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A Study to Assess the Level of Knowledge Regarding Dangue Prevention Among House Hold In A Selected Area of Kishtwar Jammu and Kashmir

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Abstract- Dengue fever is a fast growing viral disease with a high potential to cause significant health-related issues in tropical and subtropical areas as well as in some places in the northern parts of India, which is transmitted by mosquitoes. This research was done to determine the extent of knowledge on dengue prevention among households in a selected region of Kishtwar, Jammu and Kashmir, and to determine the effect of educational status of the household head and exposure to the sources of health information on the knowledge levels. The descriptive research design was employed and a structured questionnaire was used to sample out 100 household respondents. Descriptive statistics were used to analyze the demographic variables and the inferential tests were conducted using regression and ANOVA tests with SPSS software. The results showed that education of the household head significantly contributed positively to knowledge of dengue prevention at statistical significance with 21 percent variance in the scores of knowledge. Significant association was also found to exist between exposure to sources of health information which explained 12.2 percent of the variation. The two predictors had moderate positive associations with the dependent variable. The research points out that education is a key factor in creating awareness and knowledge concerning the prevention of dengue, and the health communication is a supportive factor in strengthening the knowledge. The findings reinstate the relevance of multi-level community-based educational and awareness initiatives to enhance the dengue prevention activities. Specific measures aimed at enhancing literacy and access to quality health information can play a significant role in ensuring that the risk of dengue is reduced at the household level.

Keywords: Dengue prevention, Knowledge level, Household study, Educational status, Health information sources, Vector-borne diseases.

I. INTRODUCTION

Dengue fever is a fast developing mosquito-borne viral illness that has become a major health problem to the population in most parts of the world, especially in the tropical and the subtropical areas. Dengue virus causes the disease and is mainly transmitted by an infected bite of the Aedes aegypti and Aedes albopictus mosquitoes. Dengue has a broad range of clinical manifestations, including mild febrile disease up to serious life-threatening complications including dengue hemorrhagic fever (DHF) and dengue shock syndrome (DSS). Such symptoms as acute appearance of high fever, acute headache, retro-orbital pain, myalgia, arthralgia, nausea, vomiting, rash, bleeding, and circulation failure could be observed. Lack of certain antiviral therapy and rising cases of epidemics have put dengue as a significant issue in the health systems in different parts of the world (Pourzangiabadi et al., 2025).

Transmission Dynamics and Virology

The dengue virus is classified under genus Flaviviridae and family, Flaviviridae and has four antigenically different serotypes, viz. DENV-1, DENV-2, DENV-3 and DENV-4. The infection with a single serotype offers permanent immunity against that serotype only with respect to the rest and only temporarily and partially. Re-infection with another serotype also exposes an individual to the risk of severe dengue because of antibody-dependent enhancement. Transmission Aedes mosquitoes transmit the virus to a susceptible host when a female mosquito bites an infected person and then transmits the virus to that mosquito. These mosquitos exist in urban and semi-urban areas, hatching in stagnant water in domestic containers, discarded tires, overhead tanks and improperly managed waste. They also bite during the day thus complicating their prevention (Murugesan & Manoharan, 2020).

Clinical Spectrum and Disease Severity

Dengue infection may be asymptomatic or symptomatic with the severity of the infection being highly differentiated in individuals. Mild dengue fever is a disease that is characterized by fever, headache, pain in the muscles and joints as well as rash and will often pass with supportive care. Nonetheless, acute dengue presents plasma leak, thrombocytopenia, element of bleeding, and organ dysfunction, which can easily escalate to shock and death unless dealt with early enough. Children, elderly, pregnant women and those with comorbidities are especially susceptible. Since no specific antiviral therapy is applicable, the clinical management is oriented on the early diagnosis, fluid management, warning signs monitoring, and the symptomatic treatment with antipyretics and analgesics (Parveen et al., 2023).

