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Men's artistic gymnastics, complex coordination sports, case study, guidelines, applied

Joar Svensson [1]

1. School of Health and Welfare, Halmstad University, Halmstad, Sweden.

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ABSTRACT

Men's artistic gymnastics is a complex coordination sport, where the risk of injury from the skills often leads to fear. Fear is complex, and both coaches and sport psychology practitioners (SPPs) can struggle to help gymnasts cope with fear. Through my work as a gymnastics coach and SPP, I have encountered several gymnasts who are afraid of skills. Studies have detailed the reasons for fear and how gymnasts cope with fear, but few studies have detailed the process of coaches and SPPs helping gymnasts cope with fear. As such, coaches and SPPs may find different strategies to cope with fear but lack information on how to use them. This article details two cases that I have encountered as a gymnastics coach and SPP, exemplifying the impact of fear and potential coping strategies. Two different approaches were taken in the cases, which both resulted in the gymnasts overcoming their fear. The lessons learned throughout these cases and my work as an SPP are distilled into guidelines that can guide coaches and SPPs in their attempts to support gymnasts coping with fear of injury.

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Introduction

Fear has been described as an intensely negative internal state that provokes efforts to avoid, escape or confront the fear-provoking stimuli [1], constituting a major psychological barrier for gymnasts [2]. Coping with fear can be complex and many mistakes can be made by both sport psychology practitioners (SPPs) and coaches. Although researchers have explored the cause of fear and coping strategies in a gymnastic context [e.g., 3, 4] as well as gymnasts and coaches' experience of fear [5], few studies have detailed the process of coaches' and SPPs' efforts to help gymnasts cope with fear. Case studies are important as they can positively contribute to the creation of a shared understanding about what constitutes best practice [6] and provide a more holistic picture of the phenomenon [7]. Accordingly, case studies on fear of injury in gymnastics could help coaches and SPPs better support gymnasts by giving them insight into the process of coping with fear of injury, outlining mistakes, and informing best practice. Inspired by authors using case studies to detail the process of SPPs facilitating athletes' coping with fear [e.g., 8-10], I will detail two cases that I encountered in a gymnastics context as a coach and SPP that exemplify the impact of fear and potential coping strategies. In so doing, I hope to show the experience of helping gymnasts cope with fear from a coach's and SPP's perspective, outlining mistakes, lessons learned, and recommendations that could be useful for coaches and SPPs trying to help gymnasts and athletes from other sports cope with fear.

The Gymnastics Context and Fear

Men's artistic gymnastics is a complex coordination sport with six different events, all requiring different skills. The score in men's artistic gymnastics is based on both the execution and difficulty of a routine. To increase the score, one must continually master more complex skills to increase both the difficulty and the execution of the routine. Before attempting skills, it is common for gymnasts to start thinking fear-provoking thoughts, which can elevate anxiety to a level beyond the experience of executing the skill [11]. Many skills are dangerous and have serious repercussions for poor execution [12]. The ever-present risk of injury is a basis for fear throughout the gymnast's career and a major psychological barrier [2]. Fear is not inherently bad but is rather a natural reaction to the dangerous skills in gymnastics and can even be beneficial as it raises adrenaline and focus, which allows gymnasts to perform difficult skills safely. However, fear can also prevent gymnasts from performing skills that they are capable of performing [2], and lead to avoidance [13], which can both increase fear and lead to further avoidance [14]. Fear can also lead to anxiety, stress, shame, discomfort, immobilization, freezing mid-action [4], increased bodily tension and heart rate, concentration and confidence detriments, negatively impact execution, and increase the risk of injury [3].

Coaches often use two strategies to help gymnasts cope with fear. The first strategy is to break skills down into smaller more manageable steps [2, 3]. This strategy is useful but has drawbacks as it requires the spotter to be skilled. Skills can also be difficult to break down and gymnasts can still be too scared to attempt the broken-down version of the skill [3]. The second strategy is to encourage gymnasts to attempt the skills they fear. This strategy also has drawbacks as too much encouragement can result in gymnasts feeling forced to attempt skills,

which can exacerbate fear [3]. Gymnasts have their own coping strategies like positive thinking and thought-stopping [4], but commonly "just go for the skill" [3]. As such, these strategies are insufficient to facilitate gymnasts coping with fear.

