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Population Density and Special School Enrollment: A Prefectural-Level Analysis of Inclusive Education in Japan

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Abstract

The promotion of inclusive education is often evaluated based on the rate of enrollment in special schools, with higher rates interpreted as a lack of progress in inclusion. However, it is important to distinguish between voluntary enrollment motivated by the desire for specialized instruction and involuntary enrollment caused by systemic deficiencies. As Farrell (2012) notes, inclusion is not achieved simply by placing students with disabilities in mainstream schools; quality education, appropriate systemic positioning of special schools and classes, and improvements in school choice systems are essential. Understanding actual school selection practices is crucial for improving both the quality of inclusive education and equity in school choice. Previous international studies have pointed to population density and local policy differences as potential factors influencing special school enrollment rates. Yet, more localized, case-based research is needed. In Japan, while both the total population and the school-age population have been declining for over two decades, the number of students enrolled in special needs schools and special support classes has continued to increase steadily. This study investigates how population density is associated with enrollment in special needs schools at the municipal level under these demographic trends. Using data from all 47 prefectures, the study compares areas with high and low child population densities and employs a mathematical model to project future trends. While population density showed some correlation with enrollment rates, other influential factors were suggested, highlighting the need for further investigation into the dynamics of school selection and inclusive education systems.

Keywords: Inclusive Education; Mathematical Model; Population Density; Prefectural-level analysis; Special School enrollment