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KNOWLEDGE, ATTITUDE AND PRACTICE REGARDING FIRST-AID MANAGEMENT AND PREVENTION OF RABIES AMONG MOTHERS OF CHILDREN UNDER 12 YEARS ATTENDING THE OPD AT KMCT WOMEN AND CHILD HOSPITAL, MANASSERY, KOZHIKODE

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ABSTRACT

Rabies is a fatal but preventable zoonotic disease. Mothers play an important role in protecting children from animal-bite exposure, ensuring immediate wound care and seeking timely post-exposure prophylaxis. This descriptive cross-sectional study was conducted to assess the knowledge, attitude and practice (KAP) regarding rabies prevention and first-aid management among mothers of children under 12 years attending the Outpatient Department (OPD) of KMCT Women and Child Hospital, Manassery, Kozhikode. A quantitative approach and purposive sampling technique were used to select 60 mothers. Data were collected using a structured questionnaire consisting of a socio-demographic proforma, 15 knowledge questions, 15 attitude statements on a five-point Likert scale and 15 practice items. Descriptive statistics and chi-square tests were used for analysis. Good knowledge was observed among 48.33% of mothers, moderate knowledge among 33.33% and poor knowledge among 18.33%. Positive attitude was reported by 48.33%, moderate attitude by 33.33% and negative attitude by 18.33%. Good practice was reported by 48.33%, moderate practice by 40.00% and poor practice by 11.67%. The mean percentage scores were 78.33% for knowledge, 88.33% for attitude and 91.67% for practice. Knowledge was significantly associated with age, education, occupation, locality, number of children and source of information; no significant association was reported with family type or bite history. The findings indicate that, although attitudes and reported practices were generally favourable, knowledge gaps remain. Structured health education focusing on immediate wound care and adherence to anti-rabies vaccination is recommended.

KEY WORDS: Rabies, mothers, knowledge, attitude, practice, prevention, first-aid management.

INTRODUCTION

Rabies is a vaccine-preventable zoonotic disease caused by viruses of the genus Lyssavirus. It is almost invariably fatal once clinical symptoms develop, although timely wound care and appropriate post-exposure prophylaxis can prevent disease after exposure. Children are particularly vulnerable to animal bites because of their behaviour, physical stature and limited ability to recognize risks.

In India, rabies remains an important public-health concern. Delayed health-seeking behaviour, misconceptions about animal bites and inadequate first-aid practices can increase the risk of preventable deaths. Immediate and thorough washing of a bite wound with soap and running water, followed by prompt medical assessment and completion of recommended prophylaxis, are essential components of prevention.

Mothers, as primary caregivers, have an important role in preventing animal-bite exposure among children and ensuring timely care when an exposure occurs. Their knowledge, attitudes and practices can influence the decisions made after an animal bite. Assessing maternal KAP helps identify areas requiring health education and supports nursing interventions aimed at improving child safety.

PROBLEM STATEMENT

"A descriptive study to assess the level of knowledge, attitude and practice regarding first-aid management and prevention of rabies among mothers of children under 12 years attending the OPD at KMCT Women and Child Hospital, Manassery, Kozhikode."

OBJECTIVES OF THE STUDY

0. To assess the knowledge of mothers regarding rabies transmission, prevention and first-aid management.
1. To assess the attitudes of mothers regarding rabies prevention.
2. To assess the practices of mothers regarding rabies prevention and first-aid management.
3. To assess the overall knowledge, attitude and practice level of mothers regarding rabies prevention and first-aid management.
4. To determine the association between mothers' knowledge scores and selected demographic variables.

HYPOTHESES

H0: There is no significant association between mothers' knowledge scores and selected demographic variables.

H1: There is a significant association between mothers' knowledge scores and selected demographic variables.

CONCEPTUAL FRAMEWORK

The study was guided by the Knowledge–Attitude–Practice (KAP) Model. Knowledge refers to the information mothers possess about rabies transmission, prevention and immediate first-aid measures. Attitude reflects beliefs, perceptions and willingness to adopt preventive measures. Practice refers to reported behaviours, including wound washing, seeking medical care and following vaccination advice.

