



## A study to assess knowledge on prevention of mumps among adults in Dakkilivaripalem, Nellore.



**Ms. Konde Hari Priya,**  
*Nursing Tutor*  
*Narayana College of Nursing,*  
*Nellore.*

**Dr. Indira. S,**  
*Principal,*  
*Narayana College of Nursing,*  
*Nellore, AP.*

**Mrs. A. Viji**  
*Dept of OBG*  
*Narayana College of Nursing,*  
*Chinthareddyapalem, Nellore.*  
*Scholar of Lincoln University of Malaysia.*

**Abstract: Background:** mumps was a common childhood illness Mumps is an acute infectious disease caused by a RNA virus classified as genus virus family paramyxoviridae which has a predilection for glandular and nervous tissue. This disease can be prevented through vaccinations. Mumps is prevented through the vaccination such as MMR vaccination. The MMR vaccination is given to children's in two doses. The first vaccine given at the age of 12 to 16 months and second is on 2 to 6 years of time period. These are the important periods to be administered the MMR vaccine. The vaccine is given in IM route. In adults when there is a risk to get mumps then we should be administer the vaccination to risk group. **Aims:** To assess the knowledge on prevention of mumps among adults. To find out the association between the prevention of mumps with their selected socio demographic variables. **Methodology:** The main study was carried out at Dakkilivaripalem in Nellore. The data collection procedure was carried out for a period of 1 week from 6.4.18 to 12.4.18. There was 50 samples has been collected. There was a non probability sampling technique of the adults. The obtained data was analyzed by using the descriptive and inferential statistics and chi- square. **Results:** Results shows on level of knowledge on prevention of mumps among 50 adults, 08(16%) among adults are have Bgrade, 7(14%) adults have a C grade, 35 (70%) adults have a D grade. **Conclusion:** The study concluded that most of the majority of the adults are having the D grade that level of knowledge regarding prevention of mumps 08(16%) are have Bgrade,7(14%) have a C grade, 35 (70%) have a D grade. **Key words: mumps, prevention, adults.**

**Introduction:** Mumps is one of many viral illnesses that can be prevented with immunizations. Before the vaccine was developed, mumps was a common childhood illness Mumps is an acute infectious disease caused by a RNA virus classified as genus virus family paramyxoviridae which has a predilection for glandular and nervous tissue. Clinically the disease is recognized by non -suppurative enlargement and tenderness of one [or] both the parotid glands other organ may also be involved. The incubation period from 2-4weeks usually 14-18days.Mumps is prevented through the vaccination such as MMR vaccination. The MMR vaccination is given to children's in two doses. The first vaccine given at the age of 12 to 16 months and

second is on 2 to 6 years of time period. These are the important periods to be administered the MMR vaccine. The vaccine is given in IM route. In adults when there is a risk to get mumps then we should be administer the vaccination to risk group.

**Need for study:** In worldwide New York state department of health identified epidemiology standardized mumps case in which 790 mumps cases they reported 64% were male and highest attack rate was among 11-17years age group [99%.] cases per 1000 individual [s] of the 650 cases with known vaccination history 83.6% had documentation of 2doses of mumps containing vaccine no death reported 2 major exposure setting were school



[71.8%] and household [22.5%].

In 2006, the United States experienced a multi-state mumps outbreak involving more than 6,500 reported cases.

In 2011-2013, there were several smaller mumps outbreak reported on college campuses in California, Virginia, and Maryland. In 2014, several outbreak affiliated with universities were reported from multiple states, including one community outbreak in Ohio linked to a university that involved over 400 people, and an outbreak affecting the National Hockey League. In 2016-2017, a large outbreak in a close-knit community in northwest Arkansas resulted in nearly 3,000 cases. However, in the recent years, there has been an increase in the number of reported cases, from 229 cases in 2012 to 6,366 cases in 2018.

