

UNDERGRADUATE PARAMEDICINE STUDENT SELF-PERCEIVED FITNESS LEVELS: A CROSS SECTIONAL SURVEY

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INTRODUCTION

Despite the high rate of workplace injuries in paramedicine (1), little data looks at the physical fitness levels of undergraduate students intending on entering the profession. A higher prevalence of workplace musculoskeletal injury has been found in early career paramedics within the first three years of employment (2), highlighting the importance of preparation for fitness to practice, at career commencement.

This project aimed to identify areas in which student's self-perceived fitness can be improved, and apply this to their future roles as paramedics.

METHODS

A mixed-methods, cross-sectional survey was completed by a total of 83 undergraduate Bachelor of Paramedicine students from Australian Catholic University, nationwide. Participant's current self-perceived levels of physical activity were recorded using an adaptation of the International Physical Activity Questionnaire (IPAQ).



Figure 1. Components of the survey released to first, second and third year paramedicine students.

Data collected included demography, physical activity levels, perceived barriers to physical activity, self-perceived level of physical fitness, and perceptions of the physical demands of the paramedicine role. Analysis aimed to identify trends across the paramedicine cohort and associated perceived readiness for practice.



Figure 2. Number of students who anonymously completed the survey.

RESULTS

Preliminary results suggest that self-perceived cardiovascular fitness levels significantly reduce over the three-year degree period (Figure 3).

The perceived physical demands of the paramedicine role also appear to evolve over the three-year degree period, suggesting a change in perception as students become more familiar with the requirements of the role.

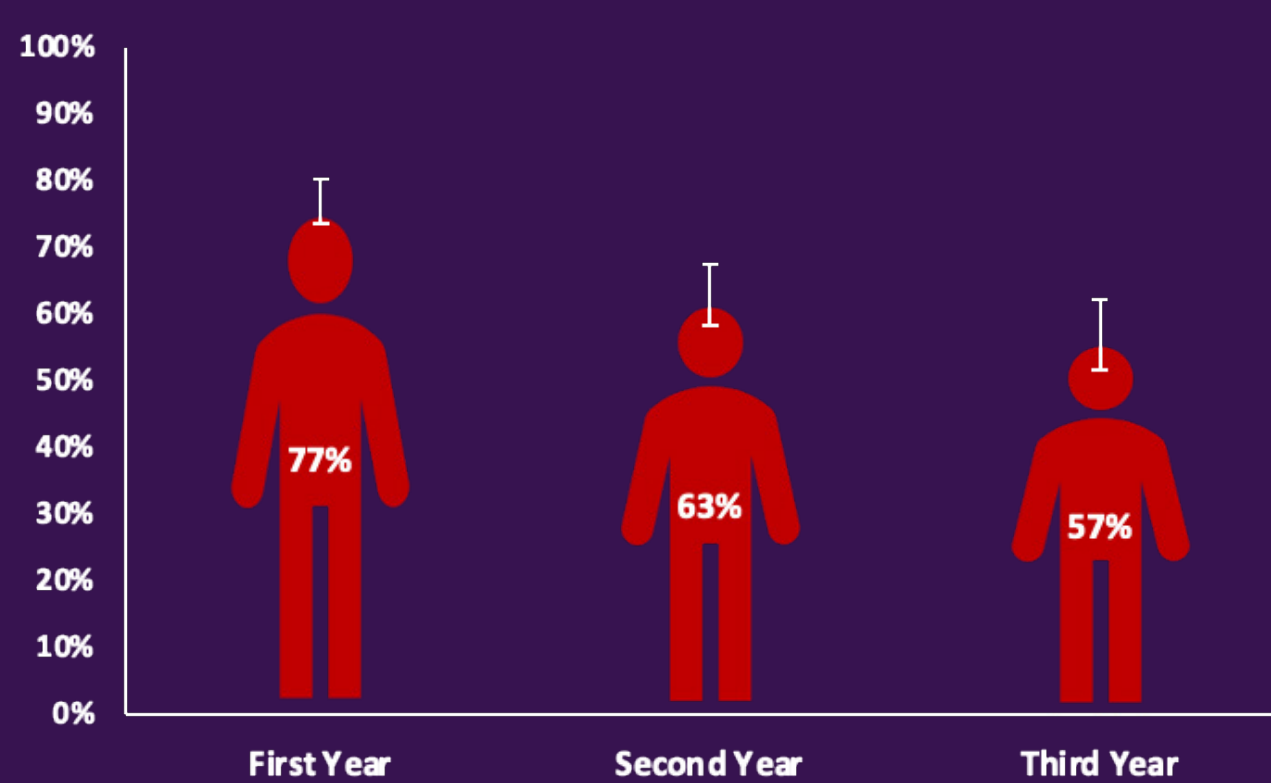


Figure 3. Students perceived cardiovascular fitness rating out of 100 separated by year levels.

