

Perfectionism among young athletes

PAULA MATIJAŠEVIĆ¹, BRUNO MATIJAŠEVIĆ², FRANE ŽUVELA³

^{1,3}Faculty of Kinesiology Split, University of Split, CROATIA

¹Faculty of Kinesiology Zagreb, University of Zagreb, CROATIA

²University of Split, CROATIA

Published online: December 30, 2024

Accepted for publication: December 15, 2024

DOI:10.7752/jpes.2024.12318

Abstract:

Background and Study Aim. This research provides valuable scientific insights into internalized behavioral issues, particularly focusing on perfectionism. It explores both the adaptive and maladaptive aspects of perfectionism, providing comprehensive information that can guide future interventions and therapeutic strategies to address related psychological, pedagogical, and kinesiology challenges. **Materials and Methods:** This quantitative study included 256 participants aged 9–18, varying in sport type and gender. The Sport Multidimensional Questionnaire Perfectionism Scale 2 (SMPS-2) was used for this research. Mann-Whitney U test, Exploratory factor analysis (EFA), cluster analysis and Chi-Square analysis were used to analyze the results. **Results.** The obtained data showed significant differences in factors that are important according to sport type and gender. Also, results showed three different clusters inherent to athletes regarding their sport type. The majority of respondents belong to the "Moderate Perfectionists" cluster. In contrast, the "Maladaptive perfectionist" affiliation is significant for individual athletes, and the athletes who play team sports belong more significantly to the "Moderate Perfectionists" cluster. **Conclusions.** This paper provides an insight into the potential mental problems young athletes face in a challenging developmental phase, adolescence. Research provides valuable insights into perfectionism and its variations and offers practical information for coaches, parents, and teachers. It expands the limited literature on perfectionism in young athletes. This information can be used to direct their efforts towards promoting mental health and preventing issues related to perfectionism.

Key Words: perfectionism, young athletes, individual sports, team sports

Introduction

The progress of sports as a social phenomenon of the 21st century broadly encompasses a broader context that include sports performance – with the physical aspect - and increasingly covers psychological and pedagogical aspects. First, this means mental health support and the identification of potential mental difficulties faced by athletes. Perfectionism is one of the most researched phenomena in this context (Hill, Mallinson-Howard, & Jowett, 2018). It is a multidimensional trait that manifests through setting high goals and being excessively critical of oneself and one's performance (Frost et al., 1990). There is a difference between positive and negative perfectionism. Positive perfectionism positively affects sports performance without harming mental health, while negative perfectionism has the opposite impact. Recent scientific literature in the context of sports has increasingly investigated negative perfectionism due to its negative impact on athletes in terms of mental health and sports performance (Matijašević & Matijašević, 2023). The perfectionist paradox manifests in the fact that sports are a part of everyday life that can encourage perfectionism to perfect a specific sports skill. On the other hand, an excessive level of preoccupation with those above can lead to problems in the performance of the sports itself and the athlete's mental health (Flett & Hewitt, 2005). Perfectionism can manifest differently and have different causes. Perfectionism in sports can come from the athlete himself and his environment. In this case, we can discuss two types of perfectionism: self-oriented and other-oriented (Hewitt, Flett, & Mikail, 2017). With other-oriented perfectionism, the importance of the environment in the development context of athletes is evident, which is also explained by the theory of the bioecological model (Bronfenbrenner & Morris, 2006).

The above model explains how the environment of a person, in this case, an athlete, is crucial for developmental contributions but also risks that can evolve into behavioral deviations. This is especially important for minors. Children and young athletes, in the case of other-oriented perfectionism with negative consequences, can have a risky environment from coaches and the family. Previous research has established that other-oriented perfectionism is often associated with internalized behavioral problems in general (Chen, Hewitt, & Flett, 2015). This influence is often associated with the family's negative pressure on young athletes' sports success, manifested in a generally poor mental state and sometimes negative perfectionism (Sevilla & Borra, 2015). The same thing happens from another source of pressure on young athletes. Coaches themselves, exposed to pressure, often reproduce the pressure on young athletes, which negatively affects their mental health (Veljkovic et al., 2019). This is especially important for the adolescent age, which is risky, and the said riskiness

can be further enhanced through pressures within the environment that have a high meaning for the person, in this case, the sports environment. To gain insight into the accessibility of the aforementioned problem, a scientific and research basis for perfectionism and sports in younger sports categories is necessary. By determining the current situation, potential challenges for the mental health of young athletes can be determined, which can help create structural support for young athletes in clubs and families.