Outside of the gymnastics context, there are several strategies that could be employed to help athletes cope with fear. For instance, sport psychology practitioners could use acceptance and commitment-based interventions (ACT; e.g., [8, 10]). The primary goal of ACT is to promote psychological flexibility (i.e., the ability to fully connect with the present moment), which is achieved by focusing on core processes including present moment attention (being in the present rather than focusing on the past or future), acceptance (accepting thoughts and emotions without trying to alter them), and cognitive defusion (separating oneself from one's thoughts and seeing them for what they are, rather than the truth; [15]). These types of intervention can help athletes cope with fear (e.g., [8, 10]), reduce worry, and help them stay in the moment [16].

Furthermore, self-efficacy has been discussed as central to breaking the cycle of fear [4]. Self-efficacy regards an individual's perceived capability to perform a target behaviour and is influenced by four sources: mastery experiences, verbal persuasion, vicarious experiences, and perception of physiological and emotional states [11]. Whereas higher self-efficacy could help athletes better cope with their fear [4], a lack of self-efficacy may be associated with increased levels of fear [e.g., 17-19]. Lastly, fear can be experienced as very uncomfortable, leading to avoidance behaviors [5] and decreased motivation [20]. Motivation, in turn, can lead to courageous behavior, perseverance [21], and help athletes overcome fear of re-injury [22]. Accordingly, both self-efficacy and motivation can be important components of helping athletes cope with fear.

Conquering Fear: Two Cases

In the following section, I will detail two cases that I encountered as both a coach and an SPP. The cases were selected due to the severity of fear and the mistakes that were made. The gymnasts in the cases have been given pseudonyms (Korera, Natsu), and information has been altered or kept vague to ensure anonymity. In the first case, I had worked as a gymnastics coach for about two years and was completing the last year of my bachelor's degree in sport psychology. The second case was a part of my 1-year master's degree and happened a year later, when I had accrued over 700 hours working as a gymnastics coach. Both cases happened early in my journey as an SPP, when I was still exploring different philosophies and methods without fully committing to one. Accordingly, I used the methods I thought were most fitting for the cases I encountered, which included both psychological skills training and ACT-based approaches.

Case 1: Korera

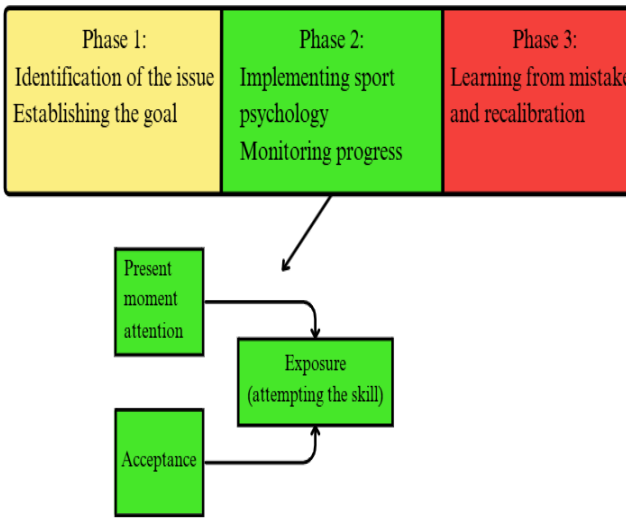
Korera (aged 11 at the time) was one of my gymnasts whom I had trained to some extent for two years at the time of the case. He had a lot of athletic potential but lacked drive, was sensitive, and had difficulties performing under pressure. Due to his mentality, he had become noticeably less skilled than his peers. His inadequacies were hard for him to handle and had led him to adopt several maladaptive coping strategies, such as asserting himself by boasting and lying about his gymnastics abilities. Korera was also hesitant and scared, which seemed to stem from his lack of self-confidence, as he did not believe in his ability to safely execute many skills. As a result, he avoided multiple skills and required several warm-ups attempts before trying skills he feared. The fear and avoidance were very

severe for one skill: the layout backflip dismount on high bar. This case is centered around my efforts to help Korera overcome his fear of the dismount and manage to execute the skill without assistance, and lasted for a couple of months.

