

Consumption of Fruits and Vegetables amongst Pre-tertiary Students

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Introduction

- Increased consumption of fruits and vegetables might reduce relative risk of certain chronic diseases such as cancer, diabetes and cardiovascular disease ([Miller et al., 2015](#)).



- A recent national survey understanding the dietary practices of Singaporeans aged 18 to 69 suggested that the younger population (18- 29) tends to consume the least amount of fruits and vegetables ([Health Promotion Board, 2010](#)).

- Pre-tertiary students aged 17- 21, are either slightly younger or amongst the youngest in this survey and might have low fruits and vegetables intake as well.

- As many adult health issues stem from habits adopted during adolescence, it is important to evaluate lifestyle habits and eating patterns in this age group.



Aims

- To investigate fruits and vegetables consumption among pre-tertiary students by collecting and analysing participants' dietary intake.
- To determine if participants consume adequate fruits and vegetables by comparing their intake against Singapore Health Promotion Board (HPB) recommended fruits and vegetables intake.

Methods

- Participants (n=100) were recruited from a junior college. Their dietary intake were collected via 24-hours recall interviews. Participants' height and weight were collected via self-reporting questionnaires. Their BMI were then calculated.
- Nutrient content of food consumed were analysed using WinDiets software and Energy and Nutrient Composition Search by Singapore HPB.
- Participants' frequency of fruits and vegetables consumption was calculated, serving as an indication on their fruits and vegetables intake.
- Also, by taking into account the weight of fruits and vegetables consumed on each occasion, the number of fruits and vegetables servings was calculated and compared against HPB's recommended number of fruits and vegetables servings.



Results

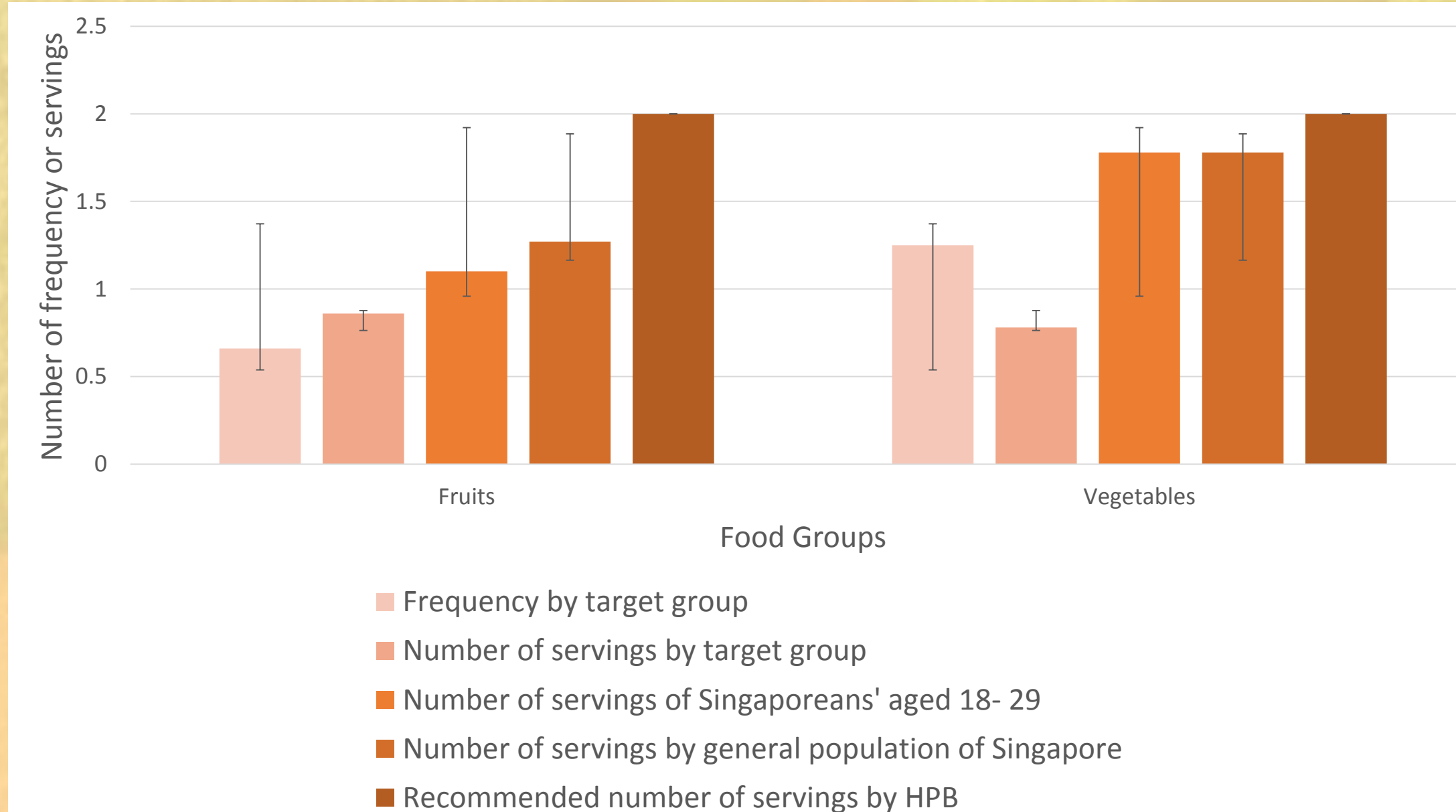


Fig. 1 Mean number of servings/ frequency of fruits and vegetables consumption per day

Discussion and Conclusion

- Frequency of vegetables consumption (1.25) is higher than the number of vegetables servings consumed (0.78). This implies that although participants consume vegetables frequently, the total weight of vegetables they consume is still lower than the recommended amount.
- Future efforts in increasing the consumption of vegetables amongst students might consider increasing the portion size of vegetables served at the canteens of institutions.
- On average, pre-tertiary students consumed fewer numbers of fruits and vegetables servings compared to Singaporeans aged 18- 29, the general Singapore population and HPB's recommended guideline.
- However, the standard deviation of results is relatively high. This implies that there are still a few individuals who consume sufficient amounts of fruits and vegetables.
- In conclusion, pre-tertiary students in general consume insufficient amounts of fruits and vegetables. Therefore, future campaigns and programs encouraging the consumption of fruits and vegetables should focus on this particular age group.

References

- HEALTH PROMOTION BOARD 2010. National Nutrition Survey 2010. Singapore.
- MILLER, N., REICKS, M., REDDEN, J. P., MANN, T., MYKEREZI, E. & VICKERS, Z. 2015. Increasing portion sizes of fruits and vegetables in an elementary school lunch program can increase fruit and vegetable consumption. *Appetite*, 91, 426-430.