In National surveillance data were used to described the epidemiology of mumps cases from 2001 to 2015 the incidence started to increase from fewer than 100 cases per 100 000. The incidence rate was highest among males aged 15-17 years during 2013-2018, reaching 508.7 per 100 000 person .

In India, the Kerala was having mumps outbreak reported in 301 number of people was admitted with mumps 58% in 11-19years old in Karnataka cases of a typical mumps that is 50% Between age group of 5-13years. In Kolkata 104 cases reported the highest level is 4.7% in 6-10years of years of group 11.7% above 15years John tj 2016; Gujarat - 14 cases, Tamil Nadu-8, Maharashtra-15, Punjab-22, Haryana-14, Kerala-38 [82cases].

In Andhra Pradesh there are nearly 1260 cases has reported in that 64%.cases are at age of 11-17years. In Nellore mumps outbreak reported 28 cases are suffering with mumps in that 58% cases are of age group of 15-19years 865 are vaccinated and cared no history of death cases.

**Statement of the problem:** A study to assess the knowledge on prevention of mumps among adults in Dakkilivaripalem, Nellore.

**Objectives:**

➤ To assess the knowledge on prevention of mumps among adults.

➤ To find out the association between the prevention of mumps with their selected socio demographic variables.

**Operational definitions:**

**Assess:** It refers to evaluating knowledge on prevention of mumps among adults.

**Knowledge:** It refers to awareness of prevention of mumps among adults.

**Mumps:** Mumps is a communicable disease caused by RNA virus classified as genus rubella virus.

**Prevention:** In this study prevention of mumps by MMR vaccination.

**Adults:** It refers to male and female individual's age group between 20-60years who are residing in Dakkilivaripalem.

**Assumption:** Adults may have some knowledge regarding prevention of mumps.

**Delimitation:** The study is delimited to;

1. Sample size is 50 adults only.
2. The duration of data collection period is 2 weeks.
3. Adults residing in Dakkilivaripalem, Nellore

**Projected outcome:** The study would help to determine the level of knowledge regarding prevention of mumps among adults in Dakkilivaripalem, Nellore.

**Review of literature**

**Part -A: Review of literature:**

Section-I: Studies related to mumps among adults.

Section-II: Studies related to prevention of mumps among adults.

**Part-I**

**Section-I: Studies related to mumps among adults**

**Sigrid gouma (2016)** conducted study on Mumps virus pathogenesis: Insights and knowledge gaps The recent mumps outbreaks among MMR vaccinated persons have raised questions about the biological mechanisms related to mumps symptoms and complications in the background of waning immunity. Contrary to other paramyxoviruses, the understanding of mumps virus pathogenesis is limited, and further in-depth clinical studies are required to provide answers to important research questions.

**Korean (2018)** conducted study on Reemergence of mumps explains that The mumps virus is a single-



stranded, non-segmented, negative-sense RNA virus belonging to the Paramyxoviridae family. Mumps is characterized by bilateral or unilateral swelling of the parotid gland. Aseptic meningitis is a common complication, and orchitis is also common in adolescents and adult men. Diagnosis is based on clinical findings, but because of high vaccination coverage, clinical findings alone are not sufficient for diagnosis, and laboratory confirmation is needed. Mumps is preventable by vaccination, but despite high vaccination coverage, epidemics occur in several countries, including Korea. Many hypotheses are suggested for these phenomena. In this review, we investigate the reason for the epidemics, optimal methods of diagnosis, and surveillance of immunization status for the prevention of future epidemics.

