High School Physical Education and its Effects on Fitness Center Participation After Graduation: A Case Study

David C. Barney
Brigham Young University, david_barney@byu.edu

Nathan Kahaiali'i
Brigham Young University - Provo

Follow this and additional works at: https://scholarsarchive.byu.edu/facpub

Part of the Health and Physical Education Commons

BYU ScholarsArchive Citation
https://scholarsarchive.byu.edu/facpub/2126

This Peer-Reviewed Article is brought to you for free and open access by BYU ScholarsArchive. It has been accepted for inclusion in All Faculty Publications by an authorized administrator of BYU ScholarsArchive. For more information, please contact scholarsarchive@byu.edu, ellen_amatangelo@byu.edu.
Abstract

For those that send off their child into the world, it is hoped they will recall what was
taught to them. This applies to high school (HS) physical education (PE) teachers and their
students that graduate from HS. The purpose of this case study was to assess current HS PE
teachers, fitness club personnel, those that frequent fitness clubs and current HS students
regarding HS PE preparing HS students for real world application regarding fitness. Participants
from these four groups were interviewed to help better understand the preparation of graduated
HS students participating in health clubs. From this case study three of the four groups felt they
had and were being prepared to be successful in health clubs and those activities that are found in
health clubs. This study sheds light on the fact that HS PE is the last opportunity of a student to
be involved in an organized class that has real world application.
For many parent’s it is hoped that they have taught their children the proper skills that will help them be successful adults when they leave their homes to go out into the world. To a certain degree high school (HS) physical education (PE) teachers feel the same way about their students when they graduate and go out into the world. PE teachers hope they have taught their students the appropriate and necessary skills to be successful adults when it involves being physically active throughout their whole life. The National Association for Sport and Physical Education (NASPE, 2004) in the document regarding Appropriate Practices in High School Physical Education states the primary purpose of physical education is to help adolescents gain skills and knowledge to be physically active for a lifetime” (p.5). Also, along this line The Centers for Disease Control and Prevention (2001, p.7) has described the purpose of HS PE as “increasing student participation in moderate to vigorous physical activity and to help high school students gain the knowledge, attitudes, and skills they need to engage in lifelong physical activity.” These statements emphasize the impact HS PE can have on a student throughout their life.

Because of the impact HS PE can have on students, the Society of Health and Physical Educators (SHAPE America) has established national standards for K-12 grade levels (SHAPE America-Society of Health and Physical Educators, 2014). The purpose of national standards are to assist physical educators with what a student should know and be able to do (NASPE, 2004). Thus, these national standards guide physical educators in what and how they teach in their lessons and activities to students, so that student’s will know and be able to do throughout their life. National standards give substance to PE lessons and activities. Physical educators are not merely “rolling out the ball” during PE class, but have goals and objectives for the lessons and activities. The national standards consist of five standards. For each standard, they specifically
address physical education for students in grades K-5, 6-8, and 9-12. The outcomes for HS students in PE are, “The learner will be college or career ready as demonstrated by the ability to plan and implement different types of personal fitness programs...model responsible behaviors while engaged in physical activity.” Standard three states, “Demonstrate the knowledge and skills to achieve a health-enhancing level of physical activity and fitness.” Within this standard HS physical educators are to teach HS students to implement a strength and conditioning program, to know how to keep their heart rate in the target zone, create methods of assessing the fitness activities and goals, and many other health related activities. One way HS PE can achieve these national standards is having student participate in activities that are commonly found in fitness clubs, during the students HS years. The purpose of this model in HS PE is to prepare students to be successful in a health club setting after they have left high school (Hastie, 2003).

