



Research Paper

“An Epidemiological Study to Assess the Level of Knowledge on Insect Bites and Its Home Remedies Among the Home Makers at Selected Rural Area, Puducherry”.

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Abstract

Insect bites and stings are common public health concerns, particularly in rural areas, and may cause symptoms such as redness, swelling, itching, and occasionally severe allergic reactions. Adequate knowledge regarding their management and appropriate home remedies is essential to prevent complications. This study aimed to assess the level of knowledge on insect bites and their home remedies among homemakers in a selected rural area of Puducherry and to determine its association with selected demographic variables. A quantitative approach with a descriptive cross-sectional design was adopted, and 50 homemakers were selected using simple random sampling. Data were collected through a structured questionnaire and analyzed using descriptive and inferential statistics. The findings revealed that most participants were aged 41–50 years (34%), with 48% being graduates. Regarding awareness, 70% identified mosquitoes as common causes of insect bites, followed by honeybees (20%), fleas (8%), and ants (2%). Overall, the study showed that a majority of homemakers had inadequate knowledge regarding insect bites and their home remedies. A statistically significant association was found between knowledge levels and selected demographic variables such as religion and education ($p < 0.05$). The study concludes that there is a need to enhance awareness through health education programs to improve knowledge and promote effective home management practices, thereby reducing complications in rural communities.

Keywords: *Insect bites, home remedies, knowledge, homemakers, rural population, Puducherry*

I. INTRODUCTION

Insect bites and stings are a frequent health concern, especially in rural areas where exposure to insects is higher due to environmental and occupational factors. Common insects such as mosquitoes, bees, fleas, and mites can cause symptoms ranging from mild irritation, redness, and itching to severe allergic reactions and infections if not managed properly. In many rural communities, individuals rely on easily available home remedies such as honey, aloe vera, onion, and baking soda for initial management. Homemakers, being primary caregivers, play a vital role in recognizing and managing such minor health problems within the family. However, inadequate knowledge regarding appropriate care and preventive measures may lead to complications and delayed treatment. Therefore, assessing the level of knowledge among homemakers regarding insect bites and their home remedies is essential to identify gaps and implement effective health education strategies to promote safe practices and improve community health outcomes.

NEED FOR STUDY

Insect bites and stings are highly prevalent in rural areas and often lead to discomfort, allergic reactions, and, in some cases, serious complications if not properly managed. Despite their common occurrence, many individuals depend on traditional home remedies without adequate knowledge of their correct use and

effectiveness. Homemakers, as primary caregivers, play a crucial role in the early management of such conditions within the family; however, insufficient knowledge and inappropriate practices may result in delayed treatment and increased risk of complications. Furthermore, there is limited research focusing on the awareness and knowledge of insect bite management among homemakers in rural settings, particularly in Puducherry. Therefore, it is essential to assess their level of knowledge and identify existing gaps, which will help in planning targeted health education programs and promoting safe, effective home management practices to improve overall community health outcomes.

STATEMENT OF THE PROBLEM:

“An epidemiological study to assess the level of knowledge on insect’s bites and its home remedies among the home makers at selected rural area, Puducherry.”

OBJECTIVES:

- Assess knowledge on insect bites and home remedies among home makers.
- Associate knowledge with demographic variables.

II. REVIEW OF LITERATURE

- **SECTION A:** Review related to Insect bite
- **SECTION B:** Review related to home remedial management of insect bite.

Research Approach

A quantitative research approach was used in this study.

Research Design

A descriptive research design was used in this study.

Population

The target population for the study comprises of the people who lives in the selected rural area in Puducherry

Setting

The study was conducted at selected rural area.

Sample

The sample for the study comprises of home makers who lives in the rural area at Puducherry.

Sample Size

In this study, the sample size consisted of 50 samples

Sampling Technique

Simple random technique is used for the present study.

