knowledge and consensus, psychological problems and information problems. [5]

Section III: Literature related to Practice towards COVID-19.

Alnasser AHA,JafferA,TawfiqA,KalifA,SulaimanA,Yousef M.F et.al. (2021) conducted a study web based cross sectional survey on public knowledge, attitudes, and practice towards COVID-19 in Saudi Arabia.The aim of the study was to assess the knowledge,attitude and practice of the people of Saudi Arabia.Thiscross-sectional web-based survey was performed with the participation of 4305 individuals agedover 15 years living in Saudi Arabia from 11 to 19 August 2020. They were included using thesnowball sampling method. The study revealed that out of the 4305 participants, 94.9% were Saudis, 60% females,and 45.4% were in the age group of 20–34 years, 61.7% married, and 49.3% from the Eastern Provinceof Saudi Arabia. Most of the participants demonstrated good KAP levels (89.6%, 87.2%, and 87.2%)towards the COVID-19 pandemic, respectively. In addition, most of the participants (85.8%) usedthe internet and social media as a source for COVID-19 information .The findingshowed that most of the participants demonstrated good knowledge of COVID-19, positive attitudes,and demonstrated good practices for preventing the spread of disease infection. [6]

RESEARCH METHODOLOGY

Research approach: Quantitative research.

Research design: Comparative research design.

Setting : The settings of the study was in Dhirenpara for urban community and for rural community in Bhalukabari, Chhaygaon ,kamrup, Assam.

Population : Elderly.

Target population: Elderly residing in Kamrup,Assam.

Accessible population: Elderly residing in Dhirenpara and Bhalukabari for urban and rural community of Kamrup,Assam.

Sample : Elderly residing in Dhirenpara and Bhalukabari for urban and rural community of Kamrup,Assam and who fulfilled the inclusion criteria.

Sample size: 100(50 from urban community and 50 from rural community)

Sampling technique: purposive sampling technique.

SAMPLE CRITERIA:

Inclusion criteria-

Elderly who were:

- present on the day of data collection and willing to participate.
- aged 65 years and above.
- could understand and speak assamese.

Exclusion criteria-

Elderly who were:

- critically ill.
- having hearing problem.
- mentally disabled.

VARIABLES-

Research variables: Knowledge and practice towards COVID-19.

Demographic variables: age, gender, education, occupation, religion, type of family, marital status, previous information regarding COVID19, source of information, history of any co-morbidity, any co-morbidity present in family.

TOOLS AND TECHNIQUE-

Tools : the tool in the study consists of demographic questionnaire and structured interview schedule consisting of 2 sections i.e knowledge questionnaire and practice inventory checklist.

Technique : Interview method

SCORING KEY:

Section II: structured knowledge questionnaire on COVID-19.

The correct answer was given score of 1(one) and wrong answer score 0(zero).The total score on knowledge towards COVID-19 was 22.

Category of knowledge level

Inadequate knowledge≤33%(score ≤ 8)

Moderately adequate knowledge =33-66%(score 9-15)

Adequate knowledge ≥ 66%(score ≥ 16)

Section III: Inventory checklist for practice towards COVID-19.

This part contains structured inventory checklist questionnaire for assessing the practice toward COVID-19. The inventory checklist contains 18 questions having "YES" and "NO" option. The score for "YES" is 1(one) and for "NO" option the score is 0 (zero).

Category of knowledge level

Inadequate practice ≤33% (score ≤ 6)

Moderately adequate practice =33-66% (score 7-13)

Adequate practice ≥ 66%(score ≥ 14)

Content validity of the tool:

The prepared instrument along with the problem statement and objectives was submitted to five experts of community health nursing,one expert from general medicine and one expert from community medicine for establishing content validity.

Reliability of the tool:

The reliability of the tool was done by using Split half method for knowledge and test retest method for practice questionnaire.It was revealed that the tool was reliable as reliability of the questionnaire was 0.84 and 0.82 for knowledge and practice questionnaire respectively.

Pilot study:

The pilot study was conduct from .10 samples were from urban and rural community using purposive sampling technique.And the study was found to be feasible.

Main study:

15th December 2020 to 15th January 2021.

