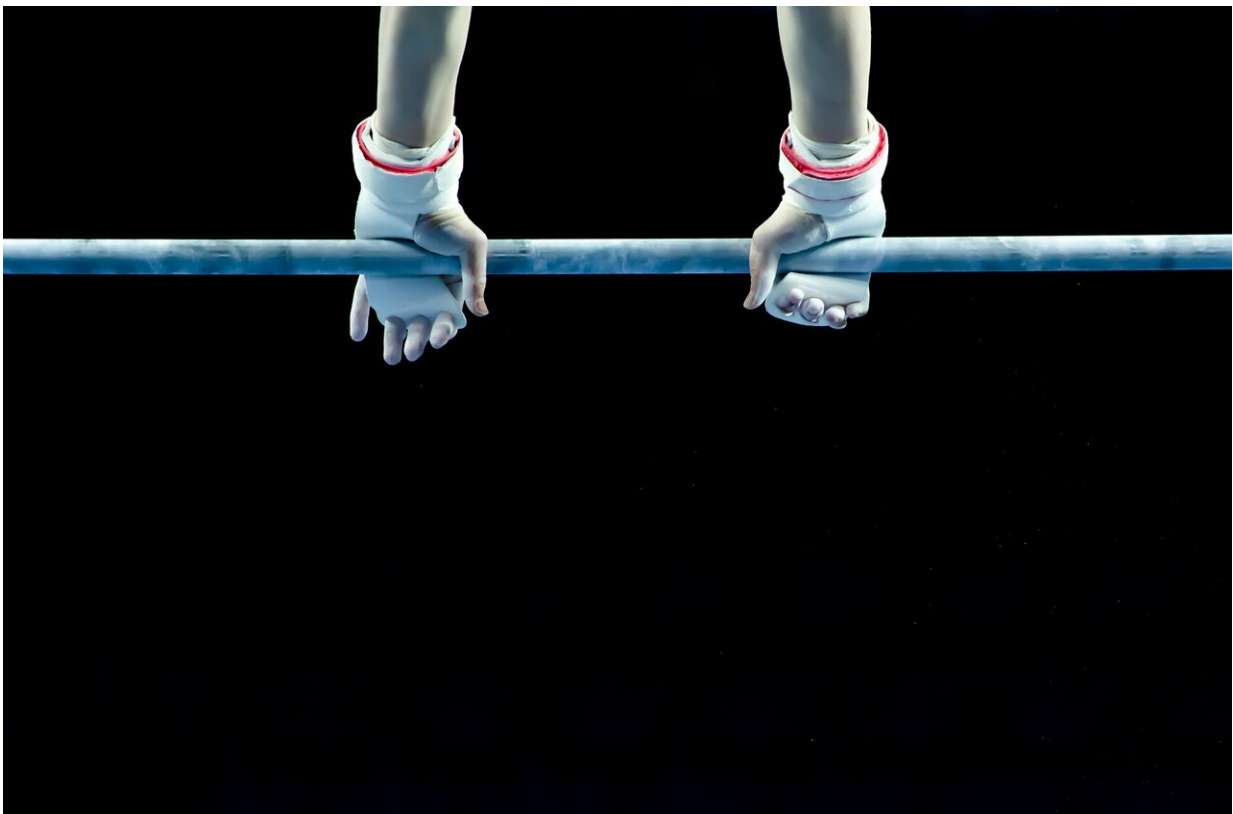


# Repressive methods used in training women's artistic gymnasts can be extremely harmful, study warns

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Women's artistic gymnastics has attracted considerable attention at recent editions of the Olympic Games, thrilling huge crowds of

spectators at the venue itself and gripping billions of viewers on TVs around the world. Murky and even unethical behavior may lie hidden behind these displays of beauty, grace and skill, however.

Many countries subject their gymnasts to training regimes that involve sacrifices not seen by the fans or the media. In the unremitting pursuit of perfection typical of this sport, coaches apparently call upon coercive and repressive methods aimed at achieving success.

"We conducted a qualitative survey of eight former Olympic-level gymnasts who lived as boarders between 2001 and 2005 at a training center for high-performance athletes. We detected problems with long-term impacts, such as overtraining and authoritarianism," said Vítor Ricci Costa, a researcher at the State University of Campinas's School of Physical Education (FEF-UNICAMP) in São Paulo state, Brazil.

