

PEDAGOGY

Understanding Motivators and Barriers to Physical Activity

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Abstract

The purpose of this study was to understand the factors that influence physical activity among year-round residents in an isolated summer resort community. Specifically, we explored the personal, environmental, social, and culture-specific perceived motivators and barriers to physical activity. Participants were formally interviewed about their knowledge of physical activity participation as well as observed throughout the research period. Results indicate participants' knowledge of physical activity is not as accurate as originally assumed. Most associated physical activity with sport, and therefore physical activity participation was underreported because residents did not acknowledge their work and transportation as physical activity. With regard to men and women, motivators for physical activity were different. Men indicated a need for competition as well as a sense of commitment to others. Women, on the other hand, were motivated by the social factor that goes along with being physically active with others.

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Information and research on the positive benefits of physical activity (PA) has been available since the 1970s. This information could provide preventative measures for healthy individuals as well as therapeutic measures to help reduce complications that arise from chronic disease (Centers for Disease Control and Prevention [CDC], n.d.-b; Chief Medical Officer [CMO], Department of Health, Physical Activity, Health Improvement, and Prevention, 2004). Adults who participate in PA may experience a 20% to 30% reduction in the risk of premature death and may realize up to a 50% reduction in risk for developing a major chronic disease such as coronary heart disease, stroke, diabetes, or cancer (CDC, n.d.-b). With such information available, it is still interesting to learn that many people are not physically active. Many popular media outlets offer information on PA and its positive benefits. Local newspapers and television channels try to bring this information home to its viewers. These are indications that physical inactivity and obesity issues are entering the home on a daily basis in a way that most would be able to comprehend (Hellmich, 2006).

Physical inactivity has been recognized as a serious health problem. Persons who are inactive, regardless of body weight, are at higher risk of cardiovascular disease and its complications. The Cooper Institute conducted long-term studies on PA and obesity and the effects that both have on the human body. The results indicate that even an obese person can receive positive health benefits from PA (Wei et al., 1999). Even in relatively small doses, PA can mitigate the effects of low cardiorespiratory fitness levels. Strong cardiorespiratory fitness levels can help lessen all-cause mortality and cardiovascular disease in men and women who show signs or symptoms of a metabolic syndrome but are otherwise healthy (Katzmarzyk, Church, & Blair, 2004).

Researchers and practitioners alike are exploring ways to increase PA. During this process, strategies have been developed in an effort to increase PA. At times, interventions and programs have been modeled after successful research in other fields. Research on several intervention programs involving only adults and PA shows mixed results. The majority of these interventions occurred in a community setting. In one program, Burke, Giangulio, Gillam, Beilin, and Houghton (2003) attempted to increase the PA of co-habitating

adults by using the mail as an intervention tool. Couples were inundated with information on physical fitness and nutrition. Couples who received the most information became healthier. Activity levels increased on a short-term basis, but no follow-up study was conducted to determine if the behavior change was permanent.

The reasons people do and do not participate in PA are as vast and different as each individual, although individuals tend to have common ground about what they see as motivators and barriers to PA. When PA habits and participation were discussed with adults, 10 categories emerged as barriers to PA: (a) lack of time, (b) social influence, (c) lack of energy, (d) lack of motivation, (e) fear of injury, (f) lack of skill, (g) lack of resources, (h) weather conditions, (i) travel, and (j) family obligations. The number one barrier appears to be lack of time (CDC, n.d.-a). When adults were asked about what motivates them to exercise, three categories emerged: (a) concern for their own health, (b) desire for greater strength throughout daily life, and (c) information about the benefits and dangers of inactivity (President's Council of Physical Fitness and Sports, n.d.). With more public awareness of preventative medicine and the positive effects of PA on a healthy lifestyle, it is understandable that a person's concern for their own health comes as a major motivator for PA.

When PA habits and participation were discussed with children, four categories emerged as barriers to PA: (a) environmental issues, (b) budget cuts in schools and the community, (c) choices made by the child, and (d) parental influence (CDC, 2005).

