

Impact of medical students’ socioeconomic backgrounds on medical school application, admission and migration in Japan: a web-based survey

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Introduction

Evidence from other countries suggests that the composition of students in the profession of medicine often does not accurately reflect society as a whole, and increasing social disparity in Japan is likely to have exacerbated the underrepresentation of students from lower socioeconomic backgrounds in medical schools. We hypothesize that the current cohorts of the Japanese medical students are more socioeconomically privileged and homogenous compared to earlier generations. To identify the relationship between socioeconomic backgrounds and choice of study in Japanese medical and non-medical students, we invited participants to complete a comprehensive questionnaire.

Methods

In 2021, a web-based anonymous questionnaire was sent out nationwide to third and fourth year university students from health professions schools (medical, dental, nursing, pharmacy, occupational/physical therapy) or non-health faculties (liberal arts, education, science, technology). Medical students were categorised as four broad groups: Chiiki-waku medical students (subsidized students who will enter the rural workforce stream), students who only applied to public medical schools, or only applied to private medical schools, or applied to both public & private medical schools. The data collected included students’ sociodemographics, educational experiences, future career aspirations and their parents’ occupations and family incomes. Data collected was analyzed using SPSS V.23.0 (SPSS). Logistic regression analysis was used to analyse the relationship between the aforementioned factors and admission to medical school.

Results

Among medical and non-medical professions, more medical and dentistry students came from higher-income families and had physician parents.