The literature reveals the impact of the health club model, and the positive effects on students in their HS PE class. Timken, McNamee and Coste (2017) studied adolescent girls’ perceptions of their health club experience in their PE class. For this study 17 female students participated in this study. For the lesson structure, 40% of the lesson was spent in cardiovascular activities, 40% in resistance training and 20% flexibility. Such activities students participated in during the lesson were Pilates, yoga, physioball, Tae Bo, and aerobic dance to name a few. The results from the student’s health club experience in their HS PE class was feelings of autonomy and relatedness. The researchers suggested that PE teachers should offer both variety and choice in PE classes to facilitate a students’ sense of autonomy and relatedness. Another study dealing with female HS student’s studied perceptions of selected fitness activities (Wilkinson & Bretzing, 2011). More specifically, female students preferred the fitness units. Also, the reasons for the female preference to the fitness units, were there applicability to fitness clubs. For this
High School PE and Lifetime Fitness

study tenth grade female students participated in fitness concepts for two-weeks. Students participated in aerobics, step aerobics, kickboxing, Pilates, core training (using mats, balls, bands and dumbbells) and fitness games. After the two-week units, students could then sign up for longer units (running the whole semester) to participate in. Prior to this tenth grade course, students participated in team and individual sport activity courses, during the 7th through 9th grades. Shortly after the longer fitness units, the students completed a questionnaire. Results from this study found that fitness activities were preferred for many reasons. Students voiced that fitness activities created a better environment for health benefits, were fun, the variety of the activities were good, and the fitness activities consisted of easier skills than sports. The researchers also stated that the students made connections that these fitness activities could be done throughout their lives.

Barney, Pleban, Wilkinson, and Prusak (2015) studied college students’ HS PE experience on their physical activity after HS. For this study, over one thousand students were surveyed. College students that were surveyed, tended to want to have attained skills in HS PE that they could use throughout their lives, such as golf, tennis, outdoor activities and weight training. A large majority of the college students in this study were not exposed to lifetime activities. An interesting point from this study was that when these college students were in HS PE, many enjoyed and excelled in team sports activities (basketball, volleyball, softball, etc.), which many of their PE teachers instituted in their HS PE courses. Yet, in hindsight, these college students indicated a desire of having been taught and exposed to activities that would have been beneficial to them later in life. Another point from this study was that the college students felt that they were not given the knowledge and skills to be successful being physically active throughout their lives. With these kinds of results HS PE teachers are in a position of
exposing HS students to activities in which they can have success throughout their lives. With these results from the literature, the purpose of this case study was to assess current HS PE teachers, fitness club personnel, those that frequent fitness clubs and current HS students regarding HS PE preparing HS students for real world application regarding fitness.

**Methods**

For this case study, a case study methodology will be used. Shulman (1992) has stated that case studies as a method of research are suited to education as they contain the potential to communicate that teaching in a complex endeavor demanding subtle judgements and decisions. This also applies to teaching HS PE. Studying cases provide the opportunity for generalizations and knowledge transfer through the process of engagement in the ideas as they appear (Eisner, 1991).

**Participants**

The participants for this case study were five current female HS PE teachers with 1 to 25 years of teaching experience, four fitness center personnel and four (2 males and 2 females) adults that workout at the local fitness centers, and three high school students (1 male and 2 females) (See Figure 1).

**Procedures**

For this case study, the participants were interviewed relating to their connection to the case being investigated. The interviews were semi-structured and were audio-recorded. The interviews were designed to get the participants perspective relating to HS PE and their activity in their local fitness center and eventually participation in a fitness center. Interviews were generally 20 minutes in length and was transcribed and analyzed. For the analysis of the interviews, participant responses were correlated and reviewed to generate preliminary coding
categories, with framework analysis methodology for participant responses, as outlined by Check and Schutt (2011). Framework analysis incorporated the stages of 1) familiarization, 2) thematic, 3) identification, and 4) charting and interpretation (Rabiee, 2004). Additionally, investigators secured university institutional review board (IRB) approval to conduct the study.

**Results**

Themes emerged from the interview data, which is presented in this section from the transcribed interviews. The following themes from the data came from the four groups of participants: 1) fitness center personnel, 2) HS PE teachers, 3) Participants of the fitness center, and 4) current HS students that were enrolled in a PE class.