Global Burden of Dengue

Dengue is now among the rapidly spreading types of diseases that are spread by vectors and impacts over 100 countries in Asia, Africa, the Americas and the Western Pacific. The world burden of dengue is about 70 percent in Asia. The dengue has been on the rise over the last several decades, owing to a significant rise in urbanization, population, climate change, international travels and insufficiently effective vector control control. When it comes to 2017, dengue caused more than 2.9 million disability-adjusted life years (DALYs), which is a 107% rise since 1990. A 2023/2024 seasonal increase in dengue was documented by the World Health Organization with around 13 million cases, and over 8,700 deaths, and was reported to be among the worst that has happened in history, and has significantly taxed healthcare systems (Malavige et al., 2023).

India Dengue Epidemiology

Dengue is regarded as hyperendemic in India, and all four serotypes are present in various areas. It is estimated that the country reports hundreds of thousands of cases in a year and the number of incidence and geographic spread is steadily increasing. Cities like Karnataka, Maharashtra, Tamil Nadu, Kerala and Delhi have become the highly populated and densely populated areas with favorable climatic conditions and lack of sanitation infrastructure. The results of the seroprevalence studies show that at least 77 percent of the southern Indian population has a past infection of dengue. Transmission of dengue in India is normally at its highest level in the post monsoon season especially during the months of September to October when there is stagnant water and increased breeding of mosquitoes. The young adults and males are particularly susceptible, which may be explained by the work-related exposure and sports (Mohana et al., 2025).

Trend, Determinants, future Projections

Dengue has become a lot more burdensome in India, and it is strictly associated with the environmental and socio-demographic characteristics, including rising temperatures, shifting rainfall patterns, unplanned urbanization, water storing, and poor waste management. According to the data provided by National Vector Borne Disease Control Programme (NVBDCP), the number of cases reported is increasing steadily in the recent years. According to predictive models, it is estimated that India has the potential to have about 278,000 to 310,000 cases of dengue by 2025,2026, depending on the current patterns. The recent prevalence of the DENV-3, and the co-circulation of the other serotypes, only increases the potential risk of devastating outbreaks and frequent epidemics (Nyenke et al., 2023).

Situation Dengue Jammu and Kashmir

Dengue surveillance data in Jammu and Kashmir is relatively low in the reports of the country as compared to southern and western India. It could reflect a reduced incidence or more likely underreporting through lack of surveillance, and diagnostic facilities. Northern India such as Jammu and Kashmir has a transmission pattern that is similar to other parts of the country and it is further characterized by outbreaks that normally follow rainy seasons. Climate changes and rising temperatures have the potential to widen the geographical coverage of Aedes mosquitoes into areas that used to be not very risky. Even though no significant cases of dengue outbreaks were conspicuously observed in Jammu and Kashmir in 2024,2025, local researches indicate the necessity of enhanced surveillance of vectors, better reporting systems, and even community-level preventive strategies to reduce the risks in the future (Gupta et al., 2024).

Research objectives

- To determine the extent of the household awareness on dengue prevention in a chosen region of Kishtwar, Jammu and Kashmir.
- To establish how educational level of the household head and access to sources of health information influences knowledge on dengue preventions.

II. LITERATURE REVIEW

(Kareem et al., 2025) Hemorrhagic fever viruses pose threats to the health of people in most regions of the world since it is capable of creating very fatal diseases and recurrently at the same time. Viruses that cause viral hemorrhagic fevers (VHFs) usually cause acute febrile disease, coagulation issues, and extensive bleeding, which might result in organ failure that is potentially fatal. Viruses that cause viral hemorrhagic fever (VHF) belong to four virus families, one of them being Filoviridae. The Filoviridae is a family which Ebola virus belongs to, and which is the cause of the recent VHF outbreak in West Africa. Viral hemorrhagic fevers (VHFs) are pathologies that can be found in different parts of the world, although the conventional diagnostic tests of these diseases have generally been done in large reference laboratories in Europe and the United States.In this review, we discuss the prevailing understanding of the pathogenesis of viral hemorrhagic fevers (VHFs) and describe the advancement of preventive and curative measures towards these infections.

