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Global Movement Crisis: A Case Study

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Abstract

Background: Physical inactivity has become a global crisis and is adversely impacting the health of our world. Being physically active, even at a minimal level, can positively change physical and mental health. As little as ten minutes a day can result in significant health improvements, such as a decrease in blood glucose levels. **Description:** Service-learning courses are a way to provide students with job-related training as college credit and offer a needed service of safe physical activity to members of the local community. **Learning Outcomes:** Student participants learn from teaching exercise, building programs, and implementing a training program for the college employees. **Significance and Impact:** Physical inactivity is a global health crisis. The lack of activity is causing major health concerns as well as death. This is a call to action to expand healthy activity to the general population using trained student leaders. **Teaching Notes:** The case includes links to various documents to guide instructors to take advantage of a similar activity.

Keywords: movement, physical activity, service-learning, campus community, exercise training

Paper type: Case Study

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CASE STUDY DESCRIPTION

This case study discusses how a service-learning course can bring physical activity to a college campus. This study addresses the application of classroom concepts with real clients, to both meet a health need and integrate job-related experiences with learning. This approach allows students a safe place to teach proper exercise techniques while also developing quality human interaction skills. Participants can practice removing exercise barriers, such as understanding what exercise to do, how to reach personal goals, and creating a commitment for activity engagement (Abbott & O'Connell, 2021).

The purpose of this case study is to share how a college course for credit can be used to improve the health and well-being of staff and faculty members. Students need exposure to real-life scenarios and members of the college community need to increase their physical activity movement and knowledge. This case study can be used as a road map for other educational or professional development opportunities around physical activity (PA). Much of the world does not meet PA requirements, therefore, increasing the opportunity for activity is highly recommended.

At a small liberal arts college in southwest Indiana, Exercise Science students were given the opportunity to teach and design a one-on-one personalized exercise program for a college employee. As a result, students earned credit toward degree completion. This service-learning environment resulted in beneficial results for both students and employees. Bringle and Hatcher (2009) define service-learning courses as

> … course-based, credit-bearing educational experience in which students (a) participate in an organized service activity that meets identified community needs, and (b) reflect on the service activity in such a way as to gain further understanding of course content, a broader appreciation of the discipline, and an enhanced sense of personal values and civic responsibility (p. 38).

Bringle and Hatcher continue to lead service-learning globally, noted by 2013 Service-Learning Teaching Excellence Award Recipient, Pratt Cassity, "Global service-learning applies academic knowledge to the real world in an international, cross-cultural, or multi-national context. It is community service that builds intercultural relationships. Global service-learning involves a meaningful, community-driven project where a vital need has been identified" (Cassity, 2013, para 3-6).

Students eligible for this course are typically in their junior year and have completed coursework to prepare for this applied experience. Ideally, students have a good understanding of exercise training and techniques, as well as precautions to consider before exercise engagement. The student learning process results from providing correct, effective, and sound exercise programming for their client. In this case, the client is a member of the college community, either staff, faculty or others that are associated with the college. This case study can serve as a template or a catalyst for any organization to start a physical activity initiative in their community.

The unique nature of this course offers real individual situations that are difficult to replicate in a traditional classroom setting. Exercise Science students will go on to careers of Physical Therapy, Athletic Training, Strength and Conditioning, and other

service-based, human-centered careers. This course creates exposure to job-related experiences in a controlled environment under qualified supervision.

One example of a real-life experience occurred during a recent training class when a client experienced an episode of vertigo. This client's response to an activity is an example of a relatively common real-life occurrence but one which students could be unprepared to respond to correctly in an unsupervised environment, or if only learning from lectures and textbooks. This experience allowed students to experience an adverse effect to exercise, see the appropriate response, and observe the communication between the healthcare professional and the client. As noted in Howell et al., after a service-learning course, students felt more confident about their ability to help others, enjoyment from client interaction, and their exposure to an older adult population (2021).

Howell et al. found that service-learning supplied students with the needed preparation in undergraduate studies that students highly desired (2021). It makes sense to allow students plenty of practical experience with clients prior to engagement in actual healthcare environments. This case study begs the question, are students being prepared with the necessary skills for career success, or merely the theory and foundational information?