**Fitness Center Personal**

The fitness center personnel was of the opinion that participants that recently graduated from HS weren’t as knowledgeable when they first come to the fitness center. Bob a manager of one of the fitness center stated:

“From my observations, people that have recently graduated from HS come to the fitness center with a look of uncertainty. When this happens, we give them a personal trainer to help them get started and to become confident in their surroundings. I feel if the trainer helps with what they want there is a higher likelihood that this person will keep coming back to the fitness center to work out. This is good business for the company.”

Another theme that came up from the fitness center personal was that the fitness center focuses on functional fitness. Ann, one of the HS PE teachers that participated in this study described functional fitness as “those things that use multiple systems of the body simultaneously just as we would use them in our ever day lives.” Josh, one of the fitness center personal stated:
“Here at our fitness center we emphasize functional fitness. We have elliptical machines, weight machines, yoga and Zumba that are offered. Right now, functional fitness is a popular workout in the fitness industry, the going thing, so this is what we present to our clients. The graduated HS student that comes to our center say they have heard of functional fitness, but didn’t do it as much in HS PE. We are more than happy to introduce them to the concepts and exercises dealing with functional fitness.”

**HS PE Teachers**

The HS PE teachers strongly felt they were preparing their students to be successful at the local fitness centers. The HS PE teachers were asked if their students were to walk into the local fitness center would they know what to do and have a successful workout. Ann stated:

“We expose our students to the things they will find at a fitness center. They learned how to use the cardio machines effectively, they learned how to use machines and free weights correctly. Our teachers were licensed in various fitness exercises (i.e. crossfit, Zumba, kickboxing, etc.). So, if students were to go to a gym they would find people with the exact same skills and expertise as their HS PE teachers. And they would not be intimidated by the weight slamming, the number of people in a class, or any of the equipment. They know how to use it and us it well! The other thing our students know is the lingo and the literacy used in a fitness facility.”

Another theme that came from the HS PE teachers was that their students will be informed consumers when it comes to using a fitness center. Ann’s statement above touches upon her students being informed consumers. Rebecca also feels her students will be informed consumers when she stated:

“All activity we teach at Rocky Mountain High School (pseudonym name for
the school) is geared towards graduating educated consumers who feel confident in participating in many group fitness activities and individualized training programs. Our PE activities are all taught in local gyms and recreation centers so that after graduation, students can participate in a variety of activities to maintain personal fitness.”

Participants at the Fitness Center

A theme that came from those that currently use their local fitness center was the emphasis of weight training throughout their life. Jon stated:

“When I was in HS, my PE teacher had us work on upper body one day, the next day work on lower body. As a class, we would rotate our lifts. This has stuck with me to this day. When I was in HS I thought you lifted as much as you could and often. My HS PE teacher taught that your body needs a day off. I still use this principle in my work outs.”

Another perspective dealing with this theme came from Stan when he stated:

“It was impressed upon me that importance of physical activity and all the ways to be physically active. Yet, I felt I wasn’t taught the lifts that would help me maintain my muscle and strength through lifting weights. When I went to the gym I observed other lifting and saw how they were doing them. I would also look on online at certain lifts and how to execute the lift correctly.”

Current High School Students

One of the themes that current HS students discussed regarding their experience in their PE class dealt with feeling confident and comfortable when they would use the local fitness center. Clark stated:

“In HS we used free weights. I was taught a variety of lifts that were helpful for
me. I also have a knowledge of the safety of lifting. One other thing we were taught was
the proper mechanics of lifting so that we wouldn’t hurt ourselves when we lifted.”
Another theme discussed was when they work out at the local fitness center, they would
like and appreciate working out with a friend. Amy stated, “I plan on working out at the
fitness center after I graduate from HS. But, I will do it with a friend. I don’t think it
would be as overwhelming.” Susan stated, “working out doesn’t bother me. I would just
like to do it with a friend.”

