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Exploring the Interplay Between Physical Activity Wellness, Social Networks, and Academic Performance in PT Students

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Exploring the Interplay Between Physical Activity Wellness, Social Networks, and Academic Performance in PT Students

Presented at the American Physical Therapy Association – Nebraska Annual Meeting
Omaha, NE, April 6, 2024

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ABSTRACT

Purpose

Recognizing the intersection of peer influence, physical activity, student wellness, and academic performance, this study aims to provide insights that can inform educational practices and promote success among future physical therapist (PT) students. The study's purpose is to investigate the associations between students' physical activity wellness scores, their social networks, and academic performance within the school environment. The research questions are (1) Do students tend to form friendships with classmates who exhibit similar physical activity wellness scores and student achievement? and (2) How do the Exercise Factor scores of PT students align with published normative values?

Subjects: 124 students from two cohorts enrolled in a physical therapy program at an academic medical center provided consent to participate.

Materials/methods: At matriculation, mid-program, and graduation, students completed a questionnaire identifying close connections using a classmate roster and answered the Five Factor Wellness (FFW) Inventory (Myers and Sweeny, 2014). The FFW scale used for this study was the Exercise Factor. A binary achievement score was assigned at graduation, defining substandard achievement as academic probation, course or clinical education remediation, or multiple licensure exam attempts. Quadratic assignment procedure correlations and social network analysis were employed to analyze data.

Results: Visualization network maps illustrate connection patterns between students with color-coded Exercise Factor scores and different icon shapes indicating academic performance issues. Students that share the most connections are at the center of the map. The mean (SD) FFW Exercise Factor score at matriculation was 83.7 (12.6) and increased to 85.1 (12.2) at mid-program and regressed 83.43 (12.1) at the time of graduation. The scores at each timepoint are higher than the reported norms of 68.1 (21.2).

Conclusions: This study questions the belief that all physical therapy students naturally embrace physical activity, despite group scores surpassing norms. Though a negative link between stress and GPA exists in health profession students, engaging in exercise can positively impact stress-related disorders. Recommending regular exercise to PT students with below-average performance may aid academic improvement. This research aims to offer valuable insights into the interplay of physical activity, social connections, and academic outcomes for holistic student development.

Clinical relevance:

The findings from this study inform educators and students about the potential benefits of fostering physical activity and its role in shaping social networks and positively influencing academic success.

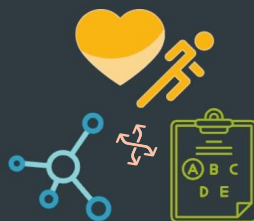
References Myers, JE, Sweeney TJ. Five-Factor Wellness Inventory Manual (2nd ed). Menlo Park, CA: Mind Garden (2014).

note that this 2014 reference is included as it is the primary reference for the Five Factor Wellness Inventory used in this study.


1. Shannonhouse L, Erford B, Gibson D, O’Hara C, Fullen MC. Psychometric synthesis of the five factor wellness inventory. *Journal of Counseling & Development*. 2020;98(1):94-106.
2. Pantic N, Brouwer J, Thomas L, Froehlich D. The potential of mixed-method social network analysis for studying interaction between agency and structure in education. *International Journal of Research & Method in Education* 2023;46(2):187-199.
3. Chisholm-Burns M, Berg-Poppe P, Spivey C, Karges-Brown J, Pithan A. Systematic review of noncognitive factors influence on health professions students’ academic performance. *Advances in Health Sciences Education*. 2021;26:1373–1445. <https://doi.org/10.1007/s10459-021-10042-1>
4. Heissel A, Heinen D, Brokmeier L et al. Exercise as medicine for depressive symptoms? A systematic review and meta-analysis with meta-regression. *Br J Sports Med*. 2023;57:1049–1057.
5. Stubbs B, Vancampfort D, Rosenbaum S, Firth J, Cosco T, Veronese N, Salum G, Schuch F. An examination of the anxiolytic effects of exercise for people with anxiety and stress-related disorders: A meta-analysis, *Psychiatry Research*. 2017;249:102-108.
6. Calo M, Judd B, Chipchase L, Blackstock F, Peiris C. Grit, resilience, mindset, and academic success in physical therapist students: a cross-sectional, multicenter study. *Physical Therapy*. 2022;102:1-10.
7. Huebner B, Mattocks A, Pitt J. Noncognitive factors of grit and mindset do not predict performance on the National Physical Therapy Exam. *Journal of Physical Therapy Education*. 2023;37:138-144.

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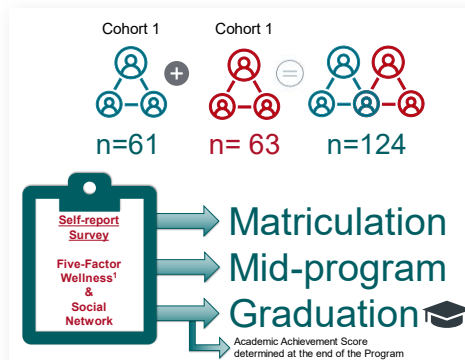


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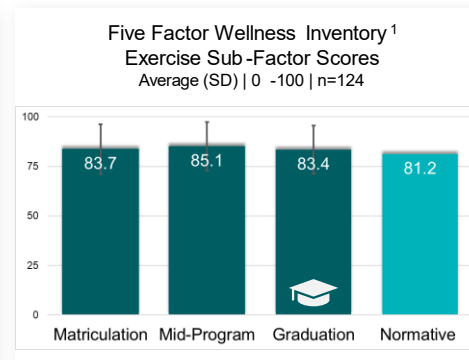


Methods



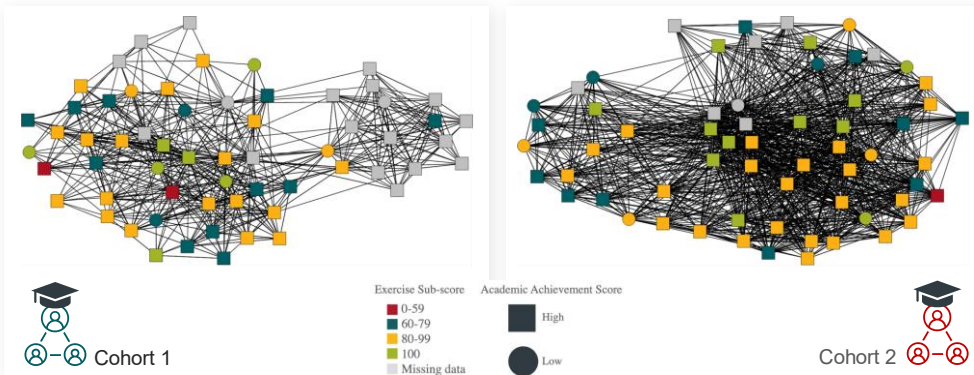
All study participants consented to participate | IRB# 583-19-EX

Results: Exercise Scores



¹ Shamonhouse, Laura, et al. "Psychometric synthesis of the five-factor wellness inventory." Journal of Counseling & Development 98.1 (2020): 94-106.

Results: Social Network - Connections Among Classmates at Graduation



missing data is due to non-responses of the survey
Each shape represents one student | Lines illustrate a close connection | Individuals are placed closest to those they share the most connections



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