

## PEDAGOGY

# PETE Students' Perceptions of a Healthy and Active Lifestyle

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## Abstract

*Participants were male and female students ( $n = 12$ ) in a physical education teacher education (PETE) program with a healthy and active lifestyle management (HALM) focus, at a university in the Intermountain West. The purpose of the study was to examine PETE students' perceptions of a healthy and active lifestyle (HAL). Following inductive content analysis of interview data and field notes, a model including several themes and categories emerged. Knowledge of HALM led to students developing views of a HAL, which influenced their HAL behaviors. Other social influences had a positive or negative effect on students' HAL behavior. Students were mostly autonomously motivated to exercise, but many were extrinsically motivated in their diets. Recommendations include a holistic focus in PETE programs, with time allocated to teach students how to teach HALM skills.*

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According to the Centers for Disease Control and Prevention (CDC, 2012), more than one third (35.7%) of adults in the United States are obese. Children and adolescents are not far behind in obesity statistics, as approximately 17% of U.S. children aged 2 to 19 are obese, and since 1980, childhood obesity prevalence has almost tripled. Obesity is related to chronic disease processes, and chronic diseases may lead to death. In 2008, medical costs associated with obesity were estimated at \$147 billion. The obesity problem is affected by lifestyle (e.g., lack of physical activity and poor food choices).

Physical education (PE) teachers have a great opportunity to educate K–12 students about the obesity problem and the importance of making good lifestyle choices. Sallis and McKenzie (1991) initially played an important role in defining the public health importance of school PE, stating that for maximal public health benefit, PE programs should prepare children to participate in physical activity for the rest of their lives. Since then, an ongoing national dialogue has been occurring about improving the health impact of PE (Sallis et al., 2012). Teachers can expose students to the benefits of regular exercise (Sallis & McKenzie, 1991) and encourage them to engage in other healthy behaviors such as healthy eating habits (Prusak et al., 2011). Prusak et al. (2011) emphasized that PE should be a public health tool with a healthy and active lifestyle management (HALM) focus and asserted the need for physical education teacher education (PETE) programs to prepare new teachers so they can teach with this HALM focus and model appropriate healthy and active lifestyles (HAL).

Modeling healthy lifestyles is important, as one factor that may contribute to lifestyle behaviors leading to obesity is observing the poor behavior of others. High school students had less desire to exercise and less favorably rated an overweight instructor's expertise and role model appropriateness (Melville & Maddalozzo, 1989). Indeed, Bandura (1986) proposed that in social learning theory most behavior is learned from observing, underscoring the need for current and future physical educators who are good role models of healthy lifestyles to exert a positive effect on their students (National Association for Sport and Physical Education, 2004). Some physical educators espouse the value of living a physically active lifestyle but do not regularly participate in physical activity (PA) themselves (Melville, 1999). Cardinal (2001) found that PE professionals and preprofessionals who were physically active and had

lower body mass index (BMI) scores had more favorable attitudes toward role modeling compared to inactive respondents and those with higher BMIs. He also found that self-perceived fitness level and actual physical activity were important variables in forming a positive attitude toward role modeling (Cardinal & Cardinal, 2003).

### **PETE Curricular Change**

Based on the national dialogue concerning the importance of public health in physical education, some PETE program officials have decided to modify their curricula to encourage PETE students to be good role models and prepare students so they have the knowledge to teach K–12 students about HALM. An attempt to accomplish these goals resulted in the development of a course, Exercise for School-Aged Children, at West Virginia University. It was designed to facilitate PETE students' ability to bridge the gap between exercise physiology theories and applying these concepts in health-related physical fitness education (Bulger, Mohr, Carson, Robert, & Wiegand, 2000).

