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Implementing Exercise is Medicine on Campus: A Mixed-Methods Evaluation of a Student-Led Health Promotion Initiative at a Small Liberal Arts College

Kameron B. Suire, PhD, ACSM-EP [1]; Ree Williams Zoller [2]; Olivia Lambert [2]; Melany Sanchez Ruiz [2]; Katelyn Cunningham [2]; Katie Frankman [2]; Hayden Chastain [2]; Trenton Hayberg [2]; Morgan Barton [2]

[1] Department of Kinesiology, Berry College, Mount Berry, GA
[2] Undergraduate Student Researchers, Berry College

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ABSTRACT

Purpose: This study evaluated a student-led Exercise Is Medicine On Campus initiative embedded within an undergraduate research methods course at a small liberal arts college. The project examined changes in program awareness, student engagement, and perceived barriers to physical activity using a mixed-methods approach. Guided by Self-Determination Theory, Social Cognitive Theory, and ecological perspectives, the initiative aimed to determine whether peer-led, socially oriented programming could enhance campus movement culture in a resource-limited setting.

Methods: During Exercise Is Medicine Month (February–April 2025), students designed and delivered three physical activity events (volleyball, pickleball, slip-and-slide kickball) and disseminated a campus-wide promotional campaign. Pre-intervention ($n = 84$) and post-intervention ($n = 71$) surveys assessed physical activity levels, Exercise Is Medicine On Campus awareness, perceived campus support, and preferred health promotion services. Event-specific reflections captured qualitative insights about enjoyment, motivation, and barriers. Quantitative analyses included descriptive statistics and chi-square tests; qualitative data underwent inductive thematic analysis.

Results: Awareness of Exercise Is Medicine On Campus increased from 22% to 56% ($\chi^2 = 21.4$, $p < .001$). Interest in future programming increased from 48% to 68% ($\chi^2 = 9.2$, $p = .003$). Perceived campus support for exercise increased from 64% to 81% ($\chi^2 = 5.7$, $p = .017$). Students exercised an average of 5 ± 1.9 days per week. Qualitative themes from 35 students participating in events emphasized the importance of social motivation, peer modeling, program visibility, and low-pressure, enjoyable formats. Time limitations, fatigue, and inconsistent awareness remained the most commonly cited barriers.

Conclusions: Integrating Exercise Is Medicine On Campus within an academic course substantially improved visibility and engagement despite minimal resources. Peer-led, socially supportive, play-based programming appears to be an effective strategy for promoting physical activity in small-college environments lacking formal wellness infrastructures. This curriculum-embedded model offers a scalable framework that simultaneously enhances student learning and strengthens institutional wellness capacity.

Keywords: Campus Wellness; Physical Activity Promotion; Student-Led Health Programming; Behavior Change; Exercise is Medicine

Introduction

Physical inactivity remains one of the most pressing public health challenges worldwide, contributing to chronic disease, functional decline, and premature mortality.[1-3] College students represent a particularly important group because emerging adulthood is marked by lifestyle transitions that often reduce physical activity and increase sedentary behavior.[4,6] Many students enter college with structured activity habits tied to organized sport or parental routines but encounter academic pressures and shifting social environments that undermine sustained engagement. Recent national data show that many students fail to meet activity recommendations and experience elevated stress, anxiety, and depressive symptoms, which are strongly linked to insufficient physical activity.[7,8] These patterns do not arise from individual factors alone; they are also shaped by environmental and social-contextual influences. Students frequently cite time constraints, low motivation, and limited awareness of campus opportunities as barriers to exercise,[9,10] yet research highlights the importance of peer support, social belonging, and enjoyable activity formats in facilitating engagement.[11]

Exercise Is Medicine On Campus (EIM-OC) provides a framework for inserting movement into institutional culture through education, engagement, and supportive environments.[12] Evidence from large universities demonstrates its effectiveness,[12,14] but far fewer studies address implementation at smaller colleges with limited wellness infrastructure. Smaller institutions possess unique strengths like tight-knit communities, strong mentoring cultures, and experiential learning traditions that may make peer-led models especially effective. Peer norms strongly influence physical activity in young adults,[11,15] making student-led initiatives particularly impactful.

