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SPORT PSYCHOLOGY WITH HIGH SCHOOL STUDENT- ATHLETES:
UNIFORM AND THE GAME PLAN FORMAT

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ABSTRACT

High school student-athletes (N=138) participated in a 12-week Psychological Skills Training (PST) intervention based in the Transtheoretical Model. Results showed the intervention group significantly increased their use of relaxation, imagery, goal setting, and self-talk from pretest to posttest. Pearson chi square showed more intervention participants in the Action Stage at posttest than expected. *T*-test results revealed the intervention group reported greater potential benefits of participating in PST at posttest, but responses were not significantly different from the control group. The intervention group's self-efficacy scores did not significantly change from pretest to posttest and were not different from the control group.



SPORT PSYCHOLOGY WITH
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UNIFORM & THE GAME PLAN FORMAT

The positive relationship between sport psychology interventions and optimal performance is well established (e.g., Gucciardi, Gordon, & Dimmock, 2009; Orlick, 2008). Sport psychology interventions have also been connected to an improvement in psychosocial variables (e.g., Danish, Forneris, Hodge, & Heke, 2004). Given these positive outcomes, a population that could benefit greatly from sport psychology interventions comprises high school student-athletes. High school sport competition is steadily increasing with the latest participation data showing more than 7.6 million adolescents competing in high school sport (National Federation of State High School Associations [NFHS], 2011). While many Sport Psychology Consultants (SPCs) and high school coaches recognize the value of sport psychology for high school student-athletes, there are few programs designed specifically for this age group. This is especially concerning when one considers that sport psychology skills (e.g., goal setting, positive thinking, etc.) are not just important for sport, but can and should be used in all aspects of life (Danish, Forneris, & Wallace, 2005; Gould, Collins, Lauer, & Chung, 2007).



With the transformative nature of teaching life skills in mind, Danish and his colleagues created Going for the Goal (GOAL; Danish, 2002a) and Sport United to Promote Education and Recreation (SUPER; Danish, 2002b). Both programs were designed to teach life skills to junior high and high school students by using sport as a medium to engage the participants. GOAL's curriculum emphasizes teaching about goals, the goal setting process, and strategies to help adolescents commit to their goals and overcome barriers that may prevent their goals from becoming a reality (Danish & Nellen, 1997). GOAL is a nationally recognized program that has received extensive external funding (Danish & Nellen). Because of its success, it became the precursor to SUPER. The SUPER program broadened GOAL's content to also include positive self-talk, relaxation, emotional control, and confidence (Danish et al., 2004). This information is packaged in 18 modules taught like sports clinics (Danish et al., 2005). Evaluations of GOAL and SUPER report that participants learned the material, enjoyed the program, and successfully transferred the life skills to other areas of their lives (Danish & Nellen, 1997). Nevertheless, Danish (2002c) argued that there is a dire need for additional sport-based interventions to teach adolescents life skills in a deliberate manner.

Weissman (2005) responded by developing a yearlong sport psychology program specifically for high school student-athletes. This was a collaborative process that included relevant stakeholders such as the athletic director, parents, coaches, student-athletes and the superintendent of schools. One of his first tasks was to introduce these groups to the benefits of the sport psychology program. This served to garner support for the program and helped to ensure its success. Weissman worked with one team per season ($N = 3$) and emphasized how sport psychology could help improve the student-athletes' performance in the affective, social, academic, and cognitive domains. Though no formal data collection occurred during the program, Weissman noted that frequent, brief sessions (i.e., 10 minutes) seemed to be most effective at teaching the sport psychology skills.



Gilbert, Gilbert, Loney, Wahl, and Michel (2006) also wrote about a sport psychology intervention for high school athletes. They presented an overview of a two-year program that evolved extensively from year one to year two. The final year used UNIFORM (Johnson & Gilbert, 2004) as a framework, which represented the seven sport psychology skills or concepts that were taught (i.e., U = Use goal setting, N = No mistakes, only learning opportunities, I = Imagery, F = Fully focused, O = Overtly positive, R = Relaxation and stress control, M = Make routines). The UNIFORM program was delivered through a unique system called the Game Plan Format; this format teaches the sport psychology material using meaningful sport terms. No formal data collection occurred as this program piloted the intervention activities, but feedback supported that the student-athletes enjoyed the program and were learning how to use the skills on their own. Information supplied by the teacher involved confirmed these positive outcomes.

The UNIFORM program was then successfully used with two other high school sport programs: football and baseball (Gilbert, Gilbert, Lewis, Loney, Horn, Glynn, & McCormick, 2008). The Test of Performance Strategies (TOPS; Thomas, Murphy, & Hardy, 1999) instrument was used to document the athletes' use of the sport psychology skills and concepts pre and postintervention. Results showed statistically significant differences in a number of the UNIFORM skills taught. More specifically, the use of goal setting, imagery, attentional control (Fully focused), self-talk (Overtly positive), and relaxation increased significantly in the practice setting. With respect to competition, imagery, self-talk, and emotional control (Relaxation and stress control) increased significantly whereas a significant decrease in negative thinking (Overtly positive) was found (Gilbert et al.).



Since those interventions, UNIFORM and the Game Plan Format have undergone significant practical and theoretical revisions. They are connected, but for reader comprehension, the practical revisions regarding the program's content and how UNIFORM is taught are presented first.

The UNIFORM intervention was expanded to a 12-week program. The first two weeks (i.e., Week #1 – What is Mental Skills Training [MST]?; Week #2 – What is UNIFORM?) introduce the student-athletes to sport psychology and explore some of the common myths and misconceptions. For example, a myth covered is that sport psychology is only for elite athletes. The student-athletes are taught that sport psychology is for everyone and they are provided with several examples of professionals, including athletes, who use sport psychology skills. A misconception that is discussed is that sport psychology can be used as a quick fix when an athlete has a performance issue. Instead, the UNIFORM program emphasizes that sport psychology is not a 'Band-Aid' and that frequent and consistent use of the skills can help to lessen performance issues. The introductory weeks help the student-athletes understand why using sport psychology skills is important and helps prepare them for the program.

Once the introductory weeks are complete, the program gets into the specific UNIFORM skills and concepts. However, two review weeks are also included. The first review week occurs in Week 6, after the two introductory weeks (presented above), Use goal setting (Week 3), No mistakes, only learning opportunities (Week 4), and Imagery (Week 5). The second review week occurs in Week 11 after Fully focused (Week 7), Overtly positive (Week 8), Relaxation and stress control (Week 9), and Make routines (Week 10). The review weeks reinforce the previous material and serve as a comprehension check for student-athletes. The program finishes with a week devoted to using sport psychology across domains (Week 12 – UNIFORM across domains). While the use of sport psychology skills outside of the sport realm is emphasized throughout the program, the last week serves as a way to reiterate this message and encourage the student-athletes to use their newly learned skills in all aspects of their lives.

