



## Mental training in group settings: Intervention protocols of a mindfulness and acceptance-based and a psychological skills training program

Philipp Röthlin & Daniel Birrer

To cite this article: Philipp Röthlin & Daniel Birrer (2019): Mental training in group settings: Intervention protocols of a mindfulness and acceptance-based and a psychological skills training program, Journal of Sport Psychology in Action

To link to this article: <https://doi.org/10.1080/21520704.2018.1557771>



Published online: 23 Jan 2019.



Submit your article to this journal [↗](#)



View Crossmark data [↗](#)



# Mental training in group settings: Intervention protocols of a mindfulness and acceptance-based and a psychological skills training program

Philipp R othlin and Daniel Birrer

Swiss Federal Institute of Sport Magglingen, Magglingen, Switzerland

## ABSTRACT

This article provides protocols of a mindfulness and acceptance-based intervention and a psychological skills training intervention. Both consist of four 90 minute group workshops in a time period of one month. All workshops were accompanied with methods that support behavioral change. We considered four principles in the program development to support behavioral change (i.e., supporting processing and learning of the workshop content, strengthening motivation to get involved with the program, promoting regular practice of formal exercises, reactivation of content between workshops). We conclude with evaluating the participants' feedback on the workshops and by giving advice how practitioners could use these programs.

## KEYWORDS

Acceptance and commitment therapy; competitive sport; group intervention; mindfulness; performance enhancement

This article aims to provide sport psychology practitioners with detailed protocols of two group intervention programs: a mindfulness and acceptance-based intervention (MAI) and a psychological skills training intervention (PST). We describe the two intervention programs in a way that allows practitioners to understand and use the theoretical contents and the practical exercises. The two intervention programs were created as part of a randomized control trial study (RCT) in which we investigated the impacts of the MAI and the PST program. The principal idea of our RCT study was to examine the effects of mental techniques that we teach our athletes in our daily work. All contents and exercises that occur in the programs we describe in this article are those we use in our applied services within competitive sport. We will reflect on the development and the implementation of the two intervention programs and present preliminary results of the participants' feedback on the perceived workshop impact. However, presenting any further results of the RCT study is beyond the scope of this article.

## Theoretical background

Psychological skills training describes a set of mental training techniques often used by sport psychology practitioners. Usually, these techniques encompass the regulation of physiological arousal, imagery, self-talk, and goal setting (Vealey, 2007). The psychological skills training approach stems mainly from cognitive behavioral therapy. The theoretical background of cognitive behavioral therapy implies that desirable behavior depends on corresponding internal states (i.e., thoughts, feelings, and bodily experiences, Birrer & Röthlin, 2017). Consequently, to be able to perform when feeling anxious, an athlete would use psychological skills training techniques to alter his or her internal state and, for example, to feel less anxious.

In contrast, therapy forms of the so-called “third wave” of behavioral therapy do not focus on changing the content of the experience but on the individual’s relationship to it. Behind this principle stands the basic assumption that people whose behavior is independent of internal states are better able to act in accordance with their values and goals (Hayes, 2004). The cultivation of mindfulness is central to all third-wave therapies, like, for example, Acceptance and Commitment Therapy (ACT, Hayes, Luoma, Bond, Masuda, & Lillis, 2006). Mindfulness describes the ability to observe present experience with an accepting and open attitude (Bishop et al., 2004). Consequently, an athlete would use mindfulness to act according to his or her goals and values, *despite* feeling anxious.

## Guiding principles of developing the two programs

Two basic organizational features in the conceptualization of the intervention programs offered in this paper were group size and duration. When we developed the group intervention programs, we had a group size of four to twelve athletes in mind. This group size allows enough room for interpersonal exchange and the discussion of questions. Both programs consist of four 90 minute group workshops, which take place over a period of one month. Research suggests that this is long enough to have an effect on habitual mindfulness (Bergen-Cico, Possemato, & Cheon, 2013) and from our experience as applied sport psychologists in elite sport, we determined that this is an amount of time athletes would probably be willing to invest.

All psychological interventions aim to change human behavior somehow. Some of these interventions, such as ACT, even explicitly make behavior change a central feature of their protocol. One of the six core processes of ACT is *committed action*, which includes various behavior change methods. In this regard, ACT is very similar to traditional forms of cognitive behavior therapy (Hayes et al., 2006).