As I encountered the case in my role as a coach, a fully planned intervention was beyond my scope. With limited time and inspired by ACT [see 23] I focused my efforts on teaching him acceptance and present-moment attention. The case spanned a couple of months and can be divided into three phases (see Figure 1)

Figure 1

Outline of Korera's Case



Phase 1: More Than Avoidance

Korera had practiced a scaled-down version of the skill and was about to progress to the next step: trying the complete skill with assistance. This was quite a big step, and suddenly, he was nowhere to be found. It took a couple of practices for me to notice, but suddenly I realized he was avoiding the skill. I tried encouraging him, but to no avail. I asked Korera what he required to attempt the skill, and after discussing it, he agreed to try the skill if he was caught and paused mid-air. After a couple of weeks of doing the skill with pauses, it was time to progress. Suddenly, he was missing again, or only wanted to attempt the skill with the pause. One day, I confronted Korera. He denied avoiding the skill and said that everything was okay. I told him that it was okay to be scared. This affected him, and he could not contain his emotions anymore. He began crying and ran to the bathroom. I realized that he was not just hesitant towards the skill, he had developed fear. Instead of arguing that the skill was safe and that his fear was irrational, I listened and tried to understand him. I told him "I understand that it is scary, but I'm here with you and we can do it together". After the conversation, I felt like we had established a working alliance. We were now working towards a common goal. He was motivated to conquer his fear, and I was motivated to help him.

Phase 2: Too Fast Too Far

To facilitate Korera's coping with fear, I decided to use my knowledge in sport psychology by taking an ACT approach. Korera experienced more negative emotions anticipating the skill than performing it. I took a couple of minutes during practice to sit down with Korera and explain the present moment attention and acceptance aspects of ACT. More specifically, we discussed how uncomfortable thoughts and emotions are not necessarily bad and how suppressing them can make them more persistent. To illustrate this ironic effect, we did a short drill inspired by the *Pink Elephant* exercise from Hayes [23]. I told him to not think of carrots for a short duration. Throughout the drill, I reminded him to not think of carrots. After the drill, we talked about his experience, and he realized that suppressing thoughts can make them more obtrusive. I continued by instructing him to accept his thoughts and feelings and try to let go of his worry and shift his focus to present and the task. As acceptance and present moment attention are skills that need to be cultivated, I reminded him during each practice to stay in the

moment, accept his thoughts and feelings, and focus on the skill. We continued doing the skill with pauses, but as Korera had a habit of trying to avoid the skill, I began each high-bar practice by negotiating how many attempts he would do that day. This seemed to result in less avoidance and his attempting the skill sooner. In the beginning, he set low goals like three attempts. As he became more comfortable with the skill, we gradually increased the number of attempts.

We kept on using both strategies, and he continued to improve and feel more comfortable. After weeks of practice, it was time to remove the pause. After several warm-up attempts, he felt ready. He attempted the skill, and with a lot of assistance, he managed to complete it. As we continued progressing, he required fewer warm-up attempts, which gave us more time to try the skill without pauses. After weeks of practice, he was ready to try the skill without assistance. During one session, he got close to completing the skill. He made several attempts and got a lot of encouragement from his peers. Suddenly, he made a poor attempt and got hurt. Although he did not seem to have injured himself (seriously at least) and just seemed to have had a painful fall, it was enough to exacerbate his fear. Now he would not try the skill unless he was paused mid-air again. His peers and the other coaches did not understand or respect his fear and were pushing him to do the skill. This made Korera feel pressured and exacerbated the symptoms of his fear.

I realized that it was costly to push Korera too far beyond his comfort zone. I still pushed him when needed, but I also held him back when he was pushing too much. I started to understand that he did not only have difficulty coping with fear. He also seemed to struggle with performance anxiety, which became elevated when he felt pressured. I started supporting him when the coaches and peers occasionally pushed him. I told him to focus on himself, instructed him to only attempt the skill when he felt ready, and made sure he knew that he had made good progress. It took about two months until we were back to attempting the skill without assistance.

One day, about a month after he had begun attempting the skill without assistance, he got very close to completing it. I told Korera that he did not have to continue unless he wanted to, but he did. I reminded him to let the feelings and emotions be there but focus on the skill. Suddenly, he completed the skill. This was a big moment for him, and with all that we had been through, it was hard for me to hold back the tears.