The way that the UNIFORM program is taught, the Game Plan Format, now consists of a more extensive teaching system (Gilbert, 2011). The student-athletes are first divided into *Teams*. Teams sit together in class, do activities together, and hold each other accountable for participating in the program and completing assignments. Lesson A (the first lesson each week)

starts with a *Warm-up*, where the student-athletes are introduced to the sport psychology skill. This is followed by *Conditioning*, where the student-athletes engage in paper and pencil in-class assignments to work with the newly learned information. Next, they are presented with a coach or athlete testimonial called *Proof it Works*. This is followed by *Films*, where they are shown a movie clip, and then answer specific questions about the characters' use of the sport psychology skills as well as their own past, current, and future use of the specific skill. A *Practice* (i.e., homework) sheet is then assigned. At the start of Lesson B (the second lesson of the week), the *Films* and *Practice* sheets are reviewed during *Chalk Talk*, which comprises an interactive mini-lecture with an accompanying handout. The next two components give the student-athletes an opportunity to compete. First, they do so mentally by completing the *Game* (i.e., a 10-point quiz), and then physically by participating in the *Drill* (i.e., an activity where the student-athletes physically apply the sport psychology skill). Finally, the student-athletes complete a journal entry in their *Playbooks*. The final component is Statistics, which is used to record the student-athletes' scores as individuals and as *Teams* for the *Games*.

A key tenet of the Psychological UNIFORM is that it is based in the Transtheoretical Model (TTM; Prochaska & Marcus, 1994). The main constructs of the TTM include the five stages of change: precontemplation, contemplation, preparation, action, and maintenance (Velicer et al., 2000). With respect to applied sport psychology, the stages represent athletes' behaviors and attitudes relating to their readiness to adopt sport psychology skills or engage in a program (Leffingwell et al., 2001). Therefore, athletes with limited exposure to sport psychology could be in one of the earlier stages of change. As the athletes learn psychological skills, have opportunities to practice them, and develop competence, progress into one of the later stages of change is likely.



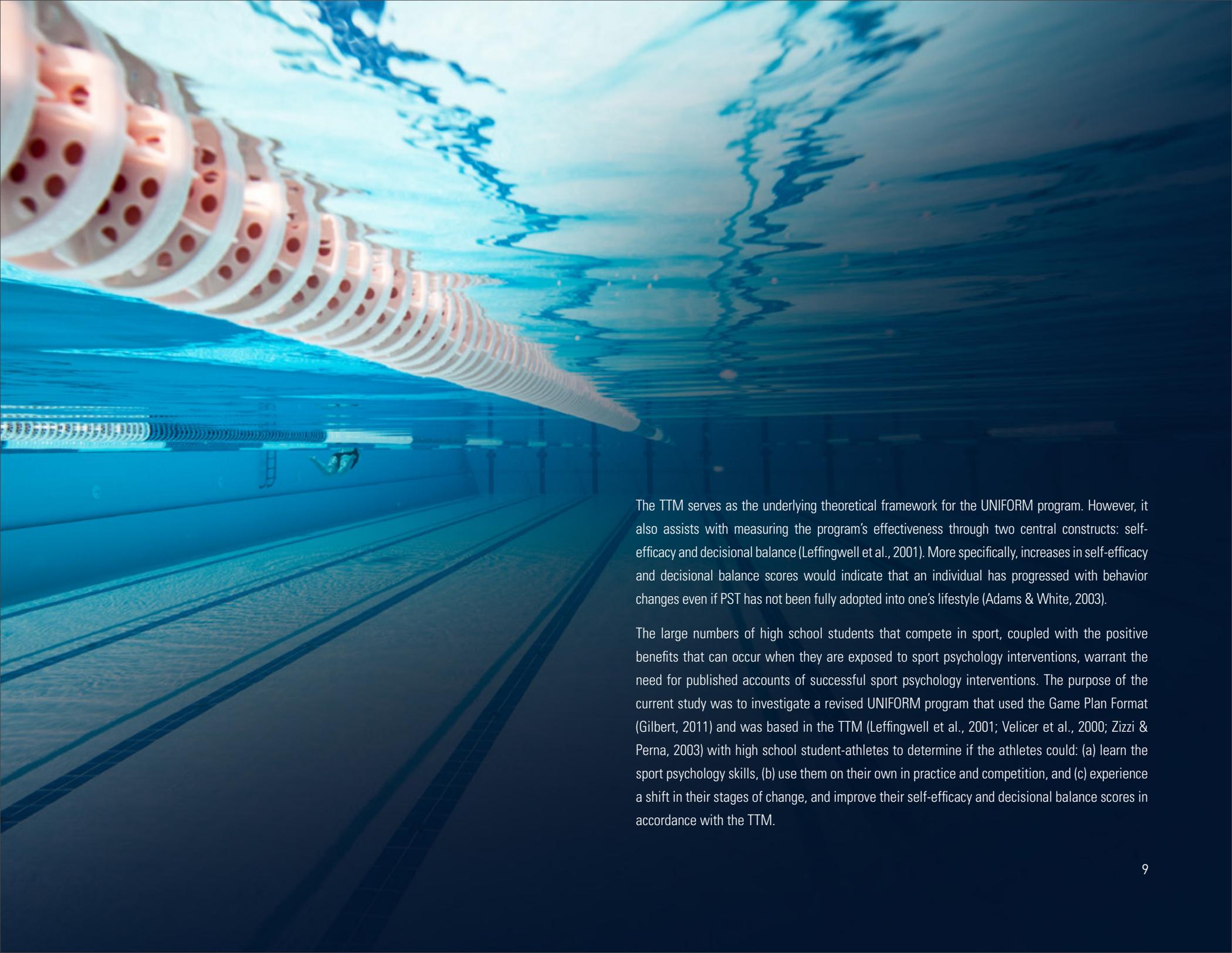


The TTM uses 10 processes of change (five cognitive and five behavioral) to help individuals progress through the stages of change (Adams & White, 2003). The cognitively based processes of change should be emphasized in the early stages of change when an individual is in the precontemplation or contemplation stage (Zizzi & Perna, 2003). They include consciousness raising, dramatic relief, environmental reevaluation, social liberation, and self-reevaluation (Velicer et al., 2000). In consciousness raising, emphasis is put on raising awareness regarding the benefits (or pros) of adopting the use of psychological skills. The first two introductory weeks of the UNIFORM program assist with this process of change. In the dramatic relief stage, the goal is to increase one's emotional experiences regarding the potential behavior change (Velicer et al., 2000). This is achieved through the *Films* segment of the Game Plan Format, as well as through *Proof it Works*, where the student-athletes experience movie characters and real athletes using the psychological skills. For the environmental reevaluation process, student-athletes reflect on the ways in which adopting sport psychology skills can impact their social context. When responding to the *Films* questions, the student-athletes are encouraged to think about the movie characters' use of the sport psychology skills and make comparisons to their own use of the skills and how this has impacted their performance. This reflection may lead to the awareness that student-athletes involved in the UNIFORM program can act as positive role models for others. Social liberation can be facilitated by increasing the social opportunities for the use of a PST program. The use of *Teams* helps increase the social opportunities for using sport psychology by allowing the student-athletes to hold each other accountable both inside and outside of the UNIFORM program. The final cognitive process of change is self-reevaluation. When participating in a sport psychology program, student-athletes will conduct cognitive and affective assessments of their self-image, and make comparisons to others whom they admire. Presenting examples of positive role models who use sport psychology skills, as is done in *Proof it Works*, can help facilitate the self-reevaluation process.