(Maia et al., 2024) Dengue hemorrhagic fever (DHF) is an infectious disease resulting from dengue virus transmission via the bites of Aedes aegypti and Aedes albopictus mosquitoes, posing a considerable public health challenge in Timor-Leste. National health statistics and World Health Organization data indicate that 1,451 dengue cases were reported in Timor-Leste from January to December 2020, leading to 10 fatalities, with the Ermera sub-district recording the greatest incidence at 318 cases. This study sought to ascertain the correlation between awareness levels, home environmental circumstances, and preventative practices among families with people impacted by DHF in the Ermera sub-district. A qualitative analytical survey utilizing a case study methodology was conducted to investigate the relationships between independent variables (knowledge level, home environment, and preventative behavior) and the dependent variable (incidence of DHF) at a specific moment in time. The results demonstrated that while the knowledge level concerning DHF was predominantly adequate ($p = 0.048$), a statistically significant correlation was identified between household environmental conditions and DHF incidence ($p = 0.019$), in addition to a significant association between preventive behaviors and DHF incidence ($p = 0.000$). The results indicate that although sufficient knowledge is present, environmental factors and preventive measures significantly influence the occurrence of DHF, leading to the conclusion that enhancing household environments and reinforcing preventive behaviors are crucial for decreasing the incidence of dengue hemorrhagic fever in the Ermera sub-district.

(Phuyal et al., 2022) Nepal has witnessed epidemiological dengue fever outbreaks since 2006 but no in-depth knowledge, attitude, and practice (KAP) studies have been done using both qualitative and quantitative methodologies. To fill this gap, a cross-sectional mixed-method study was performed in six dengue-prone districts of central Nepal in the periods of September- October 2018 to investigate and compare KAP regarding dengue among the populations living in lowland (<1500 m) and highland (>1500 m) regions. The research was based on 660 household surveys consisting of quantitative data and 12 focus group discussions and 27 in-depth interviews of qualitative data, and the KAP levels were determined as high or low through an 80 percent cut-off mark. The general knowledge of dengue and its control and prevention was also unsatisfactory, with only 40.6 percent of the surveyed having ever heard of dengue fever and much more achieved awareness among low country dwellers. The results were supported by qualitative results which showed that lowland communities were more aware of dengue symptoms and preventive measures against the disease. The respondents always felt that a more future risk of dengue outbreaks was experienced through increasing temperature and endemic to non-endemic population migrations. The most typical sources of information were found in the television and radio. It was found that only 2.3 percent of the participants had high knowledge scores with 74.1 percent having high

attitude scores and 21.2 percent having adequate preventive practices. The independent predictors of knowledge were area of residence, education, age, income, socioeconomic status, and occupation, but only the level of education was an independent predictor of attitudes. This paper concludes that the knowledge and preventive measures concerning dengue are acutely wanting in Nepal and that there is an urgent need to engage in effective and specific dengue preventive measures programs both in the highland and the lowland communities.

(Perera et al., 2021) Dengue is the most widespread the viral disease transmitted by mosquitoes in the world and is still a significant source of morbidity and mortality. To explore the level of knowledge, attitudes and practices (KAP) pertaining to dengue prevention among residents living in Ja-Ela Medical Officer of Health (MOH) area was done through a community based cross-sectional study conducted by interviewer-administered questionnaire after obtaining ethical clearance through the National Institute of Health Sciences, Kalutara. The population sample consisted of 50.8 percent of females with a mean age of 43.7 and standard deviation of 16.7. All in all, 56.5 percent of the interviewees were good in terms of knowledge, 52.9 percent were good in terms of attitudes, and 50.7 percent were good in terms of preventive practices that pertain to dengue. The 41 to 60 years of age, secondary or higher education and high monthly income were significantly linked with good knowledge whereas nationality, non-Sinhalese was associated with lower levels of knowledge. Female, unemployed, and male respondents as well as those who made less than LKR 20,000 per month had more positive attitudes towards dengue prevention. The non-Sinhalese nationality and Roman Catholic religion were closely linked with poor preventive practices. Moreover, people who had had previous experience of dengue infection were much more favorable towards dengue prevention. It is noteworthy that there were no significant relationships between knowledge, attitudes, and practices, and thus, it was important to introduce particular health education interventions and health promotion interventions that are population-specific and could enhance dengue prevention endeavours.

