



A STUDY TO EVALUATE THE EFFECTIVENESS OF STRUCTURED TEACHING PROGRAMME ON KNOWLEDGE REGARDING FLU AND ITS PREVENTION AMONG MOTHERS OF UNDER FIVE CHILDREN IN SELECTED RURAL AREAS AT BANGALORE

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ABSTRACT

Background Children are the world's most valuable assets and their wellbeing indicates the standard of living of the country. They constitute one third of the total population, **Objective.** study to assess pre and post, to compare pre and post test knowledge scores and to find out the association between pre test knowledge score with selected demographic variables. **Methods** Quasi experimental one group Pre test and Post test research design was adopted, study was conducted rural area located at Bangalore. **Result** The Pre test result shows 30% of the mothers had inadequate knowledge, 70% had moderate knowledge and none of mother had adequate knowledge Post test measures after intervention 24 (40.0%) of the mothers had adequate knowledge 36 (60.0%) had moderate knowledge and none of the mothers had inadequate knowledge. The mean knowledge score of the Pre-test 45.67%, whereas, the mean knowledge score of the Post test was 73.40%.further, enhancement of mean knowledge was found 27.73%., Paired 't' test was found 32.01 this indicating significant enhancement of knowledge score from Pre test to Post test at $P < 0.05$. **Conclusion** The overall observation showed that periodic health education is very effective among the mothers of under five children regarding swine flu and its prevention.

Key word. Children, Swine flu, structural teaching programme. Knowledge.

Introduction

Children are the world's most valuable assets and their wellbeing indicates the standard of living of the country. They constitute one third of the total population. It has been noticed that almost one out of every five live born infants die before reaching 5 years of age. Children under the age of five face multiple obstacles, including birth injuries, infectious diseases, malnutrition, home environments that lack intellectual stimulation, and environments with polluted water and air. Neonatal mortality has persisted and currently 38 percent of all deaths occur during the first month of life. Each year, more than 9 million children die, mostly from preventable and treatable cause.

Probably the most common viral infections are those of the nose, throat, and upper airways these infections include sore throat, sinusitis, and the common cold, influenza is viral respiratory infection. Need to be creating awareness among the mothers regarding the prevention of these infections among children

The flu, or influenza, is caused by a highly infectious virus. It spreads through the air, multiplies in cells lining the airways, and causes seasonal epidemics of respiratory infections which are sometimes life threatening. Flu circles the Globe every year. As it spreads, the virus is slowly changed by mistakes made when it copies its genetic material. These changes make it very difficult for our immune systems to recognize the infection for a second time, The virus gets its name from the Latin word 'influential', meaning 'influence', Hippocrates, the forefather of modern medicine, clearly described the symptoms of flu in 419 BC. Scientists originally believed that influenza was caused by a bacterium, but in 1933 three English scientists, Smith, Andrewes and Laidlaw, found that

filtered (bacteria-free) nasal washings from patients with the flu could transmit the disease to ferrets, suggesting that the infection was instead caused by a virus.⁴

Subsequently three types of flu virus have been identified and are named influenza A, B and C respectively. Types A and B produce essentially identical illnesses, but influenza C infection produces milder symptoms, more like a cold. The flu virus originally came to humans from birds. At some point in history the virus jumped the species barrier and began to infect people. We now know that the serious flu pandemics of the 20th Century (a pandemic is an epidemic affecting the whole world), in 1977, 1968, 1957 and the 1918 Spanish Flu (which killed 40 million people) were all started by a bird flu virus which got into people.

Three more swine flu deaths were reported from Karnataka, in Bangalore taking the total due to the H1N1 virus to 31 in the state health officials said. In the first swine flu fatality in **Bangalore**, a 26-year-old teacher admitted to **St Philomena Hospital** on Sunday succumbed to H1N1 August 12. The doctor treating and told that, times now that swine flu was confirmed only after her death. Roopa was a school teacher in Sudarshana vidyamandir in T block Jayanagar Bangalore. The client was admitted to St. Philomena hospital in Ashok Nagar on 7 Aug. A diabetic patient Roopa was admitted for treatment to Fever.