The behavioral processes of change are emphasized in the latter stages of change (i.e., action and maintenance) (Zizzi & Perna, 2003), and include stimulus control, helping relationships, counter conditioning, reinforcement management, and self-liberation (Velicer et al., 2000). Though used throughout the Game Plan Format (Gilbert, 2011), the smaller *Teams* of four to six athletes can make an important impact with stimulus control and helping relationships. For example, stimulus control includes prompts for PST such that the student-athletes are faced with reminders about using these skills on a regular basis. These reminders can stem from interactions with teammates. Furthermore, helping relationships provide a type of social support for using PST; instructors encouraging the *Team* members to hold each other accountable for attending the sport psychology intervention and completing its assignments can facilitate helping relationships. These helping relationships can also assist with counter conditioning which occurs when student-athletes replace behaviors that can debilitate performance (e.g., competitive anxiety) with the use of positive sport psychology skills (e.g., relaxation and stress control strategies). Reinforcement management is emphasized when student-athletes are rewarded for their use of sport psychology skills. The rewards can be as simple as self-directed praise or recognition from coaches. Finally, self-liberation involves one's belief in adopting sport psychology skills and then committing to this process. Self-liberation can be facilitated by providing options (Velicer et al., 2000). For example, offering options when completing worksheets (e.g., *Conditioning* or *Playbook*) or activities (i.e., *Drills*) allows the student-athletes to take ownership of their learning. This may enhance their intrinsic motivation to adopt sport psychology skills.

In summary, the activities used in the UNIFORM program (e.g., *Conditioning*, *Films*, *Practice*, etc.) were based on the ten processes of change (Velicer et al., 2000). Furthermore, each week's Lesson A related more to the cognitive processes whereas Lesson B emphasized the behavioral processes. This schedule was consistent with the assumption that student-athlete participants are in the early stages of change regarding the adoption of sport psychology skills.



The TTM serves as the underlying theoretical framework for the UNIFORM program. However, it also assists with measuring the program's effectiveness through two central constructs: self-efficacy and decisional balance (Leffingwell et al., 2001). More specifically, increases in self-efficacy and decisional balance scores would indicate that an individual has progressed with behavior changes even if PST has not been fully adopted into one's lifestyle (Adams & White, 2003).

The large numbers of high school students that compete in sport, coupled with the positive benefits that can occur when they are exposed to sport psychology interventions, warrant the need for published accounts of successful sport psychology interventions. The purpose of the current study was to investigate a revised UNIFORM program that used the Game Plan Format (Gilbert, 2011) and was based in the TTM (Leffingwell et al., 2001; Velicer et al., 2000; Zizzi & Perna, 2003) with high school student-athletes to determine if the athletes could: (a) learn the sport psychology skills, (b) use them on their own in practice and competition, and (c) experience a shift in their stages of change, and improve their self-efficacy and decisional balance scores in accordance with the TTM.



METHODS

PARTICIPANTS

Participants included 138 student-athletes (male = 113; female = 25) from a high school in Central California. Their ages ranged from 14 to 18 years old ($M = 15.55$, $SD = 0.90$) where 72.5 percent of the participants were 15 ($n = 59$) or 16 years old ($n = 41$). The student-athletes represented diverse races and ethnicities; 31.9 percent African-American/Black ($n = 44$), 29 percent Hispanic/Latino ($n = 40$), 18.1 percent Caucasian/White ($n = 25$), 5.1 percent Asian ($n = 7$), and 12.3 percent other ($n = 17$). Consistent with the school district's policies, informed consent forms were disseminated in English and Spanish. Informed consent from the student-athletes' parents or guardians and student-athlete informed assent were obtained prior to the start of the program.

Four different teams were involved with the study. The intervention group comprised the girls' basketball ($n = 25$), boys' basketball ($n = 30$) and boys' baseball ($n = 31$) teams. These sports compete in the winter and spring seasons. Because of this, and the timing of the study (i.e., the program started at the beginning of fall 2010), the athletes' final team placement (i.e., varsity or junior varsity) had not yet been determined. However, the control group comprised the junior varsity football team ($n = 52$). This team had already been selected as their competitive season is in the fall. The majority of participants ($n = 131$, 94.9%) indicated they had never been involved with a sport psychology program *and* had never consulted with a sport psychologist before participating in this study.

PROCEDURES

The high school was chosen for several reasons. First, an assistant coach contacted the primary researcher in spring 2010 to inquire about sport psychology services for his athletes. This contact led to several meetings with one of the varsity coaches. After explaining the sport psychology UNIFORM program to him, he was very eager to have this program taught to as many student-athletes on campus as possible and as quickly as possible; planning for a wide-scale program needed to occur, but it was decided that a pilot program would be done with the varsity football team in spring 2010. The primary researcher then met with the Athletic Director (AD) to discuss feasibility and the willingness of other coaches to participate in the sport psychology UNIFORM program. A meeting was arranged in late spring 2010. At this time, the primary researcher presented the UNIFORM program to the coaches to solicit their interest. Because of the length of the program (i.e., 12 weeks plus two weeks of pre and postprogram data collection), the coaches' desires to offer as much of the program in the off-season as possible, and the availability of graduate student instructors, the fall 2010 semester was selected as most appropriate. A final meeting was held with the AD to finalize the chosen teams and the UNIFORM teaching schedule. Thus, similar to Weismann (2005), many of the key stakeholders participated in early planning of the program.

The UNIFORM program was taught via the Game Plan Format (Gilbert, 2011). Three graduate students, who were earning their Master of Arts in Kinesiology (Sport Psychology Option), taught the program. During their first graduate year, the students joined the UNIFORM team and assisted with the creation of the Game Plan Format documents (e.g., *Warm-up*, *Conditioning*, etc.). Prior to the start of the study, this group met weekly for two hours to help plan the curriculum and review the newly developed documents; these weekly meetings continued during the study. The primary researcher directly supervised the graduate students in the field as well as indirectly via field notes, group debriefing sessions, and conversations with the coaches and AD.





The main data collection period occurred one week prior to, and one week following the 12-week UNIFORM program. The pretest comprised six surveys. To control for boredom and fatigue, the surveys were distributed in random order. However, a script was used when administering each survey. This allowed for a structured data collection protocol and provided an opportunity to check the student-athletes' comprehension. The first survey solicited demographic information (e.g., age, gender, ethnicity, and previous exposure to PST). The other five surveys were specific to psychological skills (Test of Performance Strategies and The Ottawa Mental Skills Assessment Tool) and the TTM (Stages of Change – Psychological Skills Training Questionnaire [SOC-PST], Decisional Balance-PST, and Self-efficacy-PST). The posttest comprised the same five surveys and also included the Evaluation of the Intervention Survey. Additionally, student-athletes' learning of the UNIFORM skills was measured via the use of the Games (i.e., weekly quizzes) during the 12-week intervention.