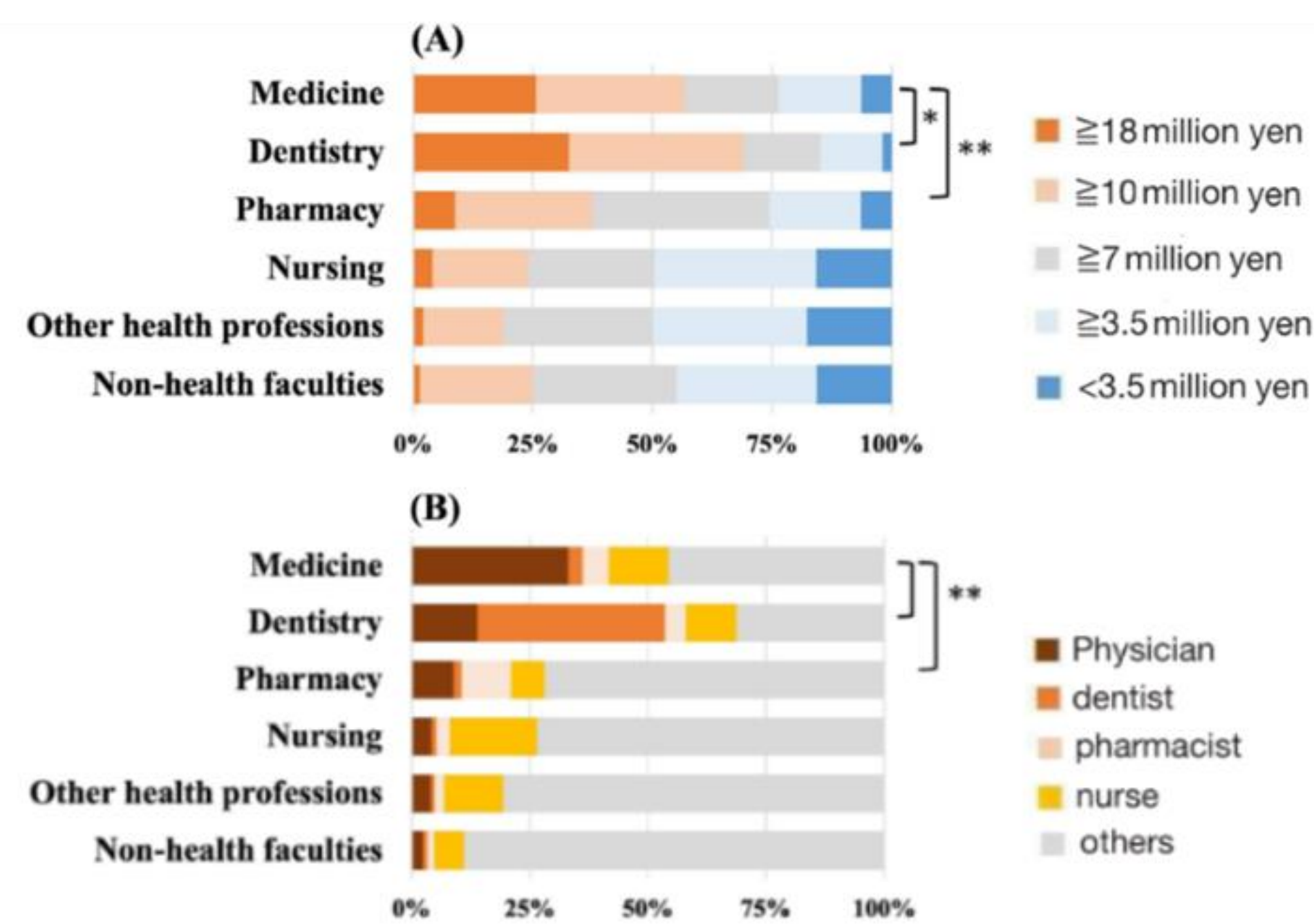


Figure 1. Family background of medical and health professions students. (A) Annual family income of medical and health professions students. (B) Parent occupation (any one of or both) of medical and health professions students.*p<0.05 **p<0.01.

Among medical students, more medical students from private medical schools came from higher-income families and had physician parents.