Participants

College community employees and related adults associated with the college were invited to participate. When considering the number of participants, it is important to identify the number of students the clinician can safely oversee and the readiness of the students for the experience. The clients selected should be considered for the unique needs, physical limitations, and diversity they can bring to the student experience, focusing on providing students with real-life situations requiring interpersonal communication, rapport building, and skill delivery.

Prior to the course, expectations were set for attendance, feedback, and oversight of the activity. These expectations were defined for both the students and the participants, and all signed a commitment agreement which established accountability for consistent attendance including agreement to only one unexcused absence during the defined period.

Selection of participants was based on personal need to increase physical activity level, clearance for exercise from primary care physician, and the commitment to attend twice per week for 30 minutes, during a 12-week period. Each participant also completed a health history questionnaire and provided physician-signed clearance for involvement. The health questionnaire used can be found at The International Standard of Pre-Participation Screening on this website http://eparmedx.com/ entitled Physical Activity Questionnaire for Everyone (Says et al., n.d.).

An important benefit of this controlled environment for students is that clients recognize the unique learning environment and respect the learning process of the young, soon to be professionals. Many times, clients bring questions and personal goals to the students which would stimulate thought and verbal responses. Students learn from these client interactions, supervisor evaluation, and peer reflections.

Supervision

Qualified faculty supervision is needed throughout each session to protect the client and to fully observe the student leadership and decision-making. The faculty supervisor reviews and observes student client engagement and ensures safe execution of each exercise. Exercise programs are designed based on the individual client's goals; however, some basic parameters also apply. These include all clients and students performing warm-up exercises, a conditioning phase, and a cool-down. If appropriate, clients engaged in strength training, cardiovascular exercise, and flexibility training. Additionally, the American College of Sports Medicine guidelines and recommendations for programming were followed (Liguori, 2022).

To ensure safe exercise training, pre-screening measures are necessary. This course used the American College of Sports Medicine (ACSM) informed consent for participation in a health and fitness program, health history questionnaire, and medical clearance form (2022). All noted forms can be found in the ACSM's Guidelines for Exercise Testing and Prescription textbook, many are also available online (Liguori, 2022).

Significance and Impact of Global Movement

The global problem of sedentary lifestyles is quickly becoming the most prevalent cause of human illness (Guthold et al., 2018). The Lancet reported a pooled analysis on global physical activity levels and found insufficient physical activity, particularly among high and rising high-income countries worldwide (2018). Further, this study confirmed that from a global perspective, women are less active than men (Guthold et al., 2018). To renormalize movement into our daily lifestyle, movement-based living must be prioritized by governments, communities, and agencies and promoted through accessible programming wherever possible.

The global lack of physical activity was emphasized in the Lancet in one of the largest global studies of 168 countries and found that over a quarter of all adults were at risk for developing chronic lifestyle-type diseases (Guthold et al., 2018). There was variation within countries revealing that higher-income countries had the highest level of sedentarism, and the lower-income countries engaged in active transport, i.e., walking, and cycling, while higher-income countries tended to have more sedentary occupations. Another interesting finding was the lack of activity among females, especially in South and Central Asia, Middle East and North Africa (Guthold et al., 2018).

Further, The World Health Organization (WHO) reinforced the need for regular physical activity when ten key physical activity facts were defined (2020):

1. Physical activity has significant health benefits for hearts, bodies, and minds.
2. Physical activity contributes to preventing/ managing noncommunicable diseases such as cardiovascular diseases, cancer, and diabetes.
3. Physical activity reduces symptoms of depression and anxiety.
4. Physical activity enhances thinking, learning, and judgment skills.
5. Physical activity ensures healthy growth and development in young people.

6. Physical activity improves overall well-being.
7. Globally, 1 in 4 adults do not meet the global recommended levels of physical activity.
8. Up to 5 million deaths a year could be averted if the global population was more active.
9. People who are insufficiently active have a 20% to 30% increased risk of death compared to people who are sufficiently active.
10. More than 80% of the world's adolescent population is insufficiently physically active.

