

# The Impacts of COVID-19 on Physical Activity, Dietary Changes and Health Awareness of University Students in Hong Kong: A Cross-Sectional Study

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**Background**

- Infection control measures in the COVID-19 pandemic significantly impacted lifestyle
- Changes in physical activity varies across population
- Hong Kong university students have not been studied before

**Objective and Hypothesis**

- To investigate the impacts of COVID-19 on physical activity, dietary changes and health awareness of university students in Hong Kong
- To identify factors contributing to these changes if any.

**Methods**

- Cross-sectional self-administered online questionnaire
- Inclusion criteria: medical and nursing students from The University of Hong Kong (HKU)
- Data analysis by Chi-square test, logistic regression and McNemar Analysis
- Approved by Institutional Review Board of the HKU/ Hospital Authority Hong Kong West Cluster. (IRB Reference Number: UW 20-773)

**Results and Discussion**

- 394 completed questionnaires were collected

**Dietary Changes**

- 38% reported decreased consumption of main meals
- Around half reported increased consumption of snacks
- ‘Changes to daily schedule’ is the only factor influencing eating habits with statistical significance
- Majority do not consider health awareness and fitness concerns when adopting dietary habits

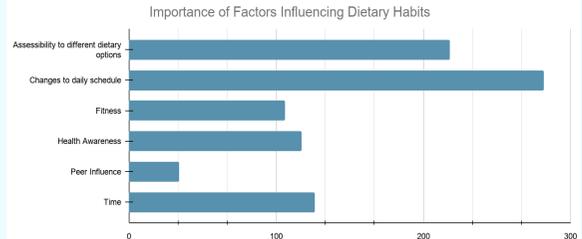


Figure 1: Factors influencing dietary habits

- Healthcare students are knowledgeable about the impacts of good nutrition and dietary habits, yet do not take these factors into concern when making dietary choices
- Healthcare students may dismiss their health due to heavy workload

**Exercise**

- Around 20% report increased exercise intensity, duration, and frequency, similar to that in the SARS outbreak (Lau et al, 2006; “Chronology of the SARS”, n.d.)
- Male sex is associated with greater decreases in exercise frequency
- Individuals physically active before the pandemic see a 60% drop in exercise frequency, intensity and duration
- Individuals not physically active before the pandemic see an a rise in the three parameters, indicating new exercise habits during the pandemic. This can be explained by consideration of time concerns and personal enjoyment.

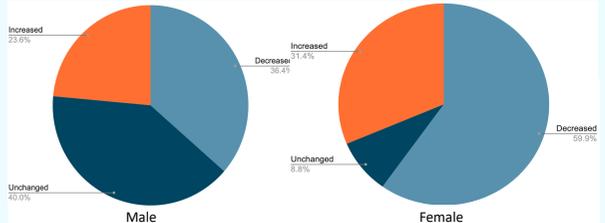


Figure 2 Changes in Exercise Frequency by Sex

**Health Awareness**

- 72.3% of the respondents were in favour of vaccination during the pandemic, which was strongly associated with attitude towards vaccination before COVID-19.
- Among those who expressed a change in attitude, 84% and 16% became more favourable and less favourable of vaccination respectively
- Promotion of vaccinations was a significant factor of consideration in those with positive change in attitude
- Fear of infection may explain a negative change in attitude (Hung et al, 2020)
- Most respondents (91.6%) reported an increase in health awareness during COVID-19. Logistic regression reveals ‘health promotions’ as most associated with increased hygiene awareness; ‘news’ coming second.

	Attitude to Vaccine During Pandemic			
	Positive	Negative	Total	
Attitude to Vaccine Before Pandemic	Positive	90.6	9.36	51.5
	Negative	52.9	47.1	48.5
	Total	72.3	27.7	100

Figure 3: Attitude to Vaccination before and during COVID-19

**Strengths**

- Large sample size of 394 participants for the specific target population of university students studying healthcare-related degrees reduces variation and contributes to strong statistical power of the study.
- To our knowledge, this is the first study of its kind that investigates the impact of COVID-19 in Hong Kong people’s health awareness and physical activity.

**Limitations**

- Broad categorical data were collected. We recommend investigation into ordinal data as an extension of this study.

**Conclusion**

- The COVID-19 pandemic had negative impacts on dietary habits of HKU healthcare students
- Changes in exercise habits differ across different groups of HKU healthcare students
- Generally, the COVID-19 pandemic had positive impacts on health awareness of HKU healthcare students
- This study informs the directions of future public health campaigns that promote healthy lifestyle habits, especially during the pandemic

**References**

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