Costa is first author of the article "Living within and outside a disciplinary bubble: a Foucauldian analysis of Brazilian gymnasts' experiences in boarding school" published in the journal *Sport, Education and Society*, describing the study and interpreting accounts of the experience by five of the eight former gymnasts.

As boarders, these [young girls](#) were not allowed to see their families and friends for long periods. Their weight was obsessively controlled via three weighings per day. To keep them as light as their coaches deemed necessary, they were subjected to an extremely strict diet providing only 800 calories although they trained for four to six hours a day. Mistakes made while executing exercises incurred many repetitions of the same workouts, which Costa interprets as punishment.

No actual names are disclosed by the authors of the article out of respect for the privacy of the gymnasts, who are referred to by pseudonyms. All were top-tier athletes and widely recognized for their performances.

"Two of the five interviewees mentioned in the article were Olympians. The other three were members of the Brazilian gymnastics team sent to international meets such as the Artistic Gymnastics World Championship and World Cup, and the Pan American and South American Artistic Gymnastics Championships. When I interviewed them, they were 30-40 years old, and some were still coping with social adaptation difficulties after the end of their careers in sports," Costa said.

Their training began when they were between 5 and 7 years old. By the time they were 20, they had retired. They then had to look for other jobs, without having been prepared for this stage of their lives.

According to Costa, the retirement age for high-performance gymnasts is now a little older. Rebeca Andrade, Brazil's top-ranking artistic gymnast, is still active at the age of 23. She was the 2020 Olympic and 2021 World Champion on the vault. At the 2022 Artistic Gymnastics World Championship, held in Liverpool, England, she was all-around Champion and won bronze medal in the floor exercise.

The boarding regime was abandoned more than ten years ago, but the training approach remains very similar to the one described by the article.

"Despite all this international success, we must pay attention to the methods used to produce it. The hegemonic culture glorifies the idea that success can only be achieved through long hours of practice, early specialization, and training and competing while in pain or injured, among other sacrifices, while authoritarian coaches control the gymnasts and everything around them, inside and outside the venue. This philosophy potentially creates a disciplinary bubble that can normalize dangerous situations, such as harassment and abuse," Costa said.

Costa explored the "disciplinary bubble" concept in his Ph.D. research. In this study, completed in 2022, he leveraged the ideas of French philosopher and activist Michel Foucault (1926-1984) to investigate the relationships among gymnasts and their coaches and parents, as well as the environment surrounding this triad. Seminal works by Foucault such as *The Archeology of Knowledge*, *The History of Sexuality*, and *Discipline and Punish* are among the references appended to Costa's doctoral thesis.

"The affective relationship between coaches and athletes is essential to overcome the challenges of this sport. On the other hand, we identified imbalances that contributed to an autocratic pattern in this relationship. The athletes are dependent on the coaches and are taught to obey them without question, becoming docile, productive and submissive bodies," Costa's project abstract states.

To be able to "fly" in spectacular acrobatics, these bodies must be small and lean. Hence the absurd diet of 800 daily calories found in the study, albeit thankfully no longer in effect.

One of the interviews, de-identified in the article by use of the pseudonym "Verônica", suggests how far this obsession with weight could go: "On Saturdays we ate sweets when no one was looking. Then we refused to eat anything from Saturday afternoon until Monday. Even so, on Sundays we ran with our bodies wrapped in plastic bags, took laxatives and drank no water. We learned to do crazy things. I spent two years without drinking any water. I would chew ice. Everyone said I had a weight problem."

Eating disorders such as bulimia and anorexia are reported in the international literature on the training of gymnasts. The study detected the occurrence of kidney stones, which may have been associated with insufficient drinking of water and overuse of calcium supplements to help the athletes recover from stress fractures due to intensive training

without the necessary rest.

Another athlete, called "Alice" in the article, said she took five anti-inflammatory pills per day when she was 15, on the instructions of the multidisciplinary team that provided training support: "I remember competing with three broken toes in a World Cup. I could hardly walk, but I competed. Two months later, the physician asked me if I wanted to have an X-ray taken. I did, and he said, 'It's not calcifying properly.' We were all badly injured."