Methods

Statement Of The Problem:“A Study To evaluate The Effectiveness Of Structured Teaching Programme on Knowledge Regarding Swine flu And its Prevention Among Mothers Of Under Five Children in Selected Rural Areas at Bangalore” **Aim Of The Study:** To develop the awareness on Swine flu and its preventive measures among under five children. **Objective Of the study** to assess pretest level of knowledge regarding Swine flu and its prevention among mothers of under five children. assess the post test knowledge regarding Swine flu and its prevention among mothers of under five children. compare pre and post test knowledge scores on Swine flu and its prevention among the mothers of under five children. and to find out the association between pre test level of knowledge with selected demographic variables. **Hypotheses: H₁:** There is significant difference between pre and post test knowledge scores on Swine flu and its prevention among mothers of under five children. **H₂:** There will be a significant association between the pre-test knowledge of score with selected socio demographic variables of the study participants. **Assumptions:** The mothers of under five children may not have adequate knowledge regarding types and major complication of Swine flu and how to prevent. **Operational Definitions: Evaluate:** Refers to the measurement of difference in the knowledge on mothers of under five children on Swine flu and its prevention among mothers of under five children before and after structured teaching program. **Effectiveness:** It refers to the extent to which the structured teaching program me has achieved the desired result as measured by mothers gain in knowledge regarding a Swine flu and its prevention. **Structured teaching program me:** It refers to a systematically organized teaching and learning activities between investigator and mothers of under five children intended to improve the knowledge of mothers regarding Swine flu and its prevention. **Knowledge:** In the present study knowledge refers to the correct responses given by the mothers to the items seeking knowledge regarding Swine flu and its prevention measured by the structured knowledge questionnaire. **Prevention:** In the present study it refers to the measures taken to diminish the possibility of occurrence of selected Swine flu among under five children. **Mothers:** In the present study it refers mothers of under-five children who are residing in selected rural area of Bangalore. The conceptual framework adopted for the present study is based on “**Imogene King’s Goal Attainment model**” (1989). An evaluative approach was used in the present study. Quasi experimental one group Pre test and Post test research design was adopted. The Present study was conducted in the Hesaraghatta rural area located at Bangalore. Knowledge of mother is depend Variable same as Structured teaching program on swine flu and its prevention is independent variable. The target population for this study is the mothers of under-five children. Total 60 samples were selected by purposive sampling technique. Sample was selected based inclusive and exclusive criteria. The mothers of under five children who are available at time of data collection, who can read and write kannada or English were included in this study and those who were severe psychological distress were excluded from this study.

In this study, the investigator has prepared tool on socio demographic and knowledge by self administrative questionnaires. The tool was exclusively prepared after an extensive review of literature of the present study, questionnaires derived from the previous studies and the investigator’s personal experience. The tool has been developed considering the reliability, feasibility and content validity. Based on the suggestion of the experts, the tool was modified as follows: The socio-demographic data includes Age, mothers educational status, Occupation, Religion, Number of children, Family income, Type of house, Type of family, Previous knowledge, If yes, Any of your family member or children suffering from Swine flu. Multiple knowledge based Questionnaires having tree distracters with one correct answer. It consists of 30 items. The items in the tool were organized under four Domains/ Aspects such as: **Aspect I:** Consist of knowledge related to general information about regarding Swine flu & its prevention, (9 statements). **Aspect II:** Consists of knowledge related mode of transmission (7 statements). **Aspect III:** Consists of knowledge on sign & symptoms (4 statements) **Aspect IV:** Consists of knowledge on prevention & management (11 statements). **Scoring Pattern:** For each correct response score “one” will be assigned for each wrong response scores “zero” will be assigned. The total minimum and maximum score of knowledge assessment found to be “zero” and “30”, respect of respectively. The computed reliability coefficient of the knowledge tool was found to be $(r_{11}) = 0.8216$ and further, the statistical validity coefficient was found to be 0.9021. It was statistically significant and thus, the tool was reliable. **Pilot study were depicts that** the mean Post test score was 72.23% which were more than the mean Pretest score of 42.23% which was significant at 0.05 level with an enhancement of knowledge score of 1.96