Phase 3: Evaluation

At the end of the case, Nattsu could complete the skill by himself. Although his fear had been lowered, he occasionally wanted assistance during the skill. We continued working on the skill, focused on what had worked well, and had patience on the days it did not go well. Eventually, he felt comfortable and proud to do the skill without assistance.

Case 2: Nattsu

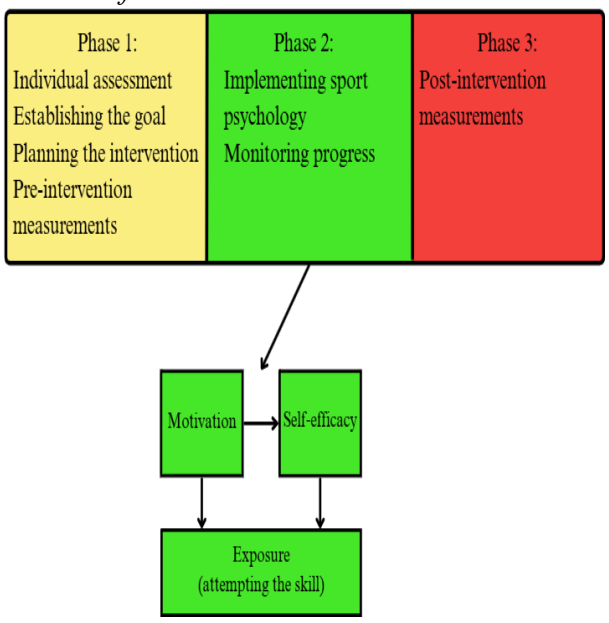
Nattsu was an elite gymnast in his early 20s, nearing the end of his gymnastics career and lacked plans for his life after gymnastics. Nattsu knew that he wanted to have one major achievement in his sport before he retired but the multiple injuries he had sustained throughout his athletic career had resulted in his performance being at an all-time low at the start of our work. The injuries had also decreased his confidence in his ability to safely perform skills that he had already mastered. The lack of confidence had grown into fear, which led him to avoid skills and, to a lesser extent, entire events, which had a large negative impact on his performance. Since Nattsu's life revolved around being an elite gymnast, his recent performance detriments had resulted in him

questioning his identity, worrying a lot about the future, and reducing his wellbeing. It had also led people to doubt his ability to make a successful return.

I contacted Nattsu to ask if he was interested in becoming my client. Nattsu felt that it was interesting and agreed. Nattsu was then sent a letter of information describing the length of our work (two months), confidentiality, ethics and my limitations. Nattsu read and signed the information letter. The intervention can be divided into three phases inspired by Anderson et al.'s [24] model of sport psychology interventions: orientation and individual assessment (e.g., clarification of purpose, identify commitment athlete's characteristics), implementation (e.g., teaching the skills and facilitating adherence), and follow-up (see Figure 2). The intervention from the first meeting to the post-intervention measures spanned approximately four months.

Figure 2

Outline of Nattsu's Case



Phase 1: Orientation and Individual Assessment

After Nattsu had signed the information letter we had a meeting (around 2 hours), which were inspired by the performance interview guide [25], which centers around seven key areas: (1) identifying information, (2) reasons for seeking consultation, (3) background of areas for improvement, growth or concern, (4) details of sports/performance, (5) life/identity outside performance, (6) significant relationships/support, and (7) self-care. Accordingly, we discussed several topics during the interviews, including his expectations, potential working areas, and goals, whilst I tried to establish a working alliance. Nattsu told me how he had become fearful after sustaining an injury during a routine about a year before our work. It was apparent that fear was an obstacle that he had to overcome. To get a better understanding of his context, I asked several general questions about his context (e.g., his career leading up to the intervention, his life outside of sport, and current ambitions) and if it was okay to interview his coach to get another perspective. He replied that it was okay.

The coach was positive about the idea of Nattsu working with a SPP and provided a lot of information about Nattsu's context. After this interview, I had an additional interview with Nattsu to get his perspective on some of the points his coach had raised. After this interview, I reflected on his case and thought that helping him create a plan for his life after gymnastics was important as he was nearing retirement, lacked a plan, and having a plan could potentially lead to several downstream effects like reduced worry and increased wellbeing. I therefore suggested that the purpose of the intervention could be to support him through career planning and facilitate the execution of the plan. As Nattsu wanted to have a big achievement before retiring and due to fear being a major barrier towards that goal, one of the aims of the intervention was to help him successfully

cope with fear and return to performing the skills he used to do (which will be the focus of this article).

