Online Group Intervention with High-Performance Youth Athletes for Mental Skills and Safeguarding

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Abstract

Athlete safeguarding is fostered by empowering young athletes and providing them tools to reinforce their mental health, as a protective measure against potential maltreatment and to deal with competitive pressure. This study explores the impact on young athletes’ mental health of an online, group psychological intervention constructed on well-being factors theorized by Seligman. Seven athletes, aged from 15 to 19 years of age, followed a five-stage psycho-educational intervention, that focused on Motivation, Stress management, Relationships with adults, Sport and school reconciliation, and Body image. They were asked to fill in a questionnaire on mood states (POMS) and on competitive state anxiety (CSAI-2) before and after the intervention. Additionally, qualitative data were gathered shortly after the end of the sessions, with self-reported assessment about the different skills athletes had been developing through the intervention. Quantitative results show a significant decrease in cognitive and somatic anxiety, and an increase of self-confidence. Qualitative results illustrate how athletes applied the tools in practical settings and evaluated their utility. In conclusion, this study invites further research into psychological interventions that are adapted to youth sports settings, aiming to simultaneously improve mental health conditions and protective factors against maltreatment in sport.

Résumé

La protection des athlètes est favorisée par l’autonomisation des jeunes athlètes et la mise à leur disposition d’outils pour renforcer leur santé mentale, en tant que mesure de protection contre d’éventuels mauvais traitements et pour faire face à la pression de la compétition. Cette étude explore l’impact sur la santé mentale des jeunes athlètes d’une intervention psychologique de groupe en ligne fondée sur les facteurs de bien-être théorisés par Seligman. Sept athlètes, âgés de 15 à 19 ans, ont suivi une intervention psycho-éducative en cinq étapes, axée sur la motivation, la gestion du stress, les relations avec les adultes, la conciliation du sport et de l’école, et l’image corporelle. Il leur a été demandé de remplir un questionnaire sur l’humeur (POMS) et sur l’anxiété liée à l’état de compétition (CSAI-2) avant et après l’intervention. En outre, des données qualitatives ont été recueillies peu après la fin des sessions, avec une évaluation auto-rapportée des différentes compétences que les athlètes ont développées grâce à l’intervention. Les résultats quantitatifs montrent une diminution significative de l’anxiété cognitive et somatique, ainsi qu’une augmentation de la confiance en soi. Les résultats qualitatifs illustrent la façon dont les athlètes ont appliqué les outils dans des contextes pratiques et ont évalué leur utilité. En conclusion, cette étude invite à poursuivre les recherches sur les interventions psychologiques adaptées aux contextes sportifs des jeunes, dans le but d’améliorer simultanément les conditions de santé mentale et les facteurs de protection contre la maltraitance dans le sport.

Mots-clés: psychologie du sport, santé mentale, talents, prévention des abus
Introduction

Safeguarding initiatives in sport have mainly focused on coaches and educators as the main potential perpetrators of maltreatment [1,2,3]. This has led to evidence-based programs like the Positive Youth Development-focused Coach Education Programs [4], which promote healthy environments and long-term performance opportunities for athletes [5]. Little research exists on youth athlete interventions, which provide emotional and mental skills tools [6] and promote awareness of the risks of, and strategies to avoid, abuse [7,8,9], as a means of athlete protection.

