

# PHYSICAL EDUCATION GRADUATION REQUIREMENTS IN OREGON'S TERTIARY INSTITUTIONS

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**Szarabajko, et. al.** Physical activity behaviors tend to decline while weight gain and psychological distress tend to increase during college. Physical education requirements (PERs) can help college students acquire and practice healthy lifestyle skills while overcoming barriers to unhealthy behaviors, shaping positive and healthy future habits. The majority of colleges and universities in the U.S. throughout the 20<sup>th</sup> century developed and implemented PERs; however, in the early 21<sup>st</sup> century, they dropped to an all-time low of 39%. Since their all-time high of 97% during the 1920s/1930s, a downward trend has been observed. The purpose of this study was to examine the current status of PERs in Oregon's 2-year and 4-year institutions ( $N = 35$ ). Results revealed that only 14.29% (i.e., 5 of 35) of Oregon's institutions fully required PERs, while 28.57% (i.e., 10 of 35) did not require PERs for graduation. The majority of the sample (57.14%; i.e., 20 of 35) partially required physical education courses, meaning that not all degrees offered at the institution listed a PER or it was an option among a list of choices. Whereas all 2-year colleges required partial ( $n = 17$ ) PERs, the majority of 4-year institutions did not require PERs ( $n = 10$ ). Given the downward trend, there is an urgent need for updated state and national data on the status of PERs in U.S. colleges. Such data could help those in kinesiology and other wellness-related disciplines better advocate for the continuation of PERs and/or to understand the factors associated with their successful continuation.

**Key Words:** college and university students, general education, higher education, liberal education, policy, well-rounded education

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## INTRODUCTION

Physical education requirements (PERs) in higher education help students develop personal awareness and responsibility regarding healthy lifestyle choices; educational aims that are within the purview of higher education (Report of the Harvard Committee, 1950). Depending on the institution, students may be required to complete PERs by completing activity courses, conceptual courses pertaining to lifetime fitness, wellness, health, or physical education, or a combination of both. During the 20<sup>th</sup> century, the majority of colleges and universities in the U.S. developed and implemented PERs; however, in the early 21<sup>st</sup> century, fewer than 40% of 4-year colleges

and universities in the US required such coursework (Cardinal et al., 2012). Moreover, since reaching an all-time high of 97% of institutions having such a requirement during the 1920s/1930s, a downward trend has been observed. Today the majority of tertiary students in the U.S. are not required to learn lifetime fitness and health skills during their higher education experience. This is concerning, as physical activity behaviors tend to decline (Nelson et al., 2007; Small et al., 2013) while weight gain (Pope et al., 2017; Yan & Harrington, 2020) and psychological distress (Petruzzello & Box, 2020) tend to increase during college, setting a trajectory of unhealthy

behavioral patterns into adulthood (Sparling & Snow, 2002).

Recent data from the American College Health Association-National College Health Assessment (2020) revealed that only 38% of college students met national aerobic activity and strength training guidelines. Additionally, more than 24% classify as overweight and more than 17% as obese. In addition, 49% of college students also rated their overall stress level as moderate and 31% as high during the previous 12 months, which could explain why more than 44% reported moderate to serious psychological distress. This decline in physical activity and mental health among tertiary students seems to have been exacerbated by the impact and restrictions of the COVID-19 pandemic (Wilson et al., 2021). With that in mind, the trend of higher education institutions eliminating required physical activity courses – be they activity-based, conceptual-based, or some combination thereof – from their programs seems counterintuitive and might exacerbate these problems.

Consider PERs emergence into higher education >160 years ago at Amherst College in western Massachusetts in the first place. At his inaugural address, the Reverend William Augustus Stearns, a doctor of divinity, expressed his grave concern over the health of the college's students, "Of one thing I am certain, the highest intellectual efficiency can never be reached, the noblest characters will never be formed, till a greater soundness of physical constitution is attained" (Stearns, 1855, p. 87). At his first report to the college's trustee's, Stearns went on to say, "No one thing has demanded more of my anxious attention than the health of the students" (cited in Allen, 1869, p. 3). With the support of the college's Board of Trustees, the innovation of physical education was introduced, and given its success, especially under the direction of Edward Hitchcock, Jr., M.D., the first president of the organization known today as the Society of Health and Physical Educators [SHAPE] America, which was founded in 1885, physical education programs were increasingly adopted by other tertiary institutions across the country and even in other parts of the world, such as Japan (Cardinal, 2017, 2020; Welch, 1975).

Over the ensuing 160 years, a plethora of research supports the merits of physical activity on cardiovascular health (Warburton & Bredin, 2017). Physical activity is also associated with improved academic performance and retention rates (Chang et al., 2014; Sanderson et al., 2018), decreased signs and symptoms of anxiety, depression, and stress, (Currier et al., 2020; Ensari et al., 2015; Petruzzello & Box, 2020), and increases in social connections with others (VanKim & Nelson, 2013). Thus, higher education institutions can play a vital role in decreasing unhealthy habits in tertiary students by mandating and upholding PERs.