PA has been shown to help improve quality of life, yet physical inactivity is on the rise and physical, emotional, and economic consequences of this type of lifestyle are also on the rise. Knowledge about positive health benefits of PA has become mainstream in the media, yet many people have turned in the opposite direction and PA on the whole has decreased. Studies have shown some intervention programs work and increase PA and the positive benefits associated with it, but on the other hand, the participants in these programs are rarely able to sustain such activity. Therefore, even though general barriers and motivators to PA are known, how and why members of a community do or do not participate in PA is still relatively unknown. The purpose of this study was to understand the factors that influence PA among year-round residents in an isolated summer re-

sort community. Specifically, we explored personal, environmental, social, and culture-specific motivators and barriers to PA.

Method

We examined daily life activities of year-round residents during the summer and winter months. Because the entire community transforms from a hectic summer resort to a quiet, slow-paced environment in the winter, we gave close attention to the physical activities and factors that either prevent or encourage inhabitants from being physically active. Data collection consisted of formal and informal interviews as well as observations, descriptive field notes of daily PA, and a record of the weather conditions.

Participants

Sixteen adults and eight children, all year-round residents from the island, participated in this study. The participants represented the core of the island's population, including people employed in the service business (tourism) as well as in government positions. Their jobs often require them to work 70 plus hours a week from May through October. Unemployment rates for the summer for the county are approximately 5%. In the winter, many are unemployed (about 29%). Marital and parental status varied among the participants. Many of the adults (nine women, nine men) approached the researchers and asked to participate. Possible participants were narrowed down to include a variety of ages and occupations as well as time constraints that may have prevented some from participating. The children were aged 12 to 17, male (six) and female (three), from the local middle school and high school. A note went home with all of the high school students (28) at the local school, and eight children, with their parents' consent, agreed to participate in the study.

Setting

Data were collected during the spring and the fall following a very mild winter. Because of the mild weather and high winds, the lake did not freeze. Average temperatures for this area range from 43 degrees in November down to 26 degrees in January. That summer was warmer than normal (about 5–10 degrees above average), which contributed to warmer lake temperatures. Warmer water temperatures and warmer air temperatures (3–5 degrees warmer) led

to no ice forming on the lake. This meant no ice bridge existed and consequently no easy access to and from the island. The sole way to come and go was by airplane, which was expensive, especially for the unemployed. On average, poor weather conditions would ground all flights approximately one day per week. Because of these weather conditions, many residents stayed island bound, which helped keep class participation in the adult education classes at a high and constant rate that winter. At the beginning of the school year, a 4-week activity program was offered to the families. It was designed to allow parents and their children to participate together. Approximately three fourths of the parents who attended parent's night expressed interest in the program. In the first week of the program, one family attended. The second and third weeks showed increased participation with three families. However, in the final week, attendance returned to only one family. This led to the question, why was there a high rate of interest, yet a lack of participation? Thus, this is the foundation for this study.

Procedure

The adults and children signed a letter of informed consent describing the purpose, possible risks, and rights of those who participated in this study. Parents of participating children were also asked to sign a consent form. Participants understood they would maintain their anonymity and pseudonyms would be used for each individual.

Data Collection

Data were collected by three means for this study: (a) formal interviews with the year-round population, (b) informal interviews with the year-round population, and (c) descriptive field notes of observations of PA participation and weather conditions.

Formal interviews. The main data source for this study was in-depth interviews with the participants. Each adult and five of the children had one formal interview, which lasted from 15 min to 1 hr. One child received a formal follow-up interview to ask more specific questions about PA. These interviews provided information on PA participation during the summer and winter months among the local population.

The interviews were semistructured and included five main questions. Each interview was audiotaped and transcribed verbatim. Follow-up questions were used to encourage participants to provide more detail and clarify initial responses. Interview questions were focused on each participant's PA participation and PA opportunities he or she would like to see and would be willing to benefit from. Immediately after each interview, the researcher recorded in a journal the details of the first impression of the participant and the activities in which he or she was involved.

Informal interviews. Informal interviews were used to (a) corroborate or refute formal interview questions and then (b) help provide correct information to the participant about PA. Informal interviews also provided additional insight on the participant's familiarity with PA and whether the participant had decided to change his or her PA habits as a result of our discussion about PA.

Descriptive field notes. Descriptive field notes were taken about PA participation from observations to determine if the information supplied during the interviews was supported. Observations about PA participation, as well as the current weather conditions, were recorded for each day during the time it took to commence and complete the interviews. Information on PA consisted of type and intensity of PA.