Faculty at a university in the Intermountain West have taken a multipronged approach to infusing HALM into the PETE curriculum. In addition to an application-oriented exercise physiology course, the teaching of wellness concepts is infused into three teaching methods classes. PETE students are introduced to Corbin and Le Masurier (2014) *Fitness for Life*, which contains practical ideas for how to teach HALM skills to students in the schools. In addition to teaching concepts such as cardiorespiratory health that include associated practical activities, Corbin and Le Masurier also include student self-assessments and self-monitoring activities that focus on helping young people develop the HALM skills necessary to continue healthy behavior outside of school. Testing application of these concepts from an earlier text edition, Dale, Corbin, and Cuddihy (1998) found that high school female students were less likely to report sedentary behaviors after being exposed to the conceptual, rather than traditional, high school PE program.

At this university in the Intermountain West, to help students realize the importance of being in good physical shape, the Fitnessgram (The Cooper Institute, 2010) is administered three times during the PETE program and the students are required to keep PA and nutrition logs during their methods classes. In addition, in 2008, the PETE faculty developed a K–12 Healthy and Active Lifestyle Management course. The learning outcomes for this course are (a) learn and apply lifestyle (nutrition/weight control and PA) management

skills in PETE students' personal lives, (b) demonstrate understanding of current curricular trends specific to healthy lifestyle choices, (c) demonstrate an ability to design, implement, and manage a healthy and active school environment program, (d) demonstrate an understanding of the Wellness and Nutrition Act and its implications in the K–12 setting, and (e) demonstrate an understanding and application of concepts specific to healthy and active lifestyle management and their accompanying pedagogical strategies.

To achieve these outcomes, PETE students compare a Western diet to diets from other parts of the world and learn about healthy eating habits and how to avoid fad diets. A similar approach is focused on PA and its importance. Students learn about the importance of choice and appropriate motivational techniques as applied to PA and diet. They also learn how to design and implement a personalized self-management plan for PA and diet. PETE students are introduced to object lessons to help them teach health-related fitness topics (Prusak, Wilkinson, Pennington, & Graser, 2008) in K–12 schools. They also learn how to infuse these ideas into lesson plans and bulletin boards around the school.

Since the effectiveness of the HALM focus in this PETE program remains unclear, the researchers felt a systematic approach to evaluation was necessary, beginning with a dialogue with PETE students to examine their perceptions of a HAL. Therefore, the purpose of this study was to examine graduating PETE students' perceptions of (a) a HAL and being good role models of a HAL and (b) influences that affect their HAL behaviors.

## **Method**

### **Participants**

The participants in this study were 12 PETE students (six males and six females) from a university in the Intermountain West who had just completed their student teaching experience (the culminating experience at the end of their PETE program). One of the researchers contacted the PETE students to explain the study and to ask for volunteers. Volunteers signed and returned an informed consent form, which ensured confidentiality of responses to interview questions.

### **Procedure**

The researchers obtained permission to conduct the study from the institutional review at the university. The researchers who taught

the methods classes and K–12 Healthy and Active Lifestyle Management course developed interview questions based on Patton’s (2002) tips for developing and ordering interview questions. The questions were focused on finding out students’ views of a HAL and being good role models of a HAL, their current PA and nutrition patterns, and influences on their HAL behaviors. Five PETE faculty members reviewed the interview questions to confirm content validity. Examples of the questions included the following:

- When you hear the words *healthy and active lifestyle*, what does that mean to you?
- If you value a healthy and active lifestyle, explain why you do?
- Do you feel it is your responsibility to demonstrate a healthy and active lifestyle? Explain your answer.
- When away from school, do you ever feel pressure regarding your exercise and eating choices? Explain.

Three professors (two taught motor learning and one taught philosophy) who did not teach HAL content volunteered to be interviewers. Each conducted a 45-min interview with individual students. Before beginning the interview, students were assured their responses would be confidential and they could decline to answer any of the questions. Pseudonyms were used to provide anonymity for the students. Follow-up questions were used to gain further clarification about an interviewee’s comments. The interviewers took field notes during the interviews. The interviews were recorded on an audiotape and subsequently transcribed. Students were later contacted via e-mail or telephone for verification and clarification of their comments.

After the interviews were completed, the researchers who had not been involved in the interviews met with the interviewers and asked them questions to gather further insights about student responses. For example, by paying attention to students’ body language, interviewers may have been alerted to students’ feelings that were not verbally expressed. These debriefing discussions were recorded and transcribed.

