



**Research Report of the Month**  
**APRIL 2005**

Wallhead, T.L., & Buckworth, J. (2004).

**The role of physical education in the promotion of youth physical activity.**  
Quest, 56, 285-301.

**Foreword** For this vernal issue of the Research Report of the Month the object of attention is not the report of a study; it is the report of many studies – a research review. This is the first example of that genre to appear in *Unlock*, and it certainly will not be the last. The rationale for including reviews is simple. If you want to know what is available in a particular area of physical education (PE) research or obtain some insight into how findings from studies in that area add up, you don't start out with a search for reports; you look for reviews.

**What Reviews Provide** It is a case of the familiar “let your fingers do the walking” principle, except that reviews allow you to use the reviewer's fingers. Not only do reviews expedite the process of retrieval, they also can provide a variety of related services such as screening for adequacy, sorting and categorizing, identifying persisting problems of methodology, pinpointing important gaps in knowledge, summarizing changes and trends, synthesizing results, and weighing to find the preponderant direction of evidence. Even with the enormous power offered by computer-based search and retrieval, a thorough review produced by a human scholar yields a vantage point on the ongoing work of scientific inquiry that no machine can duplicate.

There are many different kinds of research reviews, ranging from simple prose descriptions of what has been found in a particular segment of the literature to complex accounts that provide statistical summary of the results from a selected set of studies. Between those two points are a host of review forms that serve special purposes. Some focus on the task of critiquing design or conceptualization, while others center on synthesizing results as a means of establishing a benchmark from which future investigators can orient their efforts.

There even are journals that are entirely devoted to the publication of research reviews. An example familiar to many physical educators who have done graduate study is the *Review of Educational Research*, produced under the imprint of the American Educational Research Association. Finally, there also are excellent how-to-do-it handbooks on producing reviews. Some, such as Jose Galvan's *Writing literature reviews 2nd ed.* (2004, Pyrczak Publishing) are genuine introductions pitched to serve student term-paper assignments while others, such as Arlene Fink's *Conducting research literature reviews 2nd ed.* (2004, Sage Publications), are more comprehensive guides designed to support the review process in all forms of scholarship.

**Review of the Month** The work of Wallhead and Buckworth was selected for three reasons: (1) It deals with a topic that is at the heart of practice in school PE, (2) It is reasonably brief, written in a clear prose style, and free of unnecessary technical terminology, and (3) It has a logical structure that goes beyond mere description of available studies without making heavy conceptual demands on the reader. Put in more direct terms, the review will be both interesting and accessible to most physical educators.

The format for presenting the review will be different from what I have used to introduce research reports. Here there is no sequentially unfolding story that moves from the question through design, methods, data collection, and analysis to end with presentation of results. I can describe the general structure of the review and sample some of its contents, but to really learn what it contains you will have to read it in the original, something that should not be daunting for most of Unlock's readers. The source journal, *Quest*, is held in almost all college libraries and now is available in both print and electronic editions. Accordingly, this brief annotation is intended to lure you into the adventure of actually retrieving and reading the review.

**Review Format** This review offers neither a collation of all the research that has been done on the central topic nor a critique of the methods and conceptual structures involved. Instead, it begins with a question and organizes a variety of research studies around that topic. The question here is precisely that advanced in the title of the review, "What is the role of physical education in the promotion of youth physical activity?"

As you might expect, there is no way for any study or collection of studies to answer a question that is so broad and loosely defined. So, the authors attack the problem by examining studies that have an indirect but very real bearing on the relationship between school PE and subsequent (out of school) physical activity (PA). They employ a set of three subordinate inquiries: (1) What does research tell us about what influences PA in young people? (2) What variables (content, organization, methods) have been used in large-scale curriculum interventions that target promotion of physical activity in PE classes, and what does research tell us about the extent to which such programs have been demonstrably associated with high levels of PA? and, finally, (3) Given the match between what can be learned from answering questions (1) and (2), what might make PE more effective in promoting PA?

If that sounds like a very large undertaking, you are entirely correct. To keep the report within modest bounds, however, the authors use some simple strategies. Judicious selection of studies (no claim is made that this is a comprehensive or exhaustive review), clustering similar studies and summarizing their findings, and avoiding detailed descriptions of design and method all work to economize on space and keep logical development moving briskly. In addition, of the 64 studies and theoretical essays cited, all but a handful were selected from the immediately previous decade (up to 2002), which served to further reduce the size of what was attempted.

**Influence of PE on PA** Now let us walk through the logical sequence of questions addressed in this review. First, what have we learned from research about the impact of PE on PA? Is high quality PE persistently associated with higher levels of PA (both while students are in school and subsequently as adults)? Is there research that suggests a positive causal connection between the two? As most of you will know, although there has always been plenty of speculation about the answers to such questions, there has been very little research – and none of what exists is definitive. In brief, if you want research that takes those questions head-on, there is little or nothing to be reviewed.