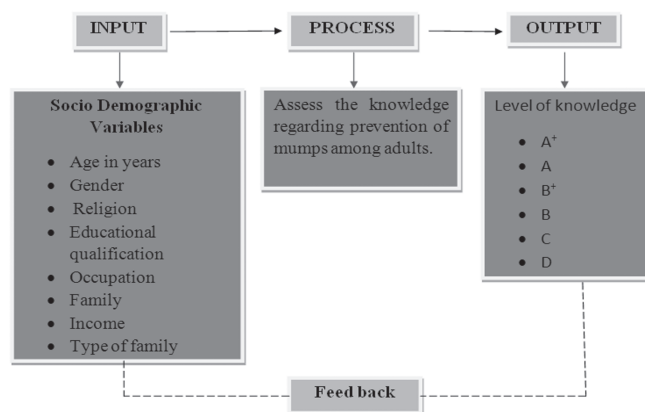
## Section-II: Studies related to prevention of mumps among adults.

**Leena n patel (2018)** conducted study on Mumps Outbreak among a Highly Vaccinated University Community on New York City explains that On 14 January 2014, a vaccinated student presented with parotitis by a method of Mumps case investigations included patient interviews, medical records review, and laboratory testing including mumps serology and RT-PCR. Results that Fifty-six NYC residents with mumps were identified with onset between 12 January and 30 April 2018. Fifty-three cases (95%) were university students, 1 (2%) was a staff member, and 2 (4%) had epidemiologic links to the university. Three cases were hospitalized, including 1 of 2 cases with orchitis. Fifty-four (96%) cases had received e"1 mumps-containing vaccine, 1 (2%) was unvaccinated due to religious exemption, and 1 (2%) had unknown vaccination status. Two of the 44 (5%) cases tested by serology were mumps IgM positive, and 27 of the 40 (68%) tested by RT-PCR were positive. Concluded that Mumps outbreaks can occur in highly vaccinated populations. Mumps should be considered in patients with parotitis regardless of vaccination status.

## PART - II

### CONCEPTUAL FRAME WORK:

**Note:** Is not included under this study is included under this study.



**Figure No-1: Conceptual frame work based on system model of gold stain (1990)**

### Methodology:

**Research approach:** Quantitative research approach.

**Research design:** Descriptive

**Setting of the study:** The study was conducted in Dakkilivaripalem, Nellore. It is a urban area consisting of 60 houses having 1250 population (630 males and 620 females) Which is located 6 Km away from Narayana college of nursing, Nellore. Most of the people are using private and government vehicles transportation. Government and private schools presented, Temple presented, and people utilize health care service from the urban health center situated in Dakkilivaripalem, Nellore.

**Population:** The population includes adults.

**Target population:** Target population for the present study includes all adults.

**Accessible population:** The accessible population for the present study includes all adults who are residing in Dakkilivaripalem, Nellore.

**Sample:** The sample of the present study includes the adults in Dakkilivaripalem and who fulfills the inclusion criteria.

**Sample size:** The sample size 50 adults.

**Sampling technique:** Non probability convenience sampling technique was used to select the samples for the study.

### Criteria for sample collection:

#### Inclusion criteria:

- Residing in Dakkilivaripalem, Nellore
- Willing to participate in the study
- Who are available at the time of data collection





**Exclusion criteria:**

- Who are not available at the time of data collection
- Who are not willing to participate in the study
- Who are sick at the time of data collection

**Variables:** Variables of the study was research variables and socio demographic variables.

**Demographic variables:** Demographic variables includes age, gender, religion, educational qualification, occupation, family income, marital status, place of residence, type of family and source of information.

**Research variables:** Includes to assess the knowledge regarding on prevention of mumps among adults in Dakkilivaripalem, Nellore.

**Method of data collection:** Structured questionnaire was adopted for the data collection.

**Description of the tool:** The tool was divided in to 2 parts.

**Part-I:** It deals with the socio demographic variables of the knowledge regarding on causes and complication of mumps among adults they are age, gender, religion, educational qualification, occupation, family income, type of family and source of information.

**Part-II:** It deals with structured questionnaire to assess the knowledge regarding on causes and complications of mumps among adults consists 30 closed ended multiple choice questions which was developed by the investigator. The tool consists of 30 items, each correct response has been scored as ‘1’ mark and wrong answer was ‘0’ mark.

