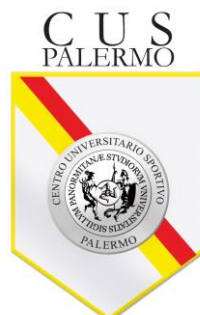


30/05/2024

Stressors common to various disciplines of women's competitive sports

Early Drop Out Prevention.

Riccardo Lana



Co-funded by the
Erasmus+ Programme
of the European Union

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Context

The following study stems from the activities of the Swift project, co-funded by the European Union's Erasmus+ program for sport. The applicant organization for the project is Mithra Legal Advisors (Spain) and partnership members are The University Sports Center of Palermo (Italy), Athletes Inspire Children GUG (Germany) and Vandoeuvre-Nancy-Volley Ball (France). The objective of the Swift project is to help improve the governance structures of European sports clubs by promoting the dissemination of the positive values of sport, including its mental health benefits, through the identification of the main stressors faced by female athletes and the adoption of appropriate tools to counteract these factors, bringing good practices to sports teams and creating new communication/complaint channels.

Scientific basis

For a long time the concept of health has been identified with the absence of disease, but as society evolves, concepts also evolve, and today the World Health Organization's definition for the concept of health is that of “complex mental, physical and social well-being.” So, the benefits of sports practice on health in all its facets are undisputed today and there is a vast medical, psychological and sociological scientific literature to testify. For this reason, member states and the European Union are committed to promoting sports. I find it stimulating to quote in this regard some passages from Article 165 of the Lisbon Treaty (2009), by which the European Union begins to deal directly¹ with sport: “The Union shall contribute to the promotion of European sporting profiles, taking account of its specific nature, its structures based on voluntary activity and its social and educational function. -The Union's action shall be aimed ... at developing the European dimension in sport, promoting fairness and openness in sporting competitions and cooperation between bodies responsible for sport, and protecting the physical and moral integrity of sportsmen and sportswomen, especially young sportsmen and sportswomen.” Emphasizing the fact that the European Union has begun to deal directly with sports with a Treaty that identifies as its goal, in the preamble, that of “laying the foundations of an ever closer union among the peoples of Europe” highlights the great social function of sports, as a vehicle for values of peaceful living together such as friendship, solidarity, courage, fair play, equality, respect, and integration. Having briefly recalled the reasons why sports are worth promoting, we can focus on the positive motivations that lead to sports practice, among which sectoral studies identify: - Enjoyment; - Improving one's skills (sport-specific); - Being in a group and forming a team; - Doing something useful for sporting purposes; - Excitement for competition; - Exercise (improving conditional skills); - Aspects related to competition (desire to compete and compare); - Learning new skills - Winning (Enoksen, 2011). These motivations are interlinked, and the decrease in intensity or disappearance of one of these factors therefore has with high scientific probability negative effects on the others as well. Focusing now, however, on the negative factors leading to an athlete's estrangement from his or her own, scientific studies today identify: Loss of motivation interest in the specific sport and in general (Gould, 1996); - Decrease or absence of enjoyment (Brain et al., 2007); - Stagnation of performance and failure to learn new skills (Brain et al., 2007; Kröger,

¹ The direct competence in sports, acquired in 2009, only concerns the implementation of policies to support of the phenomenon and its European dimension; however, it does not allow legislating in detail on sport because of its specificity.

1987; Bussmann, 1995; Vorobjev, 1994); - Excessive pressures from outside (coach, teammates and family members) (Brain et al, 2007); - Inadequacy and unpreparedness of the coach; - Little time available for sports (Lippe, 1976; Kreim & Mayer, 1985; Enoksen, 2002); 15 - Need for multiple sports activities (Brown, 1985; Klint & Weis, 1986; Sisjord, 1993); - Favoritism by the coach on the team; - Too much emphasis on winning; - Poor training facilities (Gabler, 1981; Bussmann, 1995); - Born-out (Enoksen, 2011). Dropping out of sports activity is identified in English as “Drop-out.” According to Cervello et al. (2007), drop-out occurs when young athletes end their athletic careers prematurely and before they have reached their peak performance level. So, in order to contribute to the development of sectoral scientific literature and develop ameliorative actions/solutions, a questionnaire addressed to female federal athletes of various ages was developed to investigate their stressors, thus being able to develop suitable solutions that counteract the risk of early dropout from sports practice.

The questionnaire

The questionnaire developed is anonymous in form and is solely for the scientific purpose of investigating stressors in women's competitive sports in order to prevent the risk of early dropout. The questionnaire consists of 43 questions, of which only the first three, which are used to identify the sample, are mandatory in nature. Most of the questions are set in the form of a likert scale or in the form of multiple options. There are only three open-ended questions from which it is hoped significant research insights may arise. Questionnaire completion time averaged 5 to 6 minutes. No contact information was requested from the female athletes who took part in the study by filling it out.

Going into detail, after a few general questions to track the sample, the relationship with their sport, body, and nutrition are investigated. Then social relationships with coaches and teammates, conditioning from sports in external relationships with family, friends, partners. Again, the lack of free time to devote to other interests, workloads, injuries and the fear of suffering them. The difficulties of reconciling studies with sports practice; influences in terms of mood and performance resulting from the menstrual cycle; performance anxiety and fear of failure. Thus, an attempt is made to identify what is most beautiful that sport gives in order to enhance it and any conditions of psychological stress in order to prevent them.