### **Data Analysis**

An inductive content analysis was used to analyze the interview data, and the constant comparative method (Lincoln & Guba, 1985) was used to compare, contrast, and categorize each unit of informa-

tion. Similar chunks of text were proximally placed, examined, and reexamined to identify commonalities.

A researcher may assume diverse membership roles while involved in qualitative research. The principal roles that may be assumed are (a) the complete member, (b) the active member researcher, and (c) the peripheral member researcher (Adler & Adler, 1994). Three of the researchers assumed the role of active member researcher as they taught PETE classes where HALM was a topic.

Member checking was used when students' interview comments needed further explanation. Students were asked for clarification via e-mail or telephone. This study used two forms of triangulation (Denzin & Lincoln, 2000): data (asking participants similar questions) and investigator (using several researchers). One of the researchers had the role of peer debriefer in clarifying the primary researcher's interpretation of the data (Lincoln & Guba, 1985). A university PETE professor not involved in organizing the student interviews or analyzing the data assumed the role of auditor (Lincoln & Guba, 1985) and examined the data and the process of data analysis.

## Results

The results of the inductive content analysis of students' comments produced several categories on specific topics. Raw data consisted of a short phrase to an extended paragraph. As the researcher discussed these categories with the peer debriefer, a model of higher order themes emerged. Knowledge of HALM led to students developing views of a HAL (a conscience), which influenced the HAL behavior of the students. In addition, other social influences had a positive or negative effect on students' HAL behavior. These themes and categories are addressed in the following sections.

### **Knowledge of Healthy and Active Lifestyle Management (40% of comments)**

**Meaning of HALM.** When asked about the meaning of a healthy and active lifestyle, most students focused on PA and having good nutrition. One student, Stacy, had a more holistic view: "It's a combination of being physically active and having proper nutrition as well as your emotional aspect of health, getting enough sleep, having some form of spirituality, so that all parts of your life are balanced."

**HALM skills.** All 12 students felt they had the skills to manage a successful PA and healthy diet regimen and could do this for

a lifetime. When asked for details of the skill set, several students focused on the PA and nutrition knowledge they had gained. Hans stated,

I know how many times a week I need to participate in exercise, and the intensity, type, and time for exercise. [Regarding nutrition,] I feel I have some skills. I can read labels and know the daily calories, fats, proteins, and carbohydrates I need a day.

Students also mentioned the need for motivation skills. Ruth commented, “If you don’t want to do it, you won’t, and I have the motivation to do it. Once you get into your schedule, it is easier. As your body changes, you enjoy it and want to do it.”

These were the only skills students mentioned. They generally felt confident about teaching these HALM skills to help public school students engage in a HAL.

**Sources of knowledge.** Many students felt they learned these skills while at the university and mentioned specific courses. Susan said, “Our exercise physiology class was helpful. When you know about your body and what happens with muscle fibers, etc., it makes you want to exercise more. I always wanted to go lift weights or go running after that class.”

A general PETE program focus on introducing students to lifetime activities was influential. John commented,

In the PETE program we talk about how we want to become active for life, and we want people to learn these lifetime activities. That’s something that’s influenced me, and I’ve thought, “Well, I’m not going to be able to play tackle football until I die. I’m going to be old someday.” So I’ve thought what are good physical activities that are not going to be too hard on my body, will keep me healthy and that I can do for a long time? I’ve decided that it’s probably cycling and swimming.

Regarding nutrition, students mentioned courses where they gained knowledge, such as the K–12 Healthy and Active Lifestyle Management course. Brooke stated, “Our professor would reiterate healthy eating habits. I wanted a healthy alternative to Italian dressing which I love, and I asked him and he said lemon mixed with olive oil and it was pretty good.”

PETE faculty members were also influential by talking about healthy lifestyles. Hans said, "One professor would always talk to us about his family's way of eating. He and his wife made fruit and vegetable shakes for us that made me understand that there is a way to eat healthily." Charles was not as impressed: "You're going to kill yourself if you just eat raw foods all day." Students also observed faculty modeling healthy behaviors. Ruth said, "I see some of my professors going to play tennis or riding their bike or going to run around the track, so it has been a very positive example of them being active and keeping fit."

