



ISSUE TEN

ENJOYMENT-FOCUSED MST CASE STUDY
ENJOYMENT, MENTAL SKILLS TRAINING, AND PERFORMANCE
ENHANCEMENT IN ELITE WOMEN'S SOCCER: A CASE STUDY EXAMPLE
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ABSTRACT

The following case study details an athlete's successful adoption and implementation of applied sport psychology attained during an enjoyment-focused mental skills training (MST) program. The intervention project was designed to increase intrinsic sport enjoyment using a range of formal and informal strategies, which then utilized enjoyment to enhance mental skills and soccer performance within a Division 1 collegiate women's soccer team. The case-study results and implications provided may enhance the understanding of an appreciation for the inclusion of the construct sport enjoyment in future mental skills training programs.



INTRINSIC SPORT ENJOYMENT FOCUSED MENTAL SKILLS TRAINING IN DIVISION 1 WOMEN'S SOCCER:

A CASE STUDY EXAMPLE – CONTEXT

This research project consisted of a mixed-methods season-long applied intervention, working with both athletes and coaches to improve a spectrum of mental skills and overall performance. It is important to appreciate the unique contextual landscape, as there are very few Division 1 athletic teams that have allowed an applied intervention to occur with a true treatment and control group, as the underlying framework would potentially benefit the treatment-group athletes, while excluding the control-group athletes to performance improvement which may impact their on and off field performance, potentially affecting their scholarship or future opportunities. Working from a client-focused cognitive-behavioral framework, the goal was to establish a baseline understanding of sport psychology skills with the athletes with whom I worked, followed by individualization of skills and techniques as intended. Although the season did not end as aimed, the intervention was deemed a success (see Table 1 and 2) and its principles have been implemented with professional American soccer organizations and elite youth training academies.

This 12-week intrinsic enjoyment-focused MST intervention was focused on promoting and enhancing intrinsic sources of sport enjoyment (ISOE; i.e., self-competence, competitive excitement, and effort expenditure; Barnicle & Burton, 2016; Wiersma, 2001) within Division 1 women's soccer,

and followed traditional MST theory and best practices (Burton & Raedeke, 2008; Martin & Swartz, 2000; Webb, Giusti, & Barnicle, 2016) to evaluate intervention effectiveness though comparing treatment and control groups. During initial sessions, the treatment group athletes were introduced to the traditional mental training tools and skills (i.e., goal setting, self-talk, imagery, etc.; Burton & Raedeke, 2008), from which further individualization of treatment could occur in the weeks that followed, focusing on the areas of need presented by each individual. All participants completed a battery of quantitative (i.e., SEYSQ, TOPS-2, CMSQ, SCI, SAS-2) and enjoyment-focused qualitative (i.e., Weekly Logs & Enjoyment Profiles) instruments at three time-points through the season (i.e., pre-test, formative assessment, and post-test), with game performance data and coach-evaluated assessment metrics serving as the performance data. Significant intervention effectiveness was shown through the use of MANOVAs, cross-case analysis, and a comparison of qualitative and group-performance data (see Tables 1 and 2). Prior to the beginning of the study, consent and approval to disseminate information was gained by all athletes and coaches, as well as support from the athletic director and IRB approval from the University.

STRUCTURED MST INTERVENTION

The intervention consisted of 12 individual sessions, each lasting approximately 45 minutes and focusing on individual needs of the athletes after structured MST education and acquisition sessions. Following the MST Education, Acquisition, and Implementation Phase model (Barnicle & Burton, 2016; Burton & Raedeke, 2008; Masters, 2014), treatment athletes were introduced to traditional mental training tools (i.e., goal setting, imagery, self-talk) and skills (i.e., stress management, energy management, etc.), followed by an overview to this study's working intervention approach.

The first three weeks of the intervention was the Education Phase, which was nearly identical for all treatment group athletes and focused on obtaining a baseline understanding of the targeted mental training tools and skills through structured individual-session instruction. Due to the length of the season and NCAA guidelines, the consultant deemed it appropriate to focus on the Education Phase for three weeks, as the limited length of a fall-only sport season required a somewhat rapid moving intervention. Within this phase, athlete-consultant rapport was targeted, with treatment group athletes getting more comfortable with having the researcher around practices and games as a primary goal. Athletes' primary sources of enjoyment (SOEs) were identified and assessed through qualitative and quantitative measures, with personal models of enjoyment being established for each athlete, which helped transition from the initial phase of intervention uniformity to the Acquisition and Implementation Phases.