This is consistent with the social ecological model (Sallis et al., 1998; Spence & Lee, 2003), which hypothesizes that multiple factors are in the behavior causal chain, including policy (Schmid et al., 2006). Most often policy is regarded as an "upstream" approach that influences the other levels within the chain as they trickle down from macro/societal to micro/individual. Landi et al. (2021) demonstrated that physical education policies can be an especially important means of addressing the need for equitable, inclusive, and safe physical activity practices that benefits all students. However, tertiary institutions have rationalized cutting (or not re/instituting) PERs believing that students can make their own decisions about forming healthy habits, that they can take elective coursework, or that they can access and use campus recreation programs. However, many students are disenfranchised and/or intimidated by campus fitness and recreational facilities and programs (Hoang et al., 2016; Wilson et al., 2020). Furthermore, elective physical activity coursework tends to draw students who are already motivated to be physically active (Kim & Cardinal, 2019a; Kim & Cardinal, 2019b). Hence, without PERs a large number of inactive and unmotivated students continue to be neglected. These are the students who may benefit the most from PERs. That is because PERs provide students with instruction, structure, and time in their schedules, which can motivate them to continue the journey of lifetime fitness and health.

Limited research exists examining the effects of eliminating PERs; however, one institution observed negative trends in students' physical activity and nutrition related behaviors within 3 years of dropping

their requirement (Ansuini, 2001). As such, by not upholding PERs, tertiary students are being inadequately prepared to live healthy, active lifestyles, thereby increasing their odds of experiencing premature and avoidable morbidity.

Because the “current” national PERs statistic is from data collected in 2010 (Cardinal et al., 2012), there is a pressing need for more up-to-date information, particularly given the downward trend that has been documented. One place efforts have been undertaken is at the state level. For example, Heumann and Murray (2019) studied Colorado’s 2-year and 4-year institutions. In Colorado they observed a substantial decline in the percentage of institutions with PERs from 2001 to 2019 (i.e., 41% to 15.6%, respectively). The lack of current data on PERs diminishes the capacity of PE professionals to adequately advocate for their continuation and/or to understand the factors associated with their successful continuation. Thus, the purpose of the study was to expand state-level data and examine the current status of PERs in Oregon’s 2-year and 4-year institutions.

## METHODS

### *Participants*

A complete list of Oregon’s higher education institutions ( $N = 50$ ), including 2- and 4-year colleges and universities, was obtained through the Oregon Higher Education Coordinating Commission (n.d.) website. Institutions that were highly specialized ( $n = 15$ ), such as seminaries, were excluded from the sample because they typically do not offer or require general education courses. Thus, the total sample consisted of 35 eligible 2-year ( $n = 17$ ) and 4-year ( $n = 18$ ) higher education institutions, of which 22 were public and 13 were private.

### *Procedure*

Following past methodological examples (Cardinal et al., 2012; Heumann & Murray 2019), PER information was obtained from each institution’s website. This information is publicly available and did not require human contact; therefore, Institutional Review Board (IRB) review was not needed. Institution’s websites and the most recent, official

academic catalogs (2020-2021) were searched for the following information:

- Name of the institution
- Type of institution (private or public)
- Did it have some sort of physical education requirement? Terms, such as “graduation requirement”, “physical education”, and “lifetime fitness and wellness” were used in the search. Courses were considered “fully required” when all students at the institution were required to take physical education in order to graduate with their respective degrees. Courses were considered “partially required” when only some degree programs at the institution listed the course as a requirement or it was an option among multiple choices. Where no such requirement existed, it was recorded as “not required”.
- What was the nature of the requirement (i.e., activity, conceptual, both, or any)?
- How many credit hours were required?
- Did the institution have a physical education, health, or wellness academic program or department?
- Did the institution have a campus recreation center?
- Did the institution offer elective programs (i.e., physical activity classes)?

### *Analysis*

Data were summarized using descriptive statistics, with a primary emphasis on determining the prevalence of PERs and describing the substantive nature of the institutions with and without PERs. For between-group comparisons, chi-square tests ( $\chi^2$ ) were performed with alpha at the  $p < .05$  level. As a measure of each  $\chi^2$ -test’s magnitude, contingency coefficients ( $C$ ) were computed.  $C$ -values  $\geq .30$  were considered to be most meaningful (Fleiss, 1981).