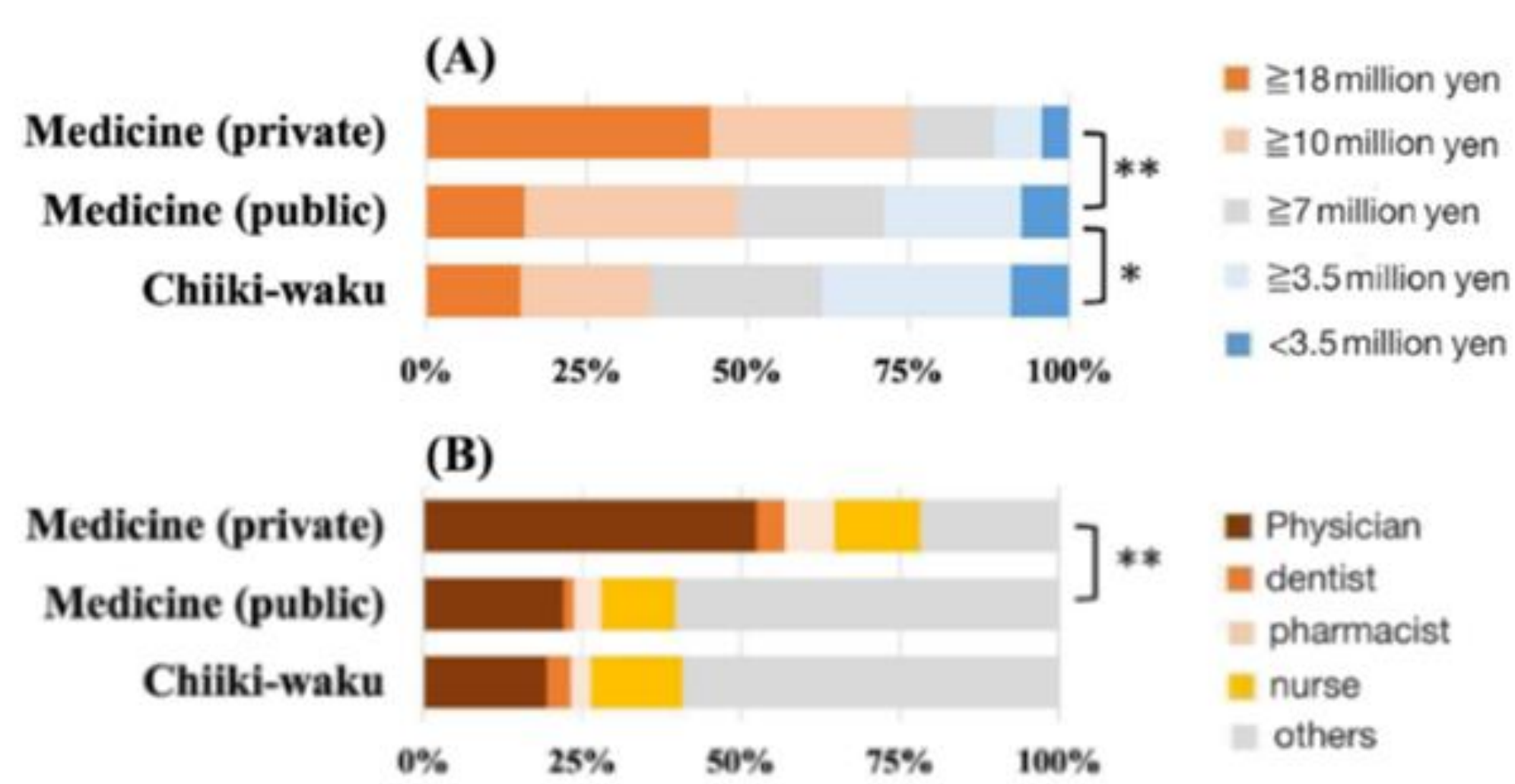


Figure 2. Family background of medical students. (A) Annual family income of private, public and Chiiki-waku medical students. (B) Parent occupation (any one of or both) of private, public and Chiiki-waku medical students..*p<0.05 **p<0.01.

More students who applied only to private medical schools came from families with higher income and had physician parents.