**Score interpretation:**

Grade	Score
A+	More than 85%
A	More than 75%
B+	More than 65%
B	More than 55%
C	More than 50%
D	Less than 50%

**Content validity:** Content validity of the tool was obtained from the 2experts in the field of nursing department.

**Reliability:** Reliability was established by split half method by using Karl Pearson correlation coefficient.

The reliability value is 1.  $r=0.9$ .  $R=2r/1+r$ .

**Feasibility:** Feasibility of tool was tested by conducting pilot study among adults in Dakkilivaripalem, Nellore.

**Pilot study:** The pilot study was done on 4.4.18 and 5.4.18 in Dakkilivaripalem at Nellore, with 4 samples. Non probability convenience sampling technique was used for the selecting samples. Data collection for 30 minutes to complete the questionnaire for each sample, it was found feasible to conduct the main study.

**Data collection procedure:** The main study was carried out at Dakkilivaripalem in Nellore. The data collection procedure was carried out for a period of 1 week from 6.4.18 to 12.4.18 after obtaining formal permission from the medical officer. The sample were selected by non probability convenience sampling technique, adults who fulfilled the inclusion criteria were included for the present study. After obtaining informed consent from them and self administered questionnaire was adopted to collect the data. It tooks 30 minutes to complete the questionnaire.

The data collection was done for a period of 7 days, each day 8 samples were selected between 9 am to 12 pm.

**Plan for data collection:** The data was analyzed in terms of objectives of the study by using descriptive and inferential.

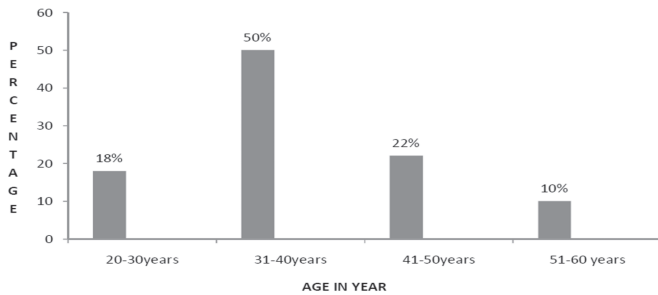
Data Analysis	Method	Remarks
<b>Descriptive statistics</b>	Frequency, Distribution of socio percentage, demographic variables mean and standard deviation	To assess the knowledge regarding on prevention of mumps among adults in Dakkilivaripalem, Nellore.
<b>Inferential statistics</b>	Chi-square	To find out the association between the level of knowledge regarding on prevention



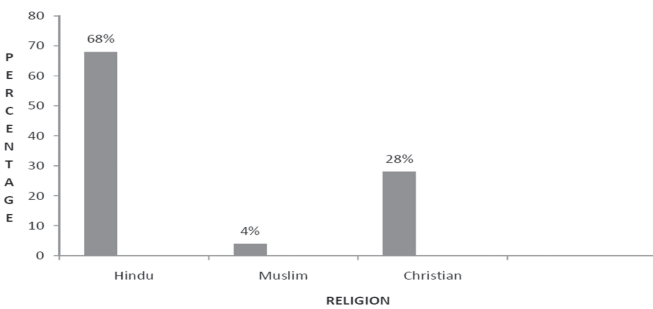


of mumps among adults in Dakkilivaripalem, Nellore with their selected socio demographic variables.

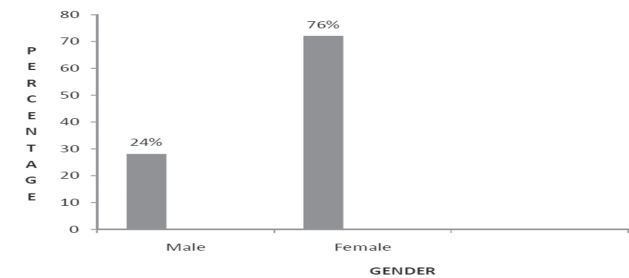
**Analysis:** Frequency and percentage distribution of socio demographic variables of adults.



