It is generally accepted that sport programs are among the most popular activities for boys and girls. Recent evidence suggests that participation in organized sport programs has increased significantly (Ewing & Seefeldt, 2002), and, for this reason, youth sport programs represent a significant socialization opportunity. It is no surprise then, that there have been recent calls asking for closer scrutiny to be paid to these programs as well as for additional energy devoted to their improvement (Danish, 2000; Larson, 2000).

Although several authors have acknowledged that participation in sports may have the potential to enhance personal development (e.g., Danish, Petitpas, & Hale, 1992; Smoll & Smith, 2002), there is nothing about sport itself that is magical. Being on the field or the court does not contribute to positive youth development. It is the experience of sport that may facilitate this result. Researchers who have studied the effects of participation in sport have found both positive and negative effects (Mahoney & Stattin, 2000; Strean & Garcia Bengoechea, 2001). Mahoney and Stattin (2000) found that the structure and context of the activity was important in determining whether participation led to positive or negative outcomes. Strean and Garcia Bengoechea (2001) found that it was the individual’s experience of sport that determined whether participation was viewed as positive or negative. Therefore, it is probably not the mere participation in sport that enhances positive development but the individual’s experience in sport that may be the critical factor. For personal growth to be realized, youth sport programs must be developed with this goal in mind. We must emphasize the valuable skills and attitudes

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learned during sport participation and how youth can apply them to daily life. These skills and attitudes are called life skills (Danish & Donohue, 1995).

Life skills facilitate the development of the psychological skills that are required to deal with the demands and challenges of everyday life. They can be physical (e.g., taking the right posture), behavioral (e.g., communicating effectively), or cognitive (e.g., making effective decisions; Danish & Donohue, 1995; Danish & Nellen, 1997). Kleiber and his colleagues (Kleiber & Kirshnit, 1991; Kleiber & Roberts, 1981) observed that sport is a forum, a structured test, for learning the skills associated with character values such as responsibility, conformity, persistence, risk taking, courage and self-control. According to the World Health Organization (1999), teaching life skills is essential for the promotion of healthy child and adolescent development, and for preparing young people for their changing social circumstances.

First, life skills are similar to physical skills in the way they are learned, through demonstration and practice. Second, many of the skills learned in sport are transferable to other life domains. These skills include: the abilities to perform under pressure, solve problems, meet deadlines and/or challenges, set goals, communicate, handle both success and failure, work with a team and within a system, and receive feedback and benefit from it. Third, sport is a pervasive activity throughout our society.

Danish et al. (1992a, 1992b) developed the Going for the Goal (GOAL) program. GOAL is a 10-hour, 10-session program taught by carefully selected and well-trained high-school students to middle-school or junior high-school students. The program is designed to teach adolescents a sense of personal control and confidence about their future so that they can make better decisions and ultimately become better citizens. Danish (1997) reported an initial evaluation of GOAL that combined different samples that had received the program at different times. Among the major findings were: (a) participants learned the information the GOAL Program taught; (b) they were able to achieve the goals they set; (c) they found the process easier than they expected; and (d) they thought they had learned quite a bit about how to set goals. O’Hearn and Gatz (1999, 2002) conducted two studies using GOAL with mostly Hispanic students. In one study, participating students, compared to a wait-list control group, gained knowledge about the skills being taught and were able to attain the goals they set. In the second study, they also improved their problem-solving (means–end thinking) skills.

SUPER (Sports United to Promote Education and Recreation; Danish, Fazio, Nellen, & Owens, 2002) is a sport-based adaptation of the GOAL Program. Linking sports and life skill is a “natural.” SUPER is taught like sports clinics with participants involved in three sets of activities: 1) learning the physical skills related to a specific sport; 2) learning life skills related to sports in general; and 3) playing the sport. The procedures for implementing SUPER differ from GOAL. Skill modules are adapted to fit the specific sport and time. Most skills require 20 to 30 minutes to teach. There is less writing and activities are more action-oriented and related to sport.

