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ASSOCIATED FACTORS OF TEMPERATURE ON HAND, FOOT, AND MOUTH DISEASE (HFMD) INCIDENCE IN KUALA PILAH DISTRICT

Mohd Fathulzhafran Mohamed Hanan [1], Noraliza Radzali [1], Azline Abdilah [1], Jacinta Mary Fathi Rosary Rajan [1], Sharifah Aini Mohamad [1], David Chan Chee Hoong [1,2], Muhd Abd Hafiz Kamarul Zaman [1], Muhammad Syahmi Najwan Shamsudin [1], Nur Syazwani Khairudin [1], Rehemey Shamsul [1], Muhammad Iskandar Noh [1], Siti Nurliyana Nur Zahariman Shah [1], Muhammad Atrash Salim [1], Siti Nor Hidayah Mohd Nordin [1]

[1] Kuala Pilah District Health Office, Kuala Pilah, Negeri Sembilan, [2] Department of Community Health, Universiti Kebangsaan Malaysia, Kuala Lumpur, Malaysia

INTRODUCTION:

- Hand, Foot, and Mouth Disease (HFMD) is a highly contagious viral infection that has become a major public health concern. It is caused by enteroviruses, spreading through saliva, blister fluid, or the fecal-oral route (1). Infected individuals experience oral ulcers and rashes on their palms and soles. While studies have explored the relationship between temperature and HFMD cases (2, 3), no such investigation has focused on the Kuala Pilah district. Understanding this association is crucial for anticipating trends and implementing effective preventive measures. Additionally, considering the impact of global warming, it is important to explore the use of weather forecasting in predicting and managing HFMD outbreaks.

OBJECTIVE:

- This study aims to bridge this knowledge gap by examining the correlation between temperature and HFMD cases in the Kuala Pilah district.

METHODOLOGY:

- The study employed a retrospective analysis of HFMD cases reported in the Kuala Pilah district in the year 2022. Data on weekly confirmed HFMD cases in Kuala Pilah were obtained from the Ministry of Health, Malaysia. The number of cases was 317. Meteorological data, specifically mean weekly temperature records, were obtained from the Malaysian Meteorological Department.
- Descriptive statistics were conducted as a preliminary analysis. Spearman's correlation analysis was then employed to determine the association between HFMD incidence and temperature. The data was analysed using SPSS 22.0.

RESULTS:

- The prevalence of cases was 0.42% among Kuala Pilah population. Most of the cases were aged ≤4 years old, male and Malay ethnicity. Juasseh subdistrict had the highest number of cases which was 80 cases. A moderate positive correlation between HFMD incidence and temperature was obtained, with a correlation coefficient (r) of 0.283 and a p-value of 0.021.

CONCLUSION:

- This study demonstrates a positive correlation between HFMD and temperature in Kuala Pilah district. Temperature should be considered as a potential influencing factor for HFMD transmission. By integrating climatic factors into surveillance and control strategies, public health measures can be optimized to protect the population, especially vulnerable children.

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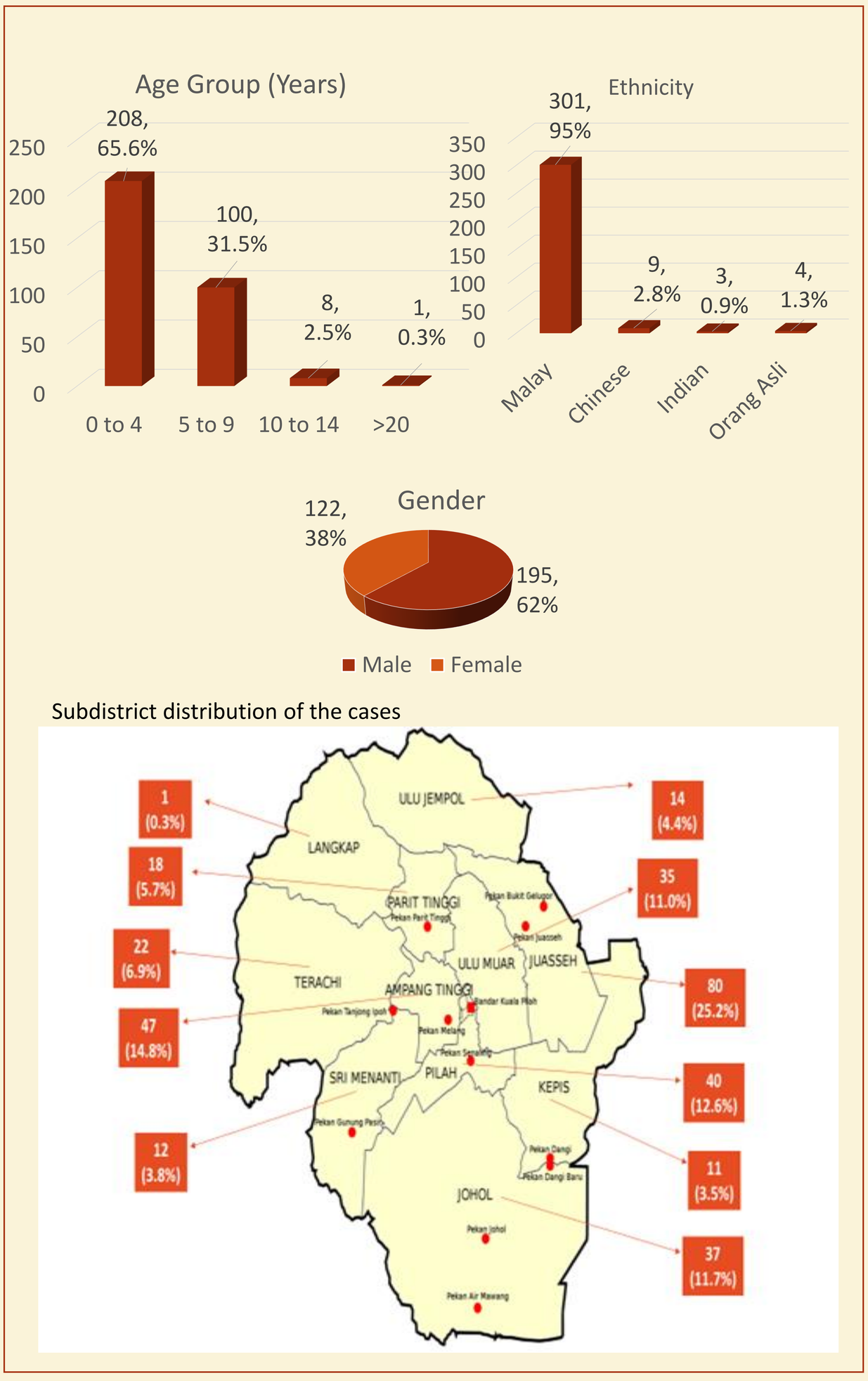