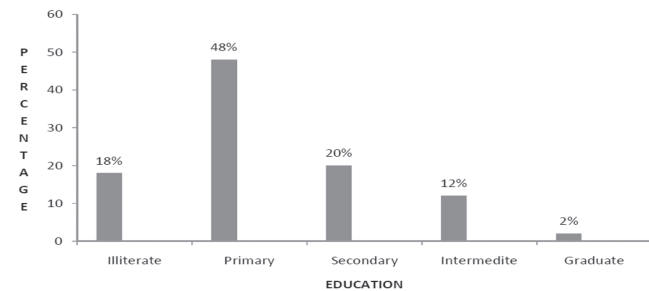
**1. Frequency and percentage distribution among adults based on age in years.**



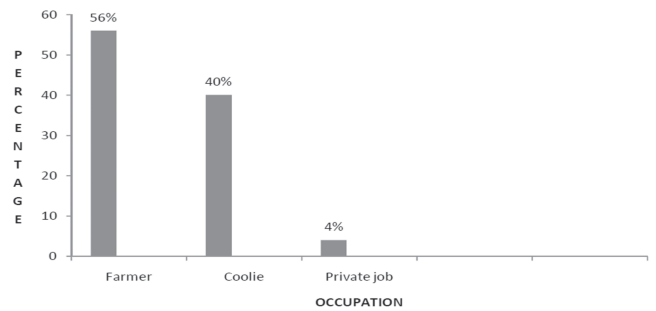
**2. Frequency and percentage distribution of adults based on religion.**



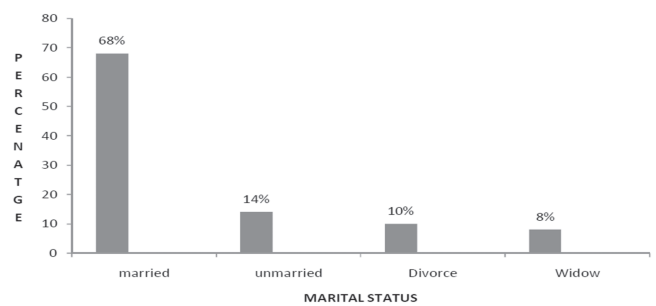
**3. Frequency and percentage distribution of adults based on gender.**



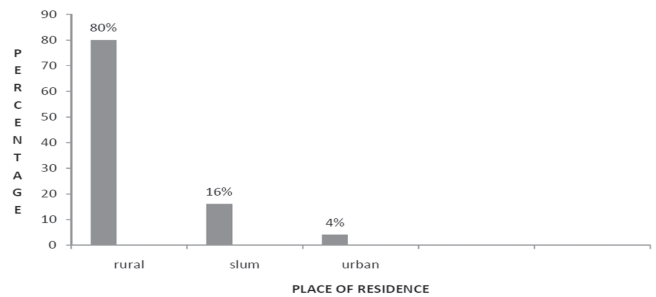
**4. Frequency and percentage distribution of adults based on educational qualification.**



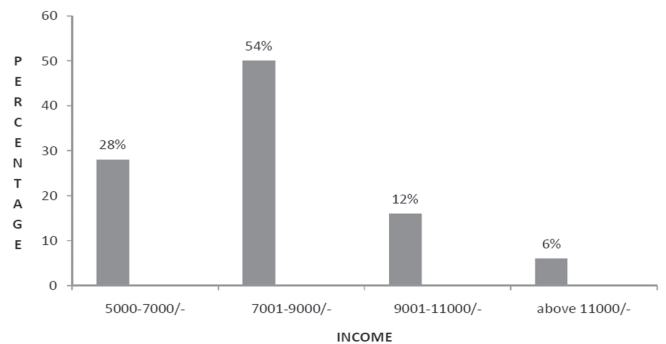
**5. Frequency and percentage distribution of adults based on occupation.**