## RESULTS

Overall, only 14.29% (i.e., 5 of 35) of higher education institutions in Oregon fully required physical education courses for graduation. The majority of the sample (57.14%; i.e., 20 of 35) partially required physical education courses, meaning that not all degrees offered at the institution listed a PER

or it was an option among a list of choices. However, 28.57% (i.e., 10 of 35) did not require PERs. Within Oregon's 2-year institutions, all community colleges required partial ( $n = 17$ ) PERs. In contrast, among 4-year institutions, the majority did not require PERs ( $n = 10$ ), whereas 3 required partial, and 5 required full PERs.

When looking at the nature of the requirement, only 23.53% (i.e., 4 of 17) of community colleges required both a conceptual and activity component as a PER, and 76.46% (i.e., 13 of 17) accepted any kind of health or wellness class, including physical activity, nutrition, or sexual health. In contrast, 42.86% (i.e., 3 of 7) of 4-year institutions required an activity class, 14.29% (i.e., 1 of 7) required only a conceptual class, 28.57% (i.e., 2 of 7) required both, and another 14.29% (i.e., 1 of 7) required any type of fitness, wellness, health, or activity class to fulfill the PER. Most ( $n = 18$ ) institutions in this study had an academic program, such as kinesiology, exercise science, health and human performance, to administer the PER; however, 7 did not. Out of the 10 institutions, who did not have a PER, 8 institutions did have a related academic program, where PER could be potentially housed and overseen.

Not every institution offered campus recreation facilities. Overall, 47.06% (i.e. 8 of 17) of Oregon community colleges have campus recreation facilities, while 52.94% (i.e. 9 of 17) did not. Among 4-year institutions, the majority (83.33%; i.e., 15 of 18) had campus recreation facilities. In addition, results showed that 91.43% (i.e., 32 of 35) of all higher education institutions offer physical activity coursework as an elective. Results of the between group comparisons are presented in Table 1.

## DISCUSSION

Physical education has been "recognized as essential to a young person's overall education experience and a foundation for lifelong healthy living" (Society of Health and Physical Educators (SHAPE) America, 2015, p. 1). Yet, the majority of PER advocacy work occurs mainly at the primary and secondary education levels, leaving the tertiary level behind. Consequently, there is a lack of state and national data regarding PERs in U.S. colleges and universities. The purpose of this study was to expand

state-level data and examine the current PER status in the state of Oregon. Results of this study show that only 5 of 35 higher education institutions in Oregon fully require physical education courses for graduation, which is ~14%. Similar results were found in the state of Colorado, where PERs dropped from 41% (Tomaino et al., 2001) to 15.6% of higher education institutions requiring PE classes for graduation (Heumann & Murray, 2019). The statistics from Oregon and Colorado are less than half of what has been reported nationally (i.e., ~39%, Cardinal et al., 2012). Given the time difference of the studies, it is unknown whether this indicates a continual decline of PERs over the past decade, or reflective of a regional trend. To clarify this, an updated study using a nationally representative sample of institutions needs to be conducted, and perhaps such studies should be performed with greater regularity.

A novel approach in this study was that it distinguished between PERs that were fully or partially implemented versus not included at all. Results show that all community colleges in Oregon have a partial requirement, meaning that only certain associate degrees at 2-year institutions require PE courses. Specifically, associate degrees, including the Associate of Arts Oregon Transfer (AAOT), Associate of Science/Oregon Transfer in Computer Science (ASOT-CS), Associate of Science (AS), and Associate of General Studies (AGS) degrees currently have a PER that students need to fulfill. These requirements are in place so that students can seamlessly transfer their degree program and associated credit hours into a 4-year institution of their choice in Oregon. It is apparent that the general education requirements at Oregon's 2-year institutions have been carefully aligned with the requirements at 4-year institutions, something that had been advocated for by kinesiology professionals (Cardinal & Cardinal, 2007). That said, if institutional policy changes in general education core requirements happen at 4-year universities, such as eliminating or not re-instituting PERs, it will not only directly affect the institution itself, but trickle down to other communities, such as Oregon's community colleges.

**Table 1**  
*Variables x Physical Education Requirement*

Variables		Physical Education Requirement			Total	$\chi^2$	<i>p-value</i>	<i>C</i>
		Yes	Partial	No				
Year	2-Year	0	17	0	17	24.8	.000*	.644
	4-Year	5	3	10	18			
	Total	5	20	10	35			
Type of Institution	Private	4	2	7	13	14.87	.001*	.546
	Public	1	18	3	22			
	Total	5	20	10	35			
Academic Program	Yes	4	14	8	26	.45	.799	.113
	No	1	6	2	9			
	Total	5	20	10	35			
Nature of Requirement	Activity	0	1	0	1	43.98	.000*	.746
	Conceptual	2	0	0	2			
	Both	1	5	0	6			
	Any	1	13	0	14			
	N/A	1	1	10	11			
	Total	5	20	10	35			
Campus Recreation	Yes	5	10	8	23	5.71	.058	.374
	No	0	10	2	12			
	Total	5	20	10	35			
Credit Hours	1 Credit	1	0	0	1	52.96	.000*	.776
	2 Credits	2	2	0	4			
	3 Credits	1	18	0	19			
	6 Credits	1	0	0	1			
	N/A	0	0	10	10			
	Total	5	20	10	35			
Elective Program	Yes	7	20	5	32	8.20	.017*	.436
	No	3	0	0	3			
	Total	10	20	5	35			

Note: \* *p-value* < .05

Consequently, a downward trend of PERs in Oregon can severely impact multiple kinesiology and health departments, their faculty, and the institution's general education requirements throughout the state.