To get a better understanding of which methods I could use to help Nattsu cope with fear, I started to read articles regarding fear in general and in a sports context to identify potential interventions, which resulted in two alternatives: motivation and self-efficacy. Accordingly, the plan was to first improve Nattsu's motivation and then his self-efficacy. Starting with motivation, the intervention was informed by self-determination theory [see 26]. Accordingly, I planned to improve Nattsu's sense of autonomy, competence, and relatedness, in the hopes of facilitating internally regulated motivation. The next part of the intervention was aimed at improving his self-efficacy, by targeting the four sources of self-efficacy (mastery experiences, verbal persuasion, vicarious experiences, and perception of physiological and emotional states; e.g., [11]).

To quantify and track Nattsu's fear, I constructed a questionnaire in collaboration with Nattsu. The questionnaire consisted of 13 questions based on a five-point Likert scale tracking both fear and avoidance for each of the six artistic gymnastics events (see Supplementary file 1). Both Nattsu and his coach were asked to answer how many attempts Nattsu had made in general, the past week where one equaled very few and five equaled the most he could have done. They were also asked to rate his avoidance for each event, where one represented 80-100% avoidance and 5 represented 0-20% avoidance. Lastly, Nattsu was asked to rate his fear for each event, where one represented not scared at all, and five represented avoiding the entire event because of fear. All questions were answered by Nattsu and the coach answered the questions regarding attempts. Both participants answered the questions pre, mid, and post-intervention.

Phase 2: Implementation

Nattsu and I began having 1-hour sessions twice a month with motivation as our initial focus. Competence was targeted by asking Nattsu to think about each successful attempt he made and relatedness was targeted by encouraging Nattsu to talk more with his peers and share his struggle as well as the improvements he made. As Nattsu had a desire to prove his doubters wrong, I thought that motivational visualization could be beneficial to his motivation, and we therefore spent one session instructing Nattsu to visualize himself being successful and proving his doubters wrong. Lastly, to more easily evaluate his efforts, to have a basis of discussion for each session, and to improve his sense of autonomy, we incorporated goal setting. During each session Nattsu was asked to set new short-term goals that we discussed the subsequent session. After we had laid the ground for his motivation we switched focus to self-efficacy.

To improve Nattsu's self-efficacy, I targeted the four sources of self-efficacy (i.e., self-efficacy: mastery experiences, verbal persuasion, vicarious experiences, and perception of physiological and emotional states; [11]). Nattsu was capable of successfully performing the skill once he dared to attempt it. Accordingly, once he dared to attempt the skill, there was a high likelihood that he would get mastery experiences, but as one does not simply attempt skills that they fear, we moved on to verbal persuasion. We spent the first session discussing the feared skills, which Nattsu had, by his own account, successfully executed over 1000 times whilst only getting injured twice. Nattsu was told to think about his success rate both outside of practice and before attempting the feared skills. When Nattsu did successful attempts, he tended to

worry about future attempts instead of recognizing and being happy with the successful attempts he made. As such, Nattsu was told to use encouraging self-talk and tell himself that he did a good job each time he did a successful attempt. Furthermore, I incorporated the present moment attention aspect of ACT and instructed him to try to stay in the moment and not focus on the future nor the past to try to improve his satisfaction with his successful attempts rather than the success being overshadowed by his worry about future attempts.

Regarding vicarious experiences, Nattsu trained in a gym with other elite gymnasts. Accordingly, he could watch other gymnasts complete the feared skills regularly, helping him access vicarious experiences. Lastly, regarding the perception of physiological and emotional states, people can interpret the same state differently which will result in different efficacy outcomes [11]. A person can for example, interpret the same internal state as frightened or fired up [11]. Furthermore, multiple sensations of fear (elevated heart rate, butterflies in the stomach, etc.) are similar to excitement [27] and positive reframing has been negatively correlated with fear [28]. Nattsu was therefore instructed to use self-talk to reframe his state as excitement instead of debilitating fear. To this end, we spent one session discussing the similarities between fear and excitement and constructed a short phrase that he could say to help him be more confident and reframe fear. Nattsu was instructed to use the trigger word before attempting a feared skill. Nattsu thought that the trigger word was a bit silly but agreed to try it. After trying the trigger word for a couple of weeks, Nattsu said that the trigger word helped create levity and make the situation more endurable.