Study duration: 2 weeks

Description of Tool

Section A - This section consists of demographic variables such as age , sex , etc . **Section B** - This section consist of knowledge questionaries on practice of insect bites and its home Remedies

Scoring Interpretation

Interpretation	Scoring	Percentage
Inadequate knowledge	1 – 10	<33 %
Moderate knowledge	10 – 20	34 % - 66%
Adequate knowledge	20 – 30	>67%

SECTION A: Description of demographic variables of the home makers.

Table 1: Frequency and percentage wise distribution of demographic variables like age, gender and religion of the home makers.

N=50

S. No	Demographic variables	Frequency	Percentage
1.	Age		
	a) 20-30 years	15	30
	b) 31-40 years	16	32

	c) 41- 50 years	17	34
	d) 51-60 years	2	4
2.	Gender:		
	a) Male	24	48
	b) Female	25	50
	c) Transgender	1	2
3.	Religion		
	a) Hindu	31	62
	b) Christian	12	24
	c) Muslim	6	12
	d) Others	1	2

Table 1: The demographic analysis of homemakers (N = 50) reveals diverse characteristics. In terms of age, the majority (34%) are aged 41-50 years, followed by 32% in the 31-40 years age group, 30% in the 20-30 years age group, and a small proportion (4%) aged 51-60 years. Regarding gender, 50% are female, 48% are male, and 2% are transgender. Religion distribution shows that 62% are Hindu, followed by 24% Christian, 12% Muslim, and 2% belonging to other religions.

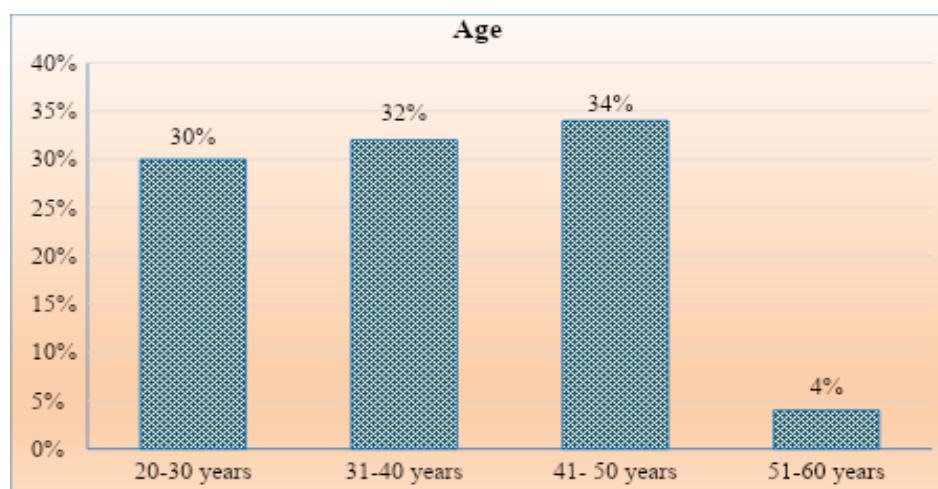


Figure 2: Percentage wise distribution of the home makers according to their age

Figure 2: Bar Diagram shows percentage wise distribution of home makers according to their age. The data shows that majority of 34% were in 41-50 years, 32% were in 31-40 year, 30% were in 20-30 year and 4% were 51-60 year

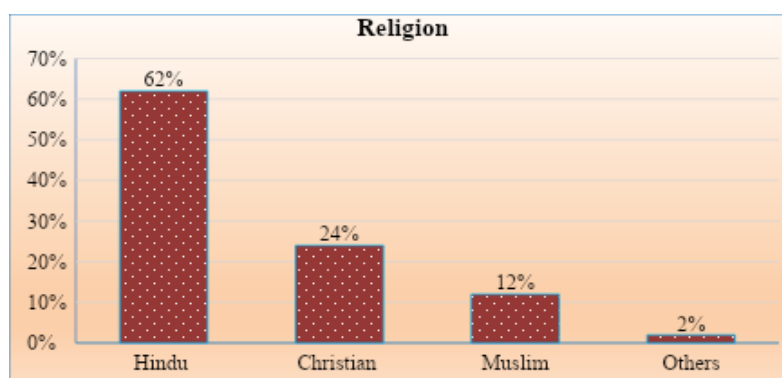


Figure 4: Percentage wise distribution of the home makers according to their religion

Figure 4: Bar diagram shows percentage wise distribution of the home makers according to their religion. The data shows that the majority of 62% were Hindus, 24% were Christians, 12% were Muslims and 2% were others.