METHODOLOGY

RESEARCH APPROACH AND DESIGN

A quantitative research approach was adopted. The study used a non-experimental descriptive cross-sectional design to assess mothers knowledge, attitude and practice at a single point in time without manipulation of variables.

SETTING, POPULATION AND SAMPLE

The study was conducted in the OPD of KMCT Women and Child Hospital, Manassery, Kozhikode. The population comprised mothers of children under 12 years attending the OPD during the study period. The sample consisted of 60 mothers selected by purposive sampling.

SAMPLING CRITERIA

Inclusion criteria: mothers with at least one child under 12 years; mothers attending the OPD during the study period; and mothers willing to participate and provide informed consent.

Exclusion criteria: mothers who were critically ill or unable to respond, and mothers unwilling to participate.

DESCRIPTION OF THE TOOL

A structured questionnaire developed by the investigators was used. It consisted of four parts:

- Part I – Socio-demographic proforma: age, education, occupation, family type, number of children, religion, locality, animal-bite history and source of information.
- Part II – Knowledge questionnaire: 15 multiple-choice questions on rabies transmission, prevention and first-aid management. Scores were classified as poor (0–5), moderate (6–10) and good (11–15).
- Part III – Attitude questionnaire: 15 statements rated on a five-point Likert scale. Scores were classified as negative (15–35), moderate (36–55) and positive (56–75).
- Part IV – Practice questionnaire: 15 yes/no items on rabies prevention and first-aid practice. Scores were classified as poor (0–5), moderate (6–10) and good (11–15).

CONTENT VALIDITY AND DATA COLLECTION

The tool, along with the problem statement, objectives, operational definitions and blueprint, was submitted to experts in nursing, paediatrics and public health for content validation. Suggestions were incorporated. Permission was obtained from the hospital authorities and ethical clearance was secured. Informed consent was obtained from participants. Data were collected in the OPD waiting area over one week using the Malayalam/English questionnaire. Each participant was given approximately 20–25 minutes to complete the tool.

PLAN FOR DATA ANALYSIS

Data were coded and entered into Excel/SPSS for analysis. Frequency and percentage were used for socio-demographic variables and KAP categories. Mean, mean percentage and standard deviation were used to summarize KAP scores. Chi-square test was used to examine the association between knowledge scores and selected demographic variables, with statistical significance assessed at the 0.05 level.

ETHICAL CONSIDERATIONS

Ethical clearance was secured, permission was obtained from the KMCT Women and Child Hospital, Manassery, Kozhikode authorities, and informed consent was obtained from the mothers before data collection. Participation was voluntary. Confidentiality was maintained throughout the study.

RESULTS

SECTION I: SOCIO-DEMOGRAPHIC CHARACTERISTICS

A total of 60 mothers participated in the study. The largest age groups were 26–33 years and 34–41 years (30.00% each). Half of the participants were graduates (50.00%) and 40.00% were homemakers. Nuclear and joint families were equally represented. Urban residents constituted 38.33%, semi-urban residents 35.00% and rural residents 26.67%.

Variable	Category	Frequency (n)	Percentage (%)
Age	18–25 years	13	21.67
	26–33 years	18	30.00
	34–41 years	18	30.00
	42 years and above	11	18.33
Education	Primary	10	16.67
	High school	20	33.33
	Graduate	30	50.00
Occupation	Homemaker	24	40.00
	Government employee	15	25.00
	Private employee	12	20.00
	Self-employed	9	15.00
Family type	Nuclear	30	50.00
	Joint	30	50.00
Locality	Urban	23	38.33
	Semi-urban	21	35.00
	Rural	16	26.67
Number of children	1	13	21.67
	2	30	50.00
	3	17	28.33
Source of information	TV/Radio	18	30.00
	Health worker	15	25.00
	Social media	15	25.00
	Family/Friends	12	20.00
Bite history	No	32	53.33
	Yes	28	46.67

Table 1. Frequency and percentage distribution of socio-demographic characteristics (N = 60).