Phase 3: Evaluation

During the post-intervention measurement, Nattsu's self-reported fear of high bar had been lowered (pre-intervention = 5, post-intervention = 3), his avoidance had been lowered as rated by both him and his coach (pre-intervention = 4, 3, post-intervention = 2, 2) and he had doubled the number of attempts of the feared skills as rated by him and his coach (pre-intervention = 2, 2, post intervention = 4, 4). Whereas Nattsu had been scared to even attempt basic skills on the high bar, he was now attempting very difficult skills in both practice and competitions. Nattsu felt that the intervention gave him a new perspective and useful tools to cope with fear. The coach was also happy with the intervention and felt like it had helped Nattsu better cope with his fear and improved his performance.

Reflections

The cases had several contextual differences. Korera was younger and attempted easy skills that could be physically assisted throughout the entire skill. In contrast, Nattsu was nearing the end of his gymnastics career and trained on too difficult skills to be physically assisted and could therefore not rely on physical assistance. Furthermore, Nattsu's career as a gymnast was dependent on him being able to execute high level gymnastic routines whereas Korera did not have any financial aspects tied to his success nor any elite gymnastics career that was dependent on him learning the skill. Lastly, in Korera's case was centered around ACT whereas Nattsu's case was centered around motivation and self-efficacy.

Despite their differences, both cases had similarities like the severity of fear, the events that was feared (high-bar), and were focused on getting the gymnasts to the point where they felt ready to attempt their skills. In the end, both interventions had successful outcomes, with Korera managing to complete his dismount and Nattsu successfully

returning to performing the skills he used to perform. Although both gymnasts managed to overcome their fear, reflecting on these cases has led me to identify several aspects that I would have changed.

What I Would Have Done Differently

In Korera's case, I was too eager. A part of me wanted to prove to my peers that I was able to help him overcome his fear. As such, I initially pushed him too much which backfired and set us back a couple of months. If I had spoken with him earlier and taken the time to understand his experiences, I would have learned about the severity of his fear earlier and could have supported him sooner, which could have led to him overcoming his fear quicker. Additionally, I would also have paid more attention to his mood and state to see when it was suitable to push him and when he needed to be held back. I would also have measured his fear and avoidance to better track his progression.

Looking back at Nattsu's case, I feel that the intervention was too complicated. Fear was an important barrier towards his performance, but it was only one part of the intervention. Although I believe that the primary focus of the intervention (career planning) was equally, if not more, important, I think it would have been better to either focus on fear or career planning before moving on to the next aim. My supervisor repeatedly tried to get me to realize that the intervention was too complicated, but I was too stubborn and eager to help the client achieve too much too fast. Furthermore, since the case my applied work has been informed by an ACT perspective. Although the intervention I chose seemed to have worked, and several parts were complementary (self-talk was used as part of verbal persuasion, and to reframe his emotional state) I now feel that there were too many parts. This likely stems from my eagerness to help him, and me being uncomfortable in placing all my trust in one method. I cannot know which intervention would be most effective, but I cannot help but wonder if we would have reached more success by only focusing on ACT.

Limitations

There are important limitations to discuss before I proceed with the lessons that I learned throughout the case. The first case was not based on quantifiable data, as it took place during my time as a coach and was not a planned intervention. Secondly, during the second case, I used several different methods (e.g., motivation, self-talk, visualization). Accordingly, I cannot know how effective each method was. Although I believe that the cases still highlight important practical implications for both coaches and SPPs. Regardless, it is important to keep the limitations in mind during the next section.

Lessons Learned and Practical Implications

I've reflected on my experience of working with fear in both cases and my work in gymnastics, both as a coach and an SPP, and realized that coping with fear is complex. SPPs and coaches can take many paths when trying to help gymnasts cope with fear, and it can be hard to know which one to take. My reflection has led me to the following guidelines that may help SPPs and coaches working with fear.