(Kenneson et al., 2017) The spread of dengue virus (DENV) by the Aedes aegypti mosquito is one of the key public health issues in urban coastal areas of Ecuador, whereby community- and domestic-based control of vectors is the main measure of preventing the outbreaks. This paper considered the role of knowledge, attitudes, and practices (KAPs) and social-ecological determinants on the existence of the DENV infection at the household level in Machala, Ecuador. The years 20142015 were the years of enrollment of individuals diagnosed with DENV infection at sentinel clinics, their family members, and residents of four households around the sentinel clinics within a distance of 200 meters. All participants were tested using diagnostic tests on DENV and heads of families were surveyed on demographic attributes, housing and KAPs associated with dengue prevention. Bivariate analyses and multivariate logistic regression models were used in comparative analyses between households with and without DENV infection (n = 139 and n = 80 respectively). The results of the multivariate analysis found that a proximity to abandoned properties, interruption in supply of piped water, and shaded patios were the significant risk factors whereas the use of mosquito bed nets, indoor fumigation, and the availability of piped water within the home were found to be protective factors. Despite the finding that the bivariate tests indicated that DENV infection was related to male heads of the household, younger heads of the household, and employed heads of the household; these variables were not significant in multivariate tests. Interestingly, DENV infection had no relationship with knowledge, attitude and perceived barriers in prevention against dengue. The results highlight the necessity of specific environmental and infrastructural responses, such as the control of vectors in shaded territories, the fumigation of the indoors, the eradication of perished properties, regular collection of rubbish, and the stable source of household water, to minimize the spread of dengue and educate prevention measures against other diseases transmitted by Aedes aegypti, such as chikungunya and Zika.

III. RESEARCH METHODOLOGY

This chapter discusses the study's methods and measurements, as well as ethical concerns, data collection, and analysis. In the academic sense, research is a scholarly Endeavour. It has been said by

researchers that research involves outlining and redefining problems, formulating hypotheses about potential solutions, collecting data, drawing conclusions, and then testing those conclusions to see if they are in line with the hypotheses that were developed.

Research Design

A study design is used to determine which approach is most appropriate for a certain collection of research objectives and factors. The research questions posed at the beginning of the project can be used to establish a systematic plan for data collection and analysis. Using a descriptive research design, this paper aims to A study to assess the level of knowledge regarding dangue prevention among house hold. There are many ways to conduct a descriptive study, including qualitative and quantitative ones. Researchers used both quantitative and qualitative methodologies in this study. It is a mixed-approach strategy. As part of the research process, it is essential to define the investigation's goals and objectives, as well as gather and analyze data from participants. The focus of this research is on the level of knowledge regarding dangue prevention among house hold.

Research Approach

The technique of a study is the most important part of the project. Choosing the right research strategy is dependent on the objectives of the A study to assess the level of knowledge regarding dangue prevention among house hold survey research techniques. The data will be collected through the use of questionnaires already developed. When participating in the survey it is possible for respondents to choose between structured and free questions.

Research variables

Variables are characteristics that are unique to each individual subject being studied. As an idea, it's one that can be measured. We use the term "variable" to describe between the level of knowledge regarding dangue prevention among house hold.

Independent Variable

The researcher has direct control over this variable, which has an effect on the dependent variable. The independent variable in this research is educational status of the household head, exposure to health information sources.

Dependent Variable

To put it another way, the dependent variable is the one you're testing or measuring in an experiment. This study's dependent variable is level of knowledge regarding dengue prevention.

Sample and sampling technique

Sampling is the process of selecting a subset of a larger group in order to make generalizations about A study to assess the level of knowledge regarding dangue prevention among house hold. Probability sampling and non-probability sampling are the two types of sampling procedures. It is termed "probability sampling" because it involves drawing a random sample from a target house hold at random. This type of sampling relies less on randomness when selecting a representative sample group. Deliberate sampling was required in order to perform a qualitative investigation into level of knowledge regarding dangue prevention among house hold.

Source of the Samples

A primary data set has been utilized in this study's analysis. The following list provides a quick overview:

Primary Data

The primary sources of primary data are all house hold hence, the need for a web-based application (a form). Questionnaires have been used to collect primary data for this research project.