There has been very little evaluation on the effectiveness of the SUPER program. In an unpublished study, Brunelle, Danish, and Fazio (2002) reported significant changes on several “character-related” measures following an abbreviated version of SUPER. The studies reported in this paper were designed to test the effectiveness of another variant of SUPER that examines participants': (a) knowledge about life skills; (b) self-assessment of their ability to use these skills; and (c) performance in sport skills. It was expected that athletes participating in the intervention program would demonstrate greater knowledge of selected life skills relative to athletes of the control group. Further, participants’ beliefs regarding their effective use would be higher than those of athletes in the control group due to the enhanced knowledge and opportunities to practice the life skills. Finally, it was expected that the utilization of life skills
METHOD

Participants

Two studies were conducted. All participants were Greek citizens and selected based on their age (10–12 years old), competitive experience in regional children’s championships (minimum 2 years) and participation in regional competitive leagues of the same level. Participants in the first study were 40 female volleyball players ($M = 11.47$ years old, $SD = .58$) practicing in two teams. The teams were randomly assigned into an experimental ($n = 19$) and a control ($n = 21$) group. In the second study, participants were 32 male soccer players, ($M = 11.7$ years old, $SD = .29$) practicing in two teams. Again, teams were randomly assigned into experimental ($n = 15$) and control ($n = 17$) groups.

Description of the Life Skills Program

The program was an abbreviated form of SUPER. The main differences were: (a) the sessions were shorter (15 minutes); (b) they took place during practice time; and (c) the program began with a sport skill tests (described below). Test results of the sport skills served as stimuli for participants to set goals. The components of the program were goal setting, problem solving, and positive thinking. Learning objectives were introduced in combination with sport practice. The intervention itself included discussion, group learning, and written worksheets.

In the beginning of the program, participants were evaluated on different sports skills related to the sport they played. In the first two sessions of the program, in addition to practice, athletes discussed their performance on the test with the group leader, discussed the importance of setting goals, and were asked to set reachable goals to achieve over the two months of practice. In session three, athletes learned about the characteristics of reachable goals. In sessions four and five, they learned how to set goals for themselves that were stated so that they were positive and specific. In sessions six and seven, a problem solving technique was introduced. Finally, in session eight, they learned how to make a plan (or goal ladder) to reach their goal. During the eight sessions, participants had as a reference point their own personal goal that they had to achieve in the particular sport skill. Having this goal in mind, they learned how to think positive, solve a problem, and make plans to achieve it.

Instruments

Sport Skills

Athletes’ performances on volleyball skills included the overhead pass test, the forearm pass test (Bartlett, Smith, Davis, & Peel, 1991), and the serve test (Strand & Wilson, 1993). In soccer, skills were evaluated on a specific soccer drill (D’ Ottavio, 1996).

Knowledge Test

The same knowledge test, based on the work of Hogan (2000), was used in both studies. The 10-item multiple-choice test evaluates knowledge of how to set goals, solve problems, and think positively. For example, “In order to make a dream come true: (a) I should dream more and more, (b) I must turn the dream into a goal, (c) I must sit and wait for something to happen, (d) I don’t have to do anything. If I want it, it will happen.” The instrument went through three validation stages. First, three individuals with expertise in psychometric research reviewed the
initial questions and corrections were made. Next, the questions were given to four 11-year-
old students in order to examine the clarity and comprehension and further corrections were
made. Finally, 68 elementary school students, 10 to 12 years old ($M = 11.3$, $SD = .34$), took
the test and an item analysis was conducted on the scores. The results showed that the item
difficulty indices were between .33 to .85 and the index of discrimination of each item was
above .25, which was deemed acceptable according to recommendations made by Thomas and
Nelson (1996). The score of each individual on the knowledge test was calculated by adding
the number of correct answers (0 to 10).