Data Analysis

Data collection and analysis were performed simultaneously and analyzed using constant comparison and were used to answer the main research question: understanding factors that influence a person's PA habits. Two subquestions included (a) what motivates you to be physically active? and (b) what prevents you from being physically active? Participant interviews were analyzed comparing the data from the interviews in an attempt to paint a picture of the community as a whole instead of an island of individuals. Four main categories emerged: (a) PA, (b) environmental factors, (c) cultural aspects, and (d) social. A fifth category, personal, melted into the other four categories. Field notes were used to accept or reject the information participants had given in the interviews. Weather conditions were recorded to help understand possible PA patterns of the participants.

Trustworthiness of Data

Trustworthiness of data was established through (a) prolonged engagement, (b) data triangulation, (c) researcher journal, (d) audit trail, and (e) peer debriefing and dependability.

Results

Four themes, each with several subcomponents, relating to barriers and motivators to PA were identified, specifically (a) acknowledgment and knowledge of PA, (b) unique cultural environment, (c) factors influencing the environment, and (d) social aspects of PA.

Acknowledgment and Knowledge of Physical Activity

Participants recognized and acknowledged the need for and the value of PA. This was consistent with mental and physical health promotion agendas. Although participants recognized the need for PA as important, their knowledge and perceived choices of activity tended to be limiting factors. Major subcomponents to this theme included health benefits, types of activity, and knowledge.

Health benefits. Participants often mentioned health benefits of PA. They clearly understood the need to be physically active. Almost without exception, when they mentioned PA, they referenced their health and the subsequent benefits of PA. Bob, a maintenance worker who could be seen walking all over town even during the winter months, described being physically active this way:

Motivated to work out and be healthier. I had a couple of kinks in my body, in my elbow and my shoulder and my knee that I've slacked on. I definitely wanted to work those kinks out... I feel better when I work out this winter.

Discussions of health benefits were most often focused on physical health, weight management, and emotional health.

Physical health. Physical health and how PA could contribute to a better quality of life was acknowledged as the first benefit. Participants acknowledged PA was a means to continue to reap the positive benefits of having a healthy body or trying to reverse what time and abuse had done to their bodies. Health was stated as one of the main motivators for participants to be physically active, regardless of PA participation.

Ann, a shop owner, often seen running with her child or skiing, explained her motivation for PA:

I've run since I was probably 8 years old and competed... in college...running is a sport that you have to be very self-motivated to do, so I am very self-motivated, because I enjoy doing it and I like the benefits and feeling in shape, and that's really the only reason.

Getting into shape and keeping the body healthy and fit were popular comments for participants. The younger the participant, the more likely the comments would center on staying healthy and fit. Joe, a 13-year-old student, indicated, "I want to be healthy, fit. When I do just sit around, it doesn't feel good." On the other hand, participants who were adults strived to get back to where they were before life intervened. Sue, a mother and former marathon runner, said "getting into better shape" was the reason that she was physically active. Sam spoke more clearly about the toil age had taken:

My age. I just want to get healthier. I've abused my poor body over the years with smoking and a lot of caffeine and eating totally wrong. It's time and I've seen a lot of people on the island changing. I just woke up one day and decided that it was time. I quit smoking and drinking, caffeine that is, not alcohol.

True to his word, Sam could be seen taking walks during the early evenings around the downtown area.

Often with age, health issues become more apparent. PA has been shown to help prevent and diminish health concerns that arise from physical inactivity. Some residents already realize the positive health benefits of PA, yet they struggle to stay active. Heidi, a health care professional, discussed,

What I find that motivates me is health risk. I had chest pain a few years ago... I was so good for a good year at least. I was so good... It's not a beauty thing for me. It's a fitness level can I breathe, can I walk kind of thing.

Yet for several years the motivation did not result in action as Heidi did not make much effort to be physically active. In the last couple of years, however, one researcher has seen Heidi riding her bike as well as going on walks with her husband, and now Heidi consistently runs in 5K races.

The need to get back in shape was a motivator for some, but for others it was a barrier. Age and past injuries were noted as barriers, and this was a common response from several participants. These participants felt they could no longer participate in PA because they had grown too old. Angela said,

I have to get to town, that's the only thing. I feel at this point in life, who cares. I'm 58, don't care. This is one reason we moved to this island: so we would have to be a little physical. It's good for people our age.

