The diffusion and socio-economic impact of Thalassemia:
A case study of the Kurunegala district

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Thalassemia is a genetically transmitted disease in the world related to abnormal morphology of red cells in the human blood. There are two types of thalassemia called major (beta) thalassemia (with symptoms) and minor (alpha) thalassemia (carriers). Thalassemia is spatially diffused from the Mediterranean Sea to Asia including Sri Lanka. The possibility of thalassemia patients to survive from malaria has caused a concentration of thalassemia in the dry zone districts in Sri Lanka. An average of 80 babies with major thalassemia is born every year and there are over 500,000 carriers in Sri Lanka. The highest prevalence of thalassemia in Sri Lanka is reported from the Kurunegala district while the migration of carriers to other districts may have diffused the disease in other parts of the country. This study attempts to explore the diffusion and socio-economic impact of major thalassemia patients in the Kurunegala district. The objectives are to identify the spatial and temporal variations of major thalassemia cases in the Kurunegala district, to analyse the migration pattern of possible thalassemia carriers, and to identify the socio-economic impact of thalassemia. Ten major thalassemia patients, parents, and medical practitioners were interviewed. The National Thalassemia Centre (NTC) Kurunegala and the Department of Census and Statistics provided the essential set of secondary data. The disease was found to be concentrated in the Eastern and Northern quadrants of the Kurunegala district, showing possible diffusion in other districts parallel to the migration pattern. The average of 44 new patients registered in the NTC annually (2003-2017) has increased to 1095 cases by 2017. Thalassemia patients are a burden to themselves, their families, and to the government as well. Major thalassemia can be totally prevented by avoiding marriage between two carriers.

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