INSTRUMENTS

The Test of Performance Strategies (TOPS; Thomas et al., 1999) is a 64-item self-report instrument that assesses the frequency with which psychological skills are used in practice (32 items) and competition (32 items). The eight, four-item practice subscales comprise activation, relaxation, imagery, goal setting, self-talk, automaticity, emotional control, and attentional control. The competition portion of the TOPS is the same, but with one exception: in the competition section, the attentional control subscale is replaced by a negative thinking subscale. Further, the automaticity subscale was eliminated for the present study because it was not taught as part of the UNIFORM intervention. This change resulted in a total of 56-items (i.e., seven, four-item subscales in each of the practice and competition sections) where student-athletes rated the extent to which they applied mental skills on a five-point Likert scale (i.e., 1 = *never* to 5 = *always*). Thomas et al. found the reliabilities of the subscales ranged from 0.66 to 0.81. With one exception (the practice activation subscale at .56), the reliability coefficients for the present study also ranged from adequate to good. Because the practice activation subscale was unreliable, its inferential analysis was not reported.



The TOPS (Thomas et al., 1999) measures the use of most sport psychology skills and concepts taught via the UNIFORM program. However, two UNIFORM components not assessed by the TOPS include No mistakes, only learning opportunities, and Make routines where adopting a continuous learning mindset, and creating and using routines consistently are respectively emphasized. As such, these two components were measured in other ways.

The Ottawa Mental Skills Assessment Tool (OMSAT-3; Durand-Bush, Salmela, & Green-Demers, 2001) is a 48-item instrument used to measure a variety of athletes' mental skills, including competition plans. Durand-Bush et al. noted that competition planning "has seldom been addressed in other assessment tools in the literature" (p. 4). Because competition plans can be likened to the creation and use of routines, the competition plans subscale from the OMSAT-3 was used in the present study. An example item from the competition planning subscale included, "I plan a regular set of things to do before a competition." Student-athletes responded via a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). The OMSAT-3 was found to

hold acceptable to good internal consistency for its 12 scales ($\alpha = .72$ to $.88$), and the internal consistency was good for the competition plans scale (.82) for the present study.

The Evaluation of the Intervention Survey instrument included five open-ended questions developed for the purpose of the study. It was administered to obtain information about the UNIFORM group's overall impressions of the intervention, what they learned from taking part in the intervention, their usage of the skills on their own, and specifically their use of No mistakes, only learning opportunities, and Make routines.

Finally, the intervention student-athletes also completed weekly quizzes (i.e., *Games*) on the skills and concepts taught in the UNIFORM program. Thus, the weekly quizzes tested their skill knowledge. Each 10-question quiz comprised true/false, multiple choice and/or short answer items. An example of an item on the Make routines *Game* included "It is important to include both physical and mental components in your routine." The correct response is True.



Three instruments were used to investigate whether the student-athletes' could experience a shift in their stages of change, and improve their decisional balance and self-efficacy in accordance with the TTM. First, the Stages of Change – Psychological Skills Training Questionnaire (SOC-PST; Leffingwell et al., 2001) measures stages of change relative to one's use of PST for performance enhancement. The four stages of change include: precontemplation, contemplation, action, and maintenance. The questionnaire consists of 12 items and uses a five-point scale ranging from 1 (*strongly disagree*) to 5 (*strongly agree*). According to Leffingwell et al., the SOC-PST has been found to demonstrate internal consistency (α 's from .51 to .85), relative freedom from social desirability bias, and a valid factor structure using both exploratory and confirmatory analyses. The present study's reliabilities by stage of change were: precontemplation, .43, contemplation, .72, action, .73, and maintenance, .39. The reliability of the precontemplation and maintenance scales is considered to be unacceptable for this sample. Because neither scale's reliability improves with the deletion of items, the precontemplation and maintenance inferential statistics were not reported or discussed.

The Decisional Balance – Psychological Skills Training Questionnaire (DB-PST; Leffingwell et al., 2001) consists of 20 items about the potential benefits (pros; $n = 11$) and detriments (cons; $n = 9$) of participating in a PST program. Respondents rated how important each item was in deciding whether or not to engage in a PST program (1 = *not at all important* to 5 = *extremely important*). The internal reliabilities for the present study were robust for DB-pros, $\alpha = .90$ and DB-cons, $\alpha = .86$.

The Self-Efficacy – Psychological Skills Training Questionnaire (Leffingwell et al., 2001) contains five items that asks the athletes to indicate how confident they are in their ability to work on and improve their psychological skills during adverse conditions. Respondents rated their confidence on a five-point scale (1 = *not at all confident* to 5 = *very confident*). The SE-PST was found to demonstrate acceptable internal reliability ($\alpha = .75$).



RESULTS

Results are presented according to the three research questions: Can the student-athletes (a) learn the sport psychology skills? (b) use them on their own in practice and competition? and (c) experience a shift in their stages of change and improve their self-efficacy and decisional balance scores in accordance with the TTM?

With respect to learning the UNIFORM skills, the student-athletes' weekly quiz scores ranged from 8.67 to 10, 7.86 to 9.83, and 9.05 to 10 over the course of the 12-week program for the boys' baseball, boys' basketball, and girls' basketball teams respectively. These scores indicate that the student-athletes had at least a "C" level of understanding of the material on the *Games*. These results were supported by the Evaluation of the Intervention Survey administered at the posttest. The UNIFORM group comprised 86 student-athletes, however 68 responded to this instrument. A majority of respondents ($n = 66$; 97%) indicated they had learned something from the UNIFORM program. A female basketball player stated, "I learned the SMART rules, how to set goals, to use imagery, stay focused, and think positive (sic)." A male basketball player commented that he learned "how to relax, visualize my success and how to be positive."

A related question on the Evaluation of the Intervention Survey asked student-athletes if they enjoyed the UNIFORM program. Sixty-two student-athletes responded they enjoyed the program. A female basketball student-athlete noted, "Yes, I enjoyed UNIFORM because I felt that I was bettering myself with each session. The activities were good examples of each aspect." Other student-athletes were more specific about the aspects of UNIFORM they enjoyed the most and how the program helped them to learn the sport psychology skills. "I really enjoyed the Drills and movie clips of UNIFORM," stated a male basketball player. A baseball student-athlete echoed this comment and further stated that he enjoyed learning about "how professional athletes use UNIFORM." Another baseball player identified how exposure to models of professional and elite athletes via film clips was a critical component of the UNIFORM program by stating, "I think watching the movies and playing the games was the most enjoyable because it showed mental skills at work, which made them easier to understand."



While results show the student-athletes learned PST taught through UNIFORM and enjoyed their exposure to the program, it is equally important to show the participants applied the PST on their own in practice and competition. To do this, first a preliminary analysis of differences between groups at pretest was conducted. Next, within and between group analyses were conducted to examine the study's main hypotheses. Independent sample t-tests with omega squared (ω^2) effect size were conducted to examine differences between the control and UNIFORM groups' scores. Dependent sample t-tests with Cohen's *d* effect size were conducted to examine within group changes in variables.