According to Seligman’s [10] well-being theory, mental health can be promoted through interventions that foster the development of the five elements of well-being: pleasure, engagement, meaning, positive relationships and accomplishment [10]. To this end, interventions should not target the development of “mental toughness” [11], but rather consider the challenge of developing sporting performance while preserving athletes’ mental health within a multi-faceted self-identity, including biological, vocational, relational and psychological aspects [12,13]. In this vein, Piffaretti & Pedrazzini-Pesce [14] set up a 5-stage, group intervention, which proved to be efficient in decreasing difficulties in reconciling sport-school conflicts, while increasing perceived meaningfulness in a group of 28 young athletes. Consequently, the authors of the present study paired up with a regional center for high-performance youth track and field athletes in French-speaking Switzerland to organize an online intervention composed of five workshops focused on mental skill development in athletes to facilitate sporting performance [15], while educating them about the risks of abuse in sport. The intervention was conducted via online group discussion, despite the barriers the format imposes [16,17]. Aligned with the advice of Henriksen et al. [6], the intervention was structured with a “holistic” perspective, targeting athletes’ long-term athletic careers and incorporating their reflections on their interactions with parents and athletic trainers.

Through this study, we sought to understand the potential positive effects of an intervention focused on high-performance youth athletes by measuring their anxiety levels and moods. In addition, we explored the potential links between improved mental skills and the capacity to communicate effectively while preventing abuse [10].

Methods

The intervention was conducted in five evening workshops delivered bi-weekly via online video conferencing. Sessions were led by two clinical sport psychologists and a doctoral student. A fourth practitioner, a sport nutritionist, led the final session. Each of the five workshops (see table 1) focused on a particular theme and a specific mental skills tool, four of which were selected for their link to well-being theory [10]. The fifth tool was chosen due to its particular relevance to the adolescent population targeted.
Athletes were encouraged to practice the mental skills tools between sessions. Each session began with an open forum for athletes to share their experiences with the tool presented in the prior session, whilst practitioners answered questions and provided feedback on the athletes’ experiences. Periods of reflection are a key element in the pedagogical and learning processes, particularly as they relate to sport skill development [18,19,20]. Sessions were recorded and sent electronically to those unable to attend at the time of the event so that they all had the opportunity to watch the presentations.

Nine athletes began the intervention, one dropped out before the final session, and one did not complete the post-intervention assessments, leaving a final sample of seven athletes (n = 7). The athletes were all women aged between 15 and 19, and competed in multiple sport disciplines.

Participants voluntarily completed two quantitative online assessments: a French version of the Competitive State Anxiety Inventory 2 (CSAI-2) [21] and an abridged version of the French version of the Profile of Mood States (POMS-f) [22]. The full POMS-f consists of seven mood categories and the Global Score, scored on a 65-item Likert scale questionnaire. To abbreviate this format for a younger audience, we reduced the number of items to 30, and eliminated the seventh category “Interpersonal Relationships”. Athletes also completed a quantitative assessment of the perceived usefulness of the mental skills tools and the frequency with which they used them. Finally, they answered open-ended qualitative questions about the intervention.

The data were collected via an online survey platform, apart from one participant’s responses, which were collected using a method described below. Participants completed the CSAI-2 and POMS-f prior to the first session of the intervention, and again after the last session, with a delay period to allow for a similar phase of trial and reflection with the fifth mental skills tool.
Given the small sample and the applied setting of the study, we decided to analyze the data looking at the Minimal clinically important difference (MCID), in particular adopting a distribution-based standardized mean difference, with 0.5 as a threshold MCID value [23,24]. The novel element of this data collection methodology was to offer athletes the opportunity to submit qualitative feedback and quantitative evaluations of the mental skills tools via WhatsApp. Our hypothesis was that this method would be more appealing to a younger population and would provide the opportunity to (a) further reflect on the questions, and thus provide richer responses, and (b) respond via voice message, similarly facilitating longer and more in-depth responses.

Participants were informed of this methodological choice in the final session. Two participants requested to answer via WhatsApp, though one ultimately did not respond to the surveys. An independent phone number and WhatsApp account were used to contact the participant responding via WhatsApp. Questions were asked in the same order as in the online platform. Given the back and forth of the text messaging system, the response collection period for the WhatsApp responses lasted nine days.

All communication throughout the intervention and assessments was conducted in French.