Regarding faculty eating habits, Susan commented, "Once we had a Dutch oven lunch and the faculty were all making comments like, 'I can have some of this, but not a ton because there is too much fat.' They were living what they encouraged us to do."

Other people also affected the students' nutrition knowledge. Sally stated,

My mom's always tried to eat healthily, and she taught us how to eat healthily. Whether or not we followed what she did was a different story. I was always in sports and so I always knew that I couldn't drink soda during basketball or it would slow me down, and through coaches I started to learn what you should or shouldn't be doing, as an athlete.

### **Views of HAL (12% of comments)**

**Value of HAL.** Most students thought the value of living a HAL was attributable to its positive effects. Brian enthused, "When you live a healthy lifestyle your confidence and self-esteem are higher, and you'll just be happier." John mentioned the benefit of avoiding the negatives of an unhealthy and inactive lifestyle: "I have gone through times when I haven't been as active and healthy in my life, and my body ached, not as much energy, not the flexibility that I wanted to have just bending down and tying my shoe."

**Role model responsibility.** All students felt it was their responsibility to be a good role model of a HAL. Many felt it gave them credibility with the students. Susan stated,

In teaching, you are telling the kids that you need to do this, you need to eat right, but if I'm not doing those things, there is no way that they are going to believe me. They'll think, "You don't do it and you're fine," but I think that you should

practice what you preach, if you are going to tell people what to do because if it is important then you'd better be doing it.

Others mentioned that being a good role model gave them credibility with family members. Hans said, "If I can demonstrate a healthy and active lifestyle then my wife and kids will want to go along with that, then that will help our family stay closer, and help us get out and do things together."

### **Social Influences (13% of comments)**

**Peers: Positive influence on PA and nutrition behavior.** Students noted the positive influence their peers had on getting them to exercise. PETE students were a particularly positive influence. John commented, "I think that I probably participated in more PA than I otherwise would have due to the fact that, as PETE students, we would get together and play soccer and tennis and do things that we thought were fun."

Students mentioned the positive influences that other PETE students had on their eating habits as well. Susan said,

When we get together and maybe this is just a self-conscious thing, there is usually healthy food around. I know that around people who I don't think are going to be judgmental, I would eat a little bit worse than I would around others. Around girls I don't eat as much as I normally do because I don't think that any girl on the planet eats as much as me. So, I am conscious when I eat around other people. We have a girl in the program and every day she would bring this huge lunch, of vegetables and fruit and whole grain breads. She ate so much but is so thin and I think that everyone always saw her eating that and it looks really good and looks like a good idea.

**Peers: Negative influence on PA and nutrition behaviors.** No students commented on a negative peer influence on exercise. Some students' nutrition was negatively affected by peer pressure. Henry stated, "I work with these big Polynesian guys who eat everything in sight and so I eat everything in sight."

**Family: Positive influence on nutrition behavior.** Students mentioned that family could positively and negatively affect their eating habits. Henry experienced positive family pressure: "My wife is a healthy eater, so there is some pressure there, and she is always trying to get me to stop drinking soda."

**Family: Negative influence on PA and nutrition behavior.**  
Sally mentioned,

Going home is hard. My mom makes a lot of home cooking, we always have a lot of vegetables and stuff like that, but there's also a lot of junk food around my house, my father loves junk food. And so going home is always hard for me because I have to find a timeline there to exercise and I also have to watch not going to the candy drawer every five minutes.

**No pressure.** A few students did not feel social pressure for several reasons. Hans did not feel pressure to exercise due to being self-motivated: "I am a pretty self-motivated person and I like to exercise and when I am away from school I don't feel pressure I just think, oh well I should go exercise." Regarding nutrition, John stated, "I feel good about the things that I eat, and so I don't necessarily feel that I have any pressure." Steve recognized that he was not perfect but did not feel pressure regarding his eating habits:

I'll still get an ice cream Snickers, and won't feel guilty around PETE students. And if they say anything, I'm just gonna smile. I'm not one to be pressured. You want to be a people pleaser, but to a certain extent. I'm still who I am, and I feel like I live a healthy life.