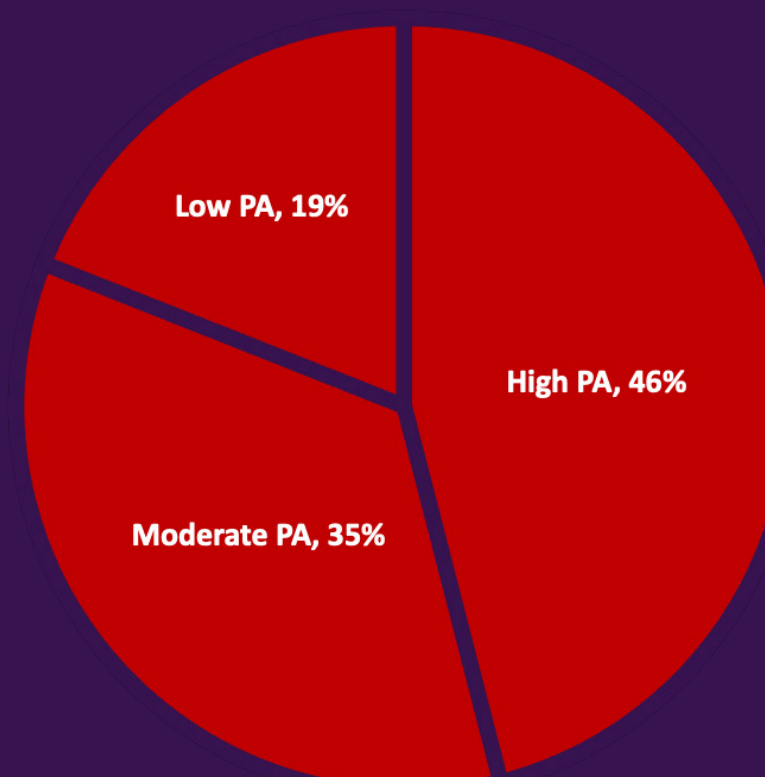


Figure 4. Breakdown of students by physical activity categorisation following IPAQ results.