In the Acquisition Phase, the consultant began to tailor athletes' programs to promote ISOEs and ultimately enhance athlete outcomes, which in this intervention were athlete engagement and use of mental skills, but also increased athletic performance. Through matching mental skills with targeted SOEs (e.g., setting practice and process-focused goals to support effort expenditure within practice), the consultant helped the athletes develop more intrinsic sources of enjoyment (ISOEs) and rely less on extrinsic sources of enjoyment (ESOSs) (i.e., frame self-talk to reflect effort and competitive

performance, instead of external-rewards driven self-talk focusing on competitive success). When this matching process was successful, athletes would gain further self-awareness of their enjoyment and how it could be fostered. When met with roadblocks (e.g., sport personal life stressors, athletic setbacks, or rapport building difficulties) the consultant would either adjust the targeted mental training tools and skills being used to promote ISOEs, or change the SOE which was being targeted (i.e., competitive excitement instead of effort expenditure).

Although all treatment athletes had uniquely individualized Acquisition and Implementation Phases, the core MST tools and skills were consistent for the entire treatment group, with each athlete acquiring and practicing their plan at their own pace. Depending on the baseline knowledge of sport and exercise psychology of each participant, a specific pace and depth of knowledge was formulated for each participant. Although the goal of understanding was the same for all, each athlete required unique and individualized training protocol to ensure they were as well trained as one another during the intervention. This treatment protocol ensured that all treatment athletes receiving the same core intervention, but flexibility provided the ability to tailor it to the needs and ISOEs of the athlete. During the Implementation Phase, athletes were encouraged to implement MST whenever possible within practice and competition, with adjustments to the targeted tools and skills as needed to enhance targeted ISOEs. During this phase, the coaching staff were able to support the treatment athletes' use of mental tools and skills, as well as identify when athletes were struggling or not utilizing the intervention as designed. This support was instrumental to the success of the intervention, which was measured via statically significant differences between a treatment and control group in development of intrinsic sport enjoyment and ultimately objective athletic performance and provides support for the need for the consultant to develop solid rapport and a healthy working relationship with the coaching staff.



THE CASE - SARAH

Though multiple participants in the overall study showed significant improvement and seemed to enjoy the intervention process, one athlete, in particular, best demonstrated the primary intent and effectiveness of the intervention. Sarah (participant's name changed to maintain anonymity), a senior forward co-captain, had enjoyed significant success during her first three years, achieving many academic and athletic honors at the university, including setting most records in the program's history. During this time, the program was trending upwards, building upon each season's performance to grow into a consistent conference contender.

BASELINE ASSESSMENT

Sarah reported the joys of playing soccer (intrinsic) as her initial primary source of enjoyment (30%), with social and life opportunities, the psychosocial aspects of soccer, and perceived competence (each 20%), and soccer as a stress reliever (10%). Given during the initial weekend of the season and compared to the treatment group as a whole, Sarah reported slightly lower levels of intrinsic sport enjoyment (see Table 1; 4.12 vs. $M = 4.19$), development focused (4.6 vs. $M = 4.7$) and win-fixated motivational styles (3.0 vs. $M = 3.8$), and the use of self-talk (2.8 vs. $M = 2.9$). Sarah reported higher levels of doubt-oriented motivational styles (6.0 vs. $M = 4.1$) and the use of goal setting (3.5 vs. $M = 2.9$) and relaxation skills (4.0 vs. $M = 2.7$) compared to the treatment group. Sarah was assessed to have an initial engagement score of 14, which was the significantly lower than the treatment group average of 18.4, which she attributed to her lack of buy-in and belief in the consultant, prompting a lack of motivation to practice mental training tools and skills.



BEGINNING OF INTERVENTION

During the beginning weeks of her senior season, Sarah struggled to find her form during practices and games, leading to a lack of motivation in practice, inconsistent results during competitions, and minor injuries, equating to a motivation and a lack of soccer enjoyment. She reported enjoying soccer less due to her nagging injuries, and disliking the extensive travel and the effect it had on her school work. During these initial weeks, her performance and scoring on the field was worse than previous seasons, and her weekly enjoyment log levels were below many of her teammate's.