This statement still holds true for Angela.

Weight management. A second PA benefit was the idea of weight management and appearance. Participants recognized that PA assists with weight loss and weight management. Most discussed how PA would help them lose the extra weight they had put on over the years. Joan stated straightforward when asked about PA, "I want to lose weight."

However, a few discussed that PA had more than one positive affect on the body. Missy realized that PA is a combination of weight management and health benefits: "Losing weight, being able to fit in clothes better, feeling not out of breath when I walk up the hill." Joan and Missy were observed participating in PA throughout the year.

Emotional health. Emotional well-being and how PA can contribute to a positive mental self was the third benefit identified. Participants noted that when they were physically active, they had a more positive mood; in addition, they liked how PA generally made them feel. Joan simply stated, "I like the way it [physical activity] makes me feel."

The notion of relaxation, sleep, and general mood stability are obvious aspects of emotional health. Participants indicated they were able to sleep better when active as well as more calm in general. When Heather is physically active, she "notices a difference in my moods if I'm more active and I sleep better and I just feel better."

For others, PA provides mood stability. Bob indicated it “gives me a calming effect.” Chris took it one step further and said, “I would say that the will that you have a life,” which motivates him to be physically active.

Brent, a service industry manager, added a new perspective for being physically active. The idea that he has a child who is now becoming more aware of the health risks of being overweight and underfit encourages him even more to become physically active. He said, “I want to be around for my kid. I want to be around and I notice that I used to be in shape and I let myself go and my daughters getting to be of age and I want to be around.” Brent continued and explained his motivation for PA: “I was always motivated to go, but I think that I just needed a push. And the push was seeing my baby girl grow up, and I want to be around for her.”

From an emotional health perspective, the idea of being physically active had a different effect for the younger crowd. PA was not seen as a chore or a task that needed to be done to be healthy. It was more a factor of what was fun to do during the day. Hanging out with friends at the park, swimming in the lake after work, and playing soccer were observations made of the island’s youth. The young participate in PA with the sole purpose of hanging out with their friends as opposed to working out. “Its fun” is all the younger participants need to stay physically active.

For some, PA is used to combat other social/emotional issues that arise, especially during the winter on an isolated island. Few activity choices exist for the locals; the youth of the island have even fewer choices because of limited resources. No movie theaters or malls exist on the island during the winter. Michelle, a 16-year-old student, summed up her participation in sport: “I enjoy my friends in volleyball, and I think it’s a really good outlet and something to do for boredom.”

Types of activity. Another subcomponent identified from the data analysis was type of activity. Participants’ knowledge of PA and their subsequent choices of PA were limited to their prior experience with sport and physical education. Many realized the benefits of PA, but few took advantage of offered programs. Participants identified two aspects to the types of activity: structured sport and unstructured activity.

Structured sport. For school-aged children, structured sport is the predominant form of PA. Most school-aged children are involved in structured sport, whether during school in a physical education class or during extracurricular activities such as varsity sport. High school students receive 250 hr of physical education a week. This is considered an elective course. Elementary students receive physical education 50 to 100 min a week. Unfortunately, this is under the recommendation of 150 min of physical education per week (CDC, 2005).

In the summer, several softball games are held in which many members of the community participate. A common complaint was there is no longer a summer softball league along with other adult activities, but there is a well-attended golf league.

Unstructured activity. A lot of opportunities exist to participate in unstructured activity in this community. During the winter, over 30 miles of cross-country ski trails are groomed, and during the summer, more than double that exist for biking, hiking, and horseback riding. Younger participants use the parks as a place to meet friends, hang out, and pass the time. Community members have many opportunities throughout the year to use the trails for biking, running, skiing, and horseback riding.

Accuracy of knowledge. Understanding what people know about PA participation is important to comprehending why people may or may not be physically active. The most common response regarding the amount of PA needed to stay healthy was 2 hr of PA per day, but the data indicate a general split between accurate and inaccurate knowledge of appropriate PA.