We aimed to design both of our intervention programs in a way that maximized behavioral change. In order to achieve that goal, we considered four partly overlapping guiding principles in the program development: (1) supporting processing and learning of the workshop content, (2) strengthening motivation to get involved with the program, (3) promoting regular practice of formal exercises, and (4) the reactivation of content between workshops.

The first point concerns support for the processing and learning of the workshops' content. When we created the programs, we made sure that there was a good mix of psychoeducation, hands-on exercises, self-paced worksheets, and opportunities to share thoughts and ask questions. Wherever possible, we used pictures, videos, and graphics to illustrate the learning content. We made sure that already-discussed content was addressed repetitively in other, shorter forms.

The second point concerns strengthening the motivation of participants to get involved with the program. In the first workshop, athletes had to think about how they would notice (i.e., in which training and competition situations) that they have progressed mentally and what important goal they could better reach as a consequence. Based on these reflections, all participants developed their personal "motivation sentence" (e.g., "If I progress mentally, I will increase training quality and therefore increase my chance to be selected for the national team"). We aimed to strengthen the participants' motivation by creating a link between our intervention programs and a meaningful and attractive personal goal. Participants were reminded of their "motivation sentence" repeatedly during the intervention programs. Another step to strengthen motivation involved establishing the personal relevance of the intervention content and the exercises for the athletes. This relevance was achieved by having participants write down their learnings and insights and how exactly they could transfer this information to their individual sports environment. We also taught participants implementation intentions (if-then plans). We considered the process of realizing an insight into a personal and concrete action plan as very important. By establishing a personal relationship to the learning content, a standardized group intervention might be similar to a consultation with an individual athlete, in which we usually tailor mental techniques specifically for each athlete.

The third point concerns promoting regular practice between workshops at home. In the workshops, we applied formal exercises fitting the contents of the program (e.g., a mindfulness exercise with the MAI participants or a relaxation exercise with the PST participants). At the end of each workshop, the participants set a goal for how often (i.e., on how many days) they wanted to do the exercise at home in the following week. During the

workshop, we discussed obstacles to practice (e.g., tiredness or “not feeling like it”) and discussed possible solutions (e.g., doing the exercise every day at the same time, setting an appointment to do the exercise, exercising even when feeling tired, or using implementation plans). All athletes also received the exercise instructions in the form of guided audio files. Participants were encouraged to practice as much as possible by receiving information that repetition is crucial to automate desired psychological processes.

The fourth point concerns the reactivation of content between workshops. After each workshop, participants received homework for the following week. We also sent each participant a text message every day for the duration of the intervention. The message contained a short exercise that fits with the content discussed in the workshops. The text messages made it possible to implement the intervention content in the athletes’ everyday life in a simple and practical way, and repeatedly made participants aware that they were currently completing an intervention program about mental training. It was our intention that these reminders, together with the homework, would activate the athletes’ lessons from the workshops, which, again, supported memorizing and transfer of the workshop content into their daily lives (a list of the text messages is available from the authors upon request).

### **Mindfulness and acceptance-based intervention**

Following the principles of ACT, the goal of the MAI program was to teach athletes psychological flexibility. This key term of ACT means the “ability to act effectively and in accordance with personal values, in the presence of interfering thoughts, emotions, and bodily sensations” (Wicksell, Olsson, & Hayes, 2010, p. 1059.e1). Mindfulness processes are essential to foster psychological flexibility. In ACT, mindfulness is taught and promoted via three separate processes: (1) *present moment attention* (i.e., being able to focus on present moment experience), (2) *defusion* (i.e., being able to perceive and distance oneself from inner states), and (3) *acceptance* (i.e., being able to accept and endure unpleasant states). These three processes correspond to three of the six core processes of ACT. While in ACT all six core processes are applied to strengthen psychological flexibility, in our MAI program, we almost exclusively used mindfulness (via the three mentioned processes). A fourth core process of ACT, *value clarification*, was treated to a small extent in the fourth workshop.

The worksheets and graphics for the PowerPoint presentation used in the MAI group stem from the book *Therapy-Tools Acceptance and Commitment Therapy*, which includes ACT exercises (Wengert, 2012).