Originally hesitant about the possible effectiveness of the project, Sarah was slow to fully trust the consultant and develop solid rapport needed for an effective working relationship, leading to a lack of buy-in initially. Positive rapport began to build as the participant began to learn more about the consultant, whose elite level playing and coaching background, and officiating experiences in soccer helped developed a sense of trust in the consultant's soccer intelligence. Previous applied consulting experience with athletes in other sports around the university also helped bolster the consultant's credibility in the eyes of this athlete. As hypothesized, identifying Sarah's intrinsic sources of enjoyment (ISOE) improved engagement as she felt more connected with the intervention once the consultant fully understood and appreciated how and why she enjoyed soccer. Finally, as reported by the athlete, the consistent positive attitude and commitment by the consultant prompted the athlete to more fully trust the intervention and gain belief in the process.



BUY-IN SOLIDIFIED

Upon this buy-in breakthrough, which occurred roughly in weeks four and five of the intervention, the results of Sarah's work with the MST program began to show in her competitive performances. Sarah had been setting practice goals that were incongruent with her competitive goals and ISOE, leading her to focus on aspects of her practice which were not preparing her to succeed during competition. For example, one of her performance goals was to improve her mental focus and goal scoring in the last 15 minutes of 90-minute soccer matches, yet during practice she did not like to run hard to build her endurance, nor did she generally enjoy the conditioning aspects of training. Her performance goal required her to build her endurance so she was an effective performer at the end of the game, yet she was unaware of her lack of goal compatibility between practice and competition. Emphasis was placed on refining her SOE to be more intrinsic focused, developing a proper goal setting plan, consisting of goal setting sheets and athlete-defined rewards/punishments, which were effective in improving her goal setting skills.





MID-SEASON PROGRESS

After buy-in was solidified Sarah's targeted areas of need suggested significant progress. Compared to the pre-season assessment, Sarah's intrinsic sport enjoyment increased 3.6% (4.12 [T1] vs. 4.27 [T2]). As hypothesized, Sarah's increased engagement opened her to the idea of utilizing her individualized targeted mental tools and skills, prompting her use of self-talk 54.5% more (2.75 vs. 4.25), goal setting 14.3% more (3.5 vs. 4.0), and increase her IES to 20, which was higher than the treatment group average of 17.8. One of Sarah's most significant changes was her refinement of her motivational style, with her doubt-oriented style decreasing 38.8% (6.0 vs. 3.67), suggesting the intervention's effectiveness in assisting Sarah become more development and performance focused. Sarah also reported lowering her failure-evader style 42% (4.0 vs. 2.8) and win-fixated style 33% (3.0 vs. 2.0), while maintaining similar levels of development-focused MS (4.6 vs. 4.8) and use of relaxation skills (4.0 vs. 4.0).



POST-SEASON REFLECTION AND ASSESSMENT

During the post-intervention interview, Sarah admitted to initially being skeptical and hesitant about buying-in to the applied sport psychology intervention. She cited the consultant's relatability, trustworthiness, and competence as important factors to her eventual buy-in, yet the factor she found most influential was the consultant's knowledge of the sport and playing experience,

"I was very pessimistic at first but meeting with you really helped a lot, I was not expecting it to at the start. Once I realized your knowledge of high level soccer I opened up more."

As reported by the coaching staff, Sarah and the other treatment-group athletes firmly felt the consultant's solid knowledge of the terminology, strategy, and general soccer culture strongly contributed to rapport building and overall intervention success. Sarah recommended every future team member be exposed to applied mental training, and in stark contrast to her affect at the outset of the season, she was thankful to be included in the project.

"This training is very nice, especially during tough seasons. Everyone could benefit from better goal setting skills, but most for me was getting a better understanding of why I enjoy soccer."

The primary skills she found beneficial in the intervention were goal setting, positive self-talk, and increasing intrinsic motivation in practice. She attributed improvement in these areas to her refined and increased sport enjoyment, which also helped her relationships with teammates on and off the field.