Accurate. Some respondents displayed a generic indication of appropriate PA with vague responses such as a “need to move around” and a “need for movement of some sort, going out for a walk, going out for a bike ride.” Others provided more information, indicating they may have understood the term as it applies to their own bodies’ physiology and health. For example, Tom defined PA as

any type of activity which involves physical exertion on my part that will raise my blood pressure and cause me to experience muscular fatigue and will result in a feeling for me of accomplishment at the end of the prescribed time.

Another good example came from Ann, who said, “For me physical activity would be increasing my heart rate for at least 20 minutes.”

Inaccurate. On the other hand, many participants were unsure of how much PA is needed for a healthy lifestyle. They indicated a person needs more activity than the body warrants, some to the point of a person needing to be active for the majority of the day. Carl, a teenager and one of the researchers’ students, indicated one should be active “at least eight hours a day of running, moving, and weight lifting.” Most participants felt a person needs at least 2 hr of cardiovascular activity each day.

Many participants expressed they had no time to participate in PA because of their work schedules. Even though Ann manages to stay active, she still finds it difficult:

A little sporadic because a lot of it depends on what type of activity I do, and the time of year, and the time that I have. Sometimes I’ll work 12 or 14 hours, so I’ll ride up and down the hill and maybe take the dog for a walk, so it varies a little bit. It’s easier and I exercise more in the fall, spring, and winter than I do in the summer.

What they failed to realize was their job and transportation are PA. Standing 10 to 12 hr a day behind a counter, bartending, and waiting tables as well as cooking for 10 to 12 hr a day and performing maintenance on company property are PA.

Cultural

The second major theme for this community was cultural in nature. This could be classified unlike many other isolated cultures. The island is remote and removed from mainstream society. Additionally, there is a clear distinction between the seasons in the community, which in turn defines the culture of the year-round population. During the summer months, the island is easily accessible and the residents have welcomed millions over the years. Once winter comes, those who stay can handle the bitter winters, isolation from the mainland, and a tight-knit community. The distinct summer and winter cultures could be divided into work, time, and transportation.

Summer. Living in a tourist destination is a unique experience. The work season is bounded by Memorial Day in May and the last weekend in October. Employees try to earn a year's salary within this limited amount of time. This means longer hours each week for the employees. In addition to the longer work days, many employees either walk or ride their bikes to work. Therefore, the aspects of work, time, and transportation in summer are exaggerated.

Work. Work hours range from as little as 50 hr to as many as 72 hr a week. As budgets decrease and prices rise, fewer employees are expected to do more work. The typical age for those to begin work on the island is 12. It is not uncommon to see children working in the stables 3 to 4 hr a day. When children reach the legal age for work, more hours and demands are placed on them.

Family and work obligations were common barriers to PA. The idea of more activity after a long day of work was not appealing. The nature of work and the lack of employees were mentioned as barriers. Tom explained that "scheduling problems" because of lack of employees tend to conflict with offered classes during the winter. Sue has family obligations along with long hours for her and her husband that prevent her from being physically active.

Adult work in the summer is intense. Exhaustion, as a result of the intensity and PA, was an aspect discussed during the interviews. Participants appeared to be unaware of how much PA they received throughout the day through work and transportation. Those interviewed discussed that although they are spending 8 to 12 hr a day on their feet at work and walking or biking to and from work, they are in general not receiving enough PA. PA for them needs to be above and beyond transportation and work.

Work does not simply entail long hours, but physical demand on the body as well because of the nature of the island and the ban on motorized vehicles. Sam described some of his work: "It's a lot of old fashioned push and pull power." Sue chooses to walk to work because of her insecurity about riding a bicycle during the crowded summer months: "I walk to work, approximately a half mile each way. I'm on my feet all day at work. I don't get to sit during the 12 hours I'm at work."

Time. The second aspect mentioned as a part of the culture was lack of time, or perceived lack of time, for PA. Because of the short

season, many residents must earn a year's salary within 6 months. Chris indicated, "I don't have time to do what I want to do, like I'm totally exhausted at the end of the day, I don't feel like working out" as one of his largest barriers to being physically active during the season.

Transportation. Transportation is a unique aspect of PA in this community. The easiest and quickest mode of transportation around the island is bicycle because of the 115-year-old ban on motorized vehicles. Few choose to walk; by the time children enter kindergarten, they are already riding their bicycles (without training wheels) to school. Essentially, because of the nature of island life, the need to be physically active is essential.