Another notable finding in the present study is that multiple factors were found to be associated with institutions having a PER. For example, the most popular variation or nature of requirement was to have students choose “any” course from a list of courses provided by the institution that would satisfy the requirement. These courses can be a combination of conceptual/theory-based coursework (i.e., aimed at developing lifetime fitness for health and behavior change skills), activity-based courses (e.g., tennis, weight training, yoga), or health courses (e.g., sexual health). The second most popular variation in this sample was to have students complete both a conceptual/theory-based and activity-based class. Additionally, most institutions require students to take a total of 3 credit hours towards the requirement.

Other factors strongly associated with having or not having a requirement included private versus public institutions; however, this was difficult to disentangle because there are no 2-year private institutions in Oregon. Additionally, 32 out of 35 institutions offered their students an elective physical education program, and 23 out of 35 had a campus recreation facility. Both variables suggest that not offering a requirement is something other than a capacity or facility issue. Related to this is whether the institution has an academic department or program to deliver PER coursework and advocate for the requirement, though this was not a significant variable in the present study. This relationship might have been confounded by studying 2- and 4-year institutions concurrently.

Given the variety of the nature of PERs and the credit hours students complete, a continued discussion is needed regarding how current and future PERs should be designed and what structure would be most effective and beneficial for both students and the institution. For example, studies on conceptual physical education (CPE) classes in high schools suggest that students continue to be more active 12-months after completing a CPE class (Dale &

Corbin, 2000) in comparison to traditional physical education classes. Moreover, students completing CPE retain health-related physical activity skills and behaviors into adulthood (Kullina et al., 2018). Similar impacts have been observed among college students (Sparling & Snow, 2002), which further supports this approach (Corbin & Cardinal, 2008). With the ongoing expansion of online courses, especially during the COVID-19 pandemic, different and innovative approaches and delivery platforms must also be considered in the future. Finally, there is an ongoing need to assure content differentiation and the building of new skills across the educational spectrum (i.e., from elementary to junior high/middle school, to high school, to tertiary institutions) (Cardinal et al., 2005).

### **Strengths and Limitations**

The current study is the first to examine and describe the PER status in Oregon's tertiary institutions. It extends past research that looked at national or state-level PERs data (Cardinal et al., 2012; Heumann & Murray, 2019) and it examined various factors that were associated with a PER. Despite this, there are limitations to acknowledge. First, due to the small sample size, significant results from the between-group comparison have to be interpreted with caution, since some of the expected counts were less than 5 per cell. Second, the study only used information available from each institution's websites. While this method helped negate issues with response rates and responder biases, only a limited breadth of information was collected. Future research may consider interviewing university faculty or administrators to gain more insights as to how PER courses are taught, why they are or are not included as general education requirements, and other efforts aimed at promoting tertiary student health and wellbeing that may be underway (e.g., campus recreation, student health services). Finally, some 2-year institutions in the state have recently been authorized to offer Applied Baccalaureate degrees in select disciplines (Oregon Laws, n.d.).

### **CONCLUSION**

Acquiring knowledge and practicing healthy lifestyle skills is crucial in shaping future physical

activity and well-being habits, especially for young adults in college who are growing to become independent and contributing members of society. Yet, most of today's college students do not receive conceptual and/or practical education pertaining to lifetime fitness for health (i.e., physical activity, nutrition, and stress management). This study examined the current PER status of Oregon's tertiary institutions and highlights the need for updated state and national level data. Specifically, the study's findings showed that only 5 out of 35 universities and colleges in Oregon fully require their students to complete some form of physical education coursework in order to graduate. This is a sparse but not entirely surprising outcome, as a national downward trend in PERs has been observed in the past. According to Hughes (1934), "During recent years, physical educators in our colleges and universities have been called upon, as never before, to justify the requirement of physical education" (p. 24), and this statement continues to hold true almost nine decades later! Hence, this discourse and topic remains an enduring and to date, unresolved area of concern for the discipline of kinesiology, underscoring that more work and direct action must be undertaken (Cardinal & Casebolt, in press). Obtaining an up-to-date estimate regarding the current status of PERs nationally would be an important next step toward moving in that direction.

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