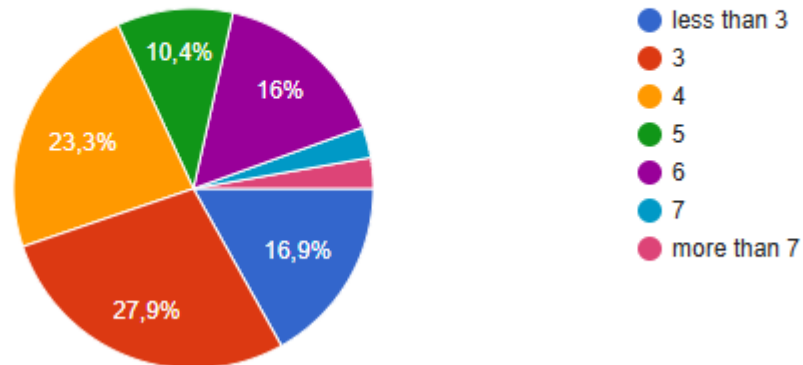
The sample examined

In the time frame from February 15, 2024 to May 15, 2024, 325 questionnaires were administered to female federal athletes from various disciplines in Italy, Spain, Germany, and France. From Italy, 115 questionnaires were received, the administration of which was conveyed by the technicians of the competitive sections of the University Sports Center in Palermo. These 115 female athletes compete mainly in soccer (30.4%), athletics (21%), swimming (19.2%) and in smaller percentages in other disciplines, including tennis, volleyball, rowing, rugby; their age group is 41.8% between 14 and 17, 45.2% over 17 and the remainder under 14. In Spain, 49 questionnaires were administered through the efforts of Mithra Legal Advisors, which holds contacts with various sports clubs in the Asturias region. The 49 Spanish female athletes, who contributed to the study, are 40.8 percent 16 and 17 years old and 59.2 percent 18 or older. These female athletes compete predominantly in handball (59.2 percent), then basketball (22.4 percent) and to a lesser extent in other disciplines, including soccer, volleyball and rugby. From Germany, however, 99 questionnaires were collected, and the organization responsible for administering them is Athletes Inspire Children GUG. Of the German female athletes surveyed 72.7 percent played handball, 19.2 percent basketball, 6.1 percent athletics, and 2 percent sports dance. Of the 99 German female athletes, 43.9 percent are under 16 years of age, 29.3 percent 16 or 17 years of age, and 27.3 percent are 18 or older. Finally, from France, 62 questionnaires were collected, all of them from female volleyball athletes from the women's Vandoeuvre-Nancy-Volley Ball league club. The age of the French female athletes is 53.2 percent 16 or 17 and 46.8 percent 18 or older.

To track the sample more specifically, the female athletes were asked how many times a week they do workouts so as to understand how much sports practice is an integral part of their daily lives. The results showed a rather diverse sample in terms of training intensity, but much less so, as we will see later in the article, in terms of the responses given. This aspect is particularly conducive to research purposes aimed at identifying stressors common to different types of female federal athletes.

How many times a week do you train?

326 risposte



We see, in fact, that 55 (16.9%) female athletes train less than three times a week; 91 (27.9%) three times; 76 (23.3%) four times; 34 (10.4%) five times; 52 (16%) six times; 9 (2.8%) seven times and another 9 (2.8%) more than seven times. Despite

Of the 325 questionnaires surveyed, 6.5 or 7 percent were found to be unreliable because they were identical to other questionnaires received in the same time frame. The most plausible hypothesis, which emerged from discussions with coaches, is that teammates filled them out together opting to enter the same answers. Hence because of the questionnaire's cessation of anonymity and possible fear of teammates' judgment, we consider the following questionnaires at least partially compromised and unreliable. So, we consider the following study to be reliable for 93% of the examined sample (303 out of 325 female athletes).

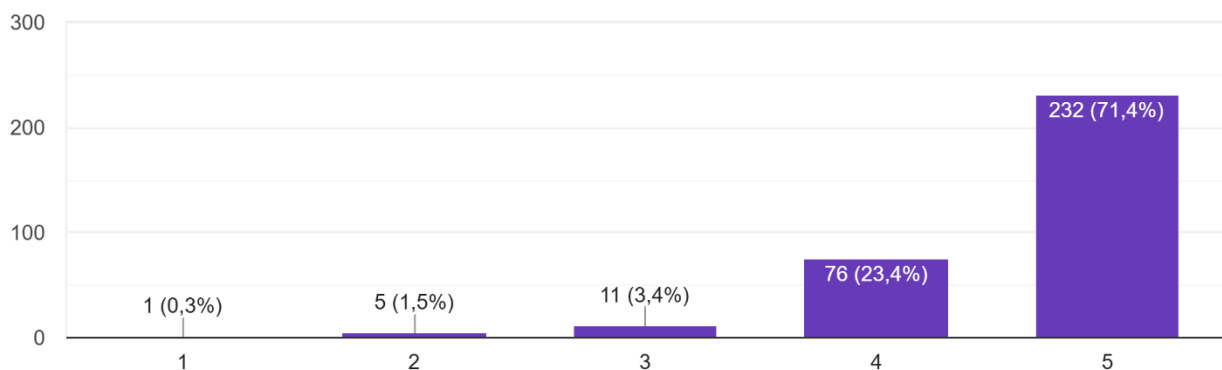
The results

Analyzing the overall results of the questionnaires submitted to the 325 female athletes, the beautiful function of sport as a vehicle for personal well-being fully emerges taking into consideration biological, psychological and social aspects. In fact, overall almost all the female athletes are happy with the sport they play and in their open-ended responses they largely confirm the existence of the reasons for playing sports that Enoksen notes in his 2011 studies. Among them are mentioned numerous times: mental and physical well-being, the pleasure of being part of a group; fun, the simple passion for a sport, the desire to achieve sports results, the pleasure of winning, taking care of the body, sometimes even dreams. But at the same time, critical issues emerge in some passages, leading to the inference that with some measures the stressors of these female athletes can be reduced, preventing the risk of early drop-out by giving added value to the world of sports.

Below are graphical elaborations of the results of the questionnaires with some comments:

How much do you like your sport?

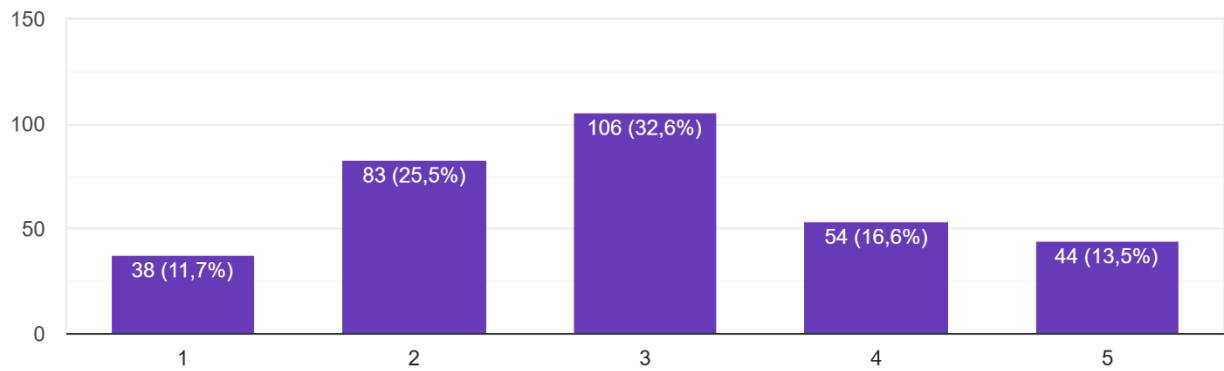
325 risposte



As mentioned above, a great level of liking for one's sport.

Does the fear of failure in your sport create anxiety for you?