Winter. During the winter months, work habits change and the environment becomes more relaxed. Perceived time for PA improves, and the main mode of transportation dramatically changes. The community switches from riding bicycles daily to driving snowmobiles.

Work. Work hours are reduced, if not completely eliminated, and children are back to their other job, school. Most locals are laid off and find they spend their time a little differently. Relaxing and recovering from an intense 6 months usually means spending time with family and at home. Heather described her day: "I get up and eat something, take a shower, and then I would stay home and do nothing."

Students, on the other hand, still have busy schedules, especially if they are participating in sport. Cindy, a student, voiced her schedule during the volleyball season: "Get up, go to school, practice, go home, do homework, maybe go to Michelle's for a while, go home, shower, go to bed."

Time. Time is used differently in the winter. Participants have more discretionary time in the winter, but the use of it does not appear to accommodate the excuses of the summer. Days during the winter are spent catching up on sleep, taking long vacations to warmer climates, spending time with friends and family at the local pub, and relaxing from a busy summer.

Participation in organized PA, adult fitness class, and a weekly volleyball night tell a different story. For some, extra time is used for organized physical activities. Two adults consistently attend the

adult fitness class twice a week, and on average, eight people attend the intramural volleyball night. However, for the majority of other adults, winter allows them to be more sedentary than in the summer season.

Downtime was also apparent in the younger participants. Students spend most of their day at school, and with school starting at 8:20 a.m. and dismissing at 3:10 p.m. and another 2 hr for practice, not much time is left for extra activity. So during school breaks, students tend to take advantage of the downtime and relax. Jake, a high school junior, described his recent Christmas break: “Wake up, sit around the house, and then go to bed. Normally I’d go out in the snowmobile, but since there is no snow, I don’t.”

Transportation. The method of transportation changes dramatically during the winter months. Residents passed a law allowing the use of snowmobiles on the island. As soon as the first snowfall leaves enough snow on the ground, snowmobiles become the preferred method of transportation. Snowmobiles are quicker and sometimes a safer mode of transportation during the winter months. Temperatures can drop below 0 for several weeks at a time, so spending time outside, if not properly attired, can be dangerous. Once the boats to the mainland stop running and temperatures are right, it can take less than a week for people to start crossing the lake by snowmobile. Locals then have 24-hr access to the mainland that only comes during the winter. With ferry rides at \$25 and flights at \$48 for a round-trip, snowmobiles on the ice bridge give residents a cheaper and more convenient access to the mainland.

However, the use of snowmobiles often leads to a decrease in PA. Three members of the varsity basketball team live within three blocks of the school, and all of them drive to school. When it snows a lot, attendance at the volleyball and basketball games is low because it is much easier to ride a machine than to bike down and back up the hill. Snowmobiles are also entertainment for the youth on the island. Freedom begins at the age of 12, when by state law a child can use a snowmobile without parental supervision. Students frequently travel to one of the golf courses for fun: “We ride out to Wawashkamo and sit there and have snowball fights and sit there some more.”

Cross-country skiing is another popular method of transportation. A program was started at the school approximately 10 years ago

giving second through fifth graders skis for the winter along with a weekly lesson. Students are encouraged to take home the skis for the winter, and weekend outings are planned for the students. This leads to parents purchasing skis for their children to continue with the sport once they enter the sixth grade. Skiing is not limited to school children. Adults have been known to ski down to the local bars as well as ski across the ice bridge to the mainland.

Environmental

The third theme identified from the data was environment. Given the uniqueness of this community, many barriers were simply not present. The island is set up for pedestrians and bicycles, and over 70% of the island is a designated state park. Water and air pollution are not a concern. Although nothing can be considered completely safe, crime is not a high concern. However, on the island the environmental aspects include not only the weather but also the facilities to which people have access to remain physically active. The local children are lucky when it comes to community support for the school. When the local school board members decided it was time for a new gym, they went to the voters; in the fall of 2000, a new facility was opened and also made available to the public. When budget cuts are discussed, sport is never an issue. The community feels strongly about sport and the opportunities it affords its children. The main theme for environmental factors that evolved from the interviews was the buildings. Three environmental subcomponents were identified: indoor facilities, outdoor facilities, and weather.