An assumption of random sampling methods is that there would be no significant differences between the control and experimental groups on the study's variables at pretest. Analysis of participants' frequency of use of psychological skills during practice and competition (as measured by the TOPS) showed significant differences between the control and UNIFORM groups on four variables – imagery and goal setting in practice and competition. The control group reported using imagery at practice ($M = 3.66$, $SD = 0.85$) more than the UNIFORM group ($M = 3.10$, $SD = 0.92$), $t(134) = 3.52$, $p < .00$, $\omega^2 = 0.02$. The control group used goal setting at practice ($M = 3.45$, $SD = 0.84$) more than the UNIFORM group ($M = 3.04$, $SD = 0.92$), $t(134) = 2.55$, $p = .01$, $\omega^2 = 0.04$. The control group reported using imagery at competition ($M = 3.64$, $SD = 0.88$) more than the UNIFORM group ($M = 3.15$, $SD = 0.93$), $t(134) = 3.05$, $p < .00$, $\omega^2 = 0.06$. Finally, the control group used goal setting at competition ($M = 4.00$, $SD = 0.79$) more than the UNIFORM group ($M = 3.69$, $SD = 0.92$), $t(134) = 2.03$, $p = .04$, $\omega^2 = 0.02$. Also, as measured by the OMSAT-3, the control group used competition plans ($M = 4.85$, $SD = 1.25$) more than the UNIFORM group ($M = 4.33$, $SD = 1.15$), $t(121) = 2.37$, $p = .02$, $\omega^2 = 0.04$. Thus, analyses of within group changes are more salient for reviewing the effectiveness of the Psychological UNIFORM program. That is, significant changes within the experimental group's scores from pretest to posttest coupled with lack of changes in the control group may be attributed to the UNIFORM intervention and indicative of the program's success.



It was hypothesized that the UNIFORM group would demonstrate a significant change from pretest to posttest in their ability to apply and use the mental skills in practice and competition as measured by the TOPS (Thomas et al., 1999) and OMSAT-3 (Durand-Bush et al., 2001). Significant changes from pretest to posttest were not expected for the control group on any of the study's measures.

Use of Sport Psychology Skills in Practice. At posttest, participants in the UNIFORM group showed significant increases in their use of four of the five psychological skills measured by the TOPS (Thomas et al., 1999) practice subscales. More specifically, the use of relaxation, imagery, goal setting, and self-talk (i.e., Overtly positive in the UNIFORM program) in practice was significantly greater at posttest when compared to pretest scores (see Table 1 for descriptive and inferential statistics). However, there was no significant change in their use of attentional control skills (i.e., Fully focused) in the practice setting. Unexpectedly, the control group reported a significant change in their use of relaxation from pretest ($M = 2.44$, $SD = 0.84$) to posttest ($M = 2.84$, $SD = 0.97$), $t(36) = -2.92$, $p < .00$, $d = -0.48$. The only difference between groups at posttest was that the UNIFORM group used relaxation during practice ($M = 3.44$, $SD = 1.04$) more so than the control group ($M = 2.84$, $SD = 0.97$), $t(104) = -2.92$, $p < .00$, $\omega^2 = 0.07$.



Use of Sport Psychology Skills in Competition. At posttest, the UNIFORM group showed significant change in their use of the four UNIFORM skills measured by the TOPS (Thomas et al., 1999). There was a significant increase in their use of relaxation, imagery, goal setting, and self-talk during competition in comparison to their pretest scores (see Table 1). They also reported a significant decrease in negative thinking (i.e., Overtly positive) during competition at posttest. As expected, the control group showed no significant changes in their use of psychological skills during competition from pretest to posttest. The only difference between groups at posttest was that the UNIFORM group used relaxation during competition ($M = 3.71$, $SD = 0.78$) more so than the control group ($M = 3.34$, $SD = 0.81$), $t(103) = -2.27$, $p = .03$, $\omega^2 = 0.04$.

Use of Competition Plans. At posttest, the UNIFORM group increased their use of competition plans ($M = 5.11$, $SD = 1.01$) in comparison to at pretest ($M = 4.17$, $SD = 1.07$), $t(56) = -5.84$, $p < .00$, $d = -0.77$ as measured by the OMSAT-3 (Durand-Bush et al., 2001). The control group showed no change in their use of competition plans over time, $t(30) = -0.16$, $p = .88$, $d = -0.03$. Also, at posttest, there was no significant difference between the UNIFORM group's use of competition plans in comparison to the control group, $t(97) = -0.20$, $p = .84$, $\omega^2 = -0.01$.

Use of No Mistakes, Only Learning Opportunities. According to the results of the Evaluation of the Intervention Survey, 58 student-athletes in the UNIFORM group responded that they used No mistakes, only learning opportunities, whereas nine student-athletes responded that they did not use it. A female basketball player stated, "Yes, during practice I'll miss a wide open lay-up, and I'll just remind myself that I'll get it back on the next run." A baseball player noted that No mistakes, only learning opportunities was one of the UNIFORM aspects that he emphasized the most. He stated, "When I have trouble, my whole performance suffers, and so I taught myself to say, 'Hey, it's no big deal. Shake it off and grab the next one.'" The concept of No mistakes, only learning opportunities was also used in the student-athletes' lives outside of sport. A baseball player stated, "When I got a B on my Trig exam, I learned that Trig is a hard class, and I need to study more. I got an A on the next one. Now, I have an A in the class."



Use of Make Routines. The Evaluation of the Intervention Survey results revealed that 55 student-athletes in the UNIFORM group used routines during the intervention. A female basketball player stated, "I used routines when I shot free throws. I would have a specific routine before I shot." Examples of using routines for school were also shared. Another female basketball player said, "I made routines for my study habits to get my grades up," while a baseball player noted, "Every morning, I get ready and make sure that I have all of my gear ready for practice and school." When they strayed from their routines, negative consequences, such as forgetting their homework or not being prepared for practice or competition, often resulted. Though routines seemed helpful for most, 12 student-athletes reported that they did not use routines during the UNIFORM program.

Overall Use of Sport Psychology Skills. According to the Evaluation of the Intervention Survey results, 63 student-athletes in the UNIFORM group reported using the sport psychology skills taught in the program on their own. This occurred at practice and competition, in the weight room, during school, at home, in social settings, and in their daily lives. For example, a baseball student-athlete stated, "Before my last bench test, I was kind of nervous, so I used cue words from relaxation/stress control. It really helped me and probably made me perform better." A female basketball player

noted, "I make a daily routine of what I want done in my personal and school life. I create goals that I can consistently reach and break." Four student-athletes stated that they did not use any of the skills taught in the UNIFORM program on their own.

With respect to the Transtheoretical Model (TTM), it was assumed that, at pretest, the control and UNIFORM groups would be similar in their stages of change, decisional balance, and self-efficacy scores. Crosstab analysis showed 14 participants were in the action stage (AX) at pretest. More specifically, six student-athletes in the control group (12.2 percent within group) and eight participants in the UNIFORM group (9.5 percent within group) were in the AX stage. Pearson chi square analysis indicated that the cell counts were as statistically expected, $\chi^2 = 0.24$, $p = .62$, $\eta = 0.4$. Also, the control and UNIFORM groups did not differ in their assessment of the potential benefits (DB-pros), $t(124) = -0.87$, $p = .39$, $\omega^2 = 0.00$, or potential detriments (DB-cons), $t(124) = 1.42$, $p = .16$, $\omega^2 = 0.01$, of participating in a PST program. However, the control group was more confident in their ability to work on and improve their psychological skills during adverse conditions (SE-PST; $M = 4.03$, $SD = 0.63$) than the UNIFORM group ($M = 3.67$, $SD = 0.69$), $t(133) = 3.02$, $p < .00$, $\omega^2 = 0.06$.