Embedding EIM-OC within academic coursework offers an innovative, sustainable strategy by aligning wellness programming with pedagogical goals. Course-Based Undergraduate Research Experiences (CUREs) promote authentic research engagement, skill development, and scientific identity formation,[16,18] making them a natural fit for health promotion initiatives that require student leadership and inquiry. Using Self-Determination Theory and Social Cognitive Theory,[19,20] this model emphasizes autonomy-supportive, competence-building, and socially connected experiences that can foster intrinsic motivation for physical activity.

Despite growing evidence supporting EIM-OC in large university settings,[12,14] little is known about how EIM-OC can be effectively implemented within small liberal arts colleges that operate with limited wellness staffing, minimal formal infrastructure, and smaller student populations. No prior studies have examined a curriculum-integrated EIM-OC model, in which wellness programming is embedded within a CURE. Integrating EIM-OC into a CURE provides a built-in mechanism for sustainability by ensuring that each new course cohort participates in planning, delivering, and evaluating wellness initiatives, reducing dependence on temporary student volunteers while strengthening program continuity. This combination of peer-led health promotion and experiential research training represents a novel approach that may be uniquely suited to smaller institutions. The present study addresses this gap by evaluating a curriculum-integrated EIM-OC model implemented within a CURE at a small liberal arts college, with the goal of determining whether this approach can increase awareness, engagement, and perceived support for physical activity during Exercise Is Medicine Month.

Methods

STUDY DESIGN

This project used a convergent mixed-methods design[22] to evaluate a student-led EIM-OC initiative embedded within an undergraduate research methods course. Quantitative and qualitative data were collected surrounding Exercise Is Medicine Month (February through April 2025). The study assessed changes in program awareness, student engagement, physical activity patterns, and perceived barriers. The University Institutional Review Board approved all study procedures, and all participants provided informed consent.

INSTITUTIONAL CONTEXT AND COURSE INTEGRATION

The institution is a private liberal arts institution with approximately 2,200 undergraduates. The EIM-OC initiative was integrated into Research Methods in Kinesiology. Students were responsible for designing, implementing, and evaluating all events and promotional efforts. Course instructors provided guidance on research design, data collection, measurement, and ethical considerations but did not direct event content. This structure ensured that the initiative functioned both as a wellness campaign and as a CURE, consistent with established CURE models.[16,17]

PARTICIPANTS AND RECRUITMENT

Participants in the quantitative surveys included undergraduate students recruited through campus-wide digital communication channels, classroom announcements, campus canvassing, and QR codes placed on promotional flyers. A total of 84 students completed the baseline survey. A total of 71 students completed the post-survey following the conclusion of the EIM Month programming. Participation in the intervention events was voluntary, and attendance ranged from 6 to 20 students per event. Students who attended physical activity events were invited to complete short written reflections immediately after each event via a survey. These reflections provided qualitative data regarding motivation, enjoyment, barriers, and perceived benefits. No incentives were offered for survey completion or event participation.

INTERVENTION PROCEDURES

The intervention consisted of three peer-led physical activity events designed by students in the research methods course. Events included a sunset volleyball match, a recreational pickleball night, and a slip-and-slide kickball game held on an outdoor field. These events were selected because they promoted social interaction, required minimal equipment, and aligned with Self-Determination Theory principles related to autonomy, competence, and relatedness. Students in the course

developed promotional materials, including digital flyers, residence hall announcements, classroom visits, and social media posts. A coordinated messaging campaign was implemented during the final two weeks leading into each event to enhance visibility. Environmental cues such as posters, chalkboard advertising, and table tents were placed across campus to support recognition of the EIM-OC brand. During each event, student organizers facilitated warm-up activities, explained rules, ensured inclusive participation, recorded attendance, and collected reflection responses. Events lasted approximately 60 to 120 minutes.

