research update

Vol. 12, No. 3, September 2005

Adolescent Physical Activity: Reasons for Relapse

Background

The health risk behaviours that contribute to adult chronic disease are established in childhood and adolescence (US Dept. of Health and Human Services, 2000). Adolescents' participation in appropriate physical activity can also decrease health-compromising (Morris, Sallybanks, Willis, & Makkai, 2004) and deviant behaviours (Collingwood, Sunderlin, Reynolds, & Kohl, 2000) and improve academic performance (Sallis, Prochaska, & Taylor, 2001). Yet physical activity levels are known to decline between early high school and young adulthood (Wharf Higgins, Gaul, Gibbons, & Van Gyn, 2003), exactly the period when promoting physical activity may be most important (Corbin & Pangrazi, 1999). Although exercise adoption, maintenance, and relapse have been studied with a variety of adult populations (Dishman, 1994), there is not much evidence in the area of adolescent exercise relapse.

This study examined reasons that adolescents stop physical activity. We then related these reasons to stages of exercise change, using a model describing barriers to youth's participation in recreational activities (Donnelly & Harvey, 1996). Types of barriers include

- *infrastructural* (costs, transportation, time, location, and availability of facilities);
- *superstructural* (relating to the nature of activities, cultural ideas, and prejudices); and
- *procedural* (a lack of social support, organizational structures, and management arrangements).

Method

Participants were 15- to 17-year-old students at a private high school (N = 327; 166 males and 161 females) who completed Godin and Shephard's Leisure-time Exercise Questionnaire (1985) and a measure of exercise stages of change (Marcus, Rakowski & Rossi, 1992). We also asked them an open-ended question about whether they used to exercise in the past but currently did not and why they had stopped. We asked students to respond to all of the questions in relation to their exercise outside mandatory physical education classes.

Results

Twenty-two per cent of participants indicated that they had previously exercised but were no longer active (relapse). Results of a t-test showed a significant difference between participants who reported a relapse and those who did not. Students who indicated a relapse engaged in fewer strenuous exercise bouts per week than participants who were still active, $t\ (309) = 3.99$, $p<.001$.

Infrastructural barriers. Infrastructural barriers were the most important barrier to youths' physical activity participation. Barriers most commonly cited in this category were a lack of time and of available/convenient facilities. Most students referred to the time needed to study (not surprising for private school students): "*Because I came to* [this private school]*…I had homework. There wasn't enough time to do anything else.*"

Superstructural barriers. Active opportunities outside physical education were mainly traditional sports that did not appeal to all students. Many students cited injuries/health conditions and body image issues that discouraged continued participation in sporting activities: "*I became anorexic and didn't have the energy.*" However, most common superstructual issues related to students' levels of motivation: "*exercising became a chore instead of enjoyment,*" and attraction to health-compromising activities such as drugs.

Procedural barriers. Other students cited a perceived lack of support from parents, peers, and teachers who were more concerned about students' academic performance than their participation in physical activity: "*My parents thought it would interfere with my schoolwork…and also that it was a pointless sport [activity] and that I should be doing something else.*" Students also perceived that teachers and administrators supported the gifted athletes in pursuing activity in leisure time, rather than the "*weak students.*"

Conclusions

Over 30% of previously active adolescents in this study reported barriers precluding extracurricular physical activity. As shown above, responses to the relapse question indicated several factors that resulted in youth abandoning active living outside physical education classes. Although mandatory physical education classes during senior secondary school years in some provinces may lessen this concern, students may return to a sedentary lifestyle after graduation, a point at which physical activity rates are known to decline (Morris, Sallybanks, Willis, & Makkai, 1996). Further, even though this study included private school students, the barriers reported are similar to those that adolescents in the public school system also face (Kubik, Lytle, & Fulkerson, 2004).

Initiatives to address the infrastructural, superstructural, and procedural limits identified in this study may help minimize relapse. In particular, interventions should target the most often cited reasons for relapse: time and the limits relating to the nature of the adolescent self. Initiatives might include providing numerous and diverse opportunities for physical activity to accommodate varied interests, skills, and abilities for students in school and community settings, with a culture (parents, peers, and school officials) that supports both academic and health development. Further, targeting interventions at adolescents who are preparing to change their behaviour should highlight time and stress as significant factors in the lives of high school students.