The paired 't' test value was 12.62 which showed significant improvement in the knowledge scores between Pre test and Post test. After coding the collected data, it was transferred to the master coding sheet. Then both descriptive and inferential statistics were used for analysis of the data. The Knowledge scores of the mothers of under five children before and after the structural teaching program were analyzed in terms of frequency, percentage, mean, and mean percentage and standard deviation. The comparison of Pre and Post test level score were determined by paired 't' test, further, chi square was employed to measure the association between knowledge level and selected demographic variables. The test results were subjected for testing at 0.05% level of probability.

Result

The analysis of the data was a process by which quantitative information is reduced, organized, summarized, evaluated, interpreted and communicated in a meaningful way.

The analysis and the interpretation of the data of this study were based on data collected by self administered Structured knowledge questionnaire on Swine flu & its prevention among the mothers of under five children (N=60). The results were computed using both the descriptive and inferential statistics based on the objectives of the study. The analysis of data was organized and finalized according to the plan for data analysis and presented in the form of tables and figures.

Table 1: depicts the frequency and percentage distribution of selected socio demographic variables of Mothers of under five children.

N=60

Sl No.	Socio demographic Variable	Category	Frequency	Percentage
1	Age Group (years)	21-25	41	68.33
		26-30	10	16.67
		31-35	9	15.00
		35 above	-	0.00
2	Mother Education	Primary	11	18.33
		Secondary	40	66.67
		Graduation	9	15.00
		illiteracy	-	0.00
3	Occupation of mother	Govt. Servant	-	0.00
		Private Employer	19	31.67
		House wife	31	51.67
		Self business	10	16.67
4	Religion	Hindu	44	73.33
		Christian	6	10.00
		Muslim	10	16.67
		Others	0	0.00
5	Number of children	one child	32	53.33
		Two child	17	28.33
		Three child	9	15.00
		More	-	0.00
6	Family income	1001-5000	33	55.00
		5001-10000	8	13.33
		10001-above	8	13.33
7	Type of house	Semi pucca house	19	31.67
		Pucca house	41	68.33
		Kachha house	-	0.00
8	Type of family	Nuclear family	42	70.00
		Joint family	18	30.00
		Extended Family	-	0.00
9	Previous knowledge	Yes	28	46.67
		No	32	53.33
10	If yes specified	News paper	9	32.14
		Radio	5	17.86
		Television	5	17.86
		Internet	-	0.00
		Others	9	32.14
11	Any of your family or friends children suffered from Flu?	Yes	19	31.67
		No	41	68.33

Table 1 analyzed data were presented under the following headings:-60 mothers of under five children's majority 68.33% were found in the age group of 21-25 years, Educational level shows that majority 66.67% of the mothers of under five children's were secondary (high school), The majority 51.67 % were house wife, 31.67 % , religion 73.33% were Hindu, Regarding numbers of children's in family 53.33% mothers of under five children's had single child, income status, 55.00% were having family income between Rs 1001-5000/m, 68.33% were staying in pucca house, 70.00% were belonged to nuclear family, Regarding previous knowledge on Swine flu, 53.33% do not have previous knowledge and 46.67% have previous knowledge, obtained from news paper 32.14%, 32.14% from others,17.86% from radio, 17.86% from television. 68.33% family member were suffers from Swine flu & its prevention and 31.67%) do not know the Swine flu & its prevention.