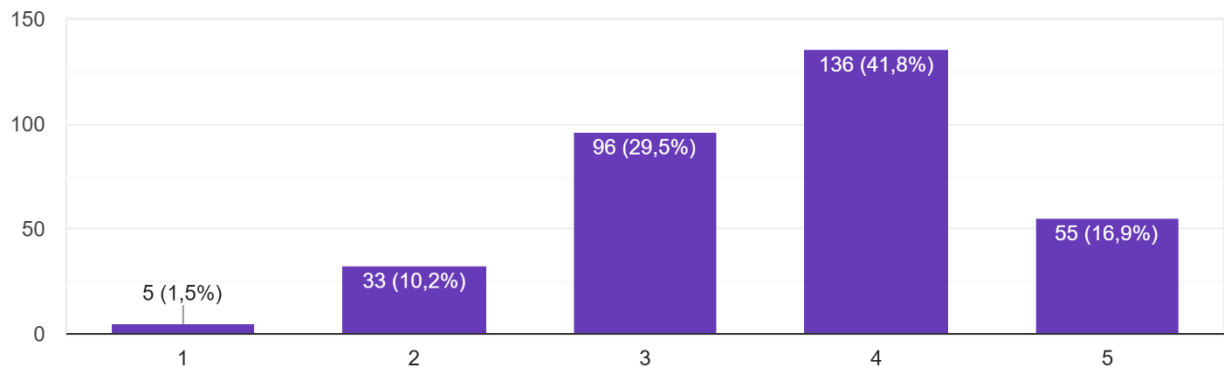
325 risposte



Regarding the fear of failure, however, the results are not homogeneous. Thus, it is believed to be a psychological factor that needs attention.

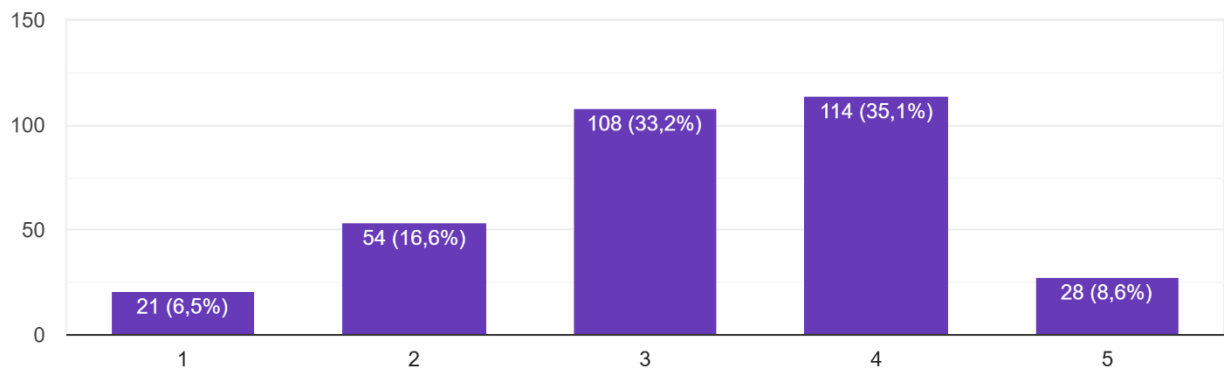
Do you think the sport you play gives beneficial effects to your body in terms of aesthetics?

325 risposte



How much do you like your body?

325 risposte

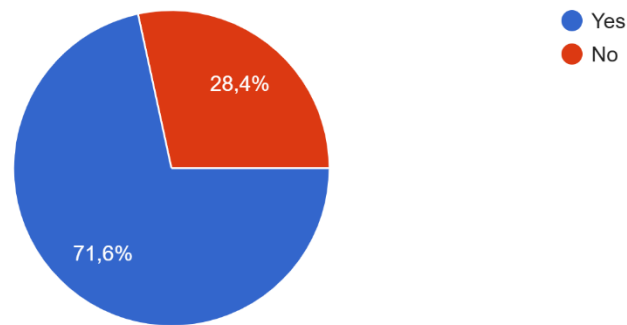


From these graphs we can see that most female athletes believe that their sport benefits their body in terms of aesthetics². The level of liking their body is high overall, but more insecurities emerge, which, however, according to the answers to the previous question, the female athletes believe that continuing in their sport can be key factor in overcoming them.

² The only 5 female athletes to have answered 1 play soccer in three cases and basketball in 2, sports in which almost all of responses fall between 3 and 5.

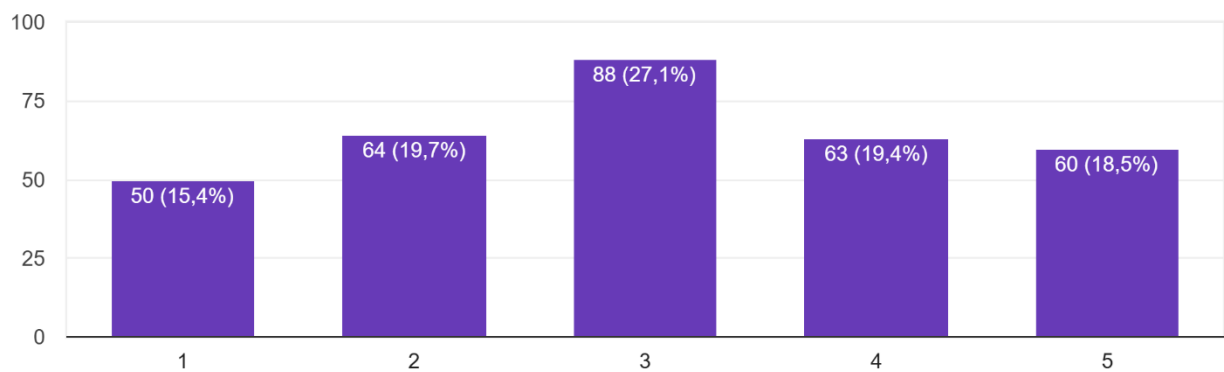
Have you ever had any injuries?

324 risposte



Are you afraid of getting injured?

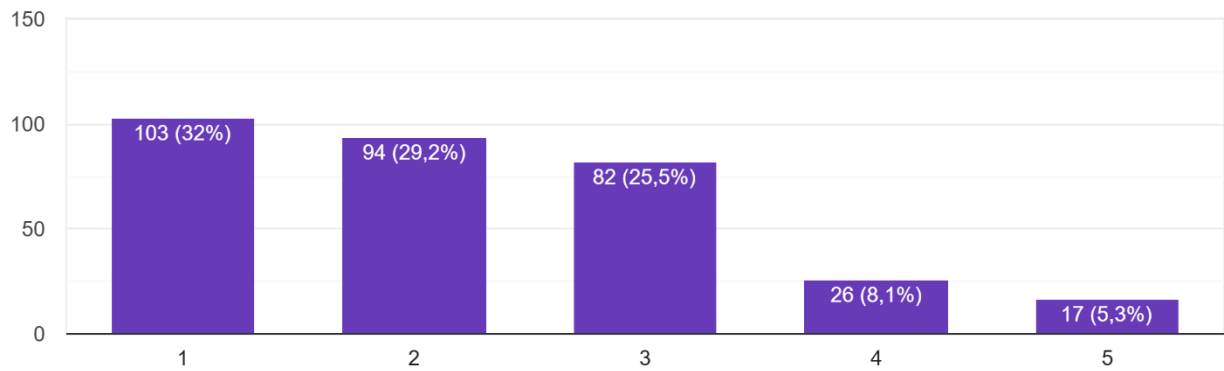
325 risposte



Regarding injuries, 71.6% of the sample say they have experienced them. Thirty-five percent are not very afraid of suffering from them, 27.1 percent on average, while 37.9 percent present a high level of fear towards injuries. Thus, this too is believed to be a psychological factor to watch out for and potentially compromising performance.