Because this book is not sport-specific, we adapted the worksheets so they would fit a competitive sport context. The psychoeducation about how emotions arise was based on the *Training of Emotional Competences* (Berking, 2010).

### **Description of the workshops**

The first MAI workshop began by giving participants an overview of the program. The detailed content of all four MAI workshops is listed in Table 1. Each workshop covered more than one process, but the focus was put on one selected process. The focus in Workshop 1 was present moment attention; in Workshop 2, defusion; and, in Workshop 3, acceptance. Workshop 4 consisted of a repetition of all three previous foci.

At the end of each workshop, participants were guided through a formal mindfulness exercise (transcripts of the exercises are available from the authors upon request). In the first workshop, participants were guided through a simple breathing meditation exercise in which they were advised to focus on the sensation of their breath and to bring their attention back to the sensation in case they divagate. The exercise used in the second workshop contained two parts. The first part was a shorter version of the exercise used in the first workshop; in the second part, participants were advised to bring attention first to their bodily sensations, then to their emotions, and then to their thoughts. Finally, participants were advised to activate “acceptance” toward their current experience. The exercises lasted 10 and 13 min, respectively. In Workshop 3, the second exercise was used. In Workshop 4, participants could choose between exercises 1 and 2.

At the beginning of each workshop (except for Workshop 1), participants were asked about their experiences in the previous week. They shared their experiences about what worked for them and what did not. There was a discussion about how the formal exercises went (i.e., whether participants could practice as much as they aimed for and what helped them practice). Every effort to practice was praised. Then, questions regarding the content of the workshop of the previous week were clarified before beginning the current workshop.

### **Psychological skills training intervention**

The goal of the PST program was to teach participants four mental techniques in a way that enabled them to apply these techniques during their training and in competitions. The four instructed methods are (1) techniques to regulate physiological arousal (Acharya & Morris, 2014), (2) imagery (Gould, Voelker, Damarjian, & Greenleaf, 2014), (3) self-talk (Van