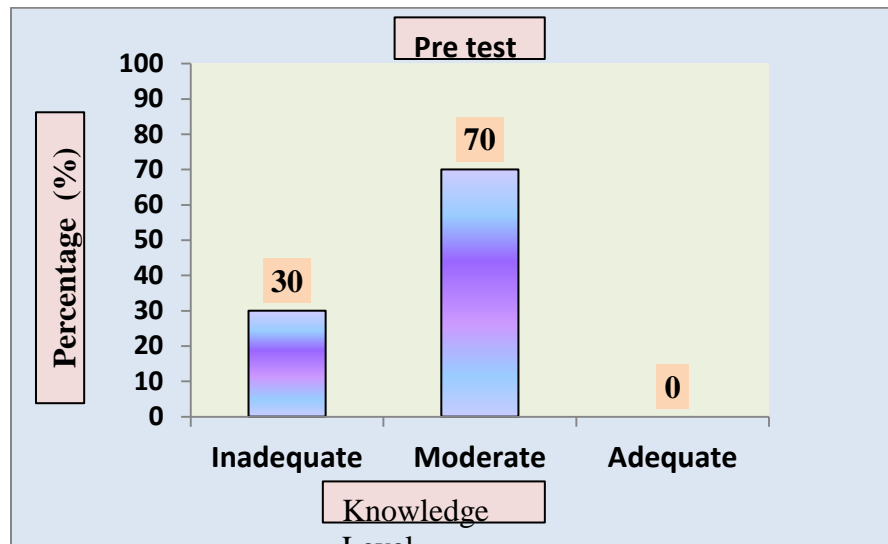


Fig 1: Bar diagram showing Pre test mean knowledge scores on flu and its prevention among Mother's of under five children.

Figure 1 depicts that 30% of the mothers of under five children had inadequate knowledge, 70% of the mothers had moderate knowledge. Further, none of the mothers of under five children had adequate knowledge on Swine flu and its prevention in the

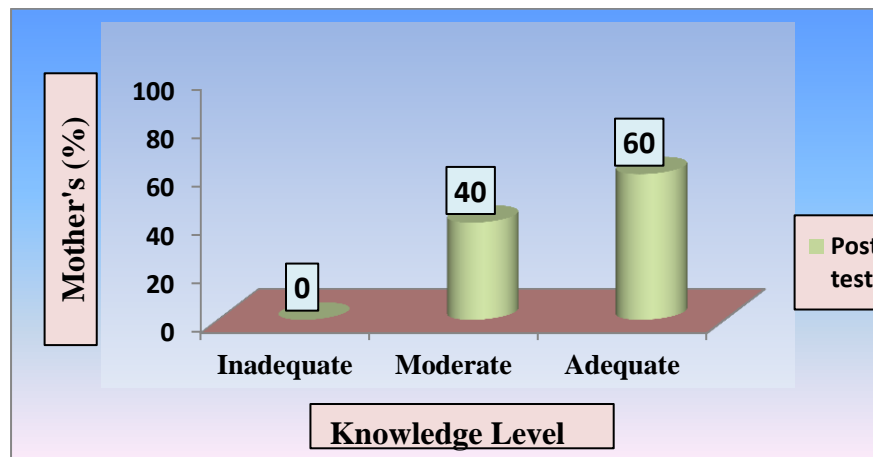


Fig- 2: Cylindrical bar diagram showing over all Post test Knowledge level on Flu and its prevention among Mother's under five children.

Figure 2 explained the post test result after one week of intervention were 24 (40.0%) of the mothers of under five children had adequate knowledge level and 36 (60.0%) had moderate knowledge level and none of the mothers of had inadequate knowledge.

TABLE – 2: shows over all differences of Pre test and Post test Mean Knowledge scores on Flu and Its Prevention among Mother's of under five children.

N=60

Sl. No	Category	Max Score	Respondent Knowledge			Paired 't' test value
			Mean \bar{x}	SD (σ)	Mean Percentage \bar{x} (%)	
1	Pre test	30	13.7	2.14	45.67	32.01
2	Post test	30	22.02	1.88	73.40	
Enhancement			8.32	2.01	27.73	

*Significant at 5% level,

t (0.05, 49df) = 1.96

Table 2 depicts that overall pre test mean knowledge score was found to be 13.7 % with SD as 2.14. Whereas over all post test of mean 22.02 with 1.88 SD

Table 3: Depicts Comparison between Aspect wise Pre and Post test Mean Knowledge Scores on Flu and Its Prevention among Mother's of under five children.