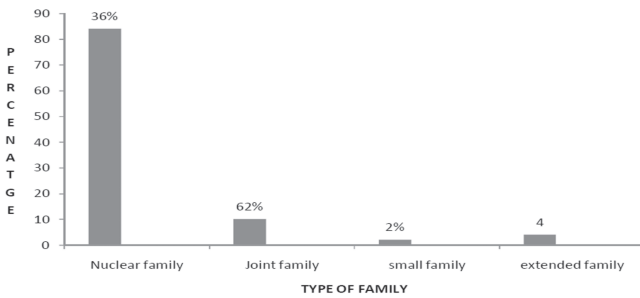
**6. Frequency and percentage distribution of adults based on marital status.**



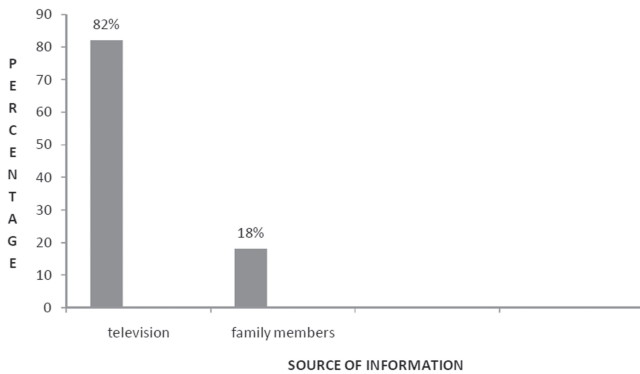
**7. Frequency and percentage distribution of adults based on place of residence.**



**8. Frequency and percentage distribution of adults income.**



**9. Frequency and percentage distribution of adults based on types of family.**



**10. Frequency and percentage distribution of adults based on source of information**

**Section-II: The level of knowledge regarding prevention of mumps among adults.**

Grade	Fre (F)	Per (%)
B+	08	16
B	07	14
C	35	70
Total	50	100

Table explains that with regard to level of knowledge regarding prevention of mumps 08(16%) among adults are have Bgrade,7(14%) adults have a C grade, 35 (70%) adults have a D grade.

Percentage distribution of level of knowledge prevention of mumps among adults.

**Section-III: The mean knowledge score and standard deviation of knowledge score of adults.**

Category	Mean	SD
Knowledge	12.18	27

Table Show that mean value of adults is 12.18 and standard deviation is 27.

**Section-IV: Association between the level of knowledge on prevention of mumps among adults.**

➤ There was **non significant** association between level

of knowledge and socio demographic variable such as age in years, religion, gender, educational qualification, occupation, marital status, place of living, family income, type of family etc.

**Discussion:**

**Major findings of the study**

➤ With regard to age, 9 (18%) adults are between 20-30 years, 25(50%) were between 31 -

40 years, 11 (22%) is between 41 to 50 years and 5(10%) adults were between 51-60 years

➤ With regard to religion Hindu were 34 (68%), Muslim were 2(4%), between Christian were 14 (28%).

➤ With regard to gender adults 12(24%) were males, 38 (76%) were females.

➤ With regard to education, illiterate were 9 (18%), primary were 24 (48%), secondary were 10 (20%), intermediate were 6 (12%), graduate were 1 (2%).

➤ With regard to occupation farmer were 28 (56%), coolie were 20 (40), private job were 2 (4%).

➤ With regard to marital status married were 34(68%), unmarried were 07 (14%), divorce were 05 (10%), widow were 04 (08%).

➤ That with regard to place of residence rural were 40(80%), slum were 8(16%), and urban were 2(4%)

➤ With regard to income 5000-7000/- were 14 (28%), 70001-9000/- were 25(50%), 9001-11000/- were 8 (16%) and above 11000/- were 3(6%).