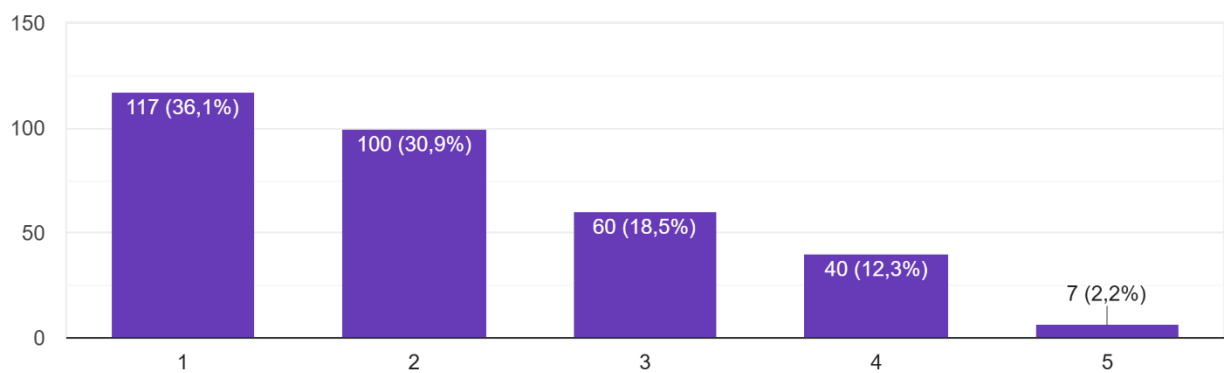
Do you think your sports practice has a negative influence on your studies?

322 risposte



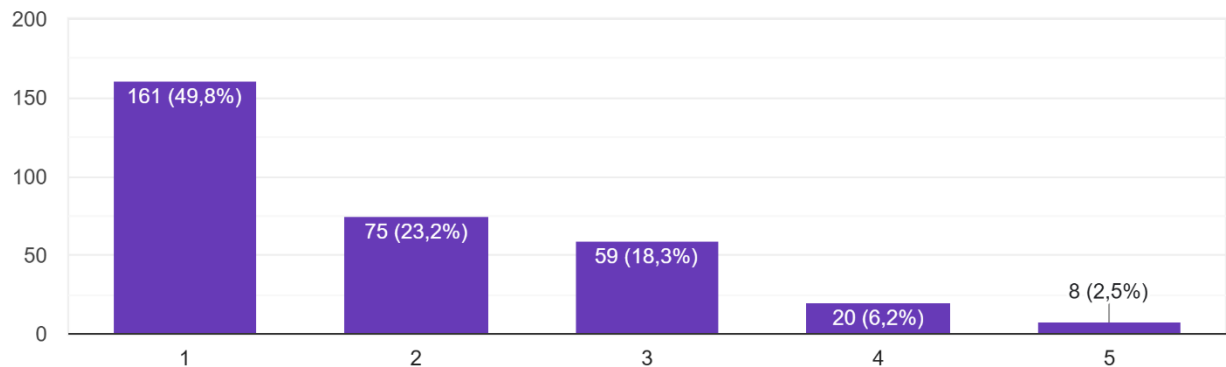
Do you think your sports practice has a negative influence on your social life?

324 risposte



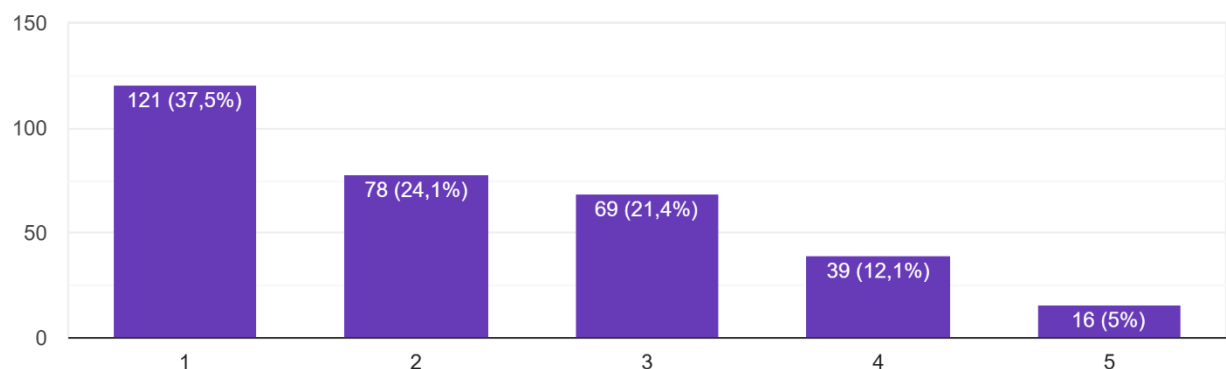
Do you think your sports practice has a negative influence on your love life?

323 risposte



Do you think that your sport practice has a negative influence on pursuing other interests?

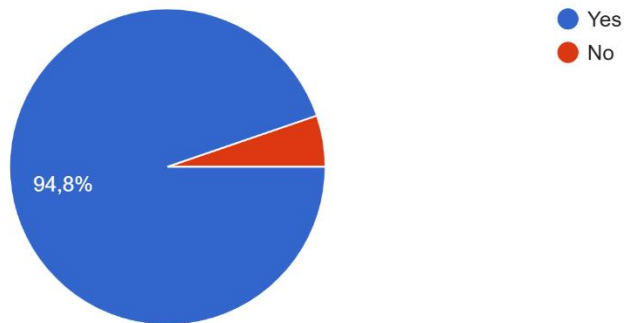
323 risposte



The study of microeconomics teaches that time is the scarcest resource at our disposal and an opportunity cost balance must be made on how to spend it. For this reason, we also investigated whether female athletes feel that time spent on sports takes away something from time to spend on study, social life, love relationships and other interests. In any case--it can be noted with pleasure--it emerges that overall female athletes manage to reconcile sports well with the other aspects of their lives. But in about 20 percent of cases this would seem not to be the case. So, this aspect, too, needs to be attended to by coaches and where possible to adapt the program and work times to the other needs of female athletes.