**Self-Beliefs for the Ability of Goal Setting, Problem Solving, and Positive Thinking**

A 15-item scale measuring self-beliefs for goal setting, problem solving, and positive think-
ing, based on the work of Roedel, Schraw, and Plake (1994), was administered in both studies.
Five items were used to assess individuals’ perceptions of goal setting ability (e.g., “I am very
good at setting goals for myself”); five items were used to assess individuals’ perceptions
of problem solving ability (e.g., “I am very good at solving the problems that I have”); five
items were used to assess individuals’ perceptions of positive thinking (e.g., “I am very good
at thinking positively for myself”). A 7-point scale was used (1 = strongly disagree to 7 =
strongly agree).

The instrument went through three validation stages. First, items were given to four 11 year-
old students to examine the clarity and comprehension. After the corrections, items were listed
and distributed to seven faculty and graduate students involved in sport psychology research.
These individuals were asked to classify the items into three categories: “goal setting,” “problem
solving,” and “positive thinking.” All items were classified correctly. Finally, the questionnaire
was subsequently distributed to 124 students, ages 11 to 12 ($M = 11.34$, $SD = .37$), and the
scores were factor analyzed. The analysis yielded three factors with eigenvalues greater than
one, explaining 58.62% of the variance. All factor loadings were above .64 (except one item
having a loading of .39). Cronbach’s alpha coefficients were: .82 for Goal Setting, .76 for
Problem Solving, and .84 for Positive Thinking. Based on these results a composite score was
computed for each of the three factors.

A social desirability scale, the M-C Form A (Reynolds, 1982), was also completed to
examine relationships of the questionnaire items with social desirability. The results revealed
that the correlations with social desirability were low.

**Procedure**

Prior to the intervention, all participants were asked to complete the questionnaires
and performance test. SUPER was then taught to the experimental groups at the begin-
ning of each training session for a period of eight weeks. The program was taught by
one of the experimenters with the coach present. Concurrently, the same training sched-
ule without the SUPER intervention was taught to the control groups. At the end of the
eight-week program, all participants completed the questionnaires and skill tests for a sec-
ond time. Data from both teams (Experimental and Control) were collected by the same
experimenter.

**RESULTS**

Means and standard deviations of all variables presented in the following studies are reported
in Table 1.
Table 1
Descriptive Statistics for Study 1 and Study 2

<table>
<thead>
<tr>
<th>Variables</th>
<th>Study 1</th>
<th></th>
<th>Study 2</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
<td>Post</td>
</tr>
<tr>
<td>Knowledge test</td>
<td>5.89</td>
<td>1.59</td>
<td>9.15</td>
<td>.83</td>
</tr>
<tr>
<td>Self-beliefs—Goal setting</td>
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<td>.75</td>
<td>5.70</td>
<td>.57</td>
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<tr>
<td>Self-beliefs—Problem solving</td>
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<td>.73</td>
<td>5.80</td>
<td>.75</td>
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<tr>
<td>Self-beliefs—Positive thinking</td>
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<td>.94</td>
<td>5.36</td>
<td>.90</td>
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<tr>
<td>Volleyball skill tests—Overhead pass</td>
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<td>5.63</td>
<td>38.17</td>
<td>5.41</td>
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<tr>
<td>Volleyball skill tests—Forearm pass</td>
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<td>6.51</td>
<td>40.76</td>
<td>5.43</td>
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<tr>
<td>Volleyball skill tests—Serve</td>
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<td>6.74</td>
<td>22.23</td>
<td>4.13</td>
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<tr>
<td>Soccer skill test</td>
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</tbody>
</table>

Study 1

Knowledge Test
A repeated-measures ANOVA with knowledge scores as the dependent variable, time of measurement as the within-subjects factor, and group as the between-subjects factor, revealed a significant Group $\times$ Time interaction, $F(1, 38) = 37.17, p < .001, \eta^2 = .49$. Post hoc analysis revealed that the two groups were not significantly different in their knowledge about life skills before the program, $t(38) = .08, p = .93$. By contrast, after the program, the Knowledge score of the Experimental group was significantly higher than that of the Control group, $t(38) = 8.55, p < .01, ES = 2.81$.