➤ With regard to type of family nuclear family 18 (36%), joint family 31 (62%), extended family 1 (2%).

➤ With regard to source of information 41(82%) were television and 09(18%) were family members.

➤ Results shows on level of knowledge on prevention of mumps among 50 adults, 08(16%) among adults are have Bgrade,7(14%) adults have a C grade, 35 (70%) adults have a D grade.

**Findings of study based on objectives:**

➤ To assess the knowledge regarding prevention of mumps among adults.

➤ Results shows on level of knowledge on prevention of mumps among 50 adults, 08(16%) among adults are have Bgrade,7(14%) adults have a C grade, 35 (70%) adults have a D grade.

**Guiseppe LA Tarre 2017:** By conducted study on



The effectiveness of measles-mumps-rubella (MMR) vaccination in the prevention of mumps that objectives are To evaluate the effectiveness of the measles-mumps-rubella (MMR) vaccine in reducing hospitalizations for infectious disease, targeted and not targeted, as well as from respiratory diseases in children in Rome by a method The cohort was recomposed through record linkage of 2 archives (vaccination register and hospital discharge records results are The analysis included 11,004 children. 20.9% did not receive the MMR vaccination, 49% and 30.1% received one and 2 doses.

There were no hospitalizations for rubella, 2 for mumps, and 12 for measles. The vaccine was highly protective against measles and mumps hospitalizations (HR = 0.10; 95% CI: 0.03-0.34). Concluded as MMR vaccination is effective for the primary prevention of target and not targeted infectious diseases and may also limit hospitalizations for respiratory diseases.

### **Summary, Conclusion, Implication & Recommendation**

#### **Major findings of the study**

- With regard to age, 9 (18%) adults are between 20-30 years, 25(50%) were between 31 - 40 years, 11 (22%) is between 41 to 50 years and 5(10%) adults were between 51-60 years
- With regard to religion Hindu were 34 (68%), Muslim were 2(4%), between Christian were 14 (28%).
- With regard to gender adults 12(24%) were males, 38 (76%) were females.
- With regard to education, illiterate were 9 (18%), primary were 24 (48%), secondary were 10 (20%), intermediate were 6 (12%), graduate were 1 (2%).
- With regard to occupation farmer were 28 (56%), coolie were 20 (40), private job were 2 (4%).
- With regard to marital status married were 34(68%), unmarried were 07 (14%), divorce were 05 (10%), widow were 04 (08%).
- That with regard to place of residence rural were 40(80%), slum were 8(16%), and urban were 2(4%)
- With regard to income 5000-7000/- were 14 (28%), 7000-9000/- were 25(50%), 9001- 11000/- were 8 (16%) and above 11000/- were 3(6%).

- With regard to type of family nuclear family 18 (36%), joint family 31 (62%), extended family 1 (2%).
- With regard to source of information 41(82%) were television and 09(18%) were family members.
- Results shows on level of knowledge on prevention of mumps among 50 adults, 08(16%) among adults are have B grade, 7(14%) adults have a C grade, 35 (70%) adults have a D grade.

**Nursing implications:** The most effective method to improve the awareness regarding the prevention of mumps through assisting and supporting adults to improve knowledge regarding prevention of mumps and it helps the adults to booster their knowledge regarding prevention of mumps.

#### **Nursing practice:**

- The nurse should have responsibility to educate the adults about the prevention of mumps in their language they understand with appropriate pictures to improve their knowledge on prevention of mumps.
- Nurse should impart information with the help of pamphlets, self instructional modules, handouts and charts etc.

#### **Nursing education**

- Nurse should be encouraged to teach measures on prevention of mumps in order to improve their knowledge.
- Effective teaching material and audio-visual aids should be used to communicate the content clearly
- Establish planned teaching and educational programmes which could be used as illustrative model for adults.
- Nurse should encourage to teach regarding personal hygiene to reduce the mumps incidence by using puppet show.
- Educating the community people to have regular health checkup.