RESULTS:

Table I: Frequency and percentage distribution of the respondents according to theirdemographic variables

n = 100(50+50)

Demographic Performa	Urban		Rural	
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)
Age group (in years)				
65-69 years	36	72	32	64
70-74 years	10	20	15	30
75-79years	4	8	3	6
Above 80 years	-	-	-	-
Gender				
Male	21	42	23	46
Female	29	58	27	54
Transgender	-	-	-	-
Educational status				
Illiterate	13	26	18	36
Primary school	23	46	25	50
High school	10	20	5	10
Higher secondary school	3	6	1	2
Graduate and above	1	2	1	2
Occupation				
Retired	13	26	4	8
Business	11	22	15	30
Housewife	23	46	24	48
Others	3	6	7	14
Religion				
Hinduism	36	72	18	36
Islam	14	28	32	64
Christian	-	-	-	-
Others	-	-	-	-
Marital status				

Married	50	100	50	100
Unmarried	-	-	-	-
Current status of married				
Stay together	20	40	27	54
Widow	17	34	15	30
Widower	13	26	6	12
Divorce	0	0	2	4
Separated	-	-	-	-
Type of family				
Joint family	6	12	16	32
Nuclear family	43	86	34	68
Extended family	1	2	0	0
Previous information regarding COVID-19				
Yes	49	98	50	100
No	1	2	0	0
Source of information				
Health professional	0	0	1	2
Mass media	20	40	13	26
Family and relatives	30	60	31	62
Friends	0	0	5	10
Other sources	-	-	-	-
Presence of co-morbidity				
Yes	18	36	17	34
No	32	64	33	66
Specific co-morbidity				
Hypertension	10	20	11	22
Diabetes	8	16	5	10
Asthma	0	0	1	2
Others, Specify	-	-	-	-
Presence of co-morbidity in family				
Yes	8	16	8	16
No	42	84	42	84
Specific co-morbidity in family				
Hypertension	6	12	6	12
Diabetes	2	4	2	4
Asthma	-	-	-	-
Others, Specify	-	-	-	-

Table II: Frequency and percentage distribution of the respondents according to their level of knowledge

n = 100(50+50)

Level of Knowledge	Urban Community		Rural Community	
	Frequency(f)	Percentage(%)	Frequency (f)	Percentage(%)
Inadequate≤33 %	-	-	-	-
Moderately Adequate (33%–66%)	6	12	3	6
Adequate (≥66%)	44	88	47	94
Total	50	100	50	100

The findings showed that in the urban and rural area, most of the elderly i.e 44(88%) and 47(94%) had adequate knowledge towards COVID-19respectively.The present study is supported by the study findings of Reuben R C , Margaret M A, Danladi, Ejembi P E whoconducted a cross sectional online survey with a semi structured questionnaire on knowledge, attitude and practice towards COVID-19: an epidemiological survey in North-central Nigeria among 589 participants with the aim to determine the levels of knowledge,attitude and practice towards COVID-19 among residence of Notrth- central Nigeria,where the findings revealed that majority of the respondents had good knowledge i.e 99.5% towards COVID-19.[7] However this findings is contradicted with the study done by Gebretsadk D, Gebramichael S, Belete MA who conducted a cross sectional study using structured questionnaire on Knowledge,attitude and practice towards COVID-19 among population visiting Dessie health centre for COVID-19 screening ,North Ethiopia with the aim to determine the magnitude of knowledge,attitude and practice toward COVID-19 among the population who visited the health center for COVID-19 screening.The study revealed that out of 384 participants, majority i.e 187(48.7%) of the respondents had poor knowledge towards COVID-19.[8]

Table III: Frequency and percentage distribution of the respondents according to the level of practice

n = 100(50+50)

Level of Practice	Urbarn Community		Rural Community	
	Frequency(f)	Percentage (%)	Frequency (f)	Percentage (%)
Inadequate (≤33%)	-	-	-	-
Moderately Adequate (33%–66%)	6	12	16	32
Adequate (≥66%)	44	88	34	68
Total	50	100	50	100