It was hypothesized that the UNIFORM group would experience a significant change from pretest to posttest in their stage of change, and self-efficacy and decisional balance scores. Significant changes from pretest to posttest were not expected for the control group on any of the study's measures.

Stages of Change (SOC-PST). At posttest, 32.8 percent ($n = 22$) of UNIFORM group participants were in the AX stage. As hypothesized, the crosstab and Pearson chi square indicated the number of student-athletes in the UNIFORM group in AX was greater than statistically expected, $\chi^2 = 4.92$, $p = .03$, $\eta = 0.22$. Also, as hypothesized, fewer control group participants progressed to AX than statistically expected ($n = 5$, 13.2% within the control group).

Decisional Balance Pros and Cons (DB-PST). The UNIFORM group reported greater potential benefits (DB-pros) of participating in a PST program at posttest ($M = 11.60$, $SD = 1.61$) in comparison to at pretest ($M = 4.21$, $SD = 0.75$), $t(62) = 42.58$, $p < .00$, $d = 5.36$. However, the control group reported similar changes in DB-pros from pretest ($M = 3.94$, $SD = 0.92$) to posttest ($M = 11.05$, $SD = 1.91$), $t(32) = 26.26$, $p < .00$, $d = 4.57$. No significant changes in either the UNIFORM or control groups' perception of the potential detriments (DB-cons) of participating in a PST program from pretest to posttest were found, $t(62) = -0.05$, $p < .96$, $d = -0.01$ and $t(33) = -0.25$, $p < .81$, $d = -0.04$ respectively. Lastly, at posttest, there were no significant differences between the groups' perception of potential benefits (DB-pros), $t(101) = -1.07$, $p = .29$, $\omega^2 = 0.00$ or potential detriments (DB-cons), $t(103) = 1.44$, $p = .15$, $\omega^2 = 0.01$.

Self-Efficacy (SE-PST). The UNIFORM group did not show a significant change in their self-efficacy to work on and improve their psychological skills during adverse conditions from pretest ($M = 3.64$, $SD = 0.69$) to posttest ($M = 3.73$, $SD = 0.97$), $t(64) = -0.83$, $p < .41$, $d = -0.10$. However, the control group's self-efficacy significantly decreased from pretest ($M = 4.05$, $SD = 0.61$) to posttest ($M = 3.77$, $SD = 0.87$), $t(37) = 2.25$, $p = .03$, $d = 0.37$. Also, there was no significant difference between the groups' self-efficacy, $t(101) = 0.19$, $p = .85$, $\omega^2 = -0.01$.



DISCUSSION

Results of the *Games* (i.e., quizzes) suggested that the high school student-athletes learned the sport psychology skills and concepts taught in the UNIFORM program. The *Game* scores ranged from 7.86 (C+ grade) to 10.0 (A+ grade). This finding is consistent with other sport psychology intervention programs (Gucciardi et al., 2009; O'Brien, Mellalieu, & Hanton, 2009) as well as with other studies that used earlier versions of the UNIFORM program (Gilbert et al., 2008; Horn, Gilbert, Gilbert, & Lewis, 2011).

Information obtained from the Evaluation of the Intervention Survey supported the finding that the student-athletes learned sport psychology skills. Furthermore, most student-athletes enjoyed the program and identified *Proof it Works* (i.e., information about elite athletes who use PST), *Films* (i.e., movie clips), and *Drills* (i.e., physical games) as the most beneficial in helping them to understand and learn the sport psychology skills. Though the UNIFORM program is mostly taught in a regular classroom setting, an advantage of the Game Plan Format (i.e., how the program is taught; Gilbert, 2011) is its mixed-methods approach and the underlying conceptual framework, the Transtheoretical Model (TTM; Prochaska & Marcus, 1994).

The *Proof it Works* and *Films* components provide real-world and entertainment-based evidence of others' use of sport psychology skills, which correspond to dramatic relief, environmental reevaluation, and self-reevaluation within the Transtheoretical Model (Velicer et al., 2000). Thoughts such as the following may arise: "Well if MLB superstar, Albert Pujols sets goals (from the *Proof it Works* document), and Stan Ross sets goals to make it into the Hall of Fame (the main character in *Mr. 3000* used in the *Films* component), then maybe I could benefit from setting goals too." Thus the high school student-athletes are entertained by these accounts, but they also make connections between the elite athletes, movie characters, and themselves.



The *Drills* were central to the student-athletes' understanding of sport psychology skills and were also identified as an enjoyable aspect of the program. When participating in the *Drills*, student-athletes performed a physical activity while applying the sport psychology skill. These activities provided an opportunity to physically compete in a format different than their regular sport context. The debriefing session that followed vetted the sport psychology skill. In addition, the instructor highlighted effective use or application of the sport psychology skill by the student-athletes. Thus, the student-athletes' contributions were recognized. Rewards, recognition, and feedback from instructors are external forms of motivation that may be used to enhance student-athletes' competence at tasks such as utilizing psychological skills to improve sport performance (Duda, 1992). The use of external motivation to increase competence and self-efficacy can, in turn, increase the likelihood of student-athletes continuing to use sport psychology on their own (i.e., behavioral process of change, reinforcement management) and lead to the self-liberation behavioral process of change (Velicer et al., 2000).

The Game Plan Format's mixed-methods approach, and especially the *Proof it Works*, *Films*, and *Drill* components appeared to be greatly enjoyed by the student-athletes. This enjoyment may lead to greater engagement with the UNIFORM program and help student-athletes learn and continue to use sport psychology skills over time. In so doing, student-athletes may experience a shift in their stages of change and move across the continuum into the action stage (AX) in accordance with the TTM. As such, SPCs who plan to work with an adolescent population may want to use teaching strategies similar to those included in the UNIFORM program. These suggestions are consistent with Danish et al. (2004), and Gould, Damarjian, and Medbery (1999) who noted that hands-on activities are more effective than lectures in enhancing sport psychology programs because many adolescents "learn best by doing rather than talking" (Danish et al., 2004, p. 46).