Ethical Considerations

As highlighted in the cases, fear can be deeply uncomfortable, and pushing gymnasts beyond their limits may lead to injuries. Accordingly, it is important for both coaches and SPPs to consider the ethical aspects of the coping process to avoid tunnel vision on the desired outcome. First, there is a power asymmetry between coaches and gymnasts [29]. As a result, gymnasts may be scared to speak up when they feel uncomfortable and disobey the coach's orders due to their fear of being punished. Although gymnasts may

need encouragement to attempt feared skills, a coach's encouragement can be perceived as coercion. Coaches should therefore make sure that the gymnasts actually feel ready to attempt feared skills. Secondly, both SPPs and coaches should be aware that coping with fear can be a long process. Although both coaches and SPPs may feel pressured to deliver results, it is important that the gymnast's safety is put first.

Lastly, whereas coaches can support gymnasts in their coping with fear, coaches need to be aware that fear can become a serious issue, exceeding their competence as coaches. Although coaches may still try to be supportive by motivating the gymnasts, facilitating their self-talk, or trying to help them accept their thoughts and emotions, it is important to be humble and realize that some cases may be better suited for SPPs.

The Underlying Processes

When individuals have aversive experiences with a stimulus (e.g., getting injured when attempting a gymnastics skill), they can become sensitized towards the stimulus, which can lead to fear [30]. Once the individual has become fearful of the stimuli, the fear can be exacerbated through more aversive encounters with the stimuli and reduced through non-aversive encounters with the stimuli (e.g., successful attempts of the skill; [30]). Followingly, it is not surprising that exposure to the feared stimuli has been described as the most impactful method of treating fear [31]. Korera and Nattsu's cases illustrate how the gymnasts' emotions (e.g., somatic anxiety) and thoughts (e.g., worry) can act as barriers keeping the gymnasts from attempting the feared skills. As highlighted in the first case, the environment can both encourage the individual to face the feared stimuli and pressure the individual, exacerbating the uncomfortable thoughts and emotions. Lastly, psychological interventions could help the individual face the feared stimuli. Accordingly, both the environment and psychological interventions can be important resources facilitating athletes' coping with fear, which will be outlined below.

Creating the Right Environment

Gymnasts can fear their coaches and be afraid to disobey them, which can lead gymnasts to attempt skills they do not feel ready for to avoid punishment from the coach [4], which can exacerbate fear [3]. As such, gymnasts should not be pushed to attempt skills before they are ready [2, 3]. However, skills should not be avoided as it can lead to further avoidance [14]. Fear is natural and will occur several times over a career [2]. By adopting this perspective and gradually working toward overcoming fear, success will be more likely [2]. In my experience, there will come days when a gymnast will be ill-suited to perform a skill. This is likely to result in bad attempts, which can in turn decrease self-efficacy and lead to injury. As such, it is important to be aware of their current shape and avoid pushing them when they are unfit to perform the skills. It is also beneficial to create a climate where gymnasts are encouraged to discuss their fears with coaches, peers, and SPPs, as it may result in them being more likely to receive encouraging suggestions and support [2]. However, gymnasts should be taught to evaluate the personal relevance of the suggestions as not all advice fits every gymnast [2].

Choosing the Approach

Each gymnast has different characteristics and experiences. A coping strategy suitable for one gymnast may be unfitting for another [2]. One gymnast could struggle with the motivation to attempt a skill, while another struggles with fear during the execution of the skill. As such, it is important to understand the gymnast as an athlete and an individual as well as the context and cause of

fear [4]. There are many methods of coping with fear [3]. Coaches and novice practitioners may be intrigued to try different methods. But using multiple different methods limits their depth and will likely hinder the gymnast's proficiency in the methods. As such, practitioners and coaches should try to construct coherent strategies focusing on a select few methods. As previously mentioned, exposure has been described as the most impactful method of treating fear [31] and should be the basis of all coping strategies. This does not mean that all gymnasts should be pushed to attempt skills they fear. It means that the core of each coping strategy should involve the gymnast at some point attempting the feared skill. The coach or SPP should work together with the gymnast to establish both a frequency and intensity of exposure that is suitable for the gymnast. But, as one does not simply attempt skills they fear, more methods are needed. The strategies that I have found at least slightly effective are 1. Motivation, 2. Self-efficacy, 3. ACT, and 4. Self-Talk.