Indoor facilities. Two year-round facilities are available for use by the community. One location has a workout facility with free and circuit weights available in one room. Another adjoining room contains treadmills and other cardio equipment. Television with cable and a VCR/DVD are also available in the cardio room for exercise videos.

The school has two gyms. The Little Gym is several feet larger than a regulation volleyball court. Yoga, an after-school PA program, archery, and dartball are done in this area. The Big Gym has a regulation-size basketball court as well as enough area to provide two regulation-size volleyball courts and bleachers. There is also a mezzanine with free weights, three elliptical machines, one treadmill, a universal weight system, and medicine balls.

These facilities are available during the week while school is in session, from 7:00 a.m. to 7:00 p.m., unless a class is occurring during that time. Yet it does not meet the needs of all community members. Sam indicated he wanted a social place. Others thought the hours were not conducive to their schedules. Chris indicated the facility hours were not favorable to the typical summer worker: "Certain facilities, having different times (hours) for people who don't live the normal life." However, the majority thought a lap pool would help, which is not available on the island.

Outdoor facilities. The major outdoor facility on the island is the state park, with over 30 miles of groomed ski trails on the east side of the island state park. Skiers may use other trails located throughout the island, but they must share with snowmobiles and snowshoers.

Throughout the summer, the trail size doubles for outdoor activities. The school and two parks have playground facilities that have been updated in the last few years. One city park also hosts a sand volleyball court, softball field, soccer field, basketball court, skateboarding facility, disc golf course, and a horse riding rink, which is flooded in the winter and turned into an ice rink.

These facilities are free for anyone to use. Yet when interviewed, no one commented about the use of these facilities, even though in some cases they were used every day. What is accepted as everyday life for these participants is not considered exercise, in terms of intensity of their work and the use of the facilities.

Weather. The third environmental aspect was weather, which came through during observations. Community members who are active outside during fair weather in activities such as running and biking continue their outdoor pursuits during the winter months. Several continue with both biking and running, but the majority switch to cross-country skiing. Community members who tend to be inactive outside during the summer months continue that pattern during the winter months.

Social

The social aspect of PA is the fourth major theme identified from the data. PA can be social when it lends itself to team sport and workout classes. Many people engage in PA for social reasons. On the other hand, it can be of some solitude when a person participates in an activity alone. The social theme was clearly subdivided by gen-

der. Men and women expressed different social viewpoints regarding PA participation and, at times, appeared to approach PA in different ways.

Men. Men indicated responsibility to you and your group if you did not show up for a workout session: “The whole motivation of ‘hey where were you?’” was enough to encourage Chris to be physically active. The sense of obligation to others to show up is important. It is acceptable for men to miss a workout session for solid reasons such as work. However, missing a session for nonserious reasons, such as taking a nap or watching a movie, is simply unacceptable. Tom indicated, “If I belonged to a group of people, nothing like peers to motivate you people.” Not only did men feel, in this study, an obligation to their peers to show up for workout sessions, but one participant also felt the need to stay physically active for the community and his partner on the job.

Another motivator discussed was the competitiveness of sport. The act of competing with others encourages men to be more active. Jake, a 16-year-old student athlete, expressed he “enjoys the competitiveness of sport.” A good competitor needs to have skill, and several participants indicated a main motivator of sport for them is improving their skills. Todd indicated “being on the team and being good at something” is his main motivator for staying physically active.

Women. On the other hand, women, although they enjoyed being with a group to exercise, did not view the responsibility of showing up as the motivator, but the structure of it.

Joan indicated, “Just something to increase my activity like an aerobic class, just anything that gets a group of people together is fun.” Sally supported this same notion of formal structure: “A class of some sort, because otherwise I won’t do it on my own.” However, for some, the structure did not have to be formal: “If there was even a group of girls that got together and did a walk at night or something like that” was enough to support the activity.

Location was also a factor in women’s PA participation. Not only did they want structure, but they also wanted structure in specific locales. Participants wanted classes closer to home. They did not want to make the extra effort to go “back down the hill.”

Women expressed enjoyment in being a part of a team or a group. This is a way for them to be with friends in a healthy mode. Joan said,

“It doesn’t really matter, just something to increase my activity like an aerobics class, just anything that gets a group of people together is fun.”