The findings showed that majorityi.e 44(88%) and 34(68%) of the elderly from urban and rural areahad adequate practice towards COVID-19 respectively.The present study is supported by the study findings of Yang k , Liu H,MaL,WangS,TianY,Zhang Fet. al.(2020) who conducted a study on knowledge and practice of residents in the prevention and control of COVID-19 with the aim to findout the knowledge,attitude and practice of residents towards COVID-19, where the findings revealed that the majority of the respondents i.e 84.4% had good practice towards COVID-196.However this findings is contradicted with the study done by Rabbani G M,AkterO,Hasan M Z,SamadN,MahmoodSS,Joarder T(2020) who conducted a study with the aim of assesing knowledge, attitude and practice towards COVID-19 among the people of Bangladesh during the pandamic, where the findings revealed that 24% of the respondents had favorable practice towards COVID-19.[9]

Table IV: Comparison of knowledge and practice towards COVID-19 between elderly residing in urban and rural community

n= 100(50+50)

Variables	Area	Mean	S.D	Student Independent 't' test value
Knowledge	Urban	18.01	2.34	t = 1.496 p=0.138, N.S
	Rural	17.31	2.36	
Practice	Urban	14.32	2.07	t = 3.511 p=0.001, S***
	Rural	12.88	2.02	

***p<0.001, S – Significant, N.S – Not Significant

The table IV shows that, the mean score for knowledge towards COVID-19 among elderly of urban and rural community include 18.01±2.34 and 17.31±2.36 respectively.The calculated student independent 't' test value of t = 1.496 was not found to be statistically significant which infers that that there was no significant difference in the level of knowledge towards COVID-19 among elderly between the urban and rural community.

The findings also showed that there was significant difference in the level of practice towards COVID-19 among elderly between the urban and rural community.The present study is supported by the study findings of Yue S et.al (2020) on knowledge ,attitudes and practices of COVID-19 among urban and rural residents in China with the aims to understand the knowledge, attitudes and practices of COVID-19 in the Chinese context. The study findings revealed that COVID-19 practices was significantly different in urban and rural area i.e urban area was associated with higher practice score.[10]

Table V: Correlation between knowledge and practice towards COVID-19 among elderly residing in urban and rural community.

n = 100(50+50)

Area	Variables	Mean	S.D	Karl Pearson's Correlation Value
Urban	Knowledge	18.01	2.34	r = 0.126 p=0.384, N.S
	Practice	14.32	2.07	
Rural	Knowledge	17.31	2.36	r = 0.448 p=0.001, S**
	Practice	12.88	2.02	

**p<0.01, S – Significant, N.S – Not Significant

The calculated Karl Pearson's Correlation value of r = 0.126 between knowledge and practice among elderly in the urban community shows a positive correlation but was not found to be statistically significant.

Whereas in the rural community, the calculated Karl Pearson's Correlation value of r = 0.448 between knowledge and practice among elderly shows a moderate positive correlation which was found to be statistically significant at p<0.01. This clearly infers that when the knowledge towards COVID-19 among elderly in the rural community increases their practice level also increases.

Table VI: Association of level of knowledge towards COVID-19 among elderly with selected demographic variables in the urban and rural community

n = 100(50+50)

Demographic Variables	URBAN				RURAL			
	Chi square	Df	P value	Remarks	Chi square	df	P value	Remarks
Age	4.072	2	0.131	NS at P >0.05	0.207	2	0.902	NS at P>0.05
Gender	0.179	1	0.672	NS at P >0.05	2.719	1	0.099	NS at P>0.05
Educational status	0.748	4	0.945	NS at P >0.05	5.674	4	0.225	NS at P>0.05
Occupation	10.369	3	0.016	S at P <0.05	3.457	3	0.326	NS at P>0.05
Religion	10.355	1	0.001	S at P≤ 0.001	1.795	1	0.180	NS at P>0.05
Marital status	-	-	-	-	-	-	-	-
If married	2.043	2	0.360	NS at P>0.05	2.719	3	0.437	NS at P>0.05
Type of family	19.315	2	0.0001	S at P ≤0.001	0.003	1	0.959	NS at P>0.05
Previous information regarding COVID-19	0.139	1	0.709	NS at P>0.05	-	-	-	-
If yes,source of information	0.126	1	0.722	NS at P>0.05	1.956	3	0.582	NS at P>0.05
Do you have co-morbidities?	0.021	1	0.885	NS at P>0.05	0.001	1	0.980	NS at P>0.05
If yes,specify the co-morbidities	0.442	3	0.931	NS at P>0.05	3.457	3	0.326	NS at P>0.05
Do you have any history of co-morbidity in family?	0.002	1	0.962	NS at P>0.05	0.608	1	0.436	NS at P>0.05
If yes,co-morbidities	0.397	3	0.941	NS at P>0.05	0.701	3	0.873	NS at P>0.05