Figure 1: Distribution of cases based on sociodemographic

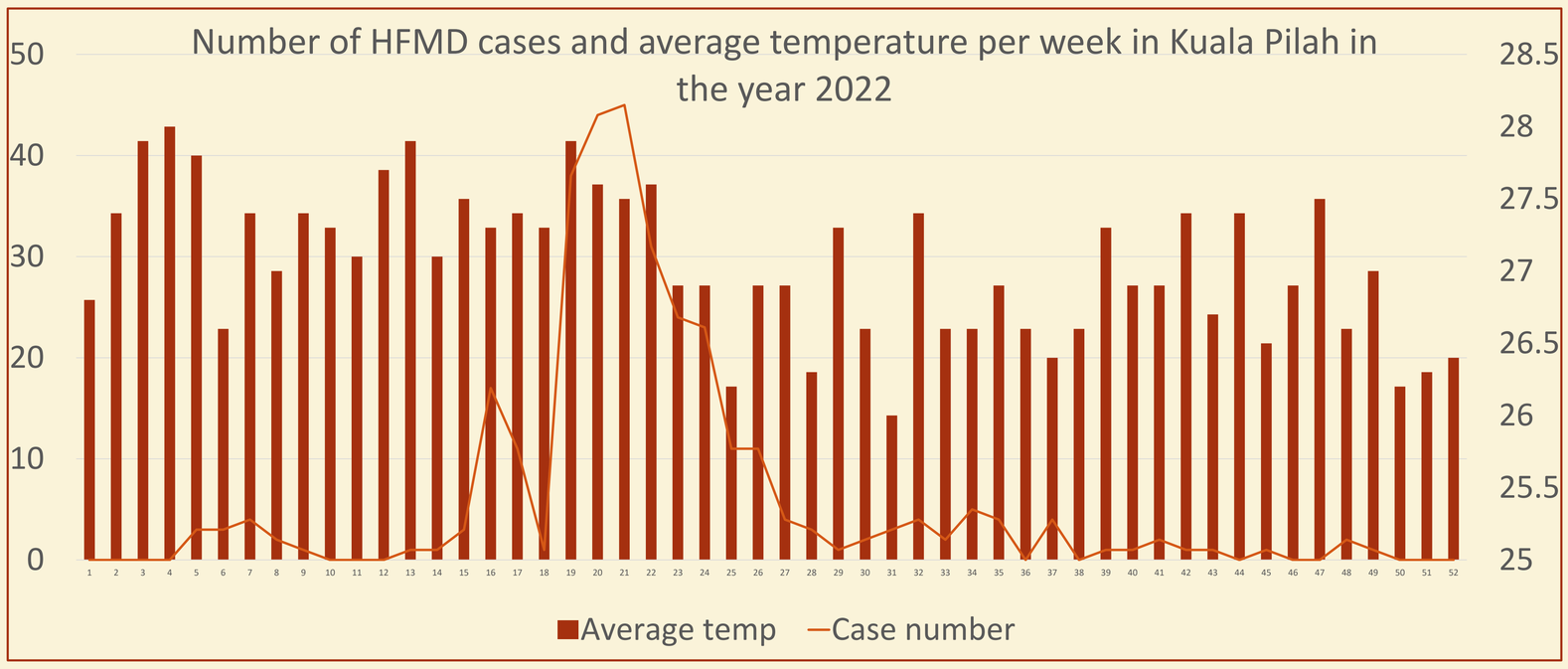

Figure 2: Number of HFMD cases and average temperature per week in Kuala Pilah in the year 2022