MEASURES

Quantitative Surveys

Pre-intervention and post-intervention surveys contained identical items assessing:

- demographic characteristics
- current physical activity (days per week)
- awareness of EIM-OC
- perceived campus support for exercise
- interest in future EIM-OC events
- perceived barriers to physical activity
- preferred formats for campus wellness programming

Survey questions included multiple-choice items, Likert-type scales, and open-ended responses. No identifying information was collected.

Event Reflections

Event participants completed a brief open-ended reflection form immediately after each activity. Prompts asked participants to describe what they enjoyed, what challenged them, whether they would attend similar events in the future, and what changes could improve the experience. These reflections served as the primary source of qualitative data.

DATA MANAGEMENT AND ANALYSIS

Quantitative Analysis

Survey data were analyzed using IBM SPSS Statistics version 29. Descriptive statistics summarized demographic characteristics, exercise frequency, and awareness levels. Pre-to-post differences in categorical variables were evaluated using chi-square tests. Continuous variables were assessed using descriptive measures due to differences in sample sizes between pre and post groups. Statistical significance was set at $p < .05$.

Qualitative Analysis

Qualitative data from event reflections were analyzed using an inductive thematic analysis approach guided by Braun and Clarke's established framework.[23] The research team first reviewed all responses to achieve familiarization with the dataset. Initial codes were generated independently, and similar codes were grouped into potential themes. Themes were refined through iterative discussion, ensuring internal coherence and distinction from other categories. Final themes represented shared patterns across reflections related to motivation, social connection, barriers, and programming preferences.

Integration of Mixed Methods

Quantitative and qualitative findings were triangulated to provide a comprehensive understanding of the impact of the EIM-OC initiative. Integration followed best practices for convergent mixed-methods designs outlined by Fetters, Curry, and Creswell.[24] Survey trends were compared with qualitative themes to contextualize changes in awareness and engagement, enhancing interpretability by linking numerical trends to lived experiences.

Results

A total of 84 students completed the pre-intervention survey and 71 completed the post-intervention survey. Event participation ranged from 6 to 20 students each week, and 35 qualitative reflections were collected across the volleyball, pickleball, and slip-and-slide kickball events. Quantitative and qualitative results are presented below, organized by awareness, engagement, perceived barriers, and thematic insights.

PARTICIPANT CHARACTERISTICS

Demographic characteristics of participants were similar across pre- and post-surveys, with a predominance of female and White students, further details can be found in **Table 1**. Average weekly exercise frequency was approximately five days per week in both samples, which aligns with the culture of an active campus environment. Event attendees showed slightly higher weekly activity, although demographic patterns were consistent with the larger samples.

Table 1. Participant Demographics

Variable	Pre (n = 84)	Post (n = 71)	Events (n = 35)
Age (Mean ± SD)	20.4 ± 1.3	20.2 ± 1.5	19.8 ± 1.2
Gender			
Female	46 (54.8%)	42 (59.2%)	9 (25.7%)
Ethnicity			
Hispanic / Latino	15 (17.9%)	11 (15.5%)	3 (8.6%)
Not Hispanic / Latino	69 (82.1%)	60 (84.5%)	32 (91.4%)
Race			
Asian	2 (2.4%)	2 (2.8%)	1 (2.9%)
Black / African American	6 (7.1%)	4 (5.6%)	2 (5.7%)
Mixed / Multiracial	5 (6.0%)	5 (7.0%)	1 (2.9%)
White	71 (84.5%)	60 (84.5%)	31 (88.6%)
Exercise Days/Week (Mean ± SD)	5.0 ± 1.9	5.1 ± 2.0	5.6 ± 1.2

AWARENESS AND ENGAGEMENT OUTCOMES

Awareness of Exercise is Medicine On Campus

A key outcome of the initiative was a marked increase in awareness of the EIM-OC program. Only 22 percent of students reported awareness at baseline, compared with 56 percent after the initiative. This change represented a statistically significant increase ($\chi^2 = 21.4$, $p < .001$). Many students noted that they learned about EIM-OC for the first time through the promotional flyers, peer word-of-mouth, or by passing the outdoor events. Students frequently commented that the colors, visuals, and consistent branding helped EIM-OC seem more visible and easier to recognize. Several students remarked that they had "never heard of EIM before this semester" or that they "finally saw what EIM was all about" because of peer-led messaging.

