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RESEARCH ARTICLE

"A STUDY ON KNOWLEDGE REGARDING UPPER RESPIRATORY TRACT INFECTION (URI) AND ITS PREVENTION AMONG MOTHERS OF UNDER FIVE CHILDREN, IN SELECTED COMMUNITY AREA, DEHRADUN"

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Abstract

Aim: A descriptive cross-sectional study was conducted with aim to assess the knowledge regarding upper respiratory tract infection (URI) and it's prevention among mothers of under five children, in selected community area, Dehradun and to find out association between knowledge score of mothers regarding upper respiratory tract infection & its prevention and selected socio-demographic profile.

Materials and Methods: After obtaining the ethical permission from the ethical committee a quantitative research approach with descriptive cross-sectional study was conducted to assess the knowledge regarding upper respiratory tract infection and its prevention among mothers of under five children in selected community area of Dehradun. Total 60 mothersof under five children were selected based on inclusion criteria by using purposive sampling technique through structured knowledge questionnaire tool. The exclusion criteria for mothers of under five children were who are sick during data collection, having any chronic illness, children above five years and for children were who are physically disabled and mentally retarded children, children had URI with other disease condition.

Results: In the present study revealed thatmore than (65%) mothers were between the age group of 26-33, nearly (40%) mothers were graduated andthe mother who are employed were (67%), (60%) mothers having girl child,(55%) mothers having child between 3-5 years and(75%) children were immunized up to their age. The result findings conclude that 18% (10) of mother had excellent knowledge regarding prevention of URI approximately half of 45% (27) of study participants had good knowledge 28% (17) of mothers had average knowledge and only 10% (6) of study participants had poor knowledge regarding prevention of URIThe result finding reveals that there is association between socio- demographic variables and knowledge score of mothers.

Conclusion: The present study concludethathalfof the 45% (27) mothers had good knowledge regarding URI and itsprevention, 18%

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(10) mothers having excellent knowledge and 10% (6) mothers having poor knowledge. Thus, it is concluded that some of the mothers need training and teaching to improve knowledge regarding Upper respiratory tract infection and its prevention among mothers of under five children and decrease the childhood acute respiratory infection.

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Introduction:-

Respiration is defined as the movement of oxygen from the outside air to the cell within the tissue and the removal of carbon dioxide from within the tissue of the body.[1]Acute respiratory infections (ARIs) is prime cause of morbidity and mortality worldwide.[2,3] It is an infectious process that occurs in any segment of the upper airway; it includes the common cold, mild flu, tonsilitis, laryngitis, sinus infections; cough is most common symptom of URI other common symptoms including runny nose sore throat, sneezing and headache.[4] Respiratory infections contribute one third of the deaths in under five children in developing countries[5].The WHO estimates that respiratory infection has greater percentage than diarrheal disease, cancer, HIV infections, ischemic heart disease, malaria. The percentage accounted by respiratory infection is around 6% of total global burden of diseases in developing countries[6].

Children from the states located at the northern region of India showed relatively high prevalence of ARI. Jammu and Kashmir (6.4%), Uttarakhand (4.9%), Uttar Pradesh (4.7%) and Punjab (4.6%) are among the states with relatively high prevalence of ARI. Among the states in the east region, West Bengal had the highest percentage of children suffering from ARI (3.3%). A state in the northeast region of India, Meghalaya (5.8%) had the highest prevalence[7]

According to Mutalik AV, Raje VV (2017) Countries like India, which are still in developing, under five mortality rate is 34 deaths per thousand live birth and every sixth child in the world is Indian and every fourth child who dies is an Indian. Among which 29% is related to acute respiratory tract infection. In India, the burden of acute URTI is significant, particularly in rural and low-income settings. According to a study published in the Indian Journal of Pediatrics in 2017, the incidence of acute URTI was found to be 27.8% among children under five[8]. The prevalence of ARIs for the preceding month was 50.4%. It was higher among the children living in the rural areas (54.2%) compared to the children living in the urban areas (46.7%) ($p = 0.01$). The prevalence of ARIs was reported to be 51.4 and 49.4% in boys and girls, respectively. In the multivariate analysis, the researchers found that living in rural areas ($p = 0.01$) and parental smoking ($p = 0.04$) were significantly associated with the ARIs[9].

Materials and Methods:-

Ethical issue:

The study was carried out after receiving administrative permission from principal HCN, SRHU. Ethical permission was taken from ethical committee, SRHU and written informed content was taken from the study participants.

Study Design and Setting:

In the present study, Descriptive cross sectional research design was used to assess the knowledge regarding upper respiratory tract infection (URI) and its prevention among mothers of under five children

The study is done in the community area of Ranipokhari, Dehradun, Uttrakhand. Total 60 mothers of under five children selected by purpsosive sampling technique.