**Table 1.** Overview of detailed workshop content.

Mindfulness and acceptance-based program	Psychological skills training program
<p><b>Workshop 1</b></p> <ul style="list-style-type: none"> <li>• Sport psychologist and participants introduce themselves</li> <li>• Overview of the program and explanation of the three processes that promote psychological flexibility: present moment attention, defusion, and acceptance</li> <li>• Worksheet: Classify experiences in thoughts, emotions, bodily sensations, and impulses (e.g., “Peter is sick” is a thought)</li> <li>• Exercise: Being aware of own experiences for two minutes and classifying them into the four categories</li> <li>• Theoretical input: bases of attention (why is it normal to divagate? Why is it important for your performance to focus on the present moment?)</li> <li>• Formulation of own “motivation sentence” (i.e., participants connect the program with a meaningful personal goal)</li> <li>• Formal exercise mindfulness: Breathing meditation (MAI Exercise 1)</li> <li>• Theoretical input: importance of repetition to automate processes</li> <li>• Video of Kobe Bryant where he says he meditates every day</li> <li>• Participants set a goal for how many times they want to do the formal exercise in the following week; discussion about possible barriers and solutions</li> <li>• Homework: Participants try to classify their experiences for one to two minutes at least once; participants do MAI Exercise 1 according to their own objective; participants put text message reminders into practice</li> </ul>	<p><b>Workshop 1</b></p> <ul style="list-style-type: none"> <li>• Sport psychologist and participants introduce themselves</li> <li>• Overview of the program and definition of the four PST techniques: arousal regulation, imagery, self-talk, goal setting</li> <li>• Discussion about the difference between outcome, performance, and process goals</li> <li>• Theoretical input: biological basis of the stress reaction</li> <li>• Explanation of the curvilinear connection between tension and performance (inverted U-curve, Yerkes &amp; Dodson, 1908); self-assessment of participants (how do I feel right now, i.e., too tense? Too relaxed? Just right?)</li> <li>• Formulation of own “motivation sentence” (i.e., participants connect the program with a meaningful personal goal)</li> <li>• Formal exercise relaxation: Progressive muscle relaxation and breathing relaxation (PST Exercise 1)</li> <li>• Exercise activation breathing: Participants check if they can raise their pulse rate by breathing in quickly five to seven times</li> <li>• Input: Importance of repetitions to automate processes</li> <li>• Participants set a goal for how many times they want to do PST Exercise 1 in the following week; discussion about possible barriers and solutions</li> <li>• Homework: Participants set and evaluate one process goal in at least one training; participants do PST Exercise 1 according to their own objective; participants put text message reminders into practice</li> </ul>
<p><b>Workshop 2</b></p> <ul style="list-style-type: none"> <li>• Review of the past week: Discussion about participants’ experiences in the previous week (i.e., what worked for them and what did not, how did the formal exercises go, whether participants could practice as much as they aimed for, and what helped them practice), praising every effort to practice, clarifying questions on the content of the previous week’s workshop</li> <li>• MAI Exercise 1</li> <li>• Theoretical input emotions: How do they arise, what happens in the body and the brain, why does acceptance make sense</li> <li>• Exercise acceptance: Monster at the wayside (i.e., participants learn that one is more likely to act in accordance to own values when not fighting unpleasant inner experiences)</li> <li>• Theoretical input defusion: Thoughts are an event in the brain and may—but do not have to—represent reality; we have many thoughts every day, and not all of them are helpful, true, or relevant; metaphors (e.g., brain as a thought machine)</li> <li>• Exercise defusion: two peoples react differently when reading a negative sentence (panic vs. calm); what does that mean for how we can react to our own inner sentences (= thoughts)?</li> <li>• Defusion strategies: e.g., “I am having the thought that I am a failure” instead of “I am a failure”</li> </ul>	<p><b>Workshop 2</b></p> <ul style="list-style-type: none"> <li>• Review of the past week: Discussion about participants’ experiences in the previous week (i.e., what worked for them and what did not, how did the formal exercises go, whether participants could practice as much as they aimed for, and what helped them practice), praising every effort to practice, clarifying questions on the content of the previous week’s workshop</li> <li>• PST Exercise 1</li> <li>• Theoretical input imagery: Definition and applications in sport; video of an athlete doing imagery on the slope; the image of a lemon (why does this picture affect us?)</li> <li>• Exercise with a paper clip on a thin thread to demonstrate that imagery leads to an activation of muscles</li> <li>• Worksheet: Athletes elaborate an individual form of imagery that is relevant for them (i.e., the imagery of a movement, a success, or a success in coping with a challenging situation)</li> <li>• Formal exercise imagery: Short progressive muscle relaxation and breathing relaxation and imagination of the situation that was previously elaborated with the worksheet (PST Exercise 2)</li> <li>• Repetition goal setting: Which goals are helpful for what outcome? How do I constructively evaluate my goals? Participants receive a worksheet for homework</li> </ul>