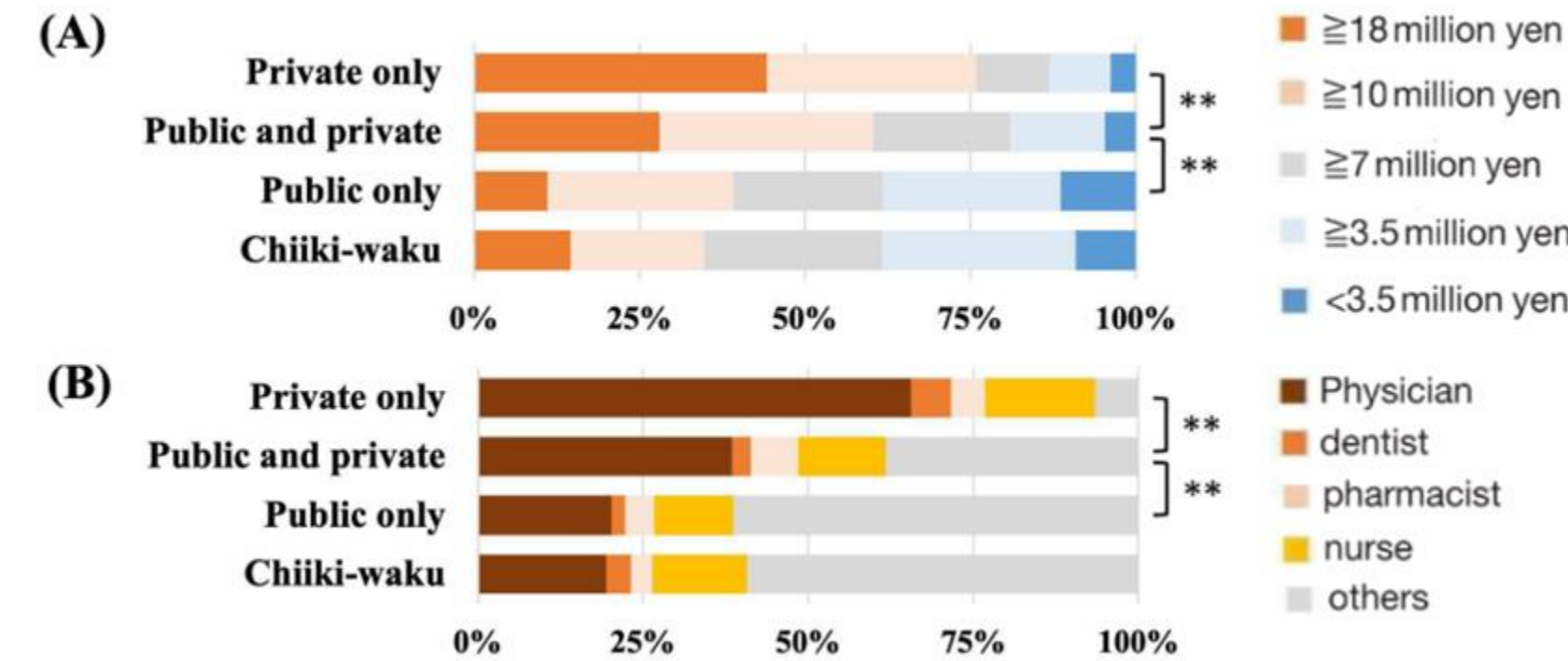


Figure 3. Applications to medical schools and Chiiki-waku. (A) Annual family income of medical students. (B) Parent occupation (any one of or both). **p<0.01.

More students who applied only to private medical schools graduated from private upper secondary schools and had parents who received higher education.

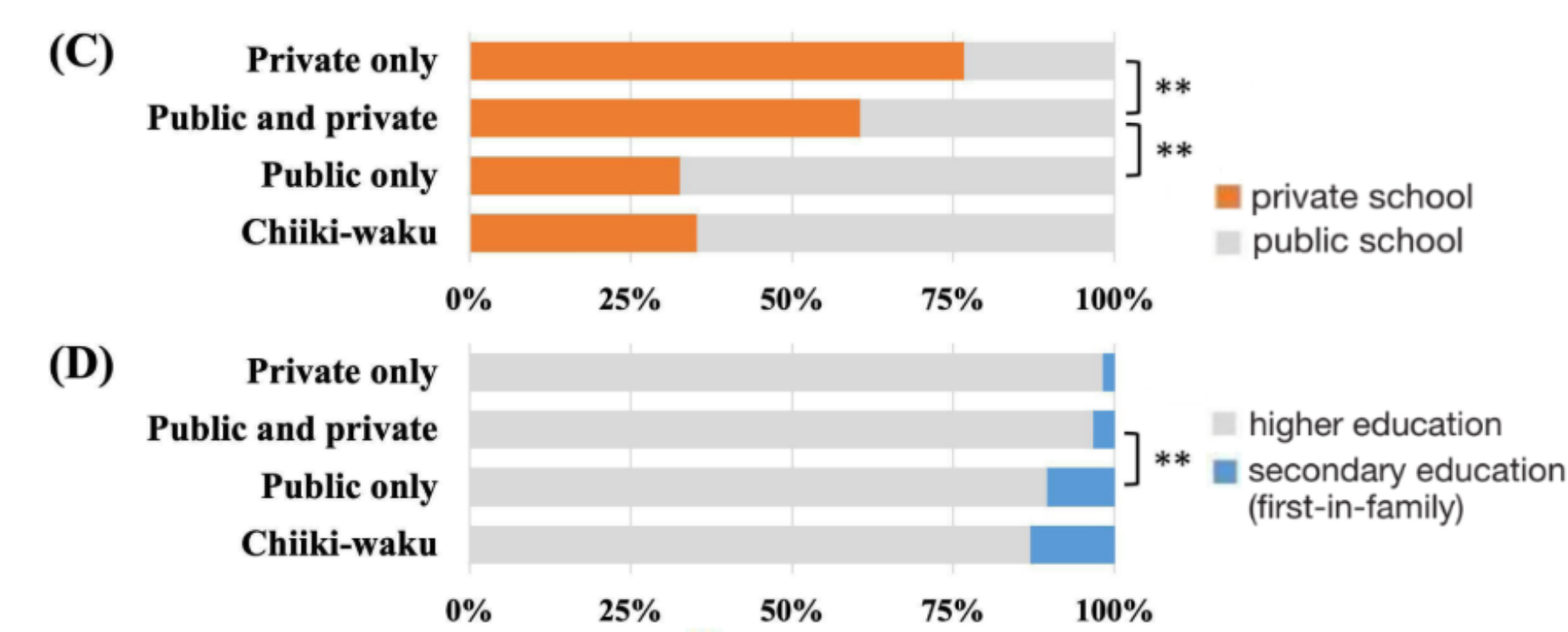


Figure 4. Applications to medical schools and Chiiki-waku. (A) Upper secondary school of medical students. (B) Academic background of parents. **p<0.01.