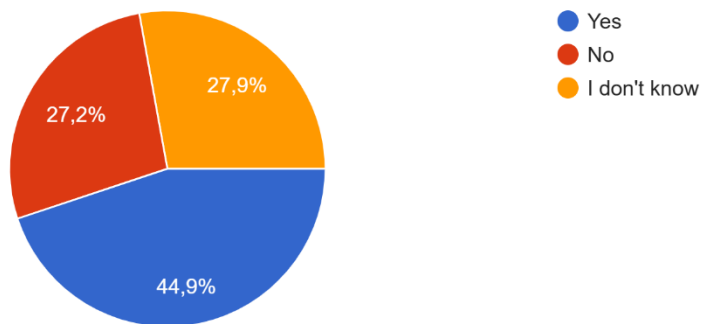
Have you already had your period?

324 risposte



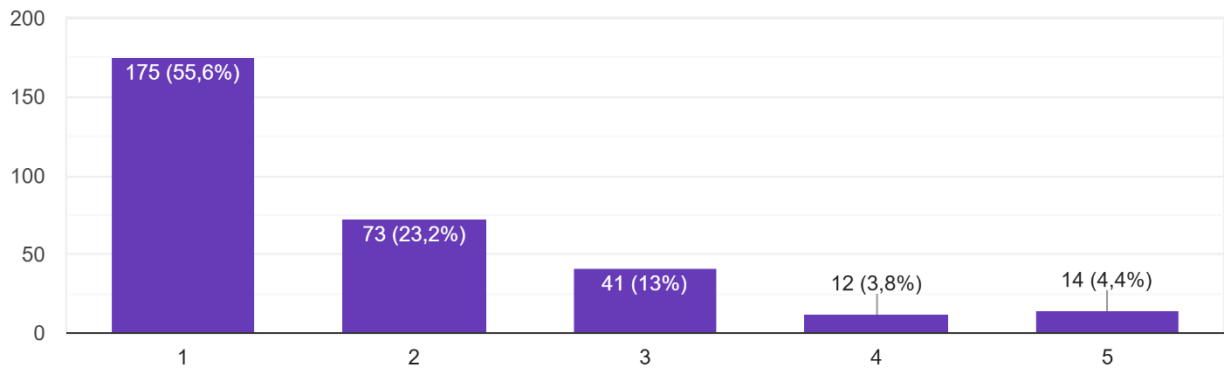
Do you think your menstrual cycle negatively affects your workouts?

323 risposte



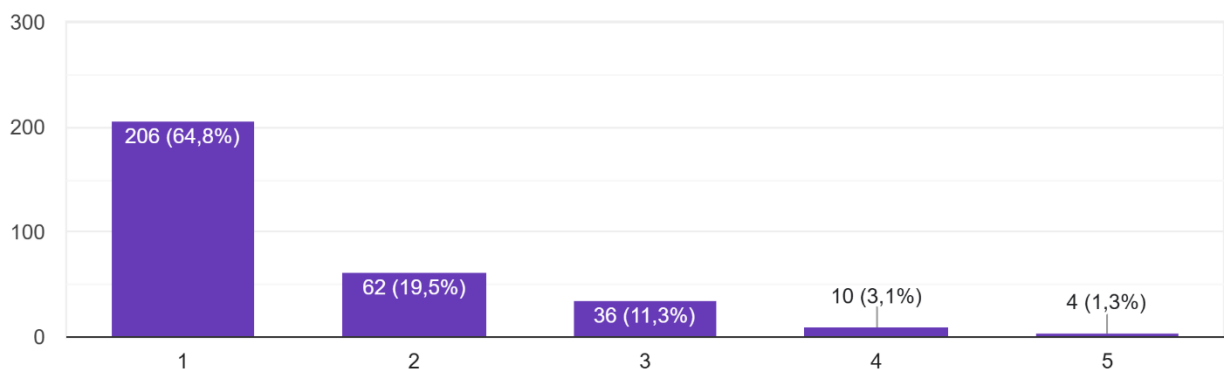
If you skip workouts or perform less due to your menstrual cycle, how much do you feel judged by your coach?

315 risposte



If you miss training sessions or perform less due to your menstrual cycle, how much do you feel judged by your teammates?

318 risposte

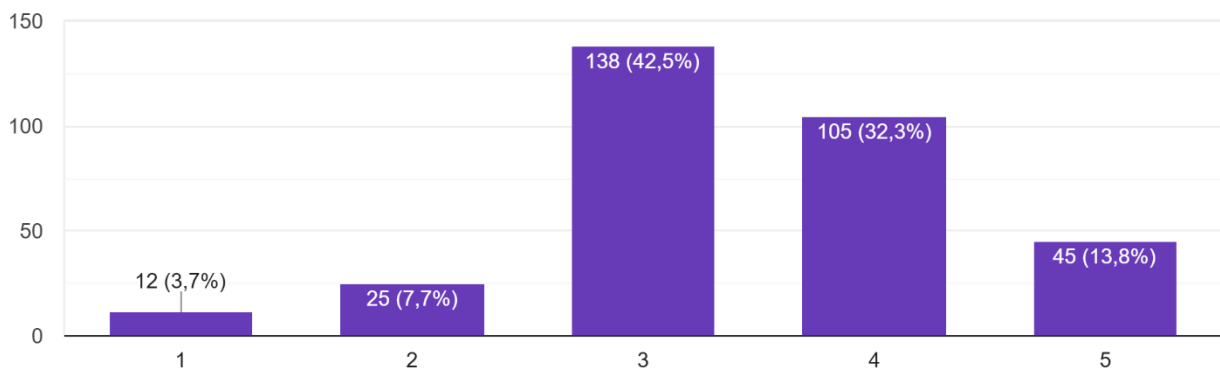


Regarding the survey of stressors related to the menstrual cycle, we found that of the 94.8% of female athletes who had already had their menstrual cycle, 44.9% perceived that it negatively affected their performance, 27.9% said they were uncertain about it, and 27.2% perceived no negative influences. Although some recent studies do not find major biological factors connecting the menstrual cycle with significantly worse athletic performance, the focus here is on psychological factors. The vast majority of female athletes, in any case, do not perceive negative judgments from coaches and

teammates, and this aspect is certainly encouraging from the point of view of mutual understanding, which is a fundamental aspect within a team. Nevertheless, considering that 44.9% feel a deterioration in performance and taking into account that the menstrual cycle both in terms of duration and intensity of the various phases differs from subject to subject, it would be appropriate for coaches to encourage female athletes to talk about it, breaking taboos and giving them the opportunity to listen to their bodies and possibly coincide with the menstrual phase with periods of discharge.³ One experience worth mentioning in this regard is the honorary degree in Science and Techniques of Preventive and Adapted Motor Activities conferred on Olympic champion Federica Pellegrini, whose *Lectio Magistralis* bore the title “Women and Sports Performance: How the Menstrual Cycle Can Affect Performance,” taking an important step toward overcoming taboos that over the years have been configured as stressors for female athletes.⁴

How do you evaluate your mood before training?