#### **Nursing administration**

- Nursing administration should develop certain plans policies to be implemented to improve the knowledge regarding prevention of mumps in adults.
- Update the nurses' knowledge with current practice through workshops, conferences. This will enable them to provide holistic approach.





### **Nursing research**

- The nurses should be encouraged to do research in the field of interest regarding knowledge on causes and complications of mumps among adults.
- Extensive research can be carried out to assess the attitude regarding knowledge on prevention of mumps among adults.
- The findings of the study can be disseminated throughout the print, journals as well as electronic journals.

### **Recommendations**

- On the basis of findings of the study recommendation are being made.
- A similar study can be replicated as a large sample to generate findings. Special education programme can be providing to the adults.
- A similar study can be done in different settings.
- An experimental study can be conducted to assess the effectiveness of prevention of mumps among adults in various settings.
- Planned teaching can be conducted to improve the knowledge regarding prevention of mumps among adults.

**Conclusion:** The study concluded that the majority of adults had “D” grade knowledge regarding the prevention of mumps. There was non significant association with the age, gender, religion, educational qualification, occupation, type of family, family income, marital status, and sources of information.

### **Bibliography:**

1. BT Basavanthappa (2017) “Text book of Nursing Theories” 1ST edition, published by Jaypee brothers, medical publishers new delhi, page no: 61-71
2. Dr. B. Sridhar Rao (2016) “Mdlld Principles of Community” 4th edition , Aibts publishers, page no:448-449.
3. Janice Htichockphylliseschabertsueathanias (2014) “Commonity Health Nursing Carrying in action”, 2nd edition, Delmoar earning, page no:543
4. K.Park (2013) “Text book of preventive and socio medicine” 8th edition, Mrs. Banarasidasbhanot publishers, page no:304-305
5. Martiyn J Hockenberry wongly (2010) “ Essential Pessential Peadiatric Nursing” 7th edition, published

by Elsevier, page no:320-321.

6. M.c Gupta IBK Mahajan (2008) “Text Book of Preventive and Social Medicine; Published by Jaypee brothers medical publishers p. Ltd, Page no:320-321
7. MARCIA STANHOPE (2007) “ TAXT BOOK OF COMMUNITY AND PUBLIC HEALTH NURSING, 6th edition, Elesrier Publications, Page no:633-634
8. PELATTLES WALKER(2004) “UNDER STANDING NURSING CARE” 4th edition , Published by Churchill living store person professional Ltd, Page no:23-157
9. PRISCILLA LEMONE, KAREN M.BASK (2002) “TEXT BOOK OF MEDICAL SURGICAL NURSING CRITICAL THINKING IN CLIENT CARE” 1st edition, Benjaman /cu Mmings published, page no:366-367
10. SK.KOCHAR (2001) text book of principles and practice of frauma care, 1st edition, jaypee publication New Delhi, page no:48-56
11. Susan c. Dewit (2000) “text book of medical surgical nursing” 3rd edition , W.B Saunders company Philadelphia, page no:868-69

### **Journals:**

1. DeokiNandan, patient care and support services, block-1, Theme-IV August 2016, New Delhi, page no:3-5
2. D.KrishnaPurosothamam, Nightingle nursing times, vol 8, no.6 September 2012, page no:35,43-44
3. H.Glory Nightingale nursing times vol.8 no.7 October 2012, page no:21-23
4. Mrs. MeeraSaravanan health action, May 2012, page no:32-39

### **Internet resources**

- ❖ <http://WWW.google.com>
- ❖ <http://WWW.weakipedia.com>
- ❖ <http://WWW.pubmed.com>
- ❖ <http://WWW.mediline.com>
- ❖ <http://WWW.Yahoo.com>
- ❖ <http://WWW.medwin.com>
- ❖ <http://WWW.healthline.com>
- ❖ <http://WWW.preventivemumps.com>