*(continued)*



**Table 1.** Continued.

Mindfulness and acceptance-based program	Psychological skills training program
<ul style="list-style-type: none"> <li>• Formal exercise mindfulness: Mindful breathing, the mindful experience of bodily sensations, emotions, and thoughts, consciously activating acceptance toward the present moment experience (MAI Exercise 2)</li> <li>• Participants set a goal for how many times they want to do MAI Exercise 2 in the following week</li> <li>• Homework: Participants read the FAQ about acceptance (e.g., that acceptance does not mean giving up); participants do MAI Exercise 2 according to their own objective; participants put text message reminders into practice</li> </ul>	<ul style="list-style-type: none"> <li>• Participants set a goal for how many times they want to do PST exercise 2 in the following week</li> <li>• Homework: Participants set and evaluate a process goal in at least three trainings, competitions, or games using the worksheet; participants do PST Exercise 2 according to their own objective; participants put text message reminders into practice</li> </ul>
<p><b>Workshop 3</b></p> <ul style="list-style-type: none"> <li>• Review of the past week</li> <li>• Short breathing meditation (five minutes)</li> <li>• Repetition of present moment attention: Exchange of experiences; discussion of “how does being in the present look like in your sport?”</li> <li>• Exercise story of the hungry little lion: What happens if you act according to your unpleasant emotions? In the short term (pleasant, lion goes away)? In the long term (cannot reach my goals, e.g., cooking dinner for my friends)? Solution: accept that the lion is there, and act in accordance with your values</li> <li>• Discussion about cultural messages of emotions: Participants think about their attitude toward emotions, learn that unpleasant feelings are normal, and that one does not have to feel good to be able to act according to one’s values</li> <li>• Exercise thoughts as a hobble or a pillow: finding one’s own thoughts that are hobbles or pillows</li> <li>• Participants read the list of defusion strategies (e.g., thanking the mind for a difficult thought and refusing in a friendly way to use it) and choose their favorite strategy</li> <li>• Transfer: Participants choose a challenging situation and formulate an individual if-then plan (e.g., If I make a mistake, I will realize ruminating thoughts, let them go, and focus on what I can do in the present moment)</li> <li>• MAI Exercise 2</li> <li>• Participants set a goal for how many times they want to do the formal exercise in the following week</li> <li>• Homework: participants formulate another if-then plan; participants do MAI Exercise 2 according to their own objective; participants put text message reminders into practice</li> </ul>	<p><b>Workshop 3</b></p> <ul style="list-style-type: none"> <li>• Review of the past week</li> <li>• The imagery of a success (five minutes)</li> <li>• Theoretical input self-talk: Definition and applications in sport; video of an athlete using self-talk in a competition</li> <li>• Exercise: Participants write down their own negative thoughts and positively reformulate them with help from the group</li> <li>• Worksheet: Participants elaborate their own “strong mindset” (i.e., three to six thoughts that help them perform)</li> <li>• Picture of a small and a tall tree: The idea that everybody has negative thoughts but what matters is cultivating the right mindset (i.e., the tall tree)</li> <li>• Formal exercise self-talk: Short progressive muscle relaxation and breathing relaxation, imagining a challenging situation in sport, and repetition of “strong mindset” (PST Exercise 3)</li> <li>• Transfer: Participants choose a challenging situation and formulate an individual if-then plan (e.g., If I make a mistake, I will relax my muscles and focus on my process goals)</li> <li>• Participants set a goal for how many times they want to do PST Exercise 3 in the following week</li> <li>• Homework: Participants set and evaluate a process goal in at least one training, competition, or game; participants formulate another if-then plan; participants do PST Exercise 3 according to their own objective; participants put text message reminders into practice</li> </ul>
<p><b>Workshop 4</b></p> <ul style="list-style-type: none"> <li>• Review of the past week</li> <li>• MAI Exercise 1 or 2 (participant’s choice)</li> <li>• Exercise two hikers: One hiker with a compass, the other hiker without; values are a compass; what kind of athlete do I want to be?</li> <li>• Exercise: Change a “but” into an “and”; participants learn to distinguish between true obstacles and obstacles that stem from language</li> <li>• Exercise: Thoughts as tools; participants get the idea that they can look at their thoughts as tools</li> <li>• Exercise: Utility check; participants check whether a particular thought is useful; if not, it is a thought that can be let go</li> </ul>	<p><b>Workshop 4</b></p> <ul style="list-style-type: none"> <li>• Review of the past week</li> <li>• PST Exercise 1, 2, or 3 (participant’s choice)</li> <li>• Repetition goal setting: Clarification of questions and discussion about how participants plan to use goal setting</li> <li>• Repetition self-talk: clarification of questions and discussion about how participants plan to use self-talk</li> <li>• Worksheet keywords for better concentration: a combination of goal setting and self-talk, one word for one process goal</li> <li>• Repetition arousal regulation: Clarification of questions and discussion about how participants plan to use arousal regulation</li> </ul>

*(continued)*



**Table 1.** Continued.

Mindfulness and acceptance-based program	Psychological skills training program
<ul style="list-style-type: none"> <li>• Repetition present moment awareness, defusion, and acceptance: Clarification of questions and discussion about how participants plan to use what they learned in the workshops</li> <li>• Transfer: Participants write down their most important two to four insights from the workshops and how they will apply these insights in their daily lives</li> <li>• Participants set a goal for how many times they want to do the formal exercise in the following week</li> <li>• Homework: Participants do MAI Exercise 1 or 2 according to their own objective; participants put text message reminders into practice</li> </ul>	<ul style="list-style-type: none"> <li>• Repetition imagery: Clarification of questions and discussion about how participants plan to use imagery</li> <li>• Transfer: Participants write down their most important two to four insights from the workshops and how they will apply these insights in their daily lives</li> <li>• Participants set a goal for how many times they want to do Exercise 1, 2, or 3 in the following week</li> <li>• Homework: Participants set and evaluate a process goal in at least one training, competition, or game; participants do PST Exercise 1, 2, or 3 according to their own objective; participants put text message reminders into practice</li> </ul>

Note. MAI = Mindfulness and acceptance-based intervention; PST = Psychological skills training intervention; contents are arranged in chronological order.