N=60

Sl. No	Aspects wise knowledge	Pre test			Post test			't' value
		Mean \bar{x}	SD (σ)	Mean %	Mean \bar{x}	SD (σ)	Mean %	
1	General Information & causes	4.27	1.05	47.44	6.68	0.79	74.22	22.76*
2	Mode of transmission	3.18	0.99	45.43	5.02	0.7	71.71	16.52*
3	Signs & Symptoms	1.77	0.56	44.25	2.95	0.67	73.75	16.29*
4	Prevention & Treatment	4.48	1.06	44.80	7.37	0.97	73.70	20.36*
Over all total		13.7	2.14	45.67	22.02	1.88	73.40	32.01

*Significant at 5% level,

t (0.05, 49df) = 1.96

The data subjected for chi-square test reveals that the knowledge level from Pre test from Post test found significant among mothers of under five children on importance of Swine flu and its prevention. ($\chi^2 = 54.59^*$, $P < 0.05$). comparison of mean knowledge score between Pre and Post test on importance of Swine flu and its prevention among the under five children. In the Pre test, knowledge scores were considerably less compared to Post test performance in all the aspects of knowledge under study. The findings showed that the maximum mean score 47.44% found in the aspect of General Information & causes in the Pre test and that in Post test was 74.22% with a 't' value of 22.76*. The mean score in Pre test was 45.43% whereas, that in Post test was 71.71% in the aspect of Mode of transmission with a 't' value of 16.52*, The mean score found in the aspect of Signs & Symptoms in Pre test knowledge was 44.25% and that in Post test was 73.75% with a 't' value of 16.29*, Regarding Prevention & Treatment, the mean score obtained in Pre test was 44.80% whereas, that in Post test was 73.70% with a 't' value of 20.36*. Hence, the statistical paired 't' test value 32.01*

reflects the significant enhancement of mean knowledge score for all the selected knowledge aspects at 0.05 level of significance which indicates the effectiveness of structure teaching program on Swine flu and its prevention among the under five children.

Table 4: Shows Association of Pre test Knowledge Scores with selected Socio demographic variables of Flu and Its Prevention among Mother's of under five children.

Sl. No.	Socio demographic Variables	Category	Knowledge scores				Total	χ^2 cal	d.f
			Inadequate		Moderate				
			f	%	f	%			
		21-25	32	78.05	9	21.95	41		
1	Age Group (years)	26-30	6	60.00	4	40.00	10	4.54*	2
		31-35	4	44.44	5	55.56	9		
		35 above	-	-	-	-	-		
		Primary	7	63.64	4	36.36	11		
2	Mother Education	Secondary	32	80.00	8	20.00	40	7.88*	2
		Graduation	3	33.33	6	66.67	9		
		illiteracy	-	-	-	-	-		
		Govt. Servant	-	-	-	-	-		
3	Occupation of mother	Private Employer	11	57.89	8	42.11	19	2.06	2
		House wife	23	74.19	8	25.81	31		
		Self business	8	80.00	2	20.00	10		
		Hindu	32	72.73	12	27.27	44		
		Christian	3	50.00	3	50.00	6		2
		Muslim	7	70.00	3	30.00	10		
4	Religion	Others	-	-	-	-	-	1.3	NS
5	Number of children	one child	24	75.00	8	25.00	32	1.45	2
		Two child	11	64.71	6	35.29	17		
		Three child	5	55.56	4	44.44	9		
		More	-	-	-	-	-		
6	Family income	Less than Rs 1000/-	8	72.73	3	27.27	11	2.3	3
		Rs 1001-5000	25	75.76	8	24.24	33		
		Rs 5001-10000/-	5	62.50	3	37.50	8		
		Rs 10001-above	4	50.00	4	50.00	8		
7	Type of house	Semi pucca house	12	63.16	7	36.84	19	0.62	1
		Pucca house	30	73.17	11	26.83	41	NS	
		Kachcha house	-	-	-	-	-	0.14	
8	Type of family	Nuclear family	30	71.43	12	28.57	42	4.13*	1
		Joint family	12	66.67	6	33.33	18		
		Extended Family	-	-	-	-	-		
9	Previous knowledge	Yes	16	57.14	12	42.86	28	8.22*	3
		No	26	81.25	6	18.75	32		
10	If yes	Radio	3	60.00	2	40.00	5	11.71*	1
		Television	3	60.00	2	40.00	5		
		Internet	-	-	-	-	-		
		Others	2	22.22	7	77.78	9		
		Yes	9	47.36842	10	52.8	19		
11	Any of your family or friends children suffered from Flu	No	33	80.4878	8	19.51	41	11.71*	1