325 risposte

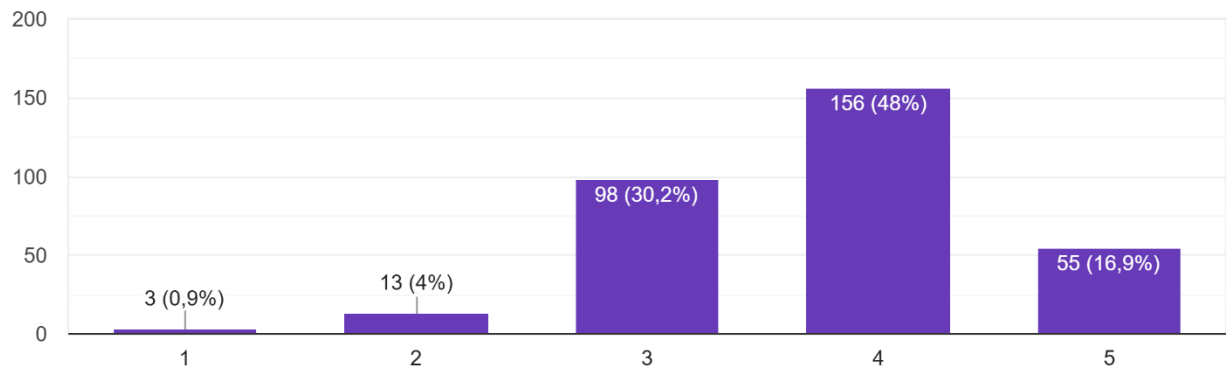


³ See De Luca M., *La programmazione dell'allenamento in funzione del ciclo mestruale*, Scienza e Movimento, 2020, for more on possible training programming according to the various phases of the cycle menstrual cycle.

⁴ To explore other stories of top female athletes who have spoken openly about their experiences related to sports and the menstrual cycle we recommend: [Mestruazioni e sport femminile: le atlete professioniste vogliono rompere i tabù sul ciclo mestruale \(olympics.com\)](https://olympics.com).

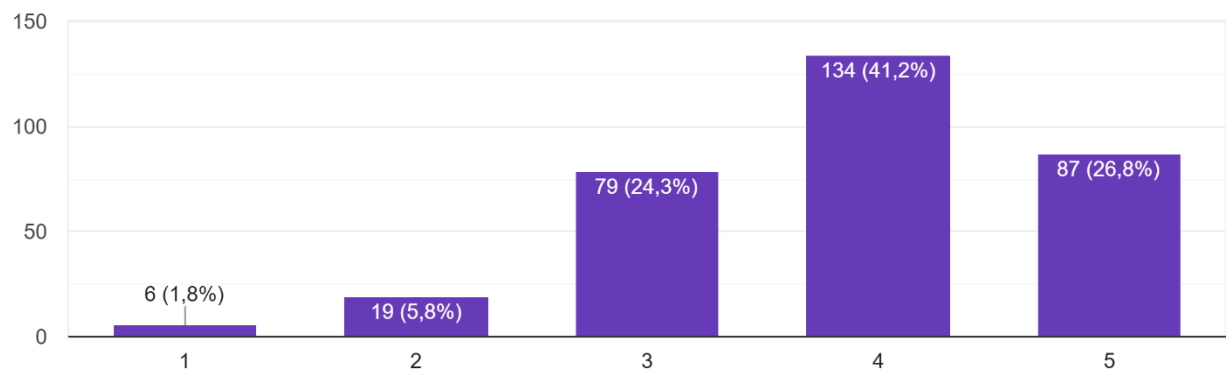
How do you evaluate your mood during training?

325 risposte



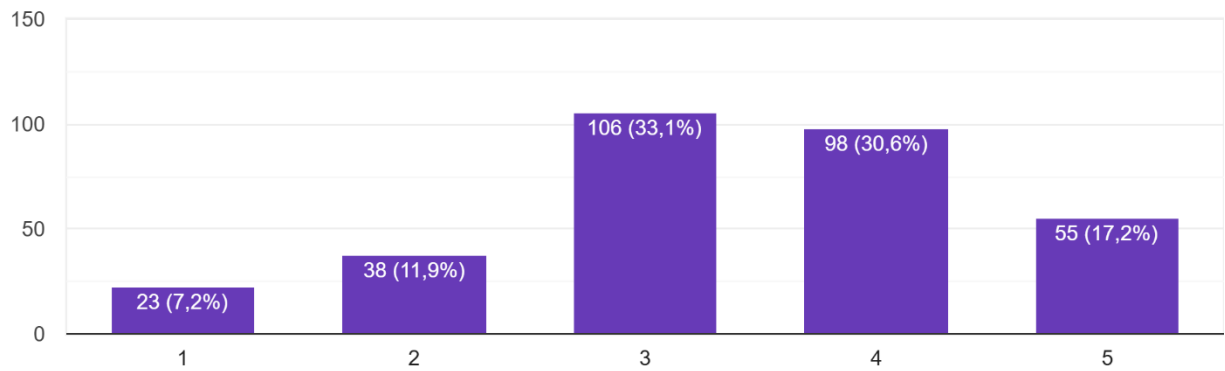
How do you evaluate your mood after training?

325 risposte



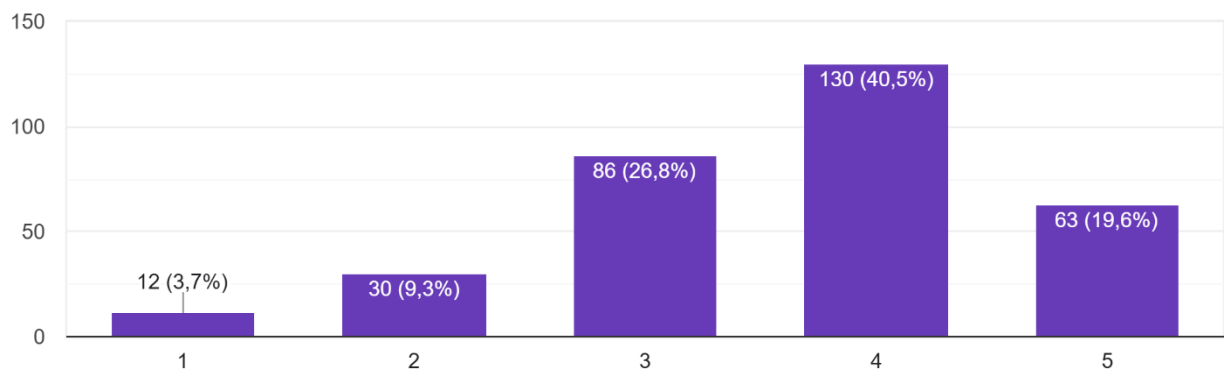
How do you evaluate your mood before competition?