Self-Beliefs
A repeated-measures MANOVA with Goal Setting, Problem Solving, and Positive Thinking, as the dependent variables, time of measurement as the within-subjects factor and group as the between-subjects factor revealed a significant multivariate Group $\times$ Time interaction, $F(3, 34) = 10.33, p < .01, \eta^2 = .48$. Correlations between the dependent variables did not exceed .70, suggesting that multicollinearity was not an issue. Univariate tests showed significant interaction effects for Goal Setting, $F(1, 36) = 14.83, p < .01, \eta^2 = .29$; Problem Solving, $F(1, 36) = 8.98, p < .01, \eta^2 = .20$; or Positive Thinking, $F(1, 36) = 20.65, p < .01, \eta^2 = .37$. Post hoc tests revealed that there were no significant differences before the program, in athletes’ self-beliefs, regarding their effective use of Goal Setting, $t(38) = -1.61, p = .12$; Problem Solving, $t(38) = .47, p = .08$; and Positive Thinking, $t(38) = .55, p = .63$. In contrast, there were significant differences between the groups after the program for all dependent variables. The Experimental group had higher scores in Goal Setting, $t(38) = 2.37, p < .05, ES = 1.16$; Problem Solving, $t(38) = 2.07, p < .05, ES = 1.08$; and Positive Thinking, $t(38) = 2.62, p < .05, ES = 1.13$, than the Control group.
Performance Test

A repeated-measures MANOVA, with the three volleyball skill tests as the dependent variables, Time of Measurement as the within-subjects factor and Group as the between-subjects factor, revealed a significant multivariate Group × Time interaction, \( F(3, 32) = 5.40, p < .01, \eta^2 = .34 \). Correlations between the dependent variables did not exceed .70. Univariate tests indicated a significant interaction effect for the Forearm Volleyball test, \( F(1, 34) = 12.59, p < .01, \eta^2 = .27 \), while the interaction effect approached significance for the Overhead Pass, \( F(1, 34) = 3.29, p = .07, \eta^2 = .09 \), and the Serve test, \( F(1, 34) = 3.75, p = .06, \eta^2 = .10 \). To further investigate these interactions, the two groups (Control and Experimental) were compared before and after the life skills program, using independent samples t-test. The analyses revealed that there was no significant difference before the program, in the Forearm Volleyball test, \( t(38) = 1.58, p = .12 \), while there were significant differences in the Overhead Pass test, \( t(38) = 2.32, p < .05, ES = .74 \); and in the Serve test, \( t(38) = 2.48, p < .05, ES = .83 \), with the Experimental group scoring higher than the Control. The Experimental group had a significantly higher score after the program in the Forearm Volleyball test, \( t(38) = 2.37, p < .01, ES = 1.44 \); in the Overhead Pass test, \( t(38) = 2.07, p < .01, ES = 3.98 \); and in the Serve test, \( t(38) = 2.62, p < .01, ES = 1.96 \), than the Control group.

Study 2

Knowledge Test

A repeated-measures ANOVA showed a significant Group × Time interaction for the Knowledge test, \( F(1, 30) = 26.37, p < .01, \eta^2 = .47 \). There was no significant difference between the two groups before the program in their knowledge about life skills, \( t(30) = -.27, p = .78 \). By contrast, the Knowledge score was significantly higher in the Experimental than the Control group after the program, \( t(30) = 5.89, p < .001, ES = 2.61 \).