SPORT ENJOYMENT AND PERFORMANCE

Consistent with initial hypotheses, the intrinsic enjoyment-focused MST intervention increased Sarah's reported intrinsic sport enjoyment and helped refine her SOE to reflect autonomy-supportive intrinsic sources. As the goal of the larger research study was to assess the effectiveness of applied sport psychology on intrinsic sport enjoyment (see Table 2), the intervention utilized specific mental skills (i.e., relaxation, self-talk, and goal setting) to specifically increase intrinsic sport enjoyment. Sarah's sport enjoyment was most directly influenced by her performance on the field and the act of playing soccer, followed by her social connections with her friends on the team, and finally with coaching staff interaction bringing up the rear. Upon her change of practice mentality, she was able to better appreciate her teammates and coaching staff during practices, which, in turn, led to better performance on the field, further enhancing her enjoyment in soccer and with her peers,

"I more enjoyed trying hard in practices and spending time with friends on the team this season than past years. This helped me feel better about myself when I left practice."

This trend is supported by the data, which show she scored 66% of her points during the second half of the season, her reported intrinsic sport enjoyment in the second half of the season increased by 19.3% compared to the first half of the season. Her engagement improved throughout the intervention, with an IES of 23 during the final assessment, which was the highest score in the treatment group (see Table 1; $M = 17.8$).

Aside from an increase in intrinsic sport enjoyment and athletic performance, Sarah also showed increases in other mental skills and tools as a result of the intervention. As setting effective practice goals was a primary aspect of her individualized intervention plan, it was positive to see a 187.5% increase in her reported use of goal setting, which was the largest increase of the eight participants. This was coupled with a 37.5% increase in the use of relaxation skills and 55.5% increase in the use of self talk. Compared to the group average, Sarah displayed higher levels of development focused style (4.8 vs. $M = 4.6$), higher use of goal setting (4.25 vs. $M = 3.9$), relaxation techniques (3.0 vs. $M = 2.7$), and self-talk (4.5 vs. $M = 3.8$). She reported lower levels enjoyment (4.3 vs. $M = 4.4$) and lower doubt-oriented (3.7 vs. $M = 3.9$), failure-evader (2.4 vs. $M = 2.9$), and win-fixated styles (2.5 vs. $M = 3.2$). Sarah's process-based performance was also higher than the group mean (34 vs. 27.2), and was 13.3% higher than the first evaluation period.





REFLECTIONS AND IMPLICATIONS FOR PRACTITIONERS

Although the project was successful in demonstrating significant increases in intrinsic sport enjoyment, use of mental tools and skills, and athletic performance in the treatment group versus the control group, the case of Sarah highlights the transformation an athlete can undergo over the course of a season. Originally hesitant, Sarah's eventual use of goal setting and adoption of a more enjoyment-focused approach to soccer helped her to increase her motivation and form during practice, leading to enhanced performance on their field. As a senior and team leader, her buy-in to the intervention helped influence other players to embrace the enjoyment-focused MST program, which aided in intervention effectiveness. Intrinsic sport enjoyment was suggested to significantly influence performance, and furthermore enjoyment was correlated with an increase in other mental skills (i.e., goal setting, self-talk, confidence). These aspects (i.e., goal; setting, self-talk, confidence) are foundations of mental skills training programs, yet traditional MST may have lacked an appreciation of the impact on sport enjoyment.

As is the case in many interventions in which there is a significant coach-athlete or consultant-athlete relationship (MacDonald, Cote, Eys, & Deakin, 2011; Mageau & Vallerand, 2010), achieving buy-in and developing rapport are paramount. In this case, the consultant's multiple year experience with other athletes, coaches, and teams in the athletic department was fundamental in establishing trust and buy-in with the coaches and athletes. If past experience with associated players and teams is not an option, a consultant's previous sport experience can be substantial although not required, which in this case even further bolstered the consultant's credentials in the eyes of the players, and very much so in establishing trust by the coaching staff that the information and intervention presented would be effective and appropriate for the soccer season. A script for establishing rapport can be difficult as any good consultant has his or her own way to do so, but without solid rapport it can be difficult to achieve intervention effectiveness. In this case, the consultant had extensive experience working in a clinical mental health setting, which helped pave the way for effective interpersonal skills, and although that is not always a given in sport and exercise psychology, a solid understanding of counseling psychology and/or "helping skills" may aid consultants who are having difficulty developing rapport with their client and helping them achieve skill mastery and application.

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TABLE 1. Overall statistics for battery of instruments across season. Group 1 is Sarah, Group 2 is the rest of the treatment group.