Raalte, Vincent, & Brewer, 2016), and (4) the setting and evaluation of goals (Weinberg & Butt, 2014).

The worksheets and graphics for the PowerPoint presentation used in the PST group stem from the book *Psyche*, which includes teaching material for coaches and sport psychologists (Birrerr, Ruchti, & Morgan, 2010). The psychoeducation about arousal regulation was based on the *Training of Emotional Competences* (Berking, 2010).

### **Description of the workshops**

The first PST workshop began by giving participants an overview of the program. The detailed content of all four PST workshops is provided in Table 1. Every workshop covered more than one PST technique, but the focus was on one or two techniques. The focus in Workshop 1 was arousal regulation; in Workshop 2, imagery and goal setting; and, in Workshop 3, self-talk. Workshop 4 consisted of a repetition of all four techniques.

At the end of each workshop, participants were guided through a formal exercise which corresponded to the focus of the respective workshop (i.e., a relaxation exercise in Workshop 1, an imagery exercise in Workshop 2, and a self-talk exercise in Workshop 3; transcripts of the exercises are available from the authors upon request). In Workshop 4, participants could choose one of the previous three exercises. The exercises lasted between eight and eleven minutes.

At the beginning of each workshop (except for Workshop 1), participants were asked about their experiences in the previous week. They shared their experiences about what worked for them and what did not. There was a discussion about how the formal exercises went (i.e., whether participants could practice as much as they aimed for and what helped them practice). Every effort to practice was praised. Next, questions regarding the content

of the workshop from the previous week were clarified before beginning the current workshop.

### **Participants' feedback**

This section discusses the participants' feedback regarding the workshops and their implications for sport psychology practice. Participants were asked to provide feedback on how they experienced the workshops in a survey that we designed to assess the effect of the intervention programs. Participants either attended the MAI or PST program, but not both. No participants quit the programs prematurely. In a few cases, a participant was not able to attend every meeting, but this was always for the purpose of other important obligations. The high participation rate suggests that our two programs were attractive regarding content and procedure for the athletes. This suggestion is supported by the fact that 75% of the athletes claimed to have benefited much or very much from the interventions, and many reported that they were happy with how the workshops were held and structured. The two programs did not differ in this regard.

Athletes in both groups (MAI and PST) gave positive feedback about the "technical support" (i.e., the text messages and the audio files, e.g., "the text messages were great"), and the fact that they have dealt with the topic of "mental strength" in the broadest sense (e.g., "I have benefited because it was the first time I have dealt with the subject of mental training" or "I became aware of the importance of mental aspects in sport"). These two points have two implications. First, these responses suggest that sport psychologists should consider using tools to support mental training exercises in their consultations, such as audio files and text messages. Second, these responses imply that applied sport psychology services should not lose sight of general impact factors independent of the psychological school. These include, as mentioned by the participants, "just" engaging with a topic but also others, like being able to solve a problem, the activation of the clients' resources, or the relationship with the consultant (Grawe, Donati, Bernauer, & Donati, 1994). Psychotherapy research illustrates the importance of such impact factors that are independent of a specific psychological school (Grawe, 2004).

On the one hand, common feedback in both groups (MAI and PST) was that the intervention helped to bring attention to performance-relevant aspects (e.g., "having my negative emotions under control helps me to focus on the match" (PST) or "I'm better able to forget mistakes and focus on my goals" (MAI)). On the other hand, an increased ability to detect, accept, and deal with unpleasant thoughts and emotions was reported by some participants of the MAI but rarely by participants of the PST group

(e.g., “I experience my thoughts and feelings more clearly”, “I learned to accept my negative thoughts”, or “I am able to distance myself from my thoughts and emotions in some situations”). These responses imply that for one topic (i.e., bringing attention to performance-relevant aspects), athletes perceive both intervention programs as helpful, while for another topic (i.e., detecting and accepting unpleasant experiences), only the MAI makes a difference from the athletes’ perspective.

