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COMPARATIVE STUDY OF KNOWLEDGE AND PREVENTIVE PRACTICES AMONG ADULTS REGARDING DENGUE IN SELECTED RURAL AND URBAN AREAS OF KHURDA DISTRICT, ODISHA

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ABSTRACT

A comparative study to assess the knowledge and preventive practices among adults regarding dengue in selected rural and urban areas of khurda district, odisha. The objective of the study was to assess and compare the knowledge and practices of adults regarding dengue and its prevention in selected rural and urban areas of Khurda, and to correlate knowledge with practices in both settings. The investigator utilized a descriptive survey research approach, incorporating both correlational and comparative designs. She selected adults 50 from rural and 50 from urban area of khurda district by non-probability convenience sampling technique. Data were gathered using a valid and reliable checklist along with a semi-structured interview schedule. The study revealed that urban residents have better mean knowledge and practices regarding dengue prevention compared to rural residents. While the majority of both rural (98%) and urban (100%) participants recognized fever and rash as signs of dengue, few were aware that headache, muscle pain, joint pain, and pain behind the eyes are also symptoms. A significant difference in knowledge was observed between rural and urban participants ($z = 2.3$), but no significant difference in practice ($z = 1.9$). There was a moderately positive correlation between knowledge and practice for both rural ($r = 0.78$) and urban ($r = 0.42$) residents, indicating that increased knowledge leads to better practices. his study has potential applications across various areas of nursing, including education, practice, research, and administration. It could be expanded by replicating it with a larger randomized sample in a different setting. Additionally, a comparative study could be carried out to examine the knowledge of dengue and its prevention between nursing students and general college students.

Keywords: Dengue, Knowledge, Preventive Practice, Dengue Signs, Adults

1. INTRODUCTION

According to WHO, dengue continues to pose a significant global health challenge. The incidence of dengue has dramatically increased, with cases reported to WHO rising from 505,430 in 2000 to 5.2 million in 2019. In 2023, dengue reached a historic high with over 6.5 million cases and more than 7,300 related deaths reported across 80 countries. World Health Organization. (n.d.)

Dengue is a viral infection spread by the bite of infected female Aedes mosquitoes, mainly Aedes aegypti. It is common in over 100 countries, with the most cases in the Americas, South-East Asia, and the Western Pacific regions. Symptoms can be mild or severe, including high fever, severe headache, eye pain, joint and muscle pain, rash, and mild bleeding. In severe cases, dengue can cause intense severe abdominal pain, persistent vomiting, rapid breathing, bleeding gums, fatigue, and restlessness. World Health Organization. (2023), World Health Organization. (2024)

The increase in dengue cases has been attributed to several factors including climate change, which has led to higher temperatures and increased rainfall, creating ideal breeding conditions for mosquitoes. Additionally, the ongoing COVID-19 pandemic has strained health systems, impacting their ability to manage dengue outbreaks effectively. World Health Organization. (2023), World Health Organization. (2024)

Efforts to control the spread of dengue include vector control strategies, public health campaigns, and community engagement to reduce mosquito breeding sites. However, there is still no specific treatment for dengue, and the primary approach remains supportive care to manage symptoms.

1.1. RESEARCH PROBLEM

Comparative study of knowledge and preventive practices among adults regarding dengue in selected rural and urban areas of khurda district, Odisha.

1.2. OBJECTIVES

- To assess the knowledge of adults regarding Dengue and its prevention in selected rural & urban areas of khurda district.
- To assess the practice of adults regarding Dengue and its prevention in selected rural & urban areas of khurda district.
- To compare the knowledge and practice of adults regarding dengue and its prevention between adults of rural and urban areas of khurda district.
- To correlate knowledge with practice of adults of both rural and urban areas of khurda district.

2. MATERIAL AND METHODS

The investigator used a descriptive survey research approach with a correlational and comparative design to meet the study's objectives. She selected 50 adults aged 20-50 years from rural areas and 50 adults aged 20-50 years from urban areas of Khurda district, Odisha, using a nonprobability convenience sampling method. Permission was obtained from the community authorities in Khurda district, Odisha. Data were collected using a valid and reliable structured interview schedule. The researcher invited adults who were willing to participate and met the inclusion criteria. The purpose of the study was explained to participants. The investigator developed the first draft of the semi-structured interview to gather background and personal information, then created the second and third drafts to assess the knowledge and Practice of both rural and urban participants in measurable and comparable terms.

- Part 1- Included a semi-structured interview with 8 questions about socio-demographic information.
- Part 2- Obtained a structured interview with 29 questions about knowledge of dengue (symptoms, transmission, and management).
- Part 3- Consisted of a structured interview with 12 questions about practices related to dengue prevention.

3. RESULTS

SECTION -I (Frequency and percentage distribution according to socio-demographic variables)

- Adults, age of 20-39yrs of rural and urban population is same 26%, 40-49 yrs in rural population 22% whereas urban 26%, above 50yrs of age is 28% in rural and urban 24%.
- In rural 40% is male, and 60% is female whereas in urban 42% is male and 78% comprises of female.
- Maximum rural people (42%) had primary level education, whereas in urban maximum people (60%) studied above middle.
- In rural (58%) and urban (60%) majority people are unemployed.
- Most of the rural people (62%) practice open field defecation whereas urban (86%) people used bathroom.
- Majority adults both rural (74%) and urban (50%) received information through Television.