Table 1.2: Demographic variables like total number of members in the family, marital status, monthly income and previous knowledge about insect bite of home makers

1.	Total numbers of members in your family:	Frequency {n}	Percentage %
	Less than 2	3	6
	3	16	32
	4	21	42
	More than 4	10	20
2.	Marital status		
	Married	36	72
	Unmarried	5	10
	Separated	7	14
	Single	2	4
3.	Monthly income		
	a) Less than 10,000 INR	13	26
	b) 10,000-15,000 INR	26	52
	c) 15,000-20,000 INR	11	22
	d) more than 20,000 INR	0	0
4.	Previous knowledge about insects bite?		
	a) Mosquito	35	70
	b) Flea	4	8
	c) Honeybee	10	20
	d) ant	1	2

Table 1.2 Family size, 42% have four members, 32% have three members, 20% have more than four members, and 6% have fewer than two members. Marital status data that 72% are married, 14% are separated, 10% are unmarried, and 4% are single. monthly income, 52% earn between INR 10,000-15,000, 26% earn less than INR 10,000, 22% earn INR 15,000-20,000, with none earning more than INR 20,000. Lastly, in terms of knowledge about insect bites, 70% are aware of mosquitoes, 20% about honeybees, 8% about fleas, and 2% about ants.

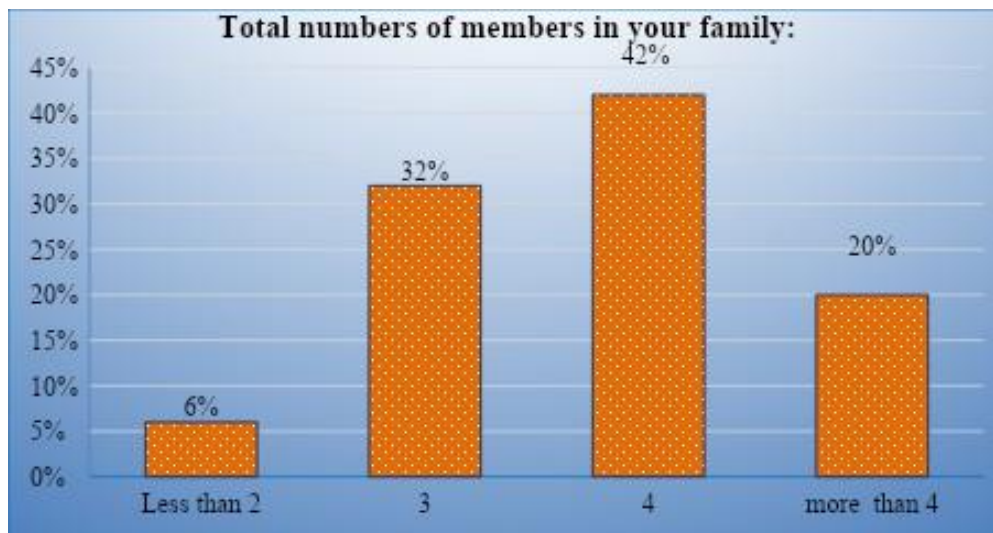


Figure 8: Percentage wise distribution of the home makers according to their total number of members in your family

Figure 8: Bar diagram shows percentage wise distribution of the home makers according to the total number of members in the family. The data shows that the majority of 42% were 4, 32% were 3, 20% were more than 4 and 6% less than 2.