Some students seemed to be immune to the positive influences of other PETE students regarding nutrition, and they seemed to dig in their heels to show they would not be pressured. Hans stated, "When we get together for PETE parties we grill hamburgers and hotdogs and there is normally salad there, but I never eat it, I probably should but I don't, so I don't feel like I am trying to show off."

**HAL Behaviors (35% of comments)**

**Current PA and nutrition patterns.** All the students felt they had good PA and nutrition patterns. Ten felt they were consistent in their PA, and six felt consistent in their nutrition. Nine of the students felt they had improved their PA patterns and 11 felt they had improved their nutrition since being in the PETE program.

**Plans.** Regarding PA, seven of the students planned to continue with their PA regimen, and five felt a desire to improve. Hans stated, "I like my current exercise patterns, playing tennis and cycling. I want to do more weight-lifting again and start building some

strength, but I would like to stay with lifetime sports instead of basketball and football.”

Regarding nutrition, three students planned to continue and nine planned to improve. Ruth commented,

I would say that I am really good right now and there are obviously times where I will still eat something that I don't really want in my body but it tastes good at the time, but as a whole I am pretty good. I would like to get more knowledge on nutrition.

Rachel made a recommendation for the PETE program: “We covered a lot about exercise and eating, but I think we could have talked about sleeping patterns, or ways of relieving stress.”

From interviewer field notes and the follow-up discussion with the interviewers, the interviewers noted the PETE students generally felt confident to teach PA and nutrition principles, but they felt they needed more information on nutrition.

## Discussion

The purpose of this study was to examine graduating PETE students' perceptions of (a) a HAL and being good role models of a HAL and (b) influences that affect their HAL behaviors. From student comments, the model of higher order themes that emerged from the categories started with a knowledge of HALM that led to students developing views of a HAL (a conscience), which influenced student HAL behavior. In addition, other social influences had a positive or negative effect on students' HAL behavior.

Regarding the first purpose of the study, students generally defined HALM as only including good exercise and good nutrition. A few mentioned a more holistic view, which included a spiritual component, and recommended including components on appropriate sleep patterns and stress management, which would seem to be a beneficial addition. PETE students could learn how to help students deal with stress in a PE setting (Blankenship, 2007) or life stresses in general with a more holistic approach.

All students felt they had knowledge of HALM skills garnered largely from their experience in the PETE program, and they felt confident to teach these HALM skills. Some mentioned it would be beneficial to have more nutrition information, and this change has since been made to the program. However, they did not elaborate on how they would teach these skills to K–12 students, even though

they taught fitness for life classes in their high school practicum or student teaching experiences. They valued a HAL and felt it was their responsibility to be a good role model for students and for others (e.g., their families), which is a positive outcome.

Considering the second purpose of the study, peers and family were the main sources of social influence or pressure on PA and nutrition behaviors. In many cases, this was a positive influence, especially the influence of peers on PA behaviors, as it provided encouragement in the form of modeling good PA behaviors and providing opportunities for PA. This is in line with the findings of Okun et al. (2003), who assessed peer support and negativity regarding PA in college students and found peer support predicted moderate and more strenuous PA. In the current study, 10 of the students consistently exercised.

Regarding nutrition, peers and family also had a positive effect on students. However, some students felt this positive effect in the form of pressure to eat healthy foods around PETE students or family. Susan commented,

When we [PETE students] get together and maybe this is just a self-conscious thing, there is usually healthy food around. I know that around people who I don't think are going to be judgmental, I would eat a little bit worse than I would around others.

This pressure Susan felt to eat healthy foods is self-regulation and may be examined with Ryan and Deci's (2000) self-determination theory (SDT).