There are many reasons for the onset of sedentarism and a lack of overall movement in the global world. However, the impact of living a sedentary lifestyle is vastly expanding the healthcare costs that contribute to worldwide financial burdens. Between 2020 and 2030 the cost of physical inactivity will cost the US 27 billion dollars per year due to heart disease, obesity, diabetes, and other non-communicable diseases (WHO, 2022). According to the WHO, less than 50% of all countries have a national physical activity policy and only 40% of all countries have standards to allow for safe walking and biking (WHO, 2022). The WHO is trying to show countries how to improve this by providing a Global Action Plan on Physical Activity, 2018-2030 (GAPPA) which sets out 20 recommendations to increase physical activity and programming. The 104-page report can be downloaded here for free:

- More Active People For A Healthier World (2018-2030)
    - https://apps.who.int/iris/bitstream/handle/10665/272722/9789241514187-eng.pdf

Through courses such as this, clients are taught the importance of physical activity to improve health outcomes and reduce morbidity while building confidence, knowledge, and motivation to continue leading an active lifestyle. American College of Sports Medicine and the CDC recommend at least 30 minutes of moderate physical activity most days of the week (Liguori, G., 2022). Currently, only a quarter of the US reach this targeted level.

Key Stakeholders

Every institution, organization, and community needs to recognize themselves as a stakeholder in this worldwide issue. Global health is at an all-time low and activity has become the responsibility of everyone. “It is good for public health and makes economic sense to promote more physical activity for everyone,” said Dr Ruediger Krech, Director Department of Health Promotion, WHO. “We need to facilitate inclusive programmes for physical activity for all and ensure people have easier access to them.” The WHO’s GAPPA 2018-2023 is a “call to all countries for stronger and accelerated action by all relevant stakeholders working better together to achieve the global target of a 15% reduction in the prevalence of physical inactivity by 2030 (WHO, 2020).”

The stakeholders for increasing physical activity are those motivated enough to start an initiative. We need leaders of all shapes, sizes, and activity levels to lead a movement that will promote more activity. This can range from biking and walking lanes, free access to fitness classes, and community sports team activity, the list is endless. The challenging part is to continue to support efforts that encourage physical activity and its worth of time in health, which to some, might be priceless.

Using service-learning on a college campus has helped bridge the gap for many underserved populations in the college community (Resch & Schrittesser, 2021). The responsibility to increase daily movement belongs to everyone. Designated walking trails, riding a bike, and requiring activity breaks during work hours can be a good starting point.

The fatal impact of sedentary lifestyles can no longer be ignored. Obesity, diabetes, and heart disease resulting from such life choices are killing people worldwide at a higher rate than ever before per the World Health Organization (2020). As a result, promotion of physical activity must become a priority for us all.

Results

The results of this case study include very tangible health outcomes i.e., lower blood glucose levels, stronger gait, and more confidence using fitness equipment. Clinical health indicators have been proven to improve with increased physical activity in many ways, see Centers for Disease Control and Prevention (CDC) website, https://www.cdc.gov/physicalactivity/basics/pa-health/index.htm.

At the conclusion of the course term, students provided clients with a full report on their progress, challenges, and suggestions for future activity. This information was provided in an oral presentation to the participant group which also allowed students to overcome public presentation inhibitions.

This course supports commitment to movement, enhanced student preparation, and quality movement instruction. Service-learning reinforces the continued physical activity of the participants and the relationship built between the students and clients. Considerations for the future entail adopting an app to track fitness, including an accountability partner, and health and wellness goal setting. The possibilities for health enhancement are endless.

Conclusion

In conclusion, this course is an effective means of changing the promotion of positive health behavior while also serving as a tool to develop future wellness providers more effectively, when supervised by qualified healthcare professionals for the safety and learning of all participants. Identification of participants and qualified supervision are pivotal for the success of the program. This must include the use of a screening tool, equipment availability, and stakeholder acceptance.

Finally, it is important to keep in mind that 75% of Americans do not meet the recommended requirements for physical activity (Liguori, 2021). The WHO recognizes that over 80% of adolescents and over 27% of adults do not meet the recommended levels of physical activity (WHO, 2020). It is vital to our global health that every community:

1) recognize the global movement crisis,
2) define how to increase physical activity in their community, and
3) promote opportunities for learning about this problem and how to rectify it.

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