Secondary data

A secondary data set is a compilation of information derived from a primary set. There are a lot of records in this category. Secondary data can be found in a variety of places, including books and journals, the internet, and official government records.

Methods and Tools used

The data was collected through a survey. Surveys are common among many methods of collecting information from house hold. All surveys characterize or explain the characteristics and attitudes of the house hold through the use of a sample. Assess the level of knowledge regarding dangue prevention among house hold was assessed using a checklist. And here we have

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taken 100 respondents and those have been obtained through survey of many offices.

Area of study
The study would be conducted mainly in the Kishtwar, jammu and kashmir.

Statistical Analysis
Data Analysis
Using raw data for data analysis, conclusions can be derived. A preliminary data analysis is necessary before beginning the data preparation process, which includes data entering, editing, and coding. Using software to analyze data quickly and accurately is essential for it to be helpful. The study's data was entered into a spreadsheet for analysis. Each respondent's responses were assigned an integer value before being placed into a spreadsheet. Using SPSS, we were able to analyze and model our data.

The data in this study was analyzed using SPSS 22.0, a statistical software package. Analytical procedures such as ANOVA and percentage approaches were used to investigate the data that was regarded as the most significant. In order to have a clearer understanding of the study's most critical elements, percentage analysis was used. Comparing and analyzing data using percentages is a powerful technique. This is one of the simplest ways to get your point through to the audience you're targeting. When data is gathered, an overall picture of the situation can be painted. Use of graphs can improve the appeal of percentage analyses.

IV. RESULT

Table 1: Age Group of Respondent

Age Group of Respondent		
	Frequency	Percent
18–30 years	20	20.0
31–40 years	14	14.0
41–50 years	26	26.0
51–60 years	17	17.0
Above 60 years	23	23.0
Total	100	100.0

The age distribution reveals that most responses were in the 41–50 years age range (26%), followed by those over 60 years (23%). Individuals aged 18–30 years represented 20%, and those aged 51–60 years comprised 17%. The lowest percentage was noted in the 31–40 years cohort (14%), signifying extensive age representation.

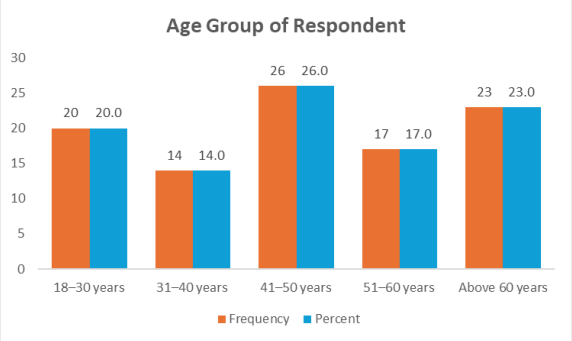

Figure 1: Age group of respondents

Table 2: Gender

Gender		
	Frequency	Percent
Male	48	48.0
Female	52	52.0
Total	100	100.0

The gender breakdown indicates a marginally greater engagement of females (52%) relative to males (48%). The nearly equal representation indicates balanced gender participation in the study, facilitating a significant comparison of knowledge on dengue prevention between genders and mitigating potential gender-related bias in the results.

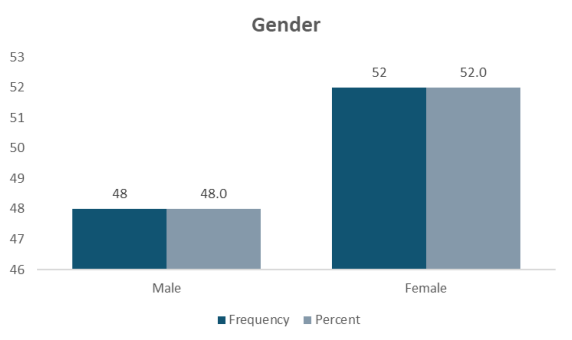

Figure 2: Gender

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Table 3: Occupation

Occupation		
	Frequency	Percent
Unemployed	38	38.0
Private employee	27	27.0
Government employee	35	35.0
Total	100	100.0

The occupational distribution indicates that 38% of respondents were unemployed, constituting the largest segment. Government personnel represented 35%, and private employees comprised 27%. This range indicates diverse employment backgrounds, potentially affecting exposure to health information and awareness regarding dengue preventative practices.