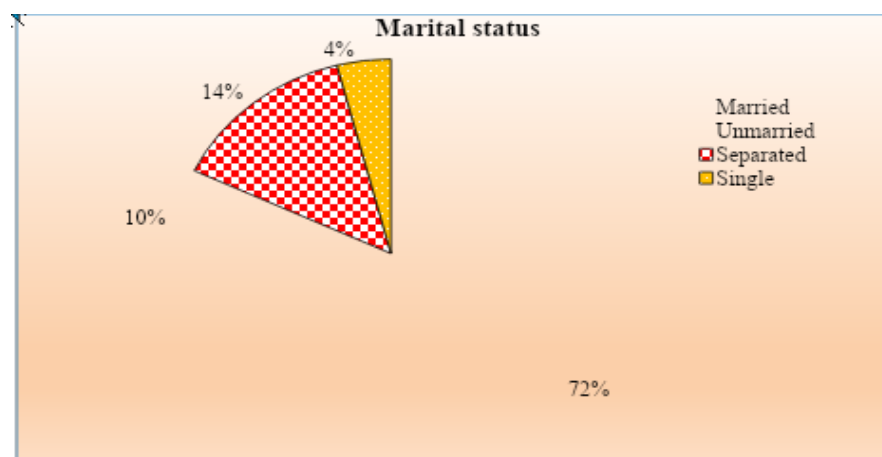


Figure 9: Percentage wise distribution of the home makers according to their marital Status

Figure 9: Bar diagram shows percentage wise distribution of the home makers according to their marital status. The data shows that the majority of 72% were married, 14% were separated, 10% were unmarried and 4% were single

Table 1.1: Frequency and percentage wise distribution of demographic variables like education, occupation and type of living place of the home makers.

N=50

1.	Educational qualification	Frequency {n}	Percentage %
	a) Primary education	8	16
	b) Higher secondary education	18	36
	c) Graduate	24	48
	d) Illiterate	0	0
2.	Occupation		
	Government sector	12	24
	Private sector	21	42

	Farmer	7	14
	Daily wager	10	20
3.	Type of living place		
	a) Rural	45	90
	b) Urban	5	10

Table 1.1: the above table shows educational qualification, 48% are graduates, 36% have higher secondary education, 16% have primary education, and none are illiterate. Occupationally, 42% work in the private sector, 24% in the government sector, 20% as daily wagers, and 14% are farmers. The majority (90%) reside in rural areas, with only 10% living in urban area



Figure 5: Percentage wise distribution of the home makers according to their educational qualification

Figure 5: Bar diagram shows percentage wise distribution of the home makers according to their educational qualification. The data shows that the majority of 48% were graduated, 36% have higher secondary education and 16% have primary education.

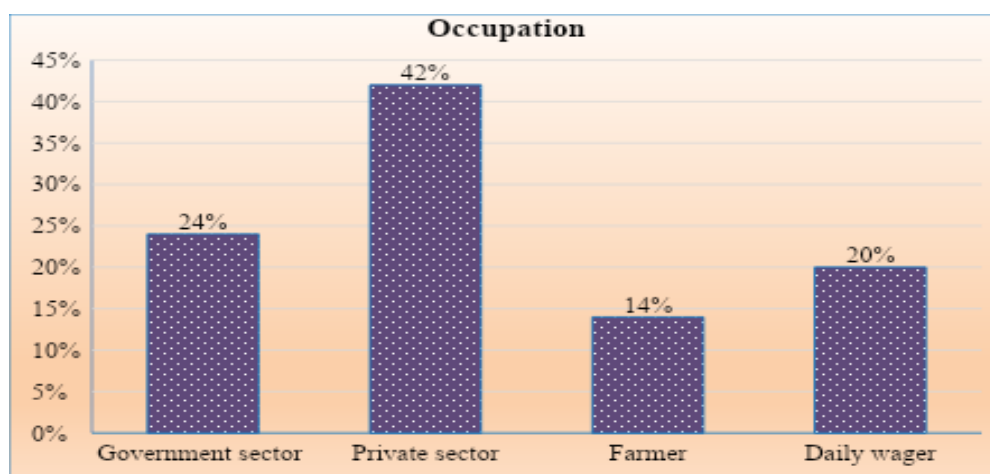


Figure 6: Percentage wise distribution of the home makers according to their occupation

Figure 6: Bar diagram shows percentage wise distribution of the home makers according to their occupation. The data shows that the majority of 42% were in private sector, 24% were in Government sector, 20 were daily wagers and 14% were farmers.