Interest in Future Events

Interest in attending future EIM events increased significantly from 48 percent to 68 percent ($\chi^2 = 9.2$, $p = .003$). Students often described that the social, low-pressure nature of the events helped them feel more comfortable attending. Many said that they would like more events that "don't feel like workouts" and instead emphasize fun, community, and a break from academic stress.

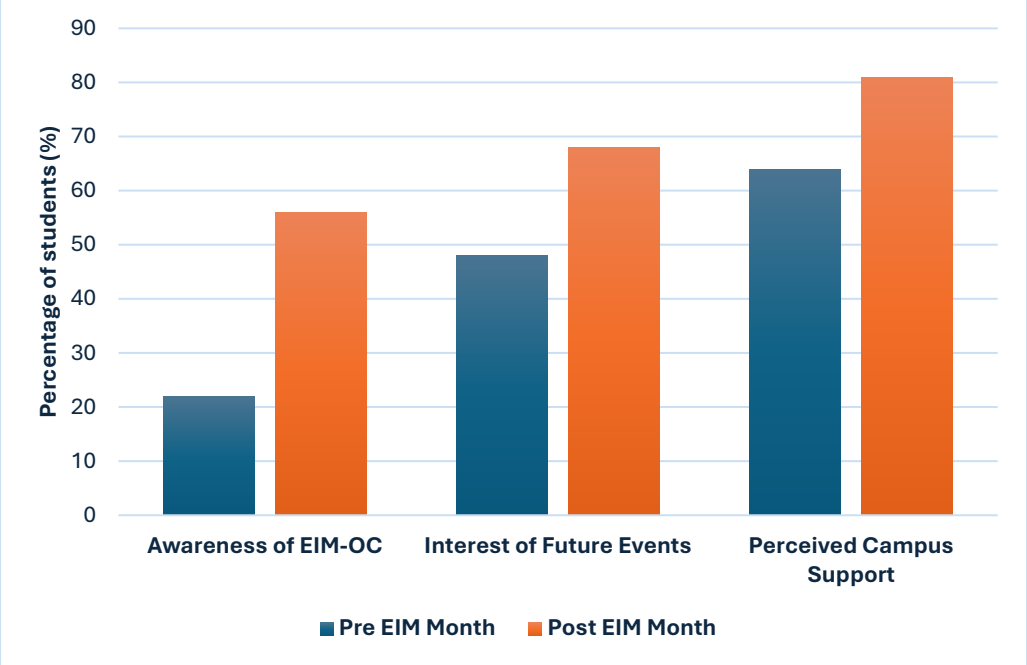
Perceived Campus Support

Perceived campus support for exercise increased significantly from 64 percent to 81 percent ($\chi^2 = 5.7$, $p = .017$). Students attributed this shift to the increased visibility of kinesiology faculty and student researchers who were seen setting up, facilitating, and promoting physical activity events. Some noted that the collaboration between faculty and students sent a message that "physical activity matters here." Across all three engagement indicators, awareness, interest in future events, and perceived campus support, post-intervention scores were significantly higher than baseline values (**Table 2**). A visual representation of these changes can be seen in **Figure 1.**

Table 2. Pre- to Post-Changes in Awareness and Engagement

Variable	Pre (%)	Post (%)	χ^2 (p-value)
Heard of EIM-OC	22	56	21.4 (< .001)
Interested in Future EIM Events	48	68	9.2 (.003)
Believe Campus Supports Exercise	64	81	5.7 (.017)

Figure 1: Changes in Awareness, Event Interest, and Perceived Campus Support



Perceived Barriers to Participation

Barriers reported by students remained consistent across the study period. Time constraints (n = 33) and motivation or fatigue (n = 24) were the most frequently cited barriers. Students also mentioned limited awareness of events (n = 21), weather disruptions, and a desire for more social support. More details can be found in **Table 3.** Although awareness significantly increased, qualitative responses revealed that barriers such as academic workload, scheduling conflicts, and low energy persisted. Event participants often described attending because the event "happened to be right there" or because a friend encouraged them. This illustrates how the location, timing, and social aspects of events help overcome well-documented motivational barriers.