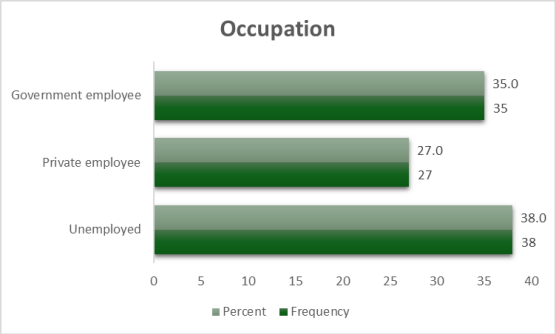

Figure 3: Occupation

Table 4: Type of family

Type of Family		
	Frequency	Percent
Nuclear family	48	48.0
Joint family	52	52.0
Total	100	100.0

In terms of family structure, 52% of participants were part of mixed families, whereas 48% came from nuclear families. This signifies a little dominance of joint family arrangements in the chosen region. The type of family may influence shared health habits, information distribution, and collective dengue prevention strategies.

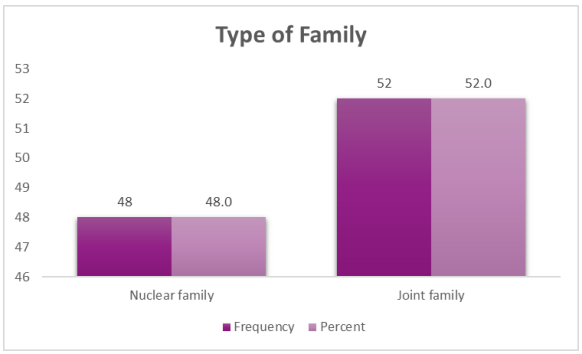

Figure 4: Type of family

Hypothesis 1
There is no significant impact of Educational Status of the Household Head on Level of Knowledge Regarding Dengue Prevention.

There is a significant impact of Educational Status of the Household Head on Level of Knowledge Regarding Dengue Prevention.

Table 5: Regression test on hypothesis 1

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.458[a]	.210	.201	.841
a. Predictors: (Constant), Educational Status of the Household Head				

According to model summary, the relationship between level of knowledge concerning dengue prevention and educational status of the household head is moderate with a positive nature (R = 0.458). The R square of 0.210 indicates that 21 per cent of the change in level of knowledge is due to educational status. Auto adjusting the R-Squared (0.201) assesses that the model is stable and has acceptable explanatory power.

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18.398	1	18.398	25.982	.000[b]

	Residual	69.392	98	.708		
	Total	87.790	99			
a. Dependent Variable: Level of Knowledge Regarding Dengue Prevention						
b. Predictors: (Constant), Educational Status of the Household Head						

The outcomes of the ANOVA indicate that the regression model is statistically meaningful, as the F value is 25.982 and the level of significance is $p < 0.001$. This means that educational levels of the head of the household are strong predictors of the level of knowledge on dengue prevention. The model can be used to describe the association between the independent and dependent variables.

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.542	.414		3.721	.000
	Educational Status of the Household Head	.541	.106	.458	5.097	.000
a. Dependent Variable: Level of Knowledge Regarding Dengue Prevention						

According to the coefficients table, educational status of the household head has significant positive influence on dengue prevention knowledge ($B = 0.541$, $p < 0.001$). The mean standardized beta (0.458) indicates a moderate effect. The constant value represents the level of baseline knowledge which proves that education is a primary predictor of dengue awareness.

Hypothesis 2

There is no significant impact of Exposure to Health Information Sources on Level of Knowledge Regarding Dengue Prevention.

There is a significant impact of Exposure to Health Information Sources on Level of Knowledge Regarding Dengue Prevention.