SECTION II: KNOWLEDGE, ATTITUDE AND PRACTICE

The findings showed that 48.33% of mothers had good knowledge, 33.33% had moderate knowledge and 18.33% had poor knowledge. Positive attitude was observed among 48.33%, moderate attitude among 33.33% and negative attitude among 18.33%. Regarding practice, 48.33% had good practice, 40.00% had moderate practice and 11.67% had poor practice.

Variable	Category	Frequency (n)	Percentage (%)
Knowledge	Good	29	48.33
	Moderate	20	33.33
	Poor	11	18.33
Attitude	Positive	29	48.33
	Moderate	20	33.33
	Negative	11	18.33
Practice	Good	29	48.33
	Moderate	24	40.00
	Poor	7	11.67

Table 2. Distribution of mothers according to knowledge, attitude and practice levels (N = 60).

Variable	Mean score	Mean percentage (%)	Standard deviation
Knowledge	2.35	78.33	0.695
Attitude	2.65	88.33	0.480
Practice	2.75	91.67	0.490

Table 3. Overall distribution of mean scores, mean percentage scores and standard deviations.

SECTION III: ASSOCIATION BETWEEN KNOWLEDGE AND SELECTED DEMOGRAPHIC VARIABLES

Chi-square analysis showed significant associations between knowledge level and age group, education, occupation, locality, number of children and source of information. Family type and bite history were not significantly associated with knowledge level.

Demographic variable	Chi-square	df	P value	Inference
Age group	31.47	6	<0.001	Significant
Education	25.62	6	<0.001	Significant
Occupation	24.31	9	<0.01	Significant
Family type	2.04	3	>0.05	Not significant
Locality	13.92	6	<0.05	Significant
Number of children	15.14	6	<0.05	Significant
Source of information	34.88	9	<0.001	Significant
Bite history	4.13	3	>0.05	Not significant

Table 4. Association between selected demographic variables and knowledge level.

DISCUSSION

The present study assessed knowledge, attitude and practice regarding rabies prevention and first-aid management among 60 mothers of children under 12 years attending the OPD at KMCT Women and Child Hospital, Manassery. Good knowledge was observed among 48.33% of mothers, while 33.33% had moderate knowledge and 18.33% had poor knowledge. These findings indicate that a proportion of mothers continue to have gaps in knowledge about rabies prevention and immediate management after animal bites.

Positive attitude was reported by 48.33% of mothers, while 33.33% had moderate and 18.33% had negative attitudes. Good practice was reported by 48.33%, moderate practice by 40.00% and poor practice by 11.67%. The mean percentage scores were higher for practice (91.67%) and attitude (88.33%) than for knowledge (78.33%), as reported in the study. This pattern suggests that reported preventive practices and attitudes were comparatively stronger than knowledge scores.

The chi-square findings showed statistically significant associations between knowledge and age, education, occupation, locality, number of children and source of information. Family type and bite history were not significantly associated with knowledge. These findings support the importance of accessible, reliable health information and targeted health education for mothers.

LIMITATIONS OF THE STUDY

- The sample size was limited to 60 mothers, which restricts generalizability.
- Purposive sampling may introduce selection bias.

- Self-reported practices may not fully reflect actual behaviours.
- The study was conducted in a single hospital setting, limiting external validity.

RECOMMENDATIONS

- Conduct similar studies with larger and more diverse populations across Kerala and other regions.
- Implement structured health-education programmes through nurses, health workers and schools.
- Strengthen community awareness campaigns focusing on immediate wound care and adherence to anti-rabies vaccination.
- Integrate rabies prevention and first-aid education into maternal and child health services.
- Conduct intervention studies to evaluate the effectiveness of structured teaching programmes on maternal KAP.

CONCLUSION

The study assessed knowledge, attitude and practice regarding rabies prevention and first-aid management among 60 mothers of children under 12 years attending the OPD at KMCT Women and Child Hospital, Manassery. Nearly half of the mothers had good knowledge, positive attitudes and good practices. Mean percentage scores were 78.33% for knowledge, 88.33% for attitude and 91.67% for practice. Knowledge was significantly associated with age, education, occupation, locality, number of children and source of information, while family type and bite history showed no significant association. The findings highlight the need for structured health education, particularly regarding immediate wound care and completion of recommended post-exposure prophylaxis.

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