Table 3. Reported Barriers to Participation

Barrier	Frequency (n)	Representative Quotes
Time Constraints	33	"I don't have time between classes and work."
Low Motivation / Fatigue	24	"I know I should work out, but I get tired or distracted."
Lack of Awareness / Visibility	21	"I didn't know events were happening."
Weather / Environment	7	"Outdoor events were rained out."
Social Support / Confidence	6	"I'd go if my friends did."

Qualitative Themes from Event Reflections
Thematic analysis of 35 written reflections identified four dominant themes that help contextualize the quantitative findings. These themes highlight *why* awareness and engagement increased and provide insight into the types of programming students find meaningful.

1. Social Motivation and Connection
Students consistently described that they enjoyed participating because the events were social, playful, and allowed them to bond with peers. Many reflections emphasized that the activities did not feel intimidating or competitive. Students valued the opportunity to "laugh with friends," meet new people, and participate in a shared experience that broke up the academic day.

Representative comments included:

- "I loved playing with friends and meeting new people."
- "It was fun and low stress."
- "I forgot it was exercise because we were laughing the whole time."

This theme aligns with increased interest in future events and highlights the importance of social design in campus activity programming.

2. Awareness and Visibility
Students frequently mentioned that the posters, branded flyers, and visible presence of student organizers improved EIM's visibility. Several students said they attended because they "happened to walk by" or because the event looked appealing from a distance, which reinforced the importance of environmental cues.

Comments included:

- "I saw people setting up and wanted to see what it was."
- "The flyers were everywhere this time."
- "I walked by and the music and people caught my attention, so I joined."

3. Personal Barriers and Time Constraints
Students described challenges such as assignments, part-time jobs, and social commitments that limited their ability to attend more events. Even participants who enjoyed the events noted that scheduling was a barrier.

Reflections commonly stated:

- "I would come to more events if the timing worked better."
- "I have a lot going on in the evenings."
- "Between work and homework, I struggle to fit anything else in."

These comments support survey findings that time and fatigue remain dominant barriers.

4. Preferred Programming Features
Students favored events that were informal, playful, nostalgic, and welcoming to all skill levels. Volleyball and slip-and-slide kickball were described as "fun," "easy to join," and "not too competitive." Students emphasized that they enjoyed events where they could participate regardless of fitness level or athletic experience.

They stated:

- "I liked that anyone could join in."
- "It did not feel like a workout, just something fun."
- "I liked that it wasn't competitive and everyone was welcome."

Discussion

Embedding a student-led EIM-OC initiative within a research methods course produced meaningful improvements in awareness, engagement, and perceived campus support for physical activity. These findings extend prior EIM-OC work by demonstrating that a low-resource, peer-led model can function effectively within small liberal arts colleges, where wellness staffing and infrastructure are often limited.[12,14] Importantly, this approach illustrates how structured academic environments can serve as effective delivery systems for health promotion without requiring substantial new funding or personnel. The pattern of results also aligns with research showing that psychological determinants such as affective responses, motivation, and self-regulatory capacity play an important role in shaping exercise behavior among young adults.[25] Taken together, these findings suggest that campus-based programming can be effective even when delivered through modest, student-driven efforts that rely heavily on relational connections rather than formal institutional resources, particularly when those efforts are embedded within existing curricular structures.