Note: *- Denotes significant at 5% level ($p < 0.05$) and NS- Not significant at 5% level ($p > 0.05$).

Table 4 depicts that Chi-square association between the knowledge of the mothers of under five children with selected socio demographic variables. Statistical significant association in knowledge level of mothers with age ($\chi^2=4.54^*$), Educational level ($\chi^2=4.54^*$), previous knowledge ($\chi^2 = 4.13^*$), knowledge obtain regarding Swine flu and its prevention among the mothers of under five children ($\chi^2 = 8.22^*$) and experience mothers regarding swine flu ($\chi^2 = 11.71^*$). The remaining variables like Occupation, Religion, Number of children, Family income, Type of house, Type of family, Previous knowledge, Any of your family or friends children suffered from Swine flu were found to be non significant.

Discussion

The findings of the study were supported by an article on “Among parents of healthy young children, to determine how parental knowledge and attitudes regarding in Swine flu infection and immunization changed during the 2003 to 2004 in Swine flu season and to identify factors predictive of in Swine flu immunization. Results shows that Compared with their attitudes before the Swine flu season, 48% of parents interviewed after the season viewed their child as more susceptible to in Swine flu, 58% viewed in Swine flu infections as more severe, and 66% perceived fewer risks associated with in Swine flu vaccine. Ninety-five percent of parents reported hearing in the media about Colorado’s in Swine flu outbreak, and having heard about the outbreak in the media was associated with viewing in Swine flu infections as more severe. A total of 258 parents (82%) immunized their child against in Swine flu. Parent attitudes about in Swine flu infection and immunization changed substantially during the 2003 to 2004 in Swine flu season, with changes favoring increased parental acceptance of in Swine flu vaccination for young children. **Testing of hypothesis:RH₁**: “There is a significant difference between pre-test and post test knowledge scores regarding Swine flu and its prevention among mothers of under five children”. In pre test the mean knowledge scores is 45.67 %. Further, Post test mean knowledge found to be 73.40 %. It indicates that there is enhancement of knowledge score of 27.73* of the mothers of under five children. The statistical paired ‘t’ test value is found significant 32.02 t (0.05, 49df) = 1.96 revealing the effectiveness of Structure teaching program on Swine flu and its prevention among the mothers of under five children’s. Thus, the analysis reveals that there is significant difference between Pre test and Post test knowledge score of Swine flu and its prevention among the mothers of under five children’s. Hence, the Researcher based on the findings, stated that the Research hypothesis (RH₁) “There is significant difference between pre and post test knowledge scores on Swine flu and its prevention among mothers of under five children.” has been accepted. Hence the stated Research hypothesis (RH₁) is accepted **RH₂**: There is a significant association between pretest score levels Swine flu and its prevention among mothers of under five children with selected socio demographic variables. The obtained chi-square value shows statistical significant association in knowledge levels of mothers with Age, Mothers educational status, Previous knowledge, if yes, Any of your family member or children suffering from Swine flu with their corresponding Chi-square value found to be 4.54*, 7.88*, 4.13*, 8.22*and 11.71* respectively 0.05 level of significance with pre test level of knowledge of mothers of under five children regarding Swine flu and its prevention. But the chi-square value did not show any significant association with other socio demographic variables such as Occupation, Religion, Number of children, Family income, Type of house, Type of family, were found to be non significant in the Pre test knowledge.