## High-level infrastructure

These accounts may appear to portray the training center as a rudimentary facility, but according to the article that was not the case at all. It had first-class equipment and infrastructure, as well as a multidisciplinary team of coaches, nutritionists, [physical therapists](#), teachers and physicians. Their remit was to develop Olympic-level gymnasts. The problem, Costa said, was the overall philosophy behind the activity.

This is clear from another part of "Alice's" statement, in which she recalls the experience with some bitterness: "They showed the Brazilian delegation's center on TV. It looked wonderful and there was a multidisciplinary support team. OK, we had a doctor, nutritionist, physical therapist and teachers, but they only did what they were told by the managers and coaches."

"They didn't really care about us. For example, we didn't have classes. The teachers went to the center but just told funny stories to try to keep us cheerful. I was more ignorant when I left the center than when I started there. On TV, the managers told the public they were giving us everything we needed. I think many gymnasts believed this. The team taught us to believe this fairy tale."

According to Costa, the system instilled the idea that discipline prepared the gymnasts for real life and, as Foucault shows in other contexts, people who are repressed tend to introject the repression, submitting to various forms of control via self-control. The combination of repression in training and success in public exhibitions trapped the girls in a sort of parallel reality.

"When they retired and left the bubble, many faced major problems to rejoin society, recoup the lost years in terms of schooling, and find a new place for themselves in the world," Costa said.

Discipline has long been strongly emphasized in [physical education](#) in Brazil, probably because many PE teachers and sports coaches were retired army sergeants. During the military dictatorship (1964-85), the ruling generals invested in training and competitions, but according to Costa this trend intensified in the period covered by the study. The overriding goal became producing world-class gymnasts. To achieve it, the authorities established a training center and boarding school where everything was strictly controlled.

"Their aim was to produce Olympic gymnasts at any cost. They didn't care if you were happy with your coach and club: you had to move to the training center, which was probably a long way away from home. If you wanted to train for the national team, you had to live there," said another interviewee ("Iris").

According to Costa, the world of women's artistic gymnastics was badly shaken in the period 2016-18 when Lawrence Nassar, the physician to the United States women's national gymnastics team, was accused of sexually assaulting more than 150 gymnasts, many of whom testified against him.

His accusers included Simone Biles, the superstar who won 25 world

Championship medals and four Olympic gold medals. Nassar was sentenced to de facto life imprisonment without parole. The entire 18-member board of U.S. Gymnastics, the sport's national governing body, resigned as a result of the scandal.

"The Nassar affair drew attention to what happens or can happen in the world of gymnastics," Costa said. "It forced FIG, the sport's international governing body, as well as national Olympic committees and federations, to invest in preventing and combating abuse. But there was no investment in courses and recycling to change the mindset of the coaches, so the disciplinary approach has remained alive."

The problem is not the sport or the coaches as such, but the model, he added. "We have to understand the limits between discipline and coercion, maltreatment and punishment. Discipline is important, but these confusions still exist. Our study also showed that isolating gymnasts from family and school is very harmful. Happily, this hasn't been done in Brazil for more than ten years," he said.

Measures should be taken to protect gymnasts, he advised. These could include the organization of support groups and communities to assure their health and well-being in the training environment.

"The sport does involve sacrifice and renunciation. Any high-performance sport is for the few. We don't propose a less demanding approach to training but advocate the promotion of a culture of respect and safety in the training centers that prepare these few to perform almost superhuman feats at such a tender age. Girls start training as artistic gymnasts when they're very young and simply don't have the wherewithal to own the process completely. Their skills, interests and limitations must be treated with the utmost respect," he said.

The last author of the article is Myrian Nunomura, a professor at the

University of São Paulo's Ribeirão Preto School of Physical Education and Sports (EEFERP-USP). She acted as Costa's Ph.D. thesis advisor. "These interviews with gymnasts offer a great deal of food for thought, especially by coaches, parents and any would-be high-performance athlete. The Olympic dream can become a nightmare from which it's very hard to wake up. That's why we propose co-responsibility and mutual surveillance involving all stakeholders," she said.

**More information:** Vítor Ricci Costa et al, Living within and outside a disciplinary bubble: a Foucauldian analysis of Brazilian gymnasts' experiences in boarding school, *Sport, Education and Society* (2022).

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