Peer leadership likely contributed substantially to the model's success. Students' familiarity with campus culture and their informal communication networks align with evidence that peer norms and peer-led health education are among the strongest predictors of physical activity and wellness engagement in young adults.[11,15,26,27] Peer-led delivery may also reduce perceived power differentials that can exist in faculty or staff-driven initiatives, increasing approachability and trust. Qualitative findings underscored this dynamic, as participants described the events as welcoming, enjoyable, and socially engaging, emphasizing how interpersonal support shapes motivation. The strong social

atmosphere surrounding each event likely helped lower psychological barriers to participation by framing activities as shared experiences rather than structured exercise obligations, which may be particularly important for students with lower confidence or inconsistent activity histories.

Self-Determination Theory provides a strong conceptual explanation for these outcomes.[19,20] The events supported autonomy through low-pressure entry points, competence through achievable activities, and relatedness through shared participation with peers. Importantly, these needs were addressed simultaneously rather than in isolation, which may amplify their combined motivational impact. These psychological needs are consistently linked to sustained physical activity and positive affective experiences.[28,29] Social Cognitive Theory complements this interpretation by highlighting the importance of peer modeling and early mastery experiences, which increase self-efficacy.[21,30] Students noted that seeing peers participate increased their comfort and confidence, and this visibility likely reinforced perceptions that the activities were both approachable and enjoyable. Together, these mechanisms illustrate how relatively simple program design choices can produce meaningful psychological effects that extend beyond individual events.

The initiative's integration within coursework aligns closely with implementation science principles emphasizing adaptability, organizational fit, and sustainability.[31-33] Course-based implementation mitigates reliance on temporary student leaders and provides built-in evaluation cycles each semester, allowing programs to evolve iteratively over time. This structure aligns well with recommendations for sustaining campus-based wellness initiatives, which often struggle with continuity due to high turnover and limited resources.[33-34] Embedding EIM-OC in a recurring course also supports institutional memory by retaining program knowledge within academic structures, reducing the need for ongoing staff coordination and creating a predictable cycle for training, refinement, and improvement.

Additionally, the model's integration with a course-based undergraduate research experience is particularly meaningful. Through event design, data collection, and interpretation, students gained applied research skills known to enhance scientific identity and academic development.[16-18] This structure positions students not only as program implementers but also as contributors to the evidence base supporting campus wellness initiatives. This dual-purpose framework, which advances both wellness and pedagogy, is especially valuable for teaching-focused institutions where experiential learning is a core priority. The approach may also strengthen student ownership of the initiative, fostering a campus culture in which wellness is perceived as a shared academic and communal responsibility rather than an optional extracurricular activity.

Persistent barriers such as time constraints, fatigue, and limited visibility reflect patterns reported in recent literature.[9-10] These challenges underscore the complexity of promoting physical activity within demanding academic environments. Multi-channel communication strategies, partnerships with residence life, and integration with orientation or first-year seminars may strengthen future reach. Implementation science suggests that repeated cues and consistent messaging improve adoption and engagement.[31-33] Although awareness improved significantly, these persistent barriers highlight the need for flexible program delivery that accounts for fluctuating academic demands, environmental conditions, and student schedules. Developing strategies that leverage both physical and digital touchpoints may help address these ongoing challenges while maintaining program accessibility.

Together, these findings suggest that embedding health promotion within academic courses, emphasizing social support, and designing low-pressure events can foster a movement-supportive culture in higher education. This model offers a scalable, resource-efficient framework that aligns with both curricular and wellness priorities and can be adapted easily by similar small colleges. Beyond immediate engagement outcomes, the findings highlight the value of viewing wellness initiatives as integrated components of the educational mission rather than stand-alone programming. Institutions seeking to build sustainable health promotion efforts may benefit from considering how academic structures, peer networks, and experiential learning can work together to support student well-being over time.