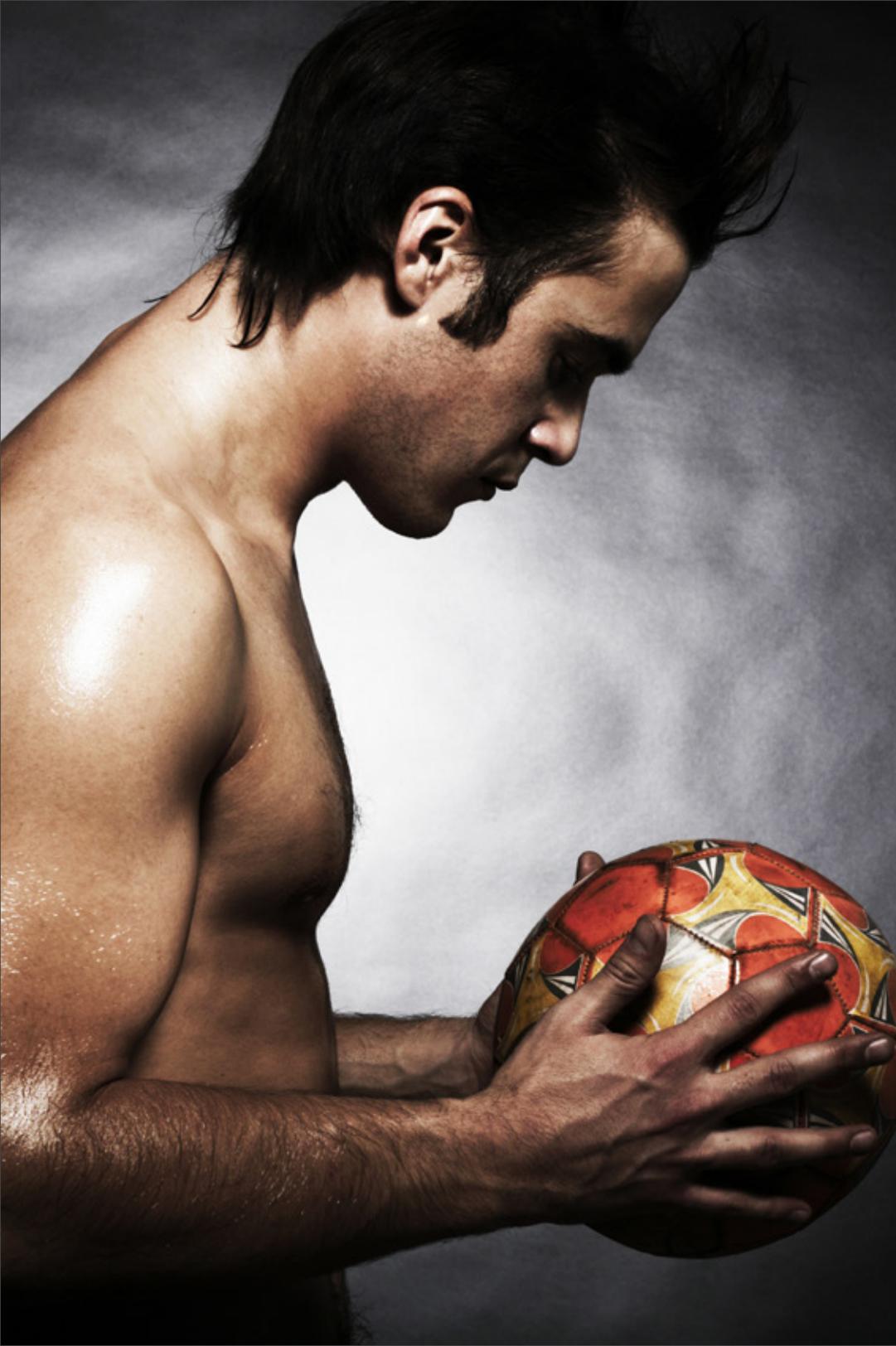
In addition to learning the sport psychology skills, the results of this study showed that the student-athletes used most of the sport psychology skills and concepts taught in the UNIFORM program overall as well as in specific sport contexts. In comparison to their pretest scores, the UNIFORM group expressed greater use of relaxation, imagery, goal setting, and self-talk at both practice and competition, experienced less negative thinking during competition, and used competition plans more at posttest. The control group did not express increased use of psychological skills at posttest similar to the results found for the UNIFORM group. In fact, the only pretest to posttest change found for the control group was for relaxation at practice. Furthermore, pretest differences between the UNIFORM and control groups' use of psychological skills were no longer evident at posttest. Also, and equally as important, the UNIFORM group reported using relaxation in practice and competition more frequently than the control group at posttest. These within and between group findings support the second main hypothesis of the study, which is the experimental group will apply and use psychological skills taught through the Psychological UNIFORM Program in practice and competition more than the control group.

Sport psychology programs taught to college-aged and older athletes have resulted in the positive use of sport psychology skills (Blakeslee & Goff, 2007; Horn et al., 2011). A review of the literature shows that while there have been some sport psychology or life skills programs aimed at teaching these skills to adolescents, there are limited published accounts that present empirical data demonstrating their effectiveness. In one study, elite adolescent boxers (mean age = 16 years) in the United Kingdom participated in a goal setting intervention program. Results showed that the boxers' use of goal setting "influenced performance behaviors by directing effort to different skills during practice and competition" (O'Brien et al., 2009, p. 301). In another study with adolescent athletes, Gucciardi et al. (2009) examined the effectiveness of two psychological skills training (PST) programs. Results showed positive changes in mental toughness, resilience, and flow, which indicate the athletes were using the learned sport psychology skills (Gucciardi et al.). The adolescent student-athletes in the present study also learned and used many of the sport psychology skills. Thus, the present study adds to the literature in two main ways.

First, the positive results show the viability of teaching sport psychology skills to high school student-athletes through a program such as UNIFORM. Adolescent student-athletes can, and seem to want to, learn these skills (e.g., Blom, Hardy, Burke, & Joyner, 2003). Furthermore, the high school context, as used in the present study, appears to be a practical context in which to teach. This is consistent with other literature regarding high school sport psychology (e.g., Gilbert et al., 2006; Weissman, 2005), and provides support for SPCs to consider the high school context when delivering sport psychology services. The high school setting may also be considered a viable environment for novice SPCs to gain consulting experience.

The UNIFORM program is designed to teach sport psychology skills and concepts by using sport as a medium to engage the student-athletes. Though the curriculum is sport-specific, each lesson includes information about how and why the student-athletes should be using the sport psychology skills in their sport and in their daily lives outside of sport. Further, the final week of the program is titled “UNIFORM across domains” in an effort to reinforce the message of using the sport psychology skills in all areas of life. Results showed that most of the student-athletes used sport psychology at home, in class, when studying, when preparing for school, in social settings, as well as in their sport (i.e., practice, competition, strength and conditioning activities). Thus, the student-athletes were able to transfer the skills from their athletic contexts and apply them to their lives outside of sport. Danish and colleagues (Danish & Nellen, 1997; Danish et al., 2004; Danish et al., 2005) have argued that helping our nation’s youth learn sport psychology skills or life skills such as goal setting is a significant and worthwhile endeavor: “the future of our country is much more dependent on helping our youth reach their goals than it is on helping elite athletes win gold” (Danish & Nellen, 1997, p. 112). The results of the current study suggest that the UNIFORM program and the way that it is taught can help high school student-athletes learn and use sport psychology in their sport and in their daily lives outside of the gymnasium or field of play.





A key component of the UNIFORM program's instructional design is the inclusion of specific behavior-change strategies as a formal part of the student-athletes' learning experience. Thus, a third objective of the UNIFORM program is to advance student-athletes' behavior at using psychological skills in sport through the stages of change identified for the TTM. At pretest, 10.5 percent of all participants were in the action (AX) stage. Posttest results revealed that a significant number of the UNIFORM student-athletes shifted into AX by the conclusion of the program intervention. The control group did not exhibit a similar shift. Thus, it can be concluded that the deliberate inclusion, teaching, and use of cognitive process-directed activities (e.g., *Proof It Works* to raise consciousness and *Playbook* entries for self-evaluation) and behavioral process-directed activities (e.g., *Teams* to develop helping relationships and *Drills* to encourage self-liberation), was successful at advancing student-athletes through the stages of change.