Study Tool:

The tool for data collection is divided into two parts:

Section A:

Socio-Demographic profile

Section B:

Structured knowledge questionnaire

Data Analysis
Section – 1

Table no. 1:- Frequency and percentage distribution of socio – demographic variables of the research study(n=60).

S. No.	Demographic variables	Frequency	Percentage %
1.	Mother's profile: Age – • 18-25 • 26-33 • 34-42	 17 39 4	 28.33% 65% 6.67%
2.	Education – • No formal education • Primary • Secondary • Graduation and above	 1 14 24 21	 1.67% 23.33% 40% 35%
3.	Marital status – • Married • Widow • Divorced	 60	 100%
4.	Employment status- • Employed • Unemployed	 40 20	 66.67% 33.3%
5.	Family Income – • <5,000 • 5,000 – 10,000 • 10,000 and above	 3 26 31	 5% 43.33% 51.67%
6.	Family type – • Nuclear family • Joint family • Extended family	 24 34 2	 40% 56.67% 3.33%
7.	Ordinal no. of child – • 1st • 2nd • 3rd and above	 33 24 3	 55% 40% 5%
8.	Previous knowledge – • Yes • No	 40 20	 66.67% 33.33%
9.	Child's profile: Age of child – • <1 year • <3 years • 3-5 years	 4 23 33	 6.67% 38.33% 55%
10.	Gender – • Male/boy child • Female/girl child	 24 36	 40% 60%

11.	Child birth weight – • <2.5 • 2.5-3 • >3	 14 34 12	 23.33% 56.67% 20%
12.	Immunization status – • Yes • No	 45 15	 75% 25%
13.	Milk type during infancy – • Mother's milk • Cow's milk • Formula milk	 32 22 6	 53.33% 36.67% 10%
14.	Weaning started at • At 6th month • After 6 months	 36 24	 60% 40%

Table no. 1:This data represents that most of the study participants i.e.,65% (39) are belong to age group of 26-33. Only 40% (24) mothers have secondary education and 35% (21) are graduate. Majority of the mothers are working woman. More than half 56.67% (34) of study participants had joint family. More than half children belong to age group of 3-5 years 55% (33). 75% (45) of children immunized up to their age. Majority of the children had birth weight of 2.5-3 kg. Only 66.67(40) % of study participants had previous knowledge regarding prevention of URI.

Table no. 2:- Mean, stand deviation, median score of knowledge regarding URI (n=60).

Content	**Range**	**Mean SD**	**Median**
Knowledge score	**8-19**	**13.62±2.41**	**14**

Table no. 2: illiterates that the mean ± standard deviation of the knowledge score is (13.62±2.41), range (8-19), median (14).

Table no. 3:- Knowledge performance of participants regarding URI(n=60).

S.NO.	**Performance**	**Category**	**Frequency**	**Percentage**
1.	**Poor**	**8-10**	**6**	**10%**
2.	**Average**	**11-13**	**17**	**28.33%**
3.	**Good**	**14-16**	**27**	**45%**
4.	**Excellent**	**17-19**	**10**	**16.7%**

Table no. 3: Knowledge performance of participants towards URI 10% of the participants has poor knowledge, 28% of participants has average knowledge, 45% has good knowledge and 16.7% has excellent knowledge regarding URI.

Fig 1:- Pie diagram showing Level of Knowledge.

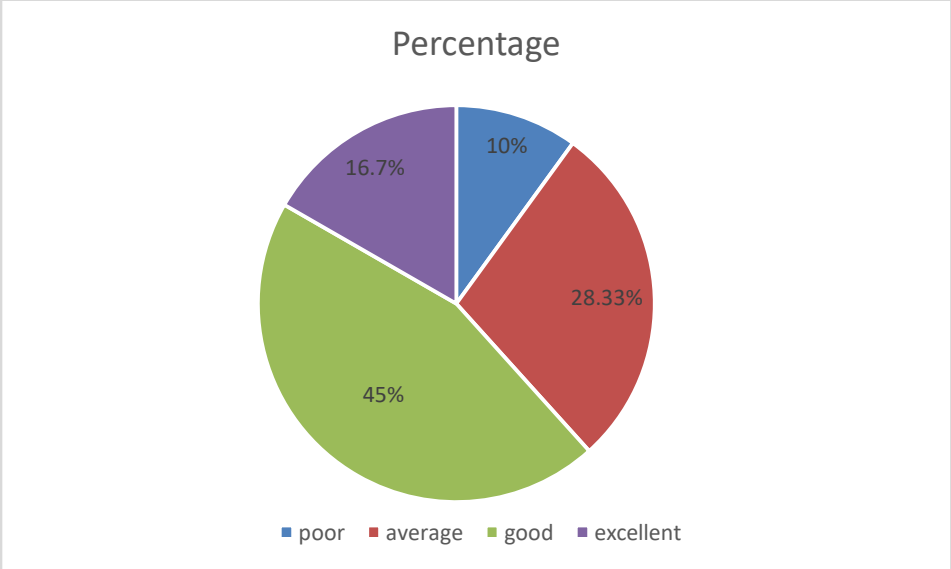

Table no.3: This data represents that 16.7% (10) of mothers had excellent knowledge regarding prevention of URI. Approximately half of 45% (27) of study participants had good knowledge 28.33% (17) of mothers had average knowledge. Only 10% (6) of study participants had poor knowledge regarding prevention of URI.