SECTION-II (knowledge level of both adults, rural and urban regarding dengue and its prevention)

- Maximum rural (86%) and urban (78%) population have average knowledge regarding dengue and its prevention.

SECTION-III (The practice of both adults, rural and urban regarding dengue and its prevention)

- In rural 42% adults fell in the level of poor practice, 54% have average practice and 4% have good practice, whereas in urban 26% fell in the level of poor practice, 70% have average practice, and 4% have good practice.

SECTION-IV (Comparison of knowledge and practice score between rural and urban adults)

Table 1 **N=50**

Table 1 Compare Knowledge Score Between Rural and Urban Adults

Habitant	Knowledge score	Mean	Difference of mean	SE of mean difference	Z value
Rural	743	14.86	1.58	0.68	2.32
Urban	822	16.44			

The Table 1(a) - shows that the presented data ie, knowledge between rural and urban was evident and the obtained Z value (2.3) was significance (p=0.02). By conventional criteria the difference is considered to be statistically significant.

Table 1 **N=50**

Practice Score Between Rural and Urban Adults					
Habitant	**Practice score**	**Mean**	**Difference of mean**	**SE of mean difference**	**Z value**
Rural	246	4.92	0.74	0.39	1.9
Urban	283	5.66			

- The Table 1 (b) - shows the presented data i.e. level of practice between rural and urban was evident and the obtained Z value (1.9) at 0.06 level of significance. By conventional criteria the difference is considered not to be statistically significant.

SECTION-V (Co-relation between knowledge and practice ofboth rural and urban adults regarding dengue and its prevention)

- The correlation between the knowledge score of rural was 14.86, SD ± 3.52 and practice score was 4.92, SD ± 2.03, Karl Pearson correlation was r =0.78, P =0.0001, which is significant, positive, moderate correlation between knowledge and practice among adults regarding dengue and its prevention.

Table 2 **N=50**

Table 2 Co-Relation Between Knowledge and Practice of Both Rural and Urban Adult			
HABITANT		**MEAN+SD**	**CORRELATION COEFFICIENT**
RURAL	KNOWLEDGE	14.86±3.52	r = 0.78
	PRACTICE	4.92±2.03	
URBAN	KNOWLEDGE	16.44±3.45	r = 0.42
	PRACTICE	5.66±1.89	

This table depicts that correlation between the knowledge score of urban was 16.44, SD ±3.45 and practice score was 5.66, SD ±1.89, Karl Pearson correlation was moderate correlation between r =0.42, P=0.002, which is significant, positive, knowledge and practice among adults regarding dengue and its prevention.

4. DISCUSSION

A cross-sectional study was done with 1,010 randomly chosen people from nine areas of Bangladesh between July and November 2019. It found that education level was a key factor influencing both knowledge and awareness about dengue ($p<0.05$). Although people had a good level of knowledge, their actual prevention efforts were somewhat lower. The preventive practice level was moderately less than the knowledge level though there was a significant association ($p<0.05$) existed between knowledge and preventive practices of dengue. Hasan et al. (2021)

Devi et. al (2020) conducted a Comparative Study to Assess the Knowledge Regarding Dengue Fever and its Prevention among Women in Selected urban and rural areas of Ratia (Fatehabad), With a Sample size of 100. The study found a significant difference in knowledge levels between women from urban and rural

areas regarding dengue fever and an association between demographic variable and women's knowledge about dengue fever and its prevention.

In present study dealt with the analysis and interpretation of data from 50 rural and 50 urban adults respectively regarding dengue and its prevention in Khurda district.

In present study reveals that the level of practice of adults regarding dengue and its prevention of both rural and urban. In rural42% adults fell in the level of poor practice, 54% have average practice and only 4% have good practice, whereas in urban 26% fell in the level of poor practice, 70% have average practice, and 4% have good practice.

The study reveals that statistical outcomes presented data i.e, knowledge between rural and urban was evident and the obtained Z value (2.3) was significance (p=0.02). By conventional criteria the difference is considered to be statistically significant.

The study also reveals the data i.e. level of practice between rural and urban was evident and the obtained Z value (1.9) at 0.06 level of significance. By conventional criteria the difference is considered not to be statistically significant.

The researcher correlated between the knowledge score and practice score in this study, the data reveals that rural was 14.86, SD ± 3.52 and practice score was 4.92, SD ± 2.03, Karl Pearson correlation was r=0.78, P =0.0001, which is significant, positive, moderate correlation between knowledge and practice among adults regarding dengue and its prevention. So, it is concluded that when knowledge increases their practice score also increases severely.

In this present study shows that the correlation between the knowledge score of urban was 16.44, SD±3.45 and practice score was 5.66, SD ±1.89, Karl Pearson correlation was moderate correlation between r =0.42, P=0.002, which is significant, positive, knowledge and practice among adults regarding dengue and its prevention. So, it is concluded that when knowledge increases their practice score also increases moderately.

5. CONCLUSION

This study brings to light the need to increase knowledge about dengue and its preventive measures among adults both rural and urban population that can help to enhance the skill, attitude and practice among people. A multidisciplinary approach is needed to handle the burden of dengue.

6. ETHICAL CONSIDERATION

- Permission had taken from institutional ethical committee. Informed consent also taken from Individual participant.
- Clients' confidentiality: The information given by subject will be kept confidential and used only for the purpose of the study and Confidentiality & anonymity of the data will be ensured throughout the study. Privacy will be maintained during interview.

CONFLICT OF INTERESTS

None.

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None.

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