320 risposte



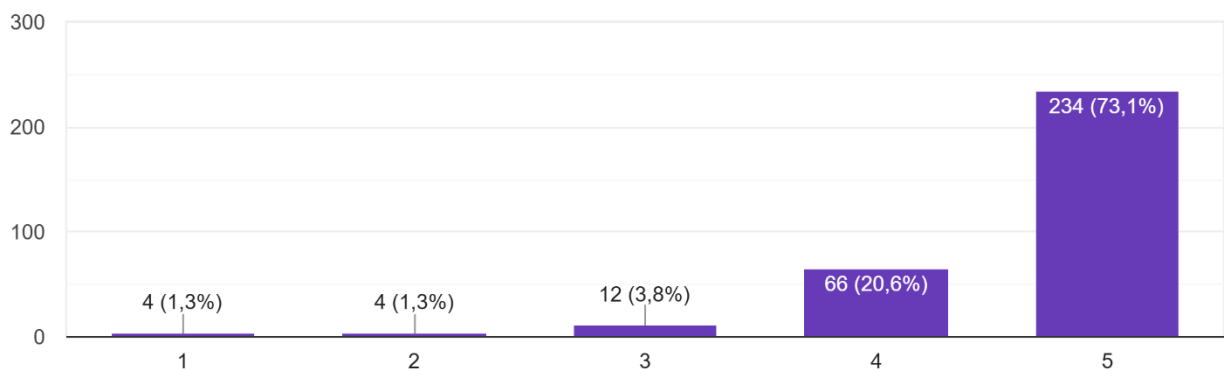
How do you evaluate your mood during competition?

321 risposte



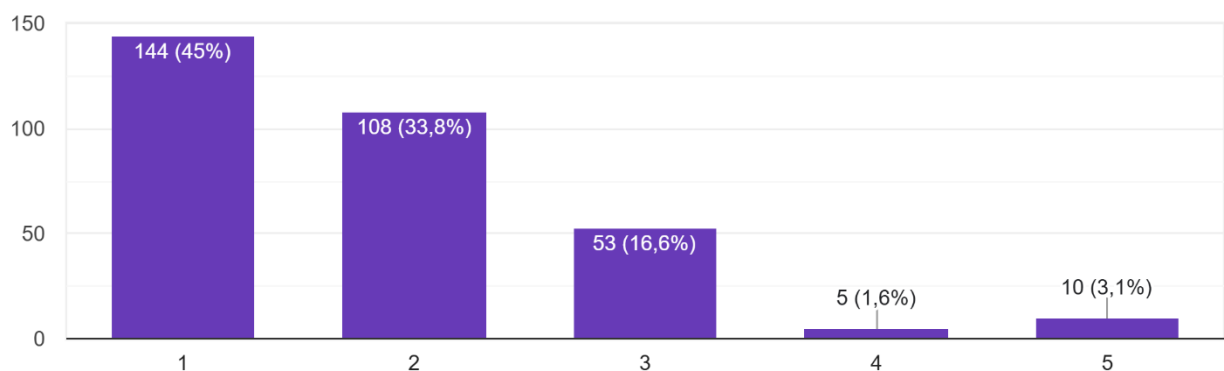
How do you rate your mood after a race in which you perform well?

320 risposte



How do you evaluate your mood after a race in which you don't perform well?

320 risposte

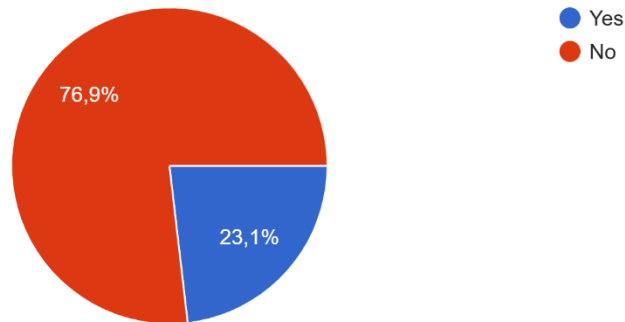


That sport promotes brain oxygenation and the release of brain-produced chemicals associated with well-being such as endorphins, dopamine, norepinephrine, and serotonin is now known and scientifically established to the vast majority. The empirical experience of this study further confirms this, for we see that in almost all cases the mood associated with training is positive and that it increases positively once the session is over. As for the mood related to competition and performance, as might be expected, this shifts the weight of the scale totally to one side or the other depending on the outcome achieved. Quoting Enoksen again, one of the factors that induces sports practice is “winning,” and when one of the factors that induces sports practice is lacking, the others often suffer as well since they are interlinked. Therefore, it might be useful after a defeat to have a discussion with a sports psychologist, a mental coach or simply dialogue with competent coaches trained on

approaching psychological aspects. In fact, defeat and victory are two sides of the same coin that connect people, create bonds and help personal growth in different but complementary ways.

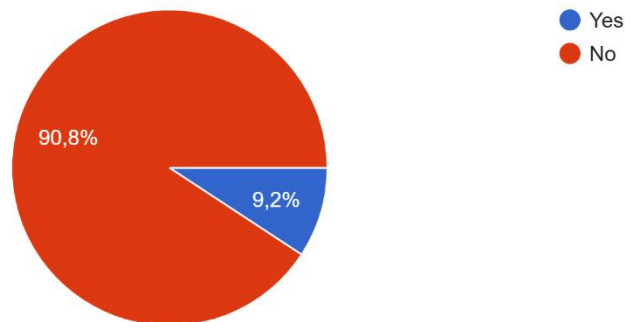
Have you ever gone to a psychotherapist?

324 risposte



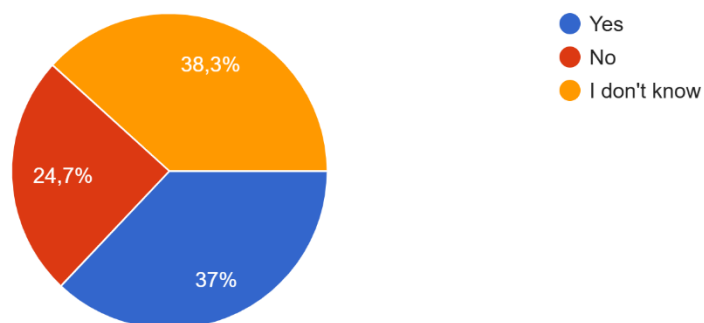
Do you go to a psychotherapist?

325 risposte



Do you think psychological support would be useful to you?

324 risposte



One of the most relevant data that emerged from the following study is that only 9.2% of the sampled female athletes are currently undergoing psychotherapy and only 23.1% have ever benefited from this type of support; but at the same time as many as 37% of the athletes are convinced that psychotherapeutic support would be helpful to them, 38.3% are uncertain about it -this is considered very plausible as in most cases they have never tried it- and only 24.7% do not believe that this type of support would be beneficial to them. This finding reinforces the idea of the coaching of a sports psychologist within teams.

What are the main reasons that lead you to do sport?

Regarding this open-ended question, as with the subsequent ones, it is difficult here to report all the contributions received, but the most frequent and representative reasons listed by female athletes are given below.