### **Understanding Processes for Students' Self-Regulation of HAL Behaviors**

In SDT (Ryan & Deci, 2000), people behave according to their position along a graded continuum of regulations ranging from being more controlling in nature to being highly self-determined (autonomous). Specifically, in SDT the motivational states along this continuum of self-determined behavior are amotivation (the state of lacking the intention to act), extrinsic motivation (doing an activity to attain a separate outcome), and intrinsic motivation (doing an activity for the inherent satisfaction of the activity itself). Ryan and Deci further proposed levels of extrinsic motivation that vary in their relative autonomy, moving from more controlling to more autonomous: external regulation (engaging in behavior to gain a re-

ward or avoid punishment), introjected regulation (doing behavior due to feelings of guilt or to gratify pride), identified regulation (accepting the value of the behavior, but it is not part of the person's core self), and integrated regulation (fully internalizing an identified behavior that is consistent with a person's values and actions, but it is not done for the inherent satisfaction of the activity itself). Whitehead (1993) identified the "threshold of autonomy" (located between introjected and identified), which marks a distinction between controlling and autonomous regulation. Hence, identified behavior is more autonomous than external and introjected regulation.

Susan's comment is an example of introjected regulation (i.e., she felt the presence of PETE students exerted a controlling influence that pressured her to eat healthy foods). Ryan and Deci (2000) further proposed that as individuals move along the motivation continuum from amotivation toward intrinsic motivation, they will increase their behavior (increased participation). Thus, per this theory, the self-regulated PETE student would be more likely to practice HAL behaviors. In fact, Ryan and Deci deem a sense of autonomy is an essential factor for achieving durable behavior change. Hence, an autonomous motivational state with respect to HAL behaviors is a desirable motivational state for future physical educators to ensure lasting HAL behaviors for the PETE students' personal benefit so they will be good role models for K–12 students.

Many PETE students indicated they were in the process of moving toward more autonomy but were still extrinsically motivated when they accepted the value of eating a healthy diet, but it was not fully integrated with their core self (identified regulation). However, some felt it was part of who they were and thus had reached the stage of integrated regulation, the next point on the continuum toward autonomy. Only three students engaged in eating a healthy diet because of the satisfaction it gave them, evidence of being intrinsically motivated. Although autonomous regulation is optimal to achieving durable change (Ryan & Deci, 2000), people could engage in exercise and good nutrition while feeling controlled and still achieve healthy outcomes in their lives and be good role models. The likelihood of sustainable change is increased for those who are moving along the self-determination continuum toward greater autonomy. It seems reasonable to assume their progress on the continuum toward autonomy is simply that: progress. An individual in one situation could be in the process of moving toward autonomy but still feel controlled in another situation. In other words, they do not immediately become fully autonomous, but rather it is a process.

None of the students felt influence from peers or family that had a negative effect on their PA behavior (family was not mentioned as a positive influence either) possibly because they were more autonomous in PA. However, this was not the case with nutrition, and several students said they caved in to the influence of peers and family and ate foods that were less healthy. Some students did not feel pressure/influence from anyone. This may have occurred for several reasons. Some were intrinsically motivated and felt the behavior of others did not affect them. Others, who had less-than-ideal eating behaviors, were determined not to be pressured by others, particularly other PETE students who were modeling healthy behaviors. This was a dig-in-your-heels approach that reflected a lack of internalizing the value of healthy eating, perhaps evidence of an amotivated attitude.

Regarding student behaviors, all of the students felt they had good PA and nutrition patterns, and the majority felt they had improved since being in the PETE program, which speaks well of the program in this respect. A majority wanted to improve in both areas, particularly in nutrition. A limitation of this study was that the responses were from 12 students at one university within a specific PETE program.

## Conclusion

The findings of this study have implications for PETE programs. First, students need to understand HALM is more than healthy PA and nutrition. Changes have been made to the HALM course in this study to increase the amount of nutrition information, and faculty members are considering adding a stress management component to the course. Second, PETE professors need to think of ways to move their students along the SDT continuum toward intrinsic motivation, as they are more likely to achieve durable change in their HAL behaviors, particularly nutrition, at this stage. This study was focused on a dialogue with PETE students to examine their perceptions of a HAL. As part of the systematic evaluation of the effectiveness of this specific program, further research is needed to examine the effectiveness of how HALM skills are taught to K–12 students.

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