Research on Mental Practice Techniques: Comment on Palmer’s Study

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In the June 1992 issue of *The Sport Psychologist*, an article by Palmer (1992) reported a comparison of the “Martin self-talk technique” to the “paper patch” as two mental practice techniques for helping young skaters improve performance of compulsory figures. The paper-patch technique was an off-ice practice strategy that required skaters, among other things, to trace a figure on a piece of paper while saying key words out loud. The results reported indicated that the paper-patch technique was an effective strategy, whereas the Martin self-talk technique was no more effective than a control group. However, the report is misleading. As described by Palmer in her published paper, her application of the Martin self-talk technique left out several important components. Moreover, the research as described is missing an important feature. Neither of the interventions had adequate procedural reliability assessments to monitor all of the components of the respective treatments.

Components of the Martin Self-Talk Technique

In my work with young figure skaters, I have recommended a practice strategy that includes the use of key words or self-talk to cue correct performance while skating a figure and an off-ice imagery rehearsal of a figure while saying the key words. The off-ice rehearsals (called walkouts) can be done while actually walking out the pattern of the figure or while in a stationary position, depending upon a skater’s preference (Martin, 1989a). While doing an off-ice rehearsal, skaters are encouraged to practice the following components: (a) time the rehearsal so that it takes approximately the same amount of time as actually skating the figure on the ice; (b) try to make the simulation as realistic as possible by visualizing that they are at a competition, that judges are standing nearby, and so on; and (c) actually “feel” the correct movements when they say the key words (Martin, 1992). This package has proven to be effective in terms of self-report data from skaters (Martin, 1989b) and in a multiple-baseline design across four subjects (Ming, 1992).

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The three components of off-ice rehearsal described above are consistent with widely accepted guidelines for imagery rehearsal (Orlick, 1986; Smith, 1987), namely, that the rehearsal last the same length of time as the actual performance, that the athlete try to imagine the actual competitive setting in which the skills are to be performed, and that the athlete try to "feel" the skills being performed. According to the published report of her study, Palmer encouraged subjects who experienced the paper patch technique to include these three components. But they were not described as a part of the procedure that she referred to as the "Martin self-talk technique" (Palmer, 1992).

When young athletes are encouraged to practice imagery rehearsal, it seems wise to offer them some vehicle for facilitating such practice. For figure skaters, the vehicle may be drawing out a figure on a piece of paper, standing in a stationary position on one foot and imagining that one is skating the figure, actually moving around on the floor in the pattern of a figure, or through some other vehicle. However, it is not likely to be the paper patch or the vehicle itself that determines the effectiveness of the package, but rather the imagery rehearsal components cited above.

Lack of Procedural Reliability Assessments

In behavioral research, investigators ensure the reliability of their dependent measures by requiring that interobserver reliability assessments meet certain standards (Martin & Pear, 1992). A less widely practiced, but equally important, requirement is to monitor and assess procedural reliability of components of the intervention to ensure treatment integrity (Billingsley, White, & Munson, 1980; Hazen, Johnstone, Martin, & Srikameswaran, 1990). Wollman (1986) has argued cogently that this practice should be extended to investigations of mental practice. That is, rather than simply asking athletes to follow some mental practice routine, the investigator should include procedures for checking both the quantity and quality of imagery, cognition, and affect that subjects experience during mental practice sessions. However, such procedural assessments were not reported by Palmer.

As a reader of Palmer's published paper, I conclude with confidence that some of her subjects followed a procedure that included walking out figures off the ice, that some of them followed a procedure that included drawing figures on a piece of paper, and that the ones who drew figures on a piece of paper showed more improvement. However, the procedure described as the Martin self-talk technique did not include all of the components that I recommend. Moreover, the differences observed may have been due to the vehicle for facilitating mental rehearsal (walkouts vs. paper patch), differences in instructions to the two groups, differences in the quality of simulations, differences in the extent to which the subjects attempted to internalize the imagery experience, differences in the key words and self-talk that were used, or to some other variable. These difficulties of interpretation underscore the need for including adequate procedural reliability assessments of treatment components to ensure treatment integrity, increase research replicability, and enhance interpretation of results.

References