As for sport, in contrast to the competitiveness of men, women indicated the social side is more their focus. Michelle said, “I just enjoy my friends in volleyball.”

Women tended to enjoy participation in sport more for camaraderie. Cindy described her experience with volleyball, “when people get along,” as a motivator for participating in sport and continued with, “when you do something that really helps the team.”

Conclusions

Limitations to this study include not having collected data on basic health-related fitness measures and a measure of participant’s PA level (i.e., pedometers). With that being said, participants narrowly defined PA in the context of sport. On the island, children may receive physical education credit by participating in a varsity sport. They must participate in four seasons, and it does not need to be the same sport. There is a high school physical education class, but that, too, caters to sport because it is a conditioning class.

The same is true for adults. Participants were comfortable and confident in defining PA participation by their past experience with sport. A few activities are now being offered in the community as an alternative to organized sport. Participants still defined PA in the context of sport. In addition to their narrow definition of PA, participants’ knowledge base was not accurate. The lack of accurate knowledge is interesting considering how much media time PA receives throughout the day through various sources. In general, participants did not see PA in certain activities if it did not make them sweat and breathe hard, regardless of how much public information has been made available to the masses about the types and duration of PA participation.

Even the students who participate in a regular physical education class could not seem to grasp how much PA a body needs to stay healthy. Even more, it came as a surprise that physical education students and athletes answered the question about the need for PA participation inaccurately. When students were posed this question during a class, all students were able to respond correctly, but during

interviews, this was not the case. Their responses corresponded to the length of their daily sport practice.

Work has been found to be a barrier to PA (CDC, n.d.-a). This was the case here, but with an added twist. Participants did not recognize their work or transportation as PA. Participants in the Zunft et al. (1999) study made the same assumption. Most of the participants felt they were not receiving enough PA during the day, especially during the season. What participants failed to realize was their work could be considered as PA. Narrowly defining PA has led to the misconception that work does not equal PA.

In this study, social factors were consistently reported as positive motivators for PA. The notion of social support has been widely reported as a motivator for PA as well as a barrier (CDC, n.d.-a). This study supports social influence and how that affects participants and with whom participants choose to be physically active.

The social factors influencing PA identified in the study included different factors for men and women. Men and women viewed the social motivation of PA differently. Men felt an obligation to others, and that obligation kept them physically active. This obligation varied from their workout partner to the community for which they worked. Competition was also a main motivator for men to keep physically active. Sport is all most men know for PA; therefore, competition being a main motivator is logical.

Women, on the other hand, use PA to be more social. Many enjoy the structure of the activity, but the structure does not have to be formal. The structure can be as informal as a group of women meeting to walk together. Cash, Novy, and Grant (1994) supported the idea that women participate in PA for social reasons as well as for appearance/weight management, fitness/health management, and stress/mental management. Keenan (2006) found women participate in PA for health and weight reasons, but social reasons are not a factor, which is inconsistent with this research.

Because of the nature of how and where the participants live, environmental and cultural factors were intertwined. The environment of living on an isolated island with no motorized transportation has led to living in a 19th, early 20th century culture for approximately 8 months out of the year. Residents work in an industrialized world in which most of that technology is not available to them, so they,

therefore, possess a manual labor mentality that continues regardless of the seasons.

Lack of time and energy were two reasons participants mentioned as barriers to PA. This is supported by the CDC (n.d.-a). The difference is the participants live and work in a physical environment; work and transportation are PA. Many indicated a limited amount of leisure time for PA because of lack of time and energy. Most of the work performed on the island is manual labor (bartending, dray drivers, and building maintenance). With this in mind, those who have manual labor jobs do not tend to participate in extra PA programs outside their jobs. According to Miller and Brown (2004), those who work in a manual labor climate tend to be more physically active because of their job as opposed to those who have office jobs.

A second observation in this study was community members were not physically active when the time allowed them to be active. A combination of factors may influence this behavior. The world has moved into the 21st century and has become more modern, but the island has maintained its ways in which it operates and promotes itself as a 19th, early 20th century resort along with all the trappings of that culture.

Most of the year-round residents live in a 19th century world, but during the winter months they make a leap into the 21st century with the use of snowmobiles. In addition to poor climate and snowmobile use, fewer hours on the job reduce activity even more. All three of these factors reduce PA in the off-season.

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