Future Directions

Future work should build on these findings by examining how curriculum-integrated EIM-OC models can further accommodate diverse activity preferences and engagement styles across the student population. While low-pressure, socially driven events were effective in increasing awareness and perceived support, subsequent iterations may explore broader menus of activity options that appeal to students who are less drawn to traditional fitness or sport-based programming. Expanding the range of formats and delivery approaches may help address persistent barriers related to time constraints, fatigue, and perceived relevance. Future studies could also employ longitudinal or paired designs to better capture individual-level changes in awareness, motivation, and participation over time. Additionally, examining implementation across multiple courses or academic units may clarify how institutional context influences reach and sustainability. Collectively, these directions would help refine curriculum-based wellness models while maintaining their adaptability, inclusivity, and alignment with academic priorities.

Limitations

This study has several limitations that should be considered when interpreting the findings. First, the pre- and post-intervention surveys were completed by independent samples rather than paired participants, limiting the ability to attribute changes in awareness or perceptions directly to the EIM-OC initiative. All quantitative measures were based on self-report, which introduces the possibility of recall bias and social desirability bias, particularly for physical activity frequency. Event participation was modest, and students

who attended the activities tended to report higher baseline activity levels than the broader campus sample, suggesting potential selection bias. The qualitative data were drawn from short, post-event reflections, which provided valuable real-time insights but offered limited depth compared with extended interviews or focus groups. Additionally, the study was conducted at a small liberal arts college with a unique culture of close faculty–student engagement, which may limit generalizability to larger institutions or campuses with different organizational structures. Finally, the EIM-OC events were implemented during a single academic term, and longer-term effects on behavior, campus culture, and sustainability of engagement could not be assessed. Together, these limitations highlight the need for future research using longitudinal designs, multi-campus comparisons, and more diverse qualitative methodologies to deepen understanding of curriculum-integrated EIM-OC models.

Conclusions

A student-led, curriculum-integrated EIM-OC initiative significantly increased campus awareness and engagement. The model demonstrates that small colleges can successfully implement health promotion by leveraging peer influence, social connection, and low-pressure activity design. These findings also illustrate how embedding wellness initiatives within academic coursework can enhance both educational outcomes and campus health culture. Importantly, results suggest that low-cost, socially oriented programming may offer a practical path forward for institutions without formal wellness infrastructures. Future iterations of this model may benefit from expanded partnerships across residence life, athletics, and student affairs to improve reach and sustainability. Continued evaluation of this embedded approach could help establish best practices for strengthening physical activity culture in higher education settings.