In addition to shifting into the AX stage, the UNIFORM group also found greater potential benefits of participating in a psychological skills program in comparison to their beliefs at pretest. This finding was expected, but contradicts Horn et al. (2011), who did not find any significant differences in the community college softball athletes' decisional balance scores (pros) from pretest to posttest.

With respect to self-efficacy, it was expected that the experimental group would show improvements. Instead, UNIFORM student-athletes' self-efficacy to work on and improve their psychological skills during adverse conditions did not significantly change from pretest to posttest. However, the control group's self-efficacy decreased from pretest to posttest, and the difference in self-efficacy scores between the two groups found at pretest were no longer evident at posttest. This within group finding for the UNIFORM student-athletes is surprising as self-efficacy should increase as individuals progress through the stages of change (Velicer et al., 2000). Lack of self-efficacy increases may be due to the number of psychological skills taught (i.e., too many) over the 12-week period (i.e., too short in time) for the student-athletes to gain a sufficient level of competence at using their new skills.



LIMITATIONS

Though the control group did not receive the intervention, their results showed several unexpected findings. To start a methodological assumption when doing experimental research is that the control and experimental groups will be similar in the variables under investigation at pretest. This was however, not the case in the current study. A preliminary check of pretest TOPS and OMSAT-3 scores revealed significant differences between the control and experimental groups on imagery, goal setting, and competition plans. Further, the control group scored significantly better than the experimental group on these variables during the pretest, indicating they were using psychological skills more than the experimental group. The most likely explanation for this finding was contamination.

A pilot program was conducted at the school with the varsity football team in spring 2010. The junior varsity team served as the control group in fall 2010. Though the coaches, graduate student instructors, and the principal investigator kept the teams separate from each other, and a summer break occurred between the pilot program and the current study, it is possible that some of the coaches within the football program used different language (i.e., sport psychology friendly vocabulary) when interacting with the student-athletes as a result of their participation in the pilot program. This situation may have led the student-athletes to be more aware of sport psychology terms and to develop a sense within them that they were using these skills. The lack of significant

difference between the groups' DB-pro and DB-con scores at posttest may be explained by this situation. However, when looking at the overall results, it is apparent that the control group's posttest scores are similar to their pretest scores. This finding indicates that the control group did not learn or apply sport psychology skills during the course of the intervention and is in stark contrast to the significant differences observed for the UNIFORM group.

Another limitation of the study is the smaller number of student-athletes who participated in the posttest data collection. To review, the UNIFORM group comprised 86 student-athletes, but in some cases, only 68 completed posttest data collection tools. The UNIFORM program is 12 weeks in length and two additional weeks were reserved for data collection. Thus 14 weeks were needed to complete the study. Because of the high school's schedule, the final data collection week occurred during their final exam period. This impacted the data collection negatively in that some student-athletes attended last-minute tutoring sessions when there were scheduling conflicts. Because of the long winter break (mid-December to mid-January), it was necessary to do data collection during finals week. However, when planning future interventions researchers should consider the high school's schedule and start earlier in the year to avoid conflict between the intervention and key events such as the final examination period.



CONCLUSIONS AND FUTURE DIRECTIONS

The results of the study demonstrated that high school student-athletes who were taught sport psychology via the UNIFORM program learned the skills and used them on their own in sport and in their daily lives outside of sport. These positive results provide support for using sport-specific intervention programs to teach sport psychology skills to student-athletes in the high school setting, and that graduate student instructors can successfully act as facilitators. However, student-athletes may also learn sport psychology if their coaches took an instructor role, as the frequent coach/student-athlete contact affords coaches the opportunity to observe performance situations that can be used as “teachable moments.” For example, a baseball coach could observe a pitcher walking two consecutive batters to load the bases and then throw three balls to the next batter. Because this situation occurred in a game (or practice), it is an authentic example from which the student-athletes can learn. The coach could start a discussion regarding this situation and help teach the student-athletes, along with the sport psychology graduate student, appropriate sport psychology skills. Thus, future studies should investigate the effectiveness of sport psychology programs when high school coaches act as co-teachers.

The organization of the UNIFORM Program and its teaching system, the Game Plan Format (Gilbert, 2011), may also facilitate high school coaches assuming the lead and/or sole instructor role. As noted by Wrisberg, Simpson, Loberg, Withycombe, and Reed (2009), there is a perception among some student-athletes that “coaches are the ones who are supposed to mentally prepare athletes for competition” (p. 481). Though simultaneously assuming the role of coach and SPC may create challenges, coaches who act as SPCs by teaching programs such as UNIFORM may actually help to “normalize” sport psychology services for high school student-athletes as recommended by Blom et al. (2003). Thus, the effectiveness of high school coaches as lead and/or sole instructors in teaching sport psychology skills should also be explored.



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DEPENDENT SAMPLE *t*-TEST COMPARISON OF THE UNIFORM GROUP'S PRETEST TO POSTTEST TOPS SCALE SCORES.

Paired variables		<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i>
Pair 1	Activation pretest	3.07	0.74				
	Activation posttest	3.31	0.76	*-2.05	66	.04	-0.25
Pair 2	Relaxation pretest	2.19	0.74				
	Relaxation posttest	3.46	1.05	-8.83	66	.00	-1.08
Pair 3	Imagery pretest	2.98	0.89				
	Imagery posttest	3.51	0.92	-4.37	66	.00	-0.54
Pair 4	Goal Setting pretest	2.96	0.90				
	Goal Setting posttest	3.53	0.98	-4.37	61	.00	-0.56
Pair 5	Self-Talk pretest	3.13	0.87				
	Self-Talk posttest	3.66	0.92	-4.09	66	.00	-0.50
Pair 6	Emotional Control pretest	3.09	0.81				
	Emotional Control posttest	3.18	0.92	-0.79	65	.43	-0.10
Pair 7	Attentional Control pretest	3.49	0.71				
	Attentional Control posttest	3.56	0.78	-0.68	66	.50	-0.08
Tot posttest TOPS Competition Scales		<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>	<i>d</i>
Pair 8	Activation pretest	3.78	0.80				
	Activation posttest	4.10	1.83	-1.37	66	.17	-0.17
Pair 9	Relaxation pretest	3.25	0.77				
	Relaxation posttest	3.72	0.78	-4.61	66	.00	-0.57
Pair 10	Imagery pretest	3.08	0.91				
	Imagery posttest	3.50	0.98	-3.45	66	.00	-0.56
Pair 11	Goal Setting pretest	3.64	0.94				
	Goal Setting posttest	3.95	0.82	-2.27	65	.03	-0.28
Pair 12	Self-Talk pretest	3.25	0.89				
	Self-Talk posttest	3.80	0.87	-4.48	66	.00	-0.55
Pair 13	Emotional Control pretest	3.29	0.86				
	Emotional Control posttest	3.36	0.88	-0.54	66	.59	-0.07
Pair 14	Negative Thinking pretest	2.26	0.75				
	Negative Thinking posttest	2.06	0.88	2.04	66	.05	0.25

Significant when $p < .05$

*Because the activation (practice) scale is not reliable for this sample, the scale's *t*-test result is not interpreted or discussed for this study.

Note: Automaticity is not taught through the Psychological UNIFORM Program; therefore its results are not included or discussed for this study.



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