Figure 1 graphically illustrates the pre- and postintervention CSAI-2 assessments and the corresponding MCID values.
Results

Quantitative Results

<table>
<thead>
<tr>
<th></th>
<th>Usefulness</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>SMART goals</td>
<td>3.43</td>
<td>1.05</td>
</tr>
<tr>
<td>Mindful breathing</td>
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</tr>
<tr>
<td>Non-violent communication</td>
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</tr>
<tr>
<td>Agenda</td>
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<td>0.45</td>
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<td>Positive body mantra</td>
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<td>0.99</td>
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</table>

Note: n = 7

*Table 2 contains the summary of the quantitative assessment of the usefulness (from 1 = not at all useful to 5 = very useful) and frequency (from 1 = never to 5 = always) of use of the mental skills tools introduced in the intervention.*

<table>
<thead>
<tr>
<th></th>
<th>Preintervention</th>
<th>Postintervention</th>
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<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Anxiety-tension [ANX]</td>
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<tr>
<td>Anger-hostility [COL]</td>
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<tr>
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<td>4.89</td>
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<tr>
<td>Depression-discouragement [DEP]</td>
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<tr>
<td>Fatigue-inertia [FAT]</td>
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<td>1.95</td>
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<td>3.20</td>
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<tr>
<td>Vigor-activity [VIG]</td>
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<td>2.38</td>
<td>19.57</td>
<td>4.39</td>
</tr>
<tr>
<td>Global score [ScG]</td>
<td>29.00</td>
<td>13.22</td>
<td>21.43</td>
<td>15.01</td>
</tr>
</tbody>
</table>

Note: n = 7, Interpretation: * some evidence

*Table 3 shows the results of the POMS-f assessments before and after the intervention.*

Qualitative Results

The qualitative assessment consisted of five groups of questions:
1. Talk about a time when you were able to use one or more of the tools we discussed together. How did you feel at that time(s)?
2. Will you behave differently in your sports life after this group intervention? And if so, what will you change?
3. What reflections on your experience as an athlete did you have during this course?
4. Would you recommend this cycle of sessions to any of your teammates? If yes, for what reasons? If not, why not?
5. Are there any topics that were not discussed or were not very well covered that you would have liked to see developed? If so, which ones?

Responses were analyzed and coded in relation to 2 of the 5 explored themes: pleasure/positive emotions and positive relationships.

Pleasure/positive emotions

In general, athletes’ self-reflection highlighted the pressure they feel they put on themselves:

“I’ve slowly tried to stop putting so much pressure on myself. Even in training, I was under my own pressure now I’m trying to be less hard on myself, accepting the fact that everything can’t be perfect all the time.”

To deal with that stress or intrusive negative thoughts, several athletes found the mindful breathing tool to be very helpful, especially in stressful situations:

“Breathing helps me when I feel overwhelmed. It helps me refocus.”

“I have tried several times to use mindful breathing in times when I was under too much stress, such as the day before a competition or the morning itself. It helped me a lot to relax and clear my head of all my thoughts.”

Athletes also had positive experience with the STOP technique (a four-stage mindfulness practice for moments of emotional conflict) to change their mental attitude when confronted to stressful situations:

“During an indoor competition, I used the STOP technique to try to reduce my stress...I wrote it that very morning on my wrist so that I could remind myself of it when warming up or even before getting into my starting blocks. And in the end, it helped me a lot, I knew how to be more relaxed and my performance was better.”

Positive relationships

Non-violent communication was mentioned once in an example of a discussion with a coach about the athlete’s return to sport after an injury:

“...The comments can piss me off but because of non-violent communication I think he gets it.”

The session on relationships allowed athletes to realize the importance of being honest and speaking with coaches with clarity about their own needs. For example, the need to rest or modify training programs depending on how the body feels:
“I will improve communication with the coaches and if I am in pain or tired, I will tell them directly.”

To adopt such a direct communication style, athletes realized that they had to question their own tendency to worry about coaches’ perceptions, and focus on their own self-evaluation:

“[I will] stop asking myself all the time if my coach will be proud of me/disappointed after my performance (more focus on my own feelings).”