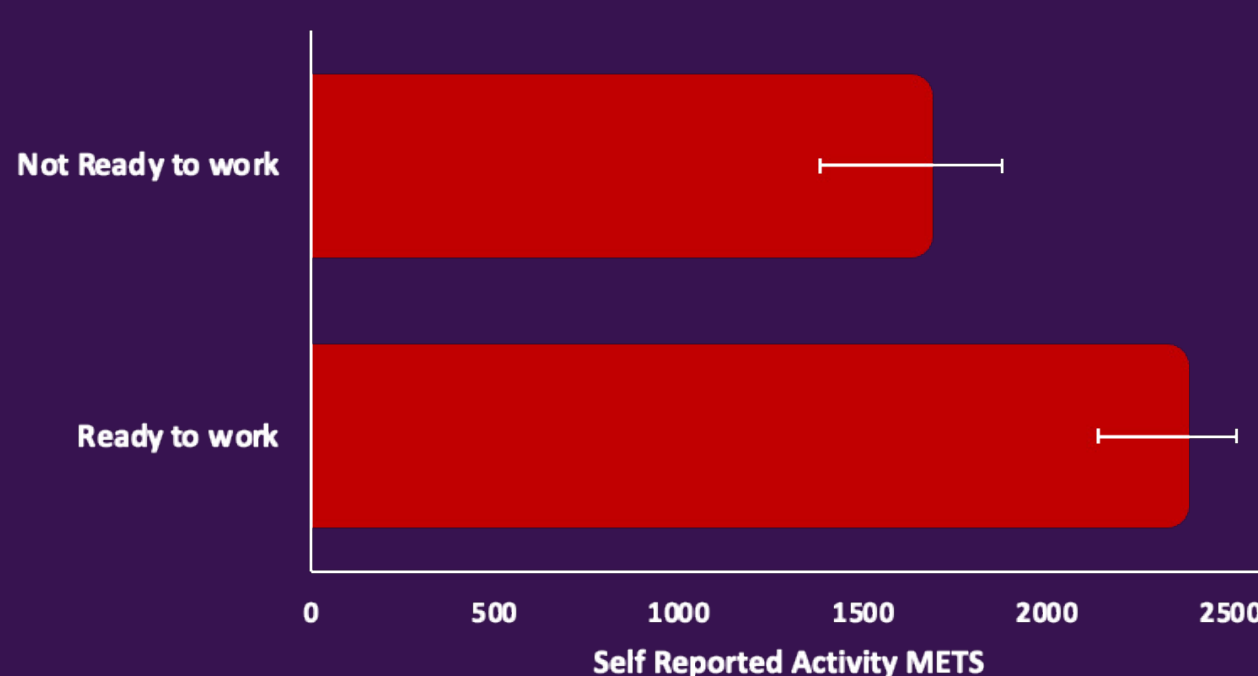


Figure 5. Students weekly physical activity levels categorised by perceived physical readiness to work as a paramedic.

When comparing students who identified as being physically ready to work to those who were not, there was significant difference seen in their weekly exercise levels.

Additionally, students who anticipated CPR as being the most physically demanding aspect of the job reported significantly lower perceived cardiovascular fitness.

DISCUSSION

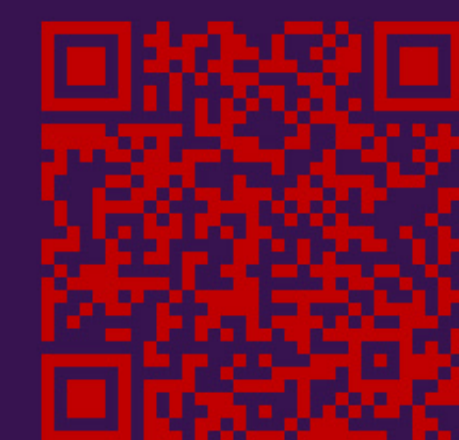
- Our findings have possible implications for graduate paramedics who are anticipating entry into the paramedicine workforce. They are consistent with recent research indicating suboptimal physical activity levels of graduate paramedics on commencement into the workforce (3).
- A study by Le Rossignol et al (4) indicates paramedicine and nursing students engage in the lowest level of physical activity in their first year of undergraduate studies, in comparison with other health science disciplines. Additionally, upon commencement of practice in the workforce, shift-work and other occupational stressors are known barriers to paramedic professionals engaging in physical activity (5).
- Our study supports the emerging findings that inadequate physical activity levels in graduate paramedics may place them at a disadvantage at the start of their careers (5), raising concerns of workplace injury and the associated pitfalls.
- It is recognised that the main limitation of our study and subsequent findings, is the reliance on self-perceived, subjective information obtained from participants. Further research would benefit from objective data collection on actual fitness and strength levels of undergraduate paramedicine students.

CONCLUSION

Self-perceived fitness levels of paramedicine students decline over the period of their three-year degree, demonstrating implications for graduate's entering the workforce.

This project has significant opportunity for expansion into future research projects, involving interprofessional and inter-organisational collaborations.

The findings from the project aim to inform future research and guide the implementation of exercise interventions into the paramedic curriculum, and positively influence graduates entering the workforce, minimising the risk of workplace injury and illness.



Scan QR code to view the survey

REFERENCES

1. Gray S, Collie A. Workers' Compensation Claims Among Nurses and Ambulance Officers in Australia, 2008/09 - 2013/14. Melbourne, Australia; 2016. Report No.: 118-0516-R03.
2. Jenkins N, Smith G, Stewart S, Kamphuis C. Pre-employment physical capacity testing as a predictor of musculoskeletal injury in Victorian paramedics. Work. 2021;70:263-70.
3. Meadley B, Wolkow AP, Smith K, Perraton L, Bowles KA, Bonham MP. Cardiometabolic, Dietary and Physical Health in Graduate Paramedics during the First 12-months of Practice - A Longitudinal study. Prehospital emergency care. 2022;26(4):524-36.
4. Le Rossignol P, Boertien M, Wee EH. Health related physical activity behaviour of first year university students. International sports studies. 2016;38(1):25-35.
5. Betts C, Stoneley A, Anderson J, Sutton C. Occupational factors influencing paramedic health and wellbeing: A scoping review. International Journal of Paramedicine. 2024;6:132-51.

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