

Socioenvironmental Factors of Rheumatic Heart Disease among School-Going Children in Sarawak, Malaysia: A Mixed-Method Study

Rudy Ngau Ajeng, Md Mizanur Rahman*, Asri Bin Said, Mohamed Ameenudeen, Greta Miranda Goh Kim Choo, Abg Safuan Bin Adenan, Muhammad Siddiq Bin Daud, Mohd Faiz Gahamat

Faculty of Medicine and Health Sciences, Universiti Malaysia Sarawak, 94300, Kota Samarahan, Sarawak, Malaysia

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Abstract Socioenvironmental elements could explain the primordial and primary prevention of Rheumatic Heart Disease (RHD) in the local context. A well-planned, encompassing way to deal with RHD in the local setting is essential. Therefore, this study sought to investigate the socioenvironmental determinants of RHD among school-going children and to investigate the aetiology of RHD in the local setting. This study was conducted as a sequential explanatory mixed-methods design. A cross-sectional study was conducted in the first phase, followed by a qualitative study based on the grounded theory approach. The study was conducted in Kuching, Samarahan and Miri divisions in Sarawak among primary and secondary school-going children. The cross-sectional data collection was conducted via face-to-face interviews, while the qualitative phase was conducted via in-depth interviews. There was a preponderance of low socioeconomic status and large family size with RHD. Based on the grounded theory approach, the causes of rheumatic heart disease were classified into internal and external factors. After integrating the findings, the qualitative findings confirmed the quantitative results by confirmation and expansion without discordance. The findings would be vital for the management of RHD in

terms of implementations in practice, theory, and subsequent research, as the factors were explained in the local context.

Keywords Rheumatic Heart Disease, Acute Rheumatic Fever, Children, School-Going, Factors

1. Introduction

The number of Rheumatic Heart Disease (RHD) cases has been declining for decades. However, more than 33 million of RHD cases were estimated in the endemic regions, while over 200,000 were reported in the non-endemic areas [1]. This chronic heart disease is caused by unresolved Acute Rheumatic Fever (ARF) [2] in susceptible individuals [3]. In Malaysia, the number of RHD cases reported has reduced, but the number of heart valve procedures due to RHD complications has increased [4]. In multiple studies, ARF and RHD have been linked to socioenvironmental factors such as income, crowding, and neighbourhood [1, 5-7]. These findings were reported from low- and middle-income developing countries and certain