Table 6: Regression test on hypothesis 2

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.349[a]	.122	.113	.887
a. Predictors: (Constant), Exposure to Health Information Sources				

The model summary indicates that there is a positive correlation between level of knowledge on dengue prevention and exposure to sources of health information ($R = 0.349$). The value of R 2 stands at 0.122, which implies that exposure to health information explains 12.2 per cent of the variation in the level of knowledge. The consistency and acceptable fit of the model are reconfirmed by the adjusted R square (0.113).

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10.686	1	10.686	13.582	.000[b]
	Residual	77.104	98	.787		
	Total	87.790	99			
a. Dependent Variable: Level of Knowledge Regarding Dengue Prevention						
b. Predictors: (Constant), Exposure to Health Information Sources						

The ANOVA results have shown that the regression model is statistically significant with an F value of 13.582 and $p < 0.001$. This makes it clear that being exposed to health information sources is a significant

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predictor of the level of knowledge about dengue prevention and also makes a significant contribution to the explanation of the differences in knowledge between households.

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.361	.350		6.737	.000
	Exposure to Health Information Sources	.328	.089	.349	3.685	.000
a. Dependent Variable: Level of Knowledge Regarding Dengue Prevention						

The table of coefficients shows that knowledge regarding dengue prevention is statistically significantly affected positively by exposure to health information sources (B = 0.328, p = 0.001). The beta standardized value of 0.349 indicates a medium effect size. The constant implies prior knowledge, which enhances the value of health communication in enhancing awareness.

Discussion

The current research evaluated the status of knowledge on dengue prevention in households living in a particular region of Kishtwar, Jammu and Kashmir specifically focusing on the role of educational status and exposure to health information sources. The demographic profile showed that there was a balanced representation of age, gender, occupation, and family type, and this presented a complete picture of household characteristics in the study area. The fact that joint families are predominant implies that they have shared living conditions that might affect their collective health behaviors and preventive practices.

The regression analysis also showed that there is statistically significant correlation between the level of education of the household head and knowledge on dengue prevention. Education explained 21% of the difference in the level of knowledge, which implies that education level increases awareness on disease transmission methods, preventive measures and health-seeking behavior. This result identifies education as a key factor in enhancing community awareness and preventive capacity of vectors-driven diseases like dengue. In the same light, exposure to health information sources had a significant positive influence on knowledge levels which accounts to 12.2% variance. Availability of health workers, mass media and community awareness programs seem to enhance awareness of the dengue prevention measures. Nevertheless, the comparatively lower explanatory power as opposed to education indicates that exposure of information on its own might not be effective unless it is backed by proper understanding and literacy.

The results support the relevance of integrated approaches to public health, which include educational empowerment and methods of regular health communication. Awareness campaigns based in the community about different levels of education will contribute to the success of dengue prevention campaigns. On the whole, the research results highlight the importance of long-term health education and specific information sharing that could increase the level of knowledge of the population and decrease the chances of spreading dengue in the target areas.

V. CONCLUSION

The paper establishes that educational attainment of the household head and access to health information sources is a key determinant of the level of knowledge on dengue prevention by households in Kishtwar. The status of education was found to be a more powerful predictor, thus highlighting the importance of formal education in creating awareness, knowledge of preventative measures, and responsible health behaviors. Health information exposure also showed significant contribution and the issue of effective health communication using the mass media and community outreach is vital. Even with the existence of the baseline knowledge, the results show there is

room to improve make with the help of the organized educational intervention and more intense awareness campaigns. Community engagement, better access to valid health education and incorporation of dengue education as a part of mainstream activities of the public health system are needed to bolster preventive measures. The research offers useful information to health planners and policymakers to develop specific interventions that are aimed at reducing dengue risk at the household level by implementing education and communication interventions. Continued work in these directions can play an important role in the burden of dengue and have a positive effect on the overall health outcomes of the community in the region.