Metropolitan areas of Japan saw more medical students of high socioeconomic status and graduating from private secondary schools. Conversely, remote areas of Japan saw more medical students that only applied to public medical schools. Additionally, medical schools in Japan consist mainly of students from metropolitan areas, even in more remote areas.

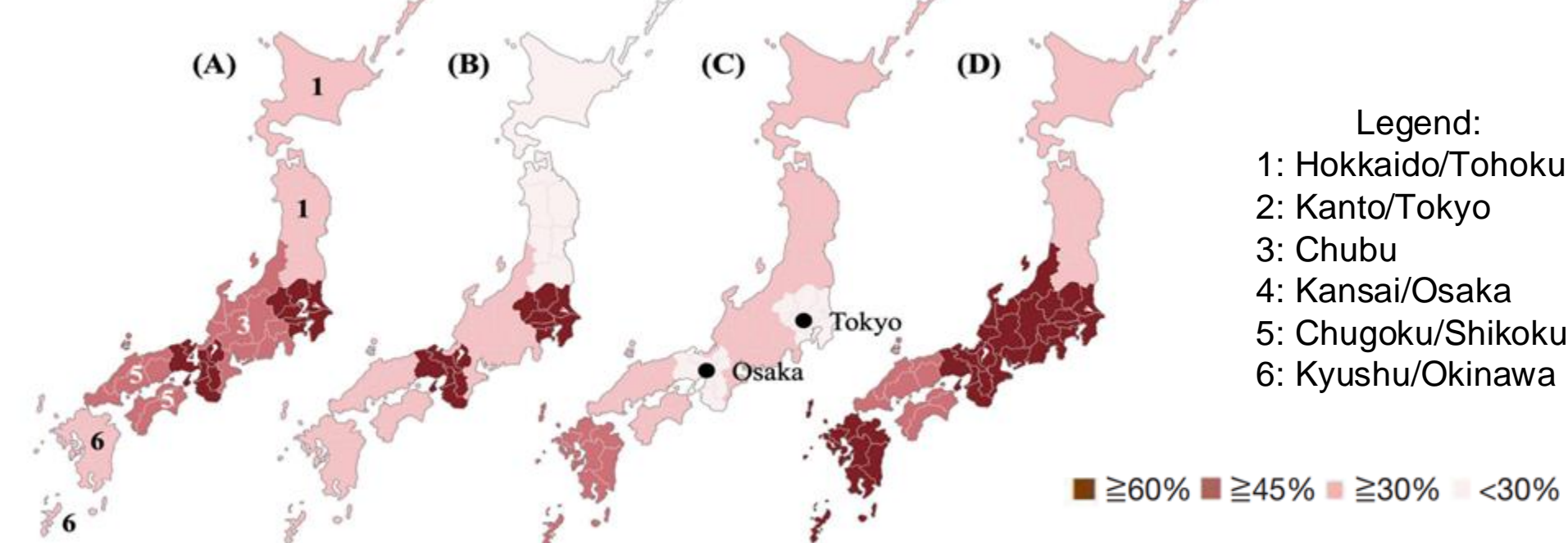


Figure 5. Regional differences of medical students. (A) Annual family income >10 million yen. (B) Private upper secondary school graduation. (C) Application only to public medical school. (D) Local student ratio in public medical schools.

Discussion and Conclusion

This is the first study that has studied demographics of Japanese medical students since the 1970s¹. Our study shows that medical students in Japan are increasingly coming from higher socioeconomic backgrounds (ie. urban areas, higher income classes and physician parents) even those from Chiiki-Waku². This will continue to perpetuate the disproportionate representation of the general population among physicians. Since most medical students in Japan come from more affluent urban areas and tend to return to their home regions to work, the rural areas in Japan are in danger of being understaffed as a consequence.

Additional strategies to attract more students from less affluent rural regions are necessary. Yet, Japan's emphasis on meritocracy and academic achievement may limit the effectiveness of initiatives aimed at recruiting students from lower socioeconomic backgrounds, and debates around broadening access to medical school may even discourage some applicants³⁻⁵. Therefore, it is crucial to engage in thoughtful and proactive discussions on healthcare workforce policies to address future challenges and ensure the healthcare system meets society's needs. *A possible research question is: How does physician maldistribution cause inequity in healthcare for the population?*

References

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