Self-Beliefs

A repeated-measures MANOVA showed a significant Group × Time interaction for Self-Beliefs, \( F(3, 28) = 9.58, p < .01, \eta^2 = .51 \). The correlations between the depended variables did not exceed .70. Univariate tests showed significant Group × Time interactions for Goal Setting, \( F(1, 30) = 28.26, p < .01, \eta^2 = .49 \); Problem Solving, \( F(1, 30) = 6.99, p < .05, \eta^2 = .19 \); and Positive Thinking, \( F(1, 30) = 10.12, p < .01, \eta^2 = .25 \). Post hoc analyses showed that there were no significant differences before the program in athletes self-beliefs regarding their effective use of Goal Setting, \( t(30) = -1.61, p = .11 \); Problem Solving, \( t(30) = 1.85, p = .07 \); and Positive Thinking, \( t(30) = 1.83, p = .08 \). In contrast, there were significant differences between the two groups after the program for all dependent variables. The Experimental group had significantly higher scores in Goal Setting, \( t(30) = 6.17, p < .01, ES = 2.25 \); Problem Solving, \( t(30) = 6.96, p < .01, ES = 5.41 \); and Positive Thinking, \( t(30) = 5.75, p < .01, ES = 4.11 \), than the Control group.

Performance Test

A repeated-measures ANOVA showed a significant Group × Time interaction for the soccer skill test, \( F(1, 30) = 16.18, p < .01, \eta^2 = .35 \). Post hoc analyses showed that there was no significant difference between the two groups before the program in the soccer Performance test, \( t(30) = -1.85, p = .07 \). By contrast, the performance score of the Experimental group after the program was significantly higher than that of the Control group, \( t(30) = 3.14, p < .001, ES = 1.17 \).
DISCUSSION

These two studies examined the effectiveness of a life skills program for youth who participated in sport clubs. Considering that the intervention was only eight 15-minute sessions, the results are very encouraging and in agreement with the findings of the applications of the GOAL program in school settings (Danish & Nellen, 1997) and with respective results regarding the application of SUPER in sport settings (Danish et al., 2002).

Previous research on the application of GOAL reported significant changes on participants’ knowledge about life skills and perceptions of their ability to achieve the goals they have set (Danish & Nellen, 1997). Brunelle et al. (2002) have also reported significant changes on social responsibility, emotional intelligence, goal knowledge and social interest, as a result of implementing an abbreviated version of SUPER. The present studies replicated and extended these results to include athletes’ performances on particular sport skills. Young athletes who participated in the program demonstrated greater knowledge about life skills compared to athletes of the Control group. Also, athletes in the Experimental group indicated higher Self-Beliefs for personal Goal Setting, Problem Solving, and Positive Thinking than did athletes in the Control group. In addition, athletes in the Experimental groups performed better in volleyball and soccer skills than athletes in the Control group.

It is important that life skills training resulted in an improvement in sport skills relative to the Control group. Studies that have applied SUPER (Brunelle et al., 2002; Danish & Nellen, 1997) have not focused in this potential benefit of life skills training. The results of the present studies denote that when life skills training is appropriately embedded in sport practices, the life skills learned are not at the expense of learning sport skills. On the contrary, young athletes can improve their performance by applying the life skills they are taught.

An important limitation of this study is that part of the outcome data was athlete’s self-report measures. Future studies may, in addition, employ behavioral measures of athletes’ use of life skills. Further, the results could be more reliable if the program was introduced to the “control” group after its initial implementation to the “experimental” group. Time and entry restrictions did not allow for this kind of design. Finally, another potential limitation is the involvement of the researcher in the experimental procedures, which may have introduced a subtle bias. Nevertheless, this involvement resembles a real-life situation since an outsider would normally provide the program. Moreover, the implementation of the program was based on standardized written procedures, which were strictly followed.

In conclusion, the present study supports the effectiveness of a life-skills program that integrates sport and life-skills training. Athletes who participate in such a program can improve their sports skills, while at the same time, the inclusion of life-skills training into sport practice may serve as an effective model for learning life-skills. Moreover, the life-skills program equips young athletes with knowledge and skills that are necessary for successfully coping with the complex realities of life. Therefore, youth with improved life skills and enhanced goal setting, problem solving, and positive-thinking abilities have an increased chance of becoming better students, better athletes, and more concerned and productive community members.

REFERENCES