As discussed, a lack of self-efficacy has been described as one of the causes of fear [11, 18], which has been supported by several studies finding a negative correlation between self-efficacy and fear [17, 19]. Furthermore, self-efficacy has also been discussed as central to breaking the cycle of fear [4, 11] and may, therefore, be a valuable tool for helping gymnast overcome their fear. Self-efficacy can be improved by targeting the four sources of self-efficacy (i.e., mastery experiences, verbal persuasion, vicarious experiences, perception of physiological and emotional states). This can include self-talk and providing the gymnast with opportunities to be successful [11], which can be accomplished by breaking skills down into manageable steps [2]. To further improve self-efficacy, Korera and Nattsu were given a lot of positive remarks on their successful attempts and instructed to notice their progress. Korera and Nattsu were also taught to change their relation to their internal states by accepting them instead of trying to change them (Korera) and by using positive reframing (Nattsu).

As discussed, fear can decrease motivation [20] and is related to several negative outcomes such as anxiety, stress, shame, and diminished self-esteem [4], which can influence athletes' motivation to practice their sport [3, 5]. Motivation can, in turn, lead to courageous behavior and perseverance [21] and help athletes overcome fear of re-injury [22]. It could, therefore, be beneficial to nourish gymnasts' motivation to both persevere through and overcome fear. In the two cases, attempts to improve their motivation were made by using goal setting, being autonomy-supportive (e.g., letting the gymnasts decide how many attempts to aim for), and nourishing their sense of relatedness and competence by creating a working alliance, facilitating their peer relationships, and improving their self-efficacy.

Fear is often marked by rumination [32], which can exacerbate fear [11]. Mindfulness can reduce rumination [33] and is correlated with lower levels of fear [34]. ACT-based approaches including mindfulness can help gymnasts become mindful and "reperceive" their discomfort and stay calm, resulting in lower levels of fear [e.g., 10, 32]. Fear can also lead to lowered concentration and inefficient movement patterns [3]. Mindful gymnasts may be able to maintain an intentional focus and adopt more effective movement patterns and in doing so, improve performance [16]. In Korera's case, I focused on the acceptance and present moment attention aspects of ACT due to the lack of time. I would, however, suggest using complete mindfulness interventions such as ACT [see 23, 35] or Mindfulness acceptance commitment [see

36]) rather than focusing on individual components of the complete interventions.

Self-talk is one of the most frequently used strategies in sports for dealing with emotions [37] and has been used to cope with fear [3, 38]. Self-talk that is incongruent with the athletes' experiences can have a performance debilitating effect [39]. As such, I suggest that self-talk should not be directed at minimizing fear. It could instead be directed at positive reframing [28], improving motivation [39] or bolstering self-efficacy [2]. Athletes can for example use statements such as "I can do it", and "let's go" to improve motivation or use task-based statements such as "tighten your body and it will go well" to redirect their focus and enhance performance [39]. Inner dialogues can be difficult to moderate and control. As such, Athletes should practice self-talk to become proficient. It is also important that athletes use statements that are relevant to themselves and their context, as statements that are incongruent with their personal and contextual factors can result in self-talk dissonance and have a performance debilitating effect [39].

Closing Remarks

Fear is a complex phenomenon with both benefits and detriments. Fear can raise gymnasts' focus and allow them to perform difficult skills safely and avoid skills they are not ready for. But, fear can also prevent them from performing skills that they are capable of performing. Fear seems to appear when gymnasts' confidence in their capabilities to perform a skill safely is low. It also seems to be exacerbated by rumination and worry. Successful encounters with the feared stimuli seem to be the foundation of helping gymnasts cope with fear but as one does not simply perform feared skills, gymnasts may require support. My recommendations are by no means a panacea. Instead, it is a foundation for practitioners to create their own approach. By using what is useful, discarding the rest, and filling in the gaps with their experiences, I hope that practitioners and coaches can find an approach and a philosophy that suits them.

As illustrated in both cases, coaches and SPPs can become emotionally invested in the cases, and their emotions and ego may lead them to become too pushy, try to accomplish too many things at once, or try too many approaches at the same time. Accordingly, both coaches and SPPs should be mindful of their relation to the coping process, their eagerness, frustration, worry, as well as other thoughts and emotions, and put the gymnast's wellbeing before their own desires.

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