REFERENCES

[1] Gupta, S., Shakya, A., Mishra, N., Islahi, S., Singh, S., Nag, S., Dwivedi, A., Shukla, M., Sen, S., Dwivedi, P., Agarwal, M., & Mukherjee, A. (2024). Investigating the Clinico-Demographic Characteristics of Dengue Fever and Its Seroprevalence at a Tertiary Care Hospital in Northern India. *Cureus*. https://doi.org/10.7759/cureus.57640

[2] Kareem, R., Al-Naymi, H. A. S., Rawah Radhwan Abdulbari, & Salah Mohammed Fezea. (2025). Hemorrhagic Fever history, Diagnosis and Treatment: review article. *Journal of Kufa for Chemical Sciences*. https://doi.org/10.36329/jkcm/2025/v4.i2.17439

[3] Kenneson, A., Beltrán-Ayala, E., Borbor-Cordova, M. J., Polhemus, M. E., Ryan, S. J., Endy, T. P., & Stewart-Ibarra, A. M. (2017). Social-ecological factors and preventive actions decrease the risk of dengue infection at the household-level: Results from a prospective dengue surveillance study in Machala, Ecuador. *PLOS Neglected Tropical Diseases*, *11*(12), e0006150. https://doi.org/10.1371/journal.pntd.0006150

[4] Maia, C., De Almeida, A., & Gusmão, C. (2024). The Relationship of Knowledge Level, Home Environment and Prevention Behavior to Dengue Incidence. *KESANS : International Journal of Health and Science*. https://doi.org/10.54543/kesans.v3i4.271

[5] Malavige, G. N., Sjö, P., Singh, K., Piedagnel, J.-M., Mowbray, C., Estani, S., Lim, S. C. L., Siquierra, A. M., Ogg, G. S., Fraisse, L., & Ribeiro, I. (2023). Facing the escalating burden of dengue: Challenges and perspectives. *PLOS Global Public Health*, *3*(12), e0002598. https://doi.org/10.1371/journal.pgph.0002598

[6] Mohana, N., Dmello, M. K., Kharvi, S., & Dsouza, N. (2025). Forecasting dengue incidence in Dakshina Kannada, Karnataka (2024–2026) using Time Series Analysis. *Journal of Vector Borne Diseases*. https://doi.org/10.4103/jvbd.jvbd_29_25

[7] Murugesan, A., & Manoharan, M. (2020). Dengue Virus. In *Emerging and Reemerging Viral Pathogens* (pp. 281–359). Elsevier. https://doi.org/10.1016/B978-0-12-819400-3.00016-8

[8] Nyenke, C. U., Nnokam, B. A., Esiere, R. K., & Nwalozie, R. (2023). Dengue Fever: Etiology, Diagnosis, Prevention and Treatment. *Asian Journal of Research in Infectious Diseases*, *14*(1), 26–33. https://doi.org/10.9734/ajrid/2023/v14i1279

[9] Parveen, S., Riaz, Z., Saeed, S., Ishaque, U., Sultana, M., Faiz, Z., Shafqat, Z., Shabbir, S., Ashraf, S., & Marium, A. (2023). Dengue hemorrhagic fever: a growing global menace. *Journal of Water and Health*, *21*(11), 1632–1650. https://doi.org/10.2166/wh.2023.114

[10] Perera, W. L. S., Perera, P. K., Wijesundara, C., Ambagahawita, A. M., Fernando, S. U., Udara, S., & Bandaranayaka, K. O. (2021). Household-Based Survey on Knowledge, Attitudes, and Practices towards Dengue Infection and Prevention in a Semi-Urban Area (Ja-Ela MOH Area). *International Journal of Medical Parasitology and Epidemiology Sciences*, *2*(4), 83–90. https://doi.org/10.34172/ijmpes.2021.25

[11] Phuyal, P., Kramer, I. M., Kuch, U., Magdeburg, A., Groneberg, D. A., Lamichhane Dhimal, M., Montag, D., Harapan, H., Wouters, E., Jha, A. K., Dhimal, M., & Müller, R. (2022). The knowledge, attitude and practice of community people on dengue fever in Central Nepal: a cross-sectional study. *BMC Infectious Diseases*. https://doi.org/10.1186/s12879-022-07404-4

[12] Pourzangiabadi, M., Najafi, H., Fallah, A., Goudarzi, A., & Pouladi, I. (2025). Dengue virus: Etiology, epidemiology, pathobiology, and developments in diagnosis and control – A comprehensive review. In *Infection, Genetics and Evolution*. https://doi.org/10.1016/j.meegid.2024.105710