Discussion
The purpose of this case study was to assess current HS PE teachers, fitness club
personnel, those that frequent fitness clubs and current HS students regarding HS PE preparing
HS student for real world application regarding fitness. From this case study, HS PE is teaching
and exposing HS students to lifetime activities to promote their health and personal wellness
(Pangrazi, 2003). From the HS PE teacher perspective, they feel they are putting their students
in a position to know how to be physically active in a fitness center or in other contexts. One of
the HS PE teachers stated that the activities the students are exposed to, make it possible for
them to not be intimidated when they walk into a fitness center or other activity settings. Gentry
and Escalante (2018) suggested that HS PE teachers need to expose HS students to lifetime
activities to better prepare them to be physically active in their lives. The HS PE teachers in this
case study feel they are achieving this in their classes. The fitness center personnel were of the
opinion that not all recently graduated HS students come to their center confident and/or
comfortable when they first come to the center. These findings are similar to Westcott’s (1992)
findings, dealing with recently graduated HS students. These fitness center personnel feel that
when they are instructed by their trainers there is a strong likelihood that these recently
graduated HS students will continue to attend their center. With this being said one of the fitness center personnel feels this good business for their company. This strongly implies that the fitness center personnel are interested in the financial profits that will come to the center.

The participants of the fitness center looked upon their HS PE experience as shaping their attitudes towards being physically active. One of the participants stated that when she was in HS the PE teacher continually stressed the importance of being physically active. One of the HS PE teachers in this case study stated that she informs her students why the activities the students are participating in are important to them. She stated, “I want them to know the “why’s” of what they are doing in class.” And finally, for the current HS students at this stage in their life feel they can have success in a fitness center after they graduate from HS. They expressed enjoying the curriculum in their classes, which gives them the confidence to continue their physical activity at a fitness center. These findings are opposite of what Rikard and Banville (2006) found with HS students. One of their findings from their research was that HS students did not like fitness activities and that other units in the curriculum were monotonous. Another opinion voiced by the current HS students was that when they graduate from HS and start to attend their local fitness center they would feel more comfortable having a friend with them when they attend the fitness center. This finding emphasizes the importance of the sociality in a physical activity context. Hohepa, Schofield and Kolt (2006) identified friends playing a large part in HS students continuing to be physically active. It was mentioned that friends can serve as motivation when exercising and also helping to maintain and stay with their physical activity. This case study analyzed four groups that have or had a stake in HS PE. The four groups have shed light on the importance of HS PE preparing students to be successful in a fitness center context after graduation. High school PE is the last opportunity for HS students to be
exposed to structured lessons and activities (Barney & McGaha, 2006 & Smith & Lounsberry, 2013). With this being the last opportunity for HS students, this can affect their attitudes towards being physically active throughout their life.

**Conclusions**

The purpose of this case study was to assess current HS PE teachers, fitness club personnel, those that frequent fitness clubs and current HS students regarding HS PE preparing them for real world application regarding fitness. The investigators anticipated that the four groups would shed light on their perspectives regarding HS PE and its effectiveness. From this case study, the HS PE teachers are in the best position to be a positive and lasting influence on their students. The HS PE teacher is preparing their students to be independent and smarter consumers of their fitness choices. In so doing HS PE teachers are helping their students feel confident when they participate in their local fitness center. Barney et. al., (2015) stated, “High school physical educators are in a position to influence students to participate in regular and practical physical activities throughout their lives by exposing them to activities in which they can participate throughout their lives.” A final conclusion is that HS PE is an important part of a students’ education. It provides the HS student with the knowledge, with experiences to make applications to benefit their life through being physically active. Pangrazi (2003) stated, “A key measure of success at this level (HS PE) is whether students can interface successfully in community and sport clubs.” From the four groups that participated in this case study, HS PE is that part of the students’ education that can aid them throughout their lives.
References


Figure 1. The interrelationship between HS PE teachers, fitness club personnel, fitness center participants and current HS students.

HS PE Teachers
- Teaches activities that can be used in fitness centers
- Teaches importance of lifetime Physical Activity
- Teaching students to be Informed consumers

Fitness Center Participants
- Frequent attendance at the fitness centers
- Receiving benefits of physical activity

Current HS Students
- Have had exposure to weight lifting and fitness activities
- Taught the importance of fitness throughout their life

Fitness Center Personnel
- Demonstrates exercises to recently graduated HS student
- Answers Questions
- Explains Exercises

HS PE/Fitness After HS