	Group	
	1	2
	Mean	Mean
CMSQ_D0_T1	6.00	3.83
CMSQ_D0_T3	3.67	4.02
CMSQ_FE_T1	4.00	2.31
CMSQ_FE_T3	2.40	3.00
CMSQ_DF_T1	4.60	4.69
CMSQ_DF_T3	4.80	4.60
CMSQ_WF_T1	3.00	3.86
CMSQ_WF_T3	2.50	3.29
SAS_Somatic_T1	1.80	2.14
SAS_Somatic_T3	2.00	1.66
SAS_Worry_T1	4.00	2.66
SAS_Worry_T3	2.40	2.83
SAS_ConDis_T1	1.80	2.03
SAS_ConDis_T3	1.80	1.60
SCI_Mental_T1	4.00	5.09
SCI_Mental_T3	5.60	5.69

(continued)

	Group	
	1	2
	Mean	Mean
(continued)		
SCI_Physical_T1	5.00	5.54
SCI_Physical_T3	6.40	5.80
TOPS_GS_T1	3.50	2.86
TOPS_GS_T3	4.25	3.89
TOPS_Relax_T1	4.00	2.54
TOPS_Relax_T3	3.00	2.68
TOPS_ST_T1	2.75	3.00
TOPS_ST_T3	4.50	3.75
Stats1half	3	1
Stats2half	6	2
SEYSQ_Int_t1	3.92	4.21
SEYSQ_Int_t2	4.54	4.10
SEYSQ_Ext_t1	4.23	4.16
SEYSQ_Ext_t3	4.08	4.46
IES1	14	19
IES3	23	17

TABLE 2. Means and Standard Deviations for Treatment and Control Groups for Pre- and Post-Season Assessments Enjoyment, Motivational Styles, Trait Sport Anxiety, Trait Sport Confidence, and Subscales of the Test of Performance Strategies-2

	Treatment				Control				Overall				Group X Time	
	n=8				n=11				n=19					
	Pre-Season		Post-Season		Pre-Season		Post-Season		Pre-Season		Post-Season			
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD	F	P
Enjoyment	4.2	.2	4.4	.4	4.5	.4	4.3	.3	4.4	.4	4.3	.4	4.12	.05
CMSQ – Doubt Orientated	4.1	1.5	3.9	1.3	4.7	.5	3.5	.4	4.5	1.1	3.7	.9	3.05	.05
CMSQ – Failure Evader	2.5	.8	2.9	.9	2.3	.7	4.3	.9	2.4	.8	3.7	1.1	5.93	.01
CMSQ – Development Focused	4.7	.6	4.6	.8	4.7	.7	3.9	.8	4.7	.6	4.2	.9	1.24	.16
CMSQ – Win Fixated	3.8	.9	3.2	1.1	2.9	1.1	3.9	.6	3.3	1.1	3.6	.9	5.38	.05
SAS – Somatic	2.1	.8	1.7	.5	2.2	.7	2.4	.6	2.1	.7	2.1	.6	2.08	.17
SAS – Worry	2.8	.8	2.8	1.0	3.0	.9	2.0	.5	2.9	.8	2.3	.8	4.82	.04
SAS – Concentration Disruption	2.0	.8	1.6	.6	1.4	.6	2.4	.8	1.7	.7	2.1	.8	4.49	.01
SCI – Mental	4.9	1.4	5.7	.9	5.5	.7	5.6	1.1	5.3	1.1	5.6	.9	1.11	.06
SCI – Physical	5.5	.6	5.9	.9	5.4	.9	4.4	.9	5.4	.8	5.0	1.2	4.67	.01
SCI – Resilience	4.5	1.2	5.3	1.2	4.6	.9	5.7	.7	4.6	1.1	5.5	.9	.20	.66
TOPS – Goal Setting	2.9	.6	3.9	.6	3.0	.7	3.7	.6	2.9	.6	3.8	.6	.71	.41
TOPS – Relaxation	2.7	.7	2.7	.8	2.3	.8	2.8	.8	2.5	.7	2.8	.8	1.15	.29
TOPS- Self-Talk	2.9	.7	3.8	.6	3.4	.8	2.8	.6	3.2	.8	3.3	.8	4.24	.004
Performance	.9	1.4	2.1	3.1	.6	.8	.9	1.0	.7	1.1	1.4	2.2	2.68	.12