There was also negative feedback. A few athletes in both groups said that the program “was just the same for everyone.” This statement is correct, of course, and we have tried, as mentioned above, to individualize the standardized content of the programs as much as possible to meet the individuals’ needs. In a group program, however, this individualization is not equally possible for all participants, and practitioners should be aware of that. The issue of the lack of individual adaptation is also reflected in the fact that some athletes felt that the program was “too short to really learn anything.” Different athletes need different amounts of time to adopt a mental strategy, even with the same amount of practice. This aspect also cannot be completely taken into account in a fixed-term group program. Nevertheless, we believe that the program offers some opportunities for applied sport psychologists.

### **How sport psychologists could use the programs**

Applied sport psychologists can use the programs presented here in various ways. A very good option is to run the full programs (either MAI or PST) with a group or a team as we described it. We consider both programs as suitable for athletes who are interested in a general introduction to mental training. The advantage of a group intervention is the provision of social support and the utilization of group processes (e.g., receiving ideas from others, seeing that others have similar problems, and athletes being able to motivate each other). It is also possible for practitioners to only treat some of the content and exercises and adapt them for their one-on-one sessions.

A question that arises is which of the two programs (MAI or PST) sport psychologists should implement. We recommend four steps to answer this question. The first step is an examination of the objective of the intervention (i.e., a consideration of the goals and needs clients have). Intervention programs that last several weeks and include a multitude of different exercises can potentially affect a variety of outcome variables. The second step is a search for empirical evidence of effective interventions that target the desired outcome. If there is empirical evidence that one approach (i.e., a mindfulness and acceptance approach or a psychological skills training approach) is better for the desired outcome, sport psychology practitioners should choose the more effective one. However, empirical evidence about

the effectiveness of intervention in applied sport psychology is generally limited. Therefore, in the third step, we have to revert to theoretical considerations to choose a particular intervention. Such considerations suggest that third-wave interventions, such as mindfulness and acceptance-based programs, are especially helpful when dealing with unpleasant experiences (Birrer, Röthlin, & Morgan, 2012) because the control of unpleasant thoughts and feelings has been reported to have detrimental effects (i.e., ironic mental processes, Wegner, 1994). For this reason, we believe that the MAI program is more helpful when dealing with unpleasant thoughts and emotions than the PST program. We, therefore, recommend that practitioners who want to help their athletes reach certain psycho-physiological states through psychological skills training (i.e., “change” strategy), should always teach the athletes alternative strategies (i.e., “accept” strategy) for situations where change is not possible. In the case where neither empirical reasons nor theoretical considerations favor one particular intervention program, the personal approach and training of the conducting sport psychologist should, in the fourth step, be the criterion for the decision to choose one of the two programs. In other words, sport psychologists should base their selection according to their education, preference and experience (e.g., in mindfulness training). That way, they will probably also appear more credible and convincing.

After a decision for an intervention program has been made, it is advisable to accompany the intervention with methods that support behavioral change. It is possible that both of our programs did not differ in regard to perceived attractiveness because they encompassed equal methods to support behavioral change. Future research should investigate this assumption. Using both—the specific MAI or PST exercises and methods of behavior change—we believe our programs fruitfully complement the sport psychology practitioners’ intervention repertoire and help increase the quality of their service to athletes.

## Funding

This research is funded by the Swiss National Science Foundation.

## References

- Acharya, J., & Morris, T. (2014). Psyching up and psyching down. In A. G. Papaioannou & D. Hackfort (Eds.), *Routledge companion to sport and exercise psychology: Global perspectives and fundamental concepts* (pp. 386–401). London, IL: Routledge.