There were multiple examples of how the mental skills tools facilitate each other. For instance, an athlete found the power of mindful breathing to boost their communication skills:

“[Mindful breathing] can help me in stressful situations, but also when I need to talk to certain people about something important (non-violent communication). So it would change my state of stress and I would dare to go talk about it if something is not right.”

**Discussion**

The data collected alongside this intervention suggests that a short-form, online intervention can produce significant changes in high-performance youth athletes’ mental states. Although the well-being theory [10] was not thoroughly tested through a quantitative approach, some elements of the data open interesting perspectives of the potential benefits of this kind of intervention to promote both mental health and augmented mental skills, which are potentially associated with positive performance [15].

The quantitative CSAI-2 data is perhaps the most convincing illustration of the impact of the intervention, particularly related to the “Pleasure/positive emotions” component of Seligman’s theory, as it shows some evidence of reduction in all three categories that the inventory assesses. The changes can be interpreted as an indication that the intervention had an impact on reducing athletes’ somatic and cognitive anxiety scores and increased their self-confidence for competition. For the POMS-f, while all mood categories showed a reduction in mean score, some evidence of reduction was in the ANX category, which arguably corresponds to the reduction in CSAI-2 anxiety scores, and the positive effect on “pleasure/positive emotions”. Besides, some evidence is shown also in the reduction of anger-hostility, confusion, and in the global ScG score. Finally, no significant evidence was found concerning the reduction of depression, fatigue and vigor, suggesting that to affect such moods a longer-term intervention might be necessary, as shown in the exercise-related literature.

The intervention aimed to develop the athletes’ mental well-being by developing their skills to remain focused, serene, open and honest in their communication. The qualitative data show encouraging signs that corroborate our hypothesis. For example, non-violent communication was introduced to help athletes better communicate with their coaches and parents, not only regarding goals and performance, but also in disclosing an illness or injury that the athlete might otherwise hide, thus putting themself at risk for overtraining or serious injury. The
issues of abuse were discussed throughout the sessions as examples of how the mental skills tools could be used, such as mindful breathing and the STOP technique. That these techniques were useful in helping athletes relate to coaches and parents with efficient communication suggests that providing athletes with emotional management tools contributes to their confidence and thus diminishes the risk for abusive relationships, as athletes are equipped with mental skills that make them more apt to successfully cope with relational issues. Lastly, one athlete asked to further pursue this work by requesting individual follow-up. This type of request reinforces our idea that a group intervention is not only directly beneficial, as suggested by this article, but also indirectly, by making the participants aware that individualized help is available and useful in their parallel pursuit of sport objectives and mental health. The individualized approach that might follow the collective approach could help tailor the application of the specific techniques that at times proved to be counterproductive in the group setting.

The data collected from this intervention show encouraging signs of the impact that even a short, electronically delivered intervention can have on the lives of young athletes, nurturing well-being in their quest for self-expression and performance. Both quantitative and qualitative feedback showed a noticeable reduction in anxiety and an increase in self-confidence. All final respondents indicated that they would recommend participation in a similar intervention to their teammates. We encourage clinicians to use this experience as a basis from which to explore similar methodologies and interventions in the pursuit of athletes’ health.

Conflicts of Interest
The intervention was financed through the training center, but the parallel research was conducted independently.

Practical Implications
- Short-form, online, group interventions with high-performance youth athletes can significantly reduce anxiety and increase self-confidence
- High-performance youth athlete stress and anxiety may at times be linked to self-imposed pressures, which can be alleviated through practices like guided self-reflection, mindful breathing, non-violent communication with others, and a positive body mantra
- Education to prevent abuse can successfully be implemented as part of a performance-based intervention for young athletes, provided it is grounded on an evidence-based and comprehensive model of intervention.

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References