Hence, the stated hypothesis H₂ is accepted. However, the stated Research hypothesis (Ho₂) is rejected with the socio demographic variables in pre test such as Occupation, Religion, Number of children, Family income, Type of house, Type of family, were found to be non significant in the Pre test knowledge as the association of knowledge score of mothers of under five children regarding Swine flu and its prevention.

Implication in nursing

Nursing Implication Of The Study The finding of the study has implication in the areas of nursing education, practice, administration and research. **Nursing Education** The nursing curriculum should consist of increased depth, content and activities which help to develop knowledge and skill among nurses in imparting knowledge on Swine flu and its prevention. As a nurse educator, there is abundant opportunity for nursing professionals to educate mothers as well as their family members regarding Swine flu and its prevention. The STP study emphasizes significance of short term in-service education programmed for nurses and peripheral health workers related to health education of mothers, family members regarding Swine flu and its prevention. Nursing personnel working in different areas should be given in service education and help them to abreast with recent trends. The nurse educator needs to conduct health campaigns and use different informational modalities, teaching strategies about imparting knowledge regarding Swine flu and its prevention. The nurse should educate about the utilization of local health services and voluntary health agencies assistance which helps promote in imparting knowledge to the mothers of under five children. Nurse educators need to prepare SIM such as self-learning packages, Power point presentations and video films which can be placed in the library. Students should be encouraged to give health education to mothers of under five children and others family members regarding Swine flu and its prevention so that they will be able to understand regarding prevention of Swine flu. **NURSING PRACTICE** In modern times, health care delivery system has changed from a care-oriented approach to promotion of health and prevention of illness oriented approach. The role of nurses in the health care delivery is a vital aspect in society. They shoulder the responsibility of promoting health, preventing illness and rehabilitation. Nurses are the key persons of the health team who play a major role in effective health promotion and maintenance. This study implies a basis for developing standards of imparting knowledge in the hospital as well as in the community. Imparting knowledge and giving health education are importance functions of nursing personnel; its accountability should be stressed. Structured Teaching programmed can be used as a teaching strategy in the hospital as well as in the community. Health education can be imparted through mass media, such as through radio, television, documentary films, pamphlets, leaflets and booklets etc. **Nursing Administration** The nurse administrator can take part in developing protocols, standing orders related to design

of the health education programmed to update nursing personnel's knowledge regarding Swine flu and its prevention among mother's of under five children. The nurse administrator can mobilize the available resource personnel towards the health education of mother's of under five children regarding Swine flu and its prevention. They should take interest in providing information on selected aspects of Swine flu and its prevention. They should be able to plan and organize programmes, taking into consideration of cost effectiveness and carry out successful educational programmes. The nurse administrator should explore their potentials and encourage innovative ideas in the preparation of appropriate information and modalities. She should organize sufficient man power, money, and material for disseminating health information. **Nursing Research** enables nurses to build on existing knowledge. This study helps the nurse researchers to develop appropriate health education tools for educating the mothers regarding Swine flu and its prevention according to their demographic characteristics. Nurses, who form an importance cadre of health professionals, should take initiative to conduct Research on various aspects of Swine flu and its prevention. The public and private agencies should also encourage research in this field through materials and funds. **Limitations Of The Study** The study was limited only to the mother's of under five children in selected rural area (Hesaraghatta) Bangalore. The study did not use any control group. **Delimitation** The study is delimited to all mothers of under five children in selected rural area at Bangalore irrespective of religion, caste, creed, culture, poor or rich available during the period of the study, mothers of under five children who are willing to participate in the study and for a period of 4 weeks for data collection. **Recommendations** On the basis of the findings of the study following recommendations have been made. A similar study can be replicated on large sample to generalize the findings. An experimental study can be conducted with control group for the effective comparison of the results. A similar comparative study can be conducted between rural and urban settings. A study can be carried out to evaluate the efficiency of various teaching strategies like self instruction module, pamphlets, leaflets, and computer assisted instruction on Swine flu and its prevention. A study can be carried out to evaluate the effectiveness of IEC package on Swine flu and its prevention.

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