- Bergen-Cico, D., Possemato, K., & Cheon, S. (2013). Examining the efficacy of a brief mindfulness-based stress reduction (brief MBSR) program on psychological health. *Journal of American College Health*, 61(6), 348–360. doi:[10.1080/07448481.2013.813853](https://doi.org/10.1080/07448481.2013.813853)
- Berking, M. (2010). *Training emotionaler Kompetenzen [Training of emotional competencies]*. Berlin: Springer.
- Birrer, D., & Röthlin, P. (2017). Riding the third wave: CBT and mindfulness-based interventions in sport psychology. In S. J. Zizzi & M. B. Andersen (Eds.), *Being mindful in sport and exercise psychology* (pp. 101–122). Morgantown, WV: FiT.
- Birrer, D., Röthlin, P., & Morgan, G. (2012). Mindfulness to enhance athletic performance: Theoretical considerations and possible impact mechanisms. *Mindfulness*, 3(3), 235–246. doi:[10.1007/s12671-012-0109-2](https://doi.org/10.1007/s12671-012-0109-2)
- Birrer, D., Ruchti, R., & Morgan, G. (2010). *Psyche. Theoretische Grundlagen und praktische Beispiele [Psyche. Theoretical basics and practical examples]*. Magglingen: Bundesamt für Sport, BASPO.
- Bishop, S. R., Lau, M., Shapiro, S., Carlson, L., Anderson, N. D., Carmody, J., ... Devins, G. (2004). Mindfulness: A proposed operational definition. *Clinical Psychology: Science and Practice*, 11(3), 230–241. doi:[10.1093/clipsy.bph077](https://doi.org/10.1093/clipsy.bph077)
- Gould, D., Voelker, D. K., Damarjian, N., & Greenleaf, C. (2014). Imagery training for peak performance. In J. L. Van Raalte & B. W. Brewer (Eds.), *Exploring sport and exercise psychology* (pp. 55–82). Washington, DC, US: American Psychological Association.
- Grawe, K. (2004). *Psychological therapy*. Boston, MA: Hogrefe Publishing.
- Grawe, K., Donati, R., Bernauer, F., & Donati, R. (1994). *Psychotherapie im Wandel: Von der Konfession zur Profession [Psychotherapy in transition: from denomination to profession]*. Göttingen: Hogrefe, Verlag für Psychologie.
- Hayes, S. C. (2004). Acceptance and commitment therapy, relational frame theory, and the third wave of behavioral and cognitive therapies. *Behavior Therapy*, 35(4), 639–665. doi:[10.1016/S0005-7894\(04\)80013-3](https://doi.org/10.1016/S0005-7894(04)80013-3)
- Hayes, S. C., Luoma, J. B., Bond, F. W., Masuda, A., & Lillis, J. (2006). Acceptance and commitment therapy: Model, processes and outcomes. *Behaviour Research and Therapy*, 44(1), 1–25. doi:[10.1016/j.brat.2005.06.006](https://doi.org/10.1016/j.brat.2005.06.006)
- Van Raalte, J. L., Vincent, A., & Brewer, B. W. (2016). Self-talk: Review and sport-specific model. *Psychology of Sport and Exercise*, 22, 139–148. doi:[10.1016/j.psychsport.2015.08.004](https://doi.org/10.1016/j.psychsport.2015.08.004)
- Vealey, S. R. (2007). Mental skills training in sport. In G. Tenenbaum, R. Eklund, & R. Singer (Eds.), *Handbook of sport psychology*. New Jersey: Wiley.
- Wegner, D. M. (1994). Ironic processes of mental control. *Psychological Review*, 101(1), 34–52. doi:[10.1037/0033-295X.101.1.34](https://doi.org/10.1037/0033-295X.101.1.34)
- Weinberg, R., & Butt, J. (2014). Goal-setting and sport performance. In A. G. Papaioannou & D. Hackfort (Eds.), *Routledge companion to sport and exercise psychology: Global perspectives and fundamental concepts* (pp. 343–355). London, IL: Routledge.
- Wengenroth, M. (2012). *Therapie-tools akzeptanz-und commitmenttherapie: Mit online-materialien [Therapy tools Acceptance and Commitment Therapy: Including online material]*. Weinheim: Beltz.
- Wicksell, R. K., Olsson, G. L., & Hayes, S. C. (2010). Psychological flexibility as a mediator of improvement in Acceptance and Commitment Therapy for patients with chronic pain following whiplash. *European Journal of Pain*, 14(10), 1059e1051–1059e1059. e1011.
- Yerkes, R. M., & Dodson, J. D. (1908). The relation of strength of stimulus to rapidity of habit-formation. *Journal of Comparative Neurology and Psychology*, 18(5), 459–482. doi:[10.1002/cne.920180503](https://doi.org/10.1002/cne.920180503)