Table no.4:- Association between the knowledge score and selected sociodemographic variable:(n=60).

S.NO.	Demographic variables	Median<15	Median>15	Chi square	P value
1.	Mother's profile: Age – • 18-25 • 26-33 • 34-42	**5** **14** **3**	**12** **25** **1**	**2.92**	**0.231****
2.	Education – • Primary • Secondary • Graduation and above	**10** **6** **7**	**5** **18** **14**	**7.12**	**0.028****
3.	Marital status – • Married • Widow • Divorced	**23**	**37**		
4.	Employment status • Employed • Unemployed	**21** **2**	**19** **18**	**10.18**	**0.001***
5.	Family Income – • 5,000 – 10,000 • 10,000 and above	**9** **14**	**20** **17**	**1.26**	**0.260***

6.	Family type – • Nuclear family • Joint family	**6** **17**	**18** **19**	**3.008**	**0.082***
7.	Ordinal no. of child – • 1st • 2nd and above	**12** **12**	**21** **15**	**0.40**	**0.525***
8.	Previous knowledge – • Yes • No	**12** **11**	**28** **9**	**3.53**	**0.060***

Table no.4:- This data represents that only 2 socio demographic variables i.e., educational status and employment status had significant association with knowledge score of mothers regarding prevention of URI. Rest did not show any significant association with knowledge score of mothers.

9.	Child's profile: Age of child – • 1yr-<3yr • 3yr-5yr	**11** **12**	**16** **21**	**0.120**	**0.728***
10.	Gender – • Male/boy child • Female/girl child	**8** **15**	**16** **21**	**0.423**	**0.515***
11.	Child birth weight – • <2.5 • 2.5<3 • 3<3.5	**6** **12** **5**	**8** **22** **7**	**0.31**	**0.856****
12.	Immunization status – • Yes • No	**17** **6**	**28** **9**	**0.023**	**0.878***
13.	Milk type during infancy – • Mother's milk • Cow's milk	**14** **9**	**18** **19**	**0.85**	**0.356***
14.	Weaning started at – • At 6th month • After 6 months	**16** **7**	**20** **17**	**1.42**	**0.233***

(P value<_0.05)

Discussion:-

More than half (65%) were between the age group of 26-33, Nearly (40%) mothers were graduated, more than half (66.67%) mothers were employed, (56.67%) mothers from joint family, (60%) mothers having girl child, (55%) mothers were having the child between 3-5 years, (60%) mothersstarted weaning at 6 months, (75%) children were immunized up to their age, only (66.67%) of study participants had previous knowledge regarding prevention.

The research was supported by the findings of a study which was done by **Sukh Manpreet Kaur et.al. (2022)** conducted a descriptive study a structured knowledge questionnaire was given to assess the knowledge regarding importance of immunization and prevention of URI in Mandi Gobindghar, Punjab. Total sample size were 30 mothers of under five children were selected by using known probability sampling technique. The result of the study

showed that the mothers have adequate knowledge regarding importance of immunization and prevention of URI. The overall knowledge towards importance of immunization and prevention of URI was found to be favorable (55.20%)[10].

The maximum score of Knowledge questionnaire was 19 and score was categorized into 4 level i.e., Excellent, Good, Average, Poor. So, in the present study it is categorized as follow:

Excellent level of knowledge on (17-19), Good level of knowledge on (14-16), Average level of knowledge on (11-13), Poor level of knowledge on (8-10) from the gained knowledge score. The research was supported by the finding of a study which was done by **Kumar p et.al. (2022)** was conducted a descriptive cross-sectional study which shows that the knowledge of mother regarding prevention and management of acute respiratory tract infection (ARI). Total sample size 100 mothers of under-five Children were selected by using convenient sampling technique. The result concluded that 20% of mothers have good knowledge in prevention and 33% had good knowledge in management of ARI[11].

Conclusion:-

Based upon the findings, it is concluded that the following conclusions were drawn on the basis of the present study.

From the findings showed that out of 60 mothers in which nearly one-third (28.4%) havingaverage knowledge followed by 45% good and 10% poor knowledge.

From the findings of the study, it can be concluded that the selective variables and the level of knowledge having significant association.

Recommendation:-

1. The government should be produced enough community health care worker to fill the gap.
2. The government should be making a policy to arrange the workshop for mothers of under five children in community area to improve the knowledge and prevention of upper respiratory tract infection.

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