References

1. Guthold R, Stevens GA, Riley LM, Bull FC. Global trends in insufficient physical activity. *Lancet Global Health*. 2020;6(10):e1077–e1086.
2. Piercy KL, Troiano RP, Ballard RM, et al. Physical Activity Guidelines for Americans, 2nd edition. *JAMA*. 2018;320(19):2020–2028.
3. World Health Organization. Global Action Plan on Physical Activity 2018–2030. Geneva: WHO; 2018.
4. Kwan MY, Cairney J, Faulkner GE, Pullenayegum EE. Physical activity and sedentary behavior across the university transition. *Prev Med*. 2019;119:113–121.
5. Huang T, Rote AE, Stanish H, Cole A. Declines in physical activity during emerging adulthood. *J Phys Act Health*. 2021;18(3):304–312.
6. American College Health Association. National College Health Assessment III: Undergraduate Reference Group Executive Summary Spring 2023. Silver Spring, MD: ACHA; 2023.
7. Watson JC, Suls J, Penedo FJ, et al. Physical activity and mental health among college students. *Health Psychol*. 2021;40(2):77–86.
8. Pascoe MC, Hetrick SE, Parker AG. Physical activity and mental health benefits in young adults. *BMC Psychiatry*. 2020;20:123.
9. Plotnikoff RC, Costigan SA, Williams RL, et al. Barriers to physical activity among university students. *Int J Behav Nutr Phys Act*. 2015;12:162.
10. Byrd-Bredbenner C, Eck K, Quick V, et al. Barriers to physical activity among college students: Updated perspectives. *J Am Coll Health*. 2020;68(6):667–677.
11. Vella SA, Cliff DP, Magee CA. Associations between sports participation and psychosocial outcomes in college-aged young adults. *J Adolesc Health*. 2015;57(3):245–251.
12. Wilson OWA, Olds TS, Langan E, et al. Implementation and outcomes of Exercise Is Medicine On Campus. *Curr Sports Med Rep*. 2018;17(3):158–168.
13. Biber DD, Knoll C. Exercise Is Medicine On Campus: A pilot study. *J Am Coll Health*. 2021;69(7):763–771.
14. Peterson NE, Young DR, Ferguson M, Baker K, Fellin RE. Exercise Is Medicine On Campus: A scoping review. *Curr Sports Med Rep*. 2022;21(8):249–257.
15. Hurst M, Dittmar H, Bond R, Kasser T. Peer influence and physical activity motivation. *J Health Psychol*. 2013;18(9):1198–1208.
16. Brownell SE, Kloser MJ, Fukami T, Shavelson RJ. Undergraduate research enhances learning and engagement. *CBE Life Sci Educ*. 2012;11(4):378–386.
17. Auchincloss LC, Laursen SL, Branchaw JL, et al. Assessment of Course-Based Undergraduate Research Experiences: A meeting report. *CBE Life Sci Educ*. 2014;13(1):29–40.
18. Corwin LA, Graham MJ, Dolan EL. Modeling course-based undergraduate research experiences: An agenda for future research. *CBE Life Sci Educ*. 2015;14(1):1–13.
19. Ryan RM, Deci EL. Self-Determination Theory: Basic Psychological Needs in Motivation, Development, and Wellness. New York: Guilford Press; 2017.
20. Teixeira PJ, Carraca EV, Markland D, Silva MN, Ryan RM. Motivation, self-determination, and physical activity: A review. *Int J Behav Nutr Phys Act*. 2012;9:78.
21. Bandura A. Social Foundations of Thought and Action: A Social Cognitive Theory. Englewood Cliffs, NJ: Prentice-Hall; 1986.
22. Johnson RB, Onwuegbuzie AJ, Turner LA. Toward a definition of mixed methods research. *J Mixed Methods Res*. 2007;1(2):112–133.
23. Braun V, Clarke V. Using thematic analysis in psychology. *Qual Res Psychol*. 2006;3(2):77–101.
24. Fetters MD, Curry LA, Creswell JW. Achieving integration in mixed methods designs—Principles and practices. *Health Serv Res*. 2013;48(6 Pt 2):2134–2156.
25. White KM, Thomas NJ, Elliott SA, et al. Peer health education and wellness in college students. *J Am Coll Health*. 2018;66(7):528–536.
26. Lochbaum M, Zourbanos N, Anton A, Dimmock J. Psychological predictors of exercise behavior: A systematic review. *Psychol Sport Exerc*. 2016;27:160–178.
27. Graupensperger S, Gottschall JS, Benson AJ. Peer influence and behavioral contagion in college recreation. *J Am Coll Health*. 2021;69(4):425–433.
28. Rhodes RE, Kates A. Can the affective response to exercise predict future behavior? *Health Psychol Rev*. 2015;9(3):307–325.
29. Williams DM. Exercise, affect, and adherence. Curr Opin Psychol. 2018;10:89–94.
30. Feltz DL, Short SE, Sullivan PJ. Self-Efficacy in Sport and Physical Activity. Human Kinetics; 2008.
31. Proctor E, Silmere H, Raghavan R, et al. Outcomes for implementation research: Conceptual distinctions, measurement challenges, and research agenda. *Implement Sci*. 2011;6:82.
32. Durlak JA, DuPre EP. Implementation matters: A review of research on the influence of implementation on program outcomes. *Am J Community Psychol*. 2008;41:327–350.
33. Shelton RC, Chambers DA, Glasgow RE. An extension of RE-AIM to enhance sustainability. *Am J Public Health*. 2020;110(4):606–614.
34. Chriqui JF, Sansone CN, Leatherdale ST. Sustaining school-based health promotion: Implications for practice and policy. *Am J Public Health*. 2020;110(9):1350–1358.