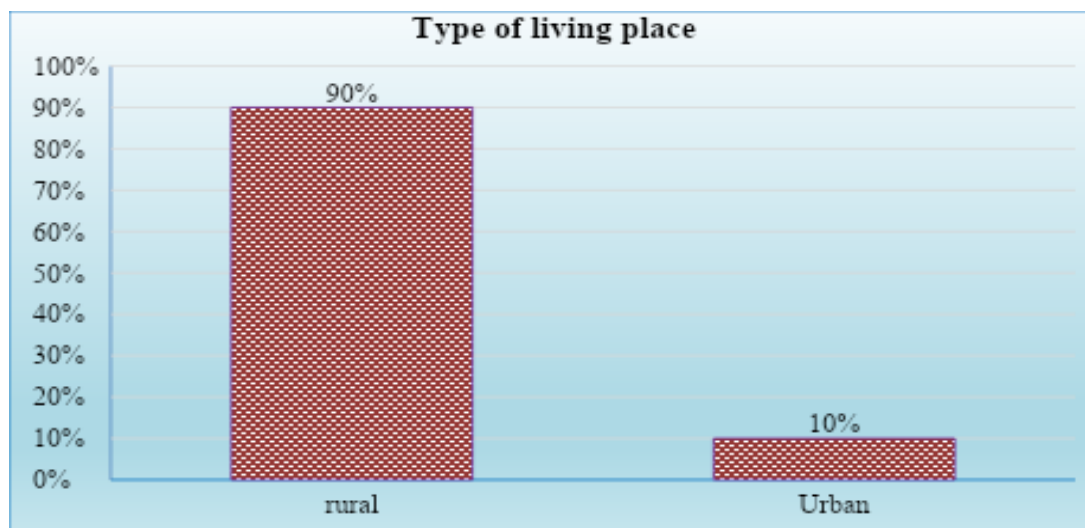


Figure 7: Percentage wise distribution of the home makers according to their type of living place

Figure 7: Bar diagram shows percentage wise distribution of the home makers according to their type of living place. The data shows that the majority of 90% were in rural and 10% were in urban.

Section B: Assessment of the level of knowledge regarding insect bites among the home makers.

Table 2: Frequency and percentage wise distribution of the level of knowledge regarding insect bites among the home makers. N = 50

S.NO	LEVEL OF KNOWLEDGE	FREQUENCY (n)	PERCENTAGE %
1.	Inadequate	28	56
2.	Moderate	12	24
3.	Adequate	10	20

Table 2: The findings reveals that,

The analysis of the level of knowledge regarding insect bites among homemakers (N=50) shows that the majority (56%) have an inadequate level of knowledge, while 24% possess a moderate level of knowledge and 20% of the homemakers demonstrated an adequate level of knowledge. This highlights the need for targeted awareness and education programs to improve understanding of insect bites among homemakers.