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Research and education for the promotion of physical activity

Vol. 12, No. 3 September 2005

Using Online Communications Technologies to Network Front-Line Health-Care Workers through Space and Time

Background

In the course of my Master's research and in my work as a public health inspector/supervisor in the Saskatoon Health Region, I have become increasingly interested in using online communications technologies to develop distributed communities of practice for knowledge transfer and exchange. The public-health field sees a lot of discussion about research-based evidence and evidence-based decision-making. However, we need to examine another cog in this wheel: practice-based evidence. By this, I mean that practitioners, particularly front-line workers, need researchers to accept their work as evidence (Gibson, 2004). In order for this to happen, practitioners need to communicate better among themselves. Online communications technologies such as listservs and online courses provide a way for practitioners to find and network with each other.

Collaborating Using Listservs

A listserv is an electronic mailing list that allows sub-scribers to e-mail everyone on the list by e-mailing the listserv itself. Using listserv software eliminates the need for you to keep track of members at any given time (the way you would if you were e-mailing from your own e-mail software to a group that you had established). Listservs often serve as discussion groups where people can collaborate on projects. Depending on the software used, members can also look at all the posted messages using a web interface, eliminating the need for each member to save all the individual listserv e-mails.

I have been involved in a collaborative listserv project while serving on the National Committee to Rewrite the Community Health Standards for the Canadian Council on Health Services Accreditation. The Council put together this listserv to rewrite the standards, drawing on the input of 25 front-line public-health workers, middle- and upper-level managers, and public-health visionaries across the country.

After an initial in-person meeting to kick off the project, we didn't meet in person again until the project was almost complete. Instead, using the listserv, the council circulated documents for review and comments, revising them as they received input. At one point we split into working groups, each accompanied by its own, smaller listserv. The council staff synthesized reports from these working groups to include in the larger report. This collaborative method of working via listservs cut our face-to-face meetings from four to two, and also made it possible for more people, from more locations (including rural and remote ones) to participate. This is a big advantage in these days of fiscal restraint and full work schedules, both of which limit travel.

Recently I joined another listserv, the Canadian Public Health Association's Public Health Student Network (to join, e-mail Sarah Williamson at swilliamson@cpha.ca). Although this listserv only began in the summer of 2005, there are already at least 25 to 30 participants, all with ideas on how to share knowledge and projects they want to further by communicating with other public-health students.

Online Courses

With the rise of the Internet, educational organizations have been exploring new ways to deliver courses that don't require students to meet in the same location or even at the same time. I will be participating in one such course, Skills Enhancement for Public Health, the Public Health Agency of Canada's health surveillance training program for front-line public-health practitioners (www.phac-aspc.gc.ca/csc-ccs/sehs-acss/index_e.html).

The course includes online modules in French or English in WebCT, an online learning environment that uses the Internet and e-mail. Students will complete the modules during eight-week blocks, although not during any set class time period. We will communicate frequently with other students and the course facilitator through the online discussion forum. Public-health practitioners with specialized training in epidemiology will serve as course facilitators. The Public Health Agency of Canada even provides a handout on ways for public-health practitioners to negotiate with their employers so that they can complete some of the 25 to 30 hours of training time required per module during work-time.

I have participated in other online communities associated with university courses. One used Community Zero, an interactive web site, to expand on discussions outside the classroom (www.communityzero.com). This community was successful because the professor spent a considerable amount of time "caretaking" the dialogue page and keeping information current, a critical part of all these online activities.

This article only scratches the surface of ways in which we can network without getting on a plane and booking a hotel room. We haven't even touched on technologies such as weblogs, for example. However, these distributed communities of practice require considerable and careful tending to become vibrant. While they are easy to start, you need a dedicated gardener to keep them from withering and fading away.

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Research and education for the promotion of physical activity

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