- “Psychophysical well-being”
- “Passion”
- “Always setting new goals”
- “I feel free from my problems and vent them in 'training”
- “Having a career based on a sport makes me feel happy”
- “Following my goal”
- “Having fun, meeting people who have the same lifestyle as you, being a team player, supporting myself.”
- “Maintain a good physique, create friendships and above all have fun and unplug from studies, exams, personal life, etc.”
- “I love sports and winning.”

The main reasons listed by female athletes relate to mental and physical well-being, having fun, feeling part of a group, pure passion, escaping the daily grind, the pursuit of victory, the pleasure of striving for new goals, taking care of the body, or simply having fun. All of these factors are actually interlinked, and it is important for coaches to take each of these aspects into consideration in order to foster the career progression of female athletes.

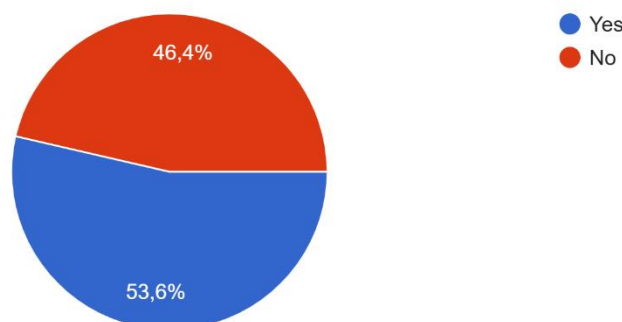
Can you identify any reasons for stress caused by your sports practice?

- “Anxiety and less free time.”
- “Periods of peak or intense volume, performance anxiety before an important peak set, failure”
- “Negative mental and physical thoughts”
- “Expectations from others”
- “Studying late into the night”
- “Feedback/comments from classmates, family members and teammates”
- “Never meeting one's own expectations”
- “Fear of injury, expectation of performance”
- “Less time for school and friendships”
- “Time management”

Among the most listed reasons, performance anxiety and fear of failure rank high on the podium; followed by lack of time for study or other interests. Still the fear of disappointing others' expectations and one's own; injuries and the fear of suffering from them; and judgments. It is noted that although the data collected in previous questions in the form of a likert scale showed balanced time management between sports and other aspects of daily life, with the ability to freely choose one or more stressors resulting from playing sports numerous female athletes listed reasons related to lack of time for study or other interests.

Have you ever thought about abandoning your sport?

319 response



This figure probably ranks as the most important one in the study, as despite the fact that overall, a great level of love for the sport emerges from the many questions asked, more than half of the female athletes (53.6 percent) say they have thought about quitting their sport. In order for these thoughts to be less recurrent or otherwise consciously processed in the context of more complex reasoning that takes various factors into consideration, it would be appropriate for young female athletes to have a figure of reference with whom they can talk openly about their intentions and thoughts, who can help them with their decisions.

What do you think would be useful to improve your psycho-physical well-being?

- “Creating an open communication space”
- “More relaxed atmosphere, acceptance of mistakes”
- “Less pressure in terms of performance”
- “Regular sessions with a sports psychologist”
- “Balance between training and personal life”
- “Less performance anxiety”
- “Getting more wins”
- “Psychological support; balanced diet”
- “More time to devote to sports”
- “Good bonding with my team”

In the personal evaluations of female athletes on what might be useful to improve their psychophysical well-being, one finds numerous cues related to reducing performance anxiety, communication and psychological support; again, finding a balance between sports and private life; improving time management between sports and studies; improving sports results; in a great many cases even practicing more sports, enhancing the social function of sports as an escape and relief from the stress of daily problems. So, again, we note the importance of the inclusion of professionally competent figures in the teams from a psychological motivational point of view; we also call for the promotion of more dialogue between sports clubs and the schools of female athletes with a view to cooperation and promotion of dual careers. For example, clubs could promote memorandums of understanding with schools that enhance the figure of the student-athlete, giving them more freedom in scheduling deadlines.

The sports psychologist

Sports psychology is concerned with studying the factors that influence participation and performance in both competitive and amateur sports. So, the goal of the sports psychologist is to work alongside athletes, coaches, and other sports figures within a team to work on their physical and mental well-being, increasing their awareness and consequently their results in terms of performance both in training and during competitive engagements. A fundamental characteristic of the sports psychologist is dynamism; in fact, he works not only in the studio but also in the field close to the athletes. It is hoped that he is a person who comes from the world of sports and documents the characteristics of the sport of the athletes and teams he is going to work alongside, also adapting the language in function, to plan interventions that complement the technical preparation. He helps the athlete to plan short-, medium-, and long-term performance and outcome goals; he can integrate complementary sports techniques⁵ to work on rebalancing the athlete; he accompanies the athlete in managing distractions, thus working on concentration; he provides strategies for managing performance anxiety, competition anxiety, fear of injury, and approach in recovery; helps to control thoughts and use them advantageously. In federal sports, the main objective is almost always to increase performance and results, and this can be a great stress factor for young female athletes who integrate sports practice with other numerous aspects of daily life. For this reason, the support of a qualified figure emerges as a valuable tool for the protection of health, understood in all its facets, and for the prevention of early drop-out, providing female athletes with psychological tools to appreciate themselves, relate in a healthy way to their sporting and non-sporting environment, and enjoy sport.

⁵ See: <http://www.studiotirelli.com/>

Some possibilities for sports clubs

Smaller sports clubs, which do not enjoy income from television rights, stadium revenues, merchandising etc.... and whose financial sustainability is mainly obtained from the membership fees of their members and sometimes from small sponsorships, encounter significant barriers in being able to introduce professional figures such as data analysts, social media managers, physiotherapists or mental coaches into their teams. Wanting to focus precisely on this last figure -or on that of the sports psychologist- for the purpose of trying to propose solutions that would reduce the stress factors found in the athletes who were part of the study sample, we try to provide some guidelines to the more forward-thinking sports clubs that are willing to try to work to improve the psycho-physical stress condition of their female athletes. One possibility, for example, could be to seek out and activate partnerships with specialized studies, offering visibility to the study in exchange for performance to the athletes, so that teams could assess the improvement in terms of performance and continuity of their athletes and make the corresponding evaluations. Another possibility lies precisely in the use of Erasmus+ funds for sports. In fact, since encouraging the practice of sports is precisely one of the specific priorities of the program⁶ and working on the mental health of female athletes is a suitable tool to do so, it is possible for European sports clubs to network and develop projects related to mental coaching for their female athletes, monitoring the results and analyzing them in scientific terms. Funds from the program would make it possible to pay professionals to carry out these tasks, and in this way, clubs could experience the benefits of this type of support without burdening their finances. Another cue for companies, with a view to improving the curricula of their staff, is to enroll their technicians in specialized schools so that they already have within them the skills needed to deal with this type of stressor.

⁶ Please consult the guide: https://erasmus-plus.ec.europa.eu/sites/default/files/2023-11/2024-Erasmus%2BProgramme-Guide_EN.pdf, (Page 237)

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