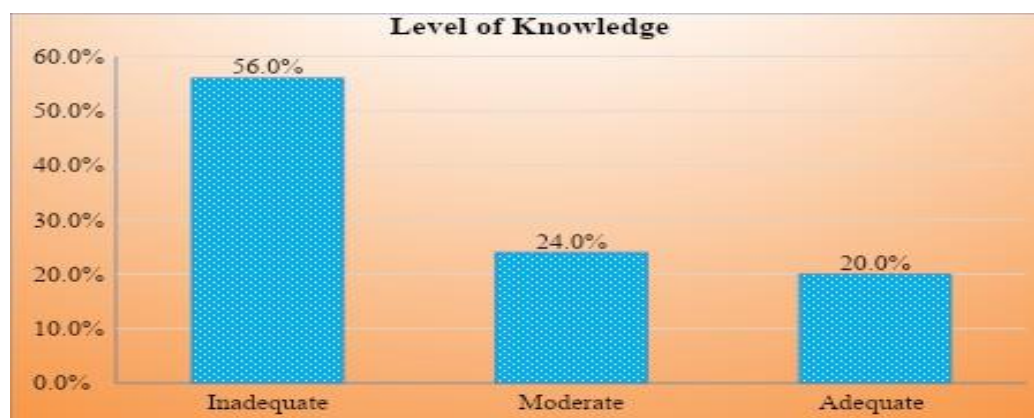


Figure 12: Percentage wise distribution of the level of knowledge regarding insect bites among the home makers.

Figure 12: Bar diagram shows percentage wise distribution of the home makers according to their level of knowledge. The data shows that the majority of 56.0% have inadequate knowledge, 24.0% have moderate knowledge and 20.0% have adequate knowledge.

Major findings of the study:

In terms of age, the majority (34%) are aged 41-50 years, followed by 32% in the 31-40 years age group, 30% in the 20-30 years age group, and a small proportion (4%) aged 51-60 years. Regarding gender, 50% are female, 48% are male, and 2% are transgender. Religion distribution shows that 62% are Hindu, followed by 24% Christian, 12% Muslim, and 2% belonging to other religions. In terms of educational qualification, 48% are graduates, 36% have higher secondary education, 16% have primary education, and none are illiterate. Occupationally, 42% work in the private sector, 24% in the government sector, 20% as daily wagers, and 14% are farmers. The majority (90%) reside in rural areas, with only 10% living in urban areas. Regarding family size, 42% have four members, 32% have three members, 20% have more than four members, and 6% have fewer than two members. Marital status data indicates that 72% are married, while 14% are separated, 10% are unmarried, and 4% are single. Regarding monthly income, 52% earn between INR 10,000-15,000, 26% earn less than INR 10,000, and 22% earn INR 15,000-20,000, with none earning more than INR 20,000. Lastly, in terms of knowledge about insect bites, 70% are aware of mosquitoes, 20% about honeybees, 8% about fleas, and 2% about ants.

III. CONCLUSION

The present study assessed the level of knowledge on insects bites and its home remedies among the home makers at selected rural areas, Puducherry. The study findings concluded that majority of the home makers had an inadequate level of knowledge. There is a significance association of religion and education qualification with the level of knowledge regarding insect bites among the home makers with selected demographic variables.

NURSINGIMPLICATIONS

The findings of the study have important implications for nursing education, practice, administration, and research. In nursing education, nurse educators should design and implement structured educational programs to improve understanding of insect bites, their health risks, first aid management, and evidence-based home remedies among homemakers. In nursing practice, the results can help nurses identify misconceptions, provide appropriate guidance on home care, and educate individuals on recognizing severe allergic reactions and the need for timely medical intervention, especially through community outreach programs. From a nursing administration perspective, organizing in-service education and awareness programs for both nursing staff and homemakers is essential to enhance knowledge regarding prevention, first aid, and proper management of insect bites, along with ensuring the availability of educational materials. In nursing research, the study provides a basis for developing evidence-based protocols and encourages further research to evaluate the effectiveness of various home remedies and to assess knowledge levels across different demographic groups, thereby supporting the design of targeted health education interventions.

IV. RECOMMENDATIONS

- A similar study could be conducted with a larger sample size across multiple regions to enhance the generalizability of the results.
- Future research could explore the relationship between different types of insect bites and the effectiveness of various home remedies.
- Additional studies should examine the long-term impact of home remedies on preventing infections and complications from insect bites.

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