S – Significant, N.S – Not Significant

The table VI revealed that, in the urban community, the demographic variables such as occupation,religion and type of family had shown statistically significant association with the level of knowledge towards COVID-19 among elderly with chi-square value of (x^2=10.369, p=0.016) at p<0.05,(x^2=10.355, p=0.001) and (x^2=19.315, p=0.0001) at p≤0.001. The other demographic variables had not shown statistically significant association with level of knowledge towards COVID-19 among elderly residing in urban community.

Whereas, in the rural community, none of the demographic variableshad shown statistically significant association with the level of knowledge towards COVID-19 among elderly residing in rural area.

TableVII:Association of level of practice towards COVID-19 among elderly with selected demographic variables in urban and rural community.

n = 100(50+50)

Demographic Variables	URBAN				RURAL			
	Chi square	Df	P value	Remarks	Chi square	df	P value	Remarks
Age	0.705	2	0.703	NS at P>0.05	4.647	2	0.098	NS at P>0.05
Gender	1.703	1	0.193	NS at P>0.05	0.048	1	0.827	NS at P>0.05
Educational status	0.748	4	0.945	NS at P>0.05	8.364	4	0.079	NS at P>0.05
Occupation	2.157	3	0.540	NS at P>0.05	0.685	3	0.877	NS at P>0.05
Religion	1.637	1	0.201	NS at P>0.05	3.039	1	0.081	NS at P>0.05
Marital status	-	-	-	-	-	-	-	-
If married	0.914	2	0.633	NS at P>0.05	4.725	3	0.193	NS at P>0.05
Type of family	1.110	2	0.574	NS at P>0.05	0.327	1	0.567	NS at P>0.05
Previous information regarding COVID-19	7.483	1	0.006	S at P<0.05	-	-	-	-
If yes, source of information	0.126	1	0.722	NS at P>0.05	3.474	3	0.324	NS at P>0.05
Do you have co-morbidities?	0.021	1	0.885	NS at P>0.05	2.684	1	0.101	NS at P>0.05
If yes,specify the co-morbidities	1.705	3	0.636	NS at P>0.05	4.218	3	0.239	NS at P>0.05
Do you have any history of co-morbidity in family?	0.002	1	0.962	NS at P>0.05	0.132	1	0.716	NS at P>0.05
If yes, specify theco-morbidities in family	0.397	3	0.941	NS at P>0.05	2.307	3	0.511	NS at P>0.05

p≤0.001,p<0.05 , S – Significant, N.S – Not Significant

Table VII revealed that, in the urban community, the demographic variable i.eprevious information regarding COVID-19 had shown statistically significant association with level of practice towards

COVID-19 among elderly with chi-square value of (x^2=7.483, p=0.006) at p<0.01 . And the other demographic variables had not shown statistically significant association with level of practice towards COVID-19 among elderly residing in urban community.

Whereas, in the rural community none of the demographic variable had shown statistically significant association with level of practice towards COVID-19 among elderly residing in rural community.

CONCLUSION:

The findings revealed that majority of the study participants were knowledgeable and had adequate practice towards COVID-19.The analysis infers that there was no significant difference in the level of knowledge towards COVID-19 among elderly between urban and rural community but it is found that there was significant difference in the level of practice towards COVID-19 among elderly between urban and rural community.The results of this study suggest that,targeted health education interventions should be directed to this particular vulnerable population,who may be at risk of contracting COVID-19.lThe findings may help policymaker identify the target populations,for COVID-19 prevention and health education.

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