**Correlates of PA** Which brings us to the first of the authors' subordinate questions. What about things other than PE that appear to be associated with PA? There are a good number of such studies, and because almost all of them are correlational in design, the question is posed as, "What are the correlates of youth physical activity?" The authors assert that some answers are well supported. For example, young people who engage in higher levels of PA believed that they were competent in PA, reported that they enjoyed PA, frequently held the intention to engage in PA, received support for such engagements from parents and significant others, and had safe and attractive opportunities to be physically active.

Here you will have to suppress your impulse to say a loud "duh!" You may think you already knew all those things, but mother nature frequently has nasty surprises for people who think that the obvious always is the true. Not only are those the dispositions and conditions that are consistent across studies, it also happens that, at least in theory, all of them are potentially modifiable. That is a point that may matter a great deal for those of us in PE.

**Attitude to PE as a Correlate** What appears to be less certain, however, is whether a positive attitude toward PE, in particular, shows up in research as a precursor of higher PA. That it does not do so struck the authors of this review as at least curious if not ominous. Accordingly, they more closely examined some of the studies that have attempted to estimate the effect of PE on PA (Five of the major studies are laid out in an elegant table that displays the sample, aims, measurement, and results for each). The authors' conclusion was that there are so many measurement problems that it would be truly surprising if such investigations had all pointed in the same direction. Sorting apples and oranges with an unreliable measuring stick produces piles of something, but that something is unlikely to be knowledge.

**Patterns Revealed** Despite those problems, correlational studies do reveal some patterns that seem consistent and important. First, the levels of PA decline toward the end of the school years, and that is not simply the consequence of the decrease in required PE. Second, that decline is sharp in females throughout the period of adolescence, and is more pronounced than in their male counterparts. The authors cite a number of studies that, taken together, give strong indication that for many girls, a positive (or negative) experience in PE has a pronounced effect on their willingness to be involved in PA. Again, the correlates of self-perceived competence and enjoyment are suggested as explanations. If that is true, then manipulation of the motivational climate in PE (the review cites several studies of class climate and goal orientation) may offer genuine leverage for confronting the decline in PA among adolescent girls.

**Large-Scale PE Curriculum Interventions** Next the authors turn to the large-scale PE curriculum studies (7 are cited but only 5 are described). They looked for evidence that the interventions had or did not have an impact on PA and for whether their content and design appeared to have been informed by the results from the previous correlational studies. Evaluations of the programs revealed a positive association with out-of-school PA in only 2 instances while the remaining efforts produced either no effect or a negative impact. The conclusion was clear. Good programs designed to increase PA in PE classes generally work to achieve that end, but the transfer to life as it is lived out-of-school is anything but automatic. Higher PA in PE may be necessary, but it is not a sufficient condition if the ultimate target is adoption of a lifestyle.

**How PE Can Influence PA** Finally, the review inspects the PE-based programs for clues to explain why some influenced out-of-school PA, and some did not. Again, the explanation posed by Wallhead & Buckworth is simple. Those programs prescribing teaching methods that emphasize enjoyment and nurture the student's perception of competence are those that are most likely to influence PA. The provision of attractive (and physically vigorous) content (what is taught as opposed to how it is taught) is essential, but it is not the critical factor from which the longer term consequence of engagement in PA will flow.

What makes this conclusion persuasive is the fact that the authors have led the reader through a sequence of logical steps, citing the supporting research with each new assertion. At the end, I want to let them speak for themselves.

This evidence suggests that teaching strategies utilized in physical education [can] influence the psychological mediators of youth physical activity, such as perceived competence, enjoyment, and intention to be active. From the review of the large-scale physical activity interventions, which utilized physical education curriculum programs, the effectiveness of physical education within this process seems dependent, not only on the content, but also on the pedagogy embedded in the curriculum. The interventions that were successful in increasing students' out-of-school physical activity were either embedded within pedagogical frames [that stressed motivation] or emphasized a pedagogy that fostered student enjoyment as a critical factor within the design of the curriculum (297).

To my ear, what Wallhead and Buckworth are saying is that unless appropriate teaching methods

foster enjoyment in PE classes, the motivation to continue to participate may be lost. Moreover, they offer a carefully organized body of evidence to support that conclusion. For problem-centered reviews such as this, that kind of end product is precisely what readers expect the author (s) to accomplish.

Your comments on this annotation will be welcome at [lflocke@hotmail.com](mailto:lflocke@hotmail.com).

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