Perfectionism in young athletes has a two-way effect – on the one hand, it can boost athletic performance. On the other hand, it can compromise mental health, especially during adolescence. Previous research has shown that individual sports generally pose a higher risk for the development of internalizing behavioral problems compared to team sports, with the risk being particularly pronounced in the case of depressive disorders (Nixdorf, Frank & Beckmann, 2016). Given the broader context of mental health, which includes perfectionism and its effects on psychological state and sports performance, it is crucial to investigate the phenomenon of perfectionism in different types of sports. However, previous research has not sufficiently addressed differences in manifestations of perfectionism according to types of sports, gender, and environmental influences, which opens the door to further research and discoveries in this area.

Accordingly, this study aims to examine the prevalence of perfectionism among young athletes, including children and adolescents, and to analyze the cluster of perfectionism within the sample. In this way, this research seeks to fill existing gaps and provide a scientific basis for creating tailored interventions that support mental health and reduce the risks associated with perfectionism in sports.

Materials and methods

Participants

This study included 256 subjects aged 9 to 18, made up of 105 females and 151 males. Of the participants, 93 were involved in individual sports while 163 participated in team sports. Before the research, we obtained informed consent from sports clubs and the parents of participants who were minors. All participants who provided consent, along with their parents and clubs, were included voluntarily and informed of their right to withdraw at any time. Written informed consent was obtained from each participant and their parents, and the research was conducted following the Ethical Code of the Declaration of Helsinki.

Research design

The research was conducted from February to May 2023 by sharing an online questionnaire created using Google Forms. After parents, clubs, and athletes consented, the questionnaires were sent to the clubs' or research participants' e-mail addresses. The questionnaire was anonymous, and the purpose of the data obtained was explained in the initial invitation to participate in the research. The questionnaire consisted of the sociodemographic part and the Sport Multidimensional Perfectionism Scale 2 (Gotwals & Dunn, 2009). The mentioned questionnaire showed satisfactory metric characteristics according to Cronbach's alpha, represented by 0.92.

Statistical analysis

The statistical analysis of the data was processed using the statistical tool SPSS 29.0. The researchers used factor analysis to identify the key dimensions of perfectionism among young athletes. They then used the extracted factors for further analysis. To investigate potential differences in perfectionism factors based on the type of sport and gender, they applied the Mann–Whitney U test, with statistical significance set at $p < 0.05$. To determine the optimal number of clusters, they initially conducted a hierarchical analysis and then used the K-means clustering method. Notably, the clustering process was repeated until cluster stability was achieved, demonstrating the thoroughness of the research. Additionally, they utilized a chi-square analysis to identify differences between clusters based on the type of sport.

Results

The collected data were analyzed using factor analysis, cluster analysis, and chi-square analysis. Exploratory factor analysis was conducted on the Sport Multidimensional Questionnaire Perfectionism Scale 2 (SMPS-2) using the principal component method. The Kaiser–Meyer–Olkin coefficient ($KMO = 0.889$) and Bartlett's test of sphericity ($\chi^2 = 6358.211$, $df = 0.861$, $p < 0.001$) indicate that the correlation matrix is suitable for factor analysis. Guttman's criteria were used to extract six factors, which account for 60.30% of the total variance. The factor loadings can be found in Table 1.

Table 1. Factor analysis

HIGH EXPECTATIONS	ROUTINE COMPETITION	BEFORE	THE
If I don't set the most goals in sports, I will end up as a second-grader.	0.57	Before a game/competition, I have a routine that I like to follow.	0.80
I don't like to be anything less than the best in the sport I play.	0.78	I have and follow a competitive routine.	0.86

It is essential for me that I am competent enough and have the appropriate skills.	0.68	I follow pre-planned steps that prepare me for the match/competition.	0.89
I expect better results and performances from myself than most in daily training.	0.76	I follow a routine to mentally prepare for the match/competition.	0.89
I feel like most athletes in my sport settle for lower goals.	0.39	I have developed plans that dictate how I will prepare for the competition.	0.85
I have extremely high goals for myself in the sport I play.	0.79	I have set the strategies that I use during the competition/match.	0.73
I set higher expectations for myself than most athletes who play my sport.	0.74		
VARIANCA FACTOR	10.91	VARIANCA FACTOR	5.51
% VARIANCA	25.98	% VARIANCA	13.11
NOT ACCEPTING MISTAKES		HIGH EXPECTATIONS OF PARENTS	
If I make any mistakes and fail the competition, I consider it unsuccessful, as if I failed utterly.	0.76	My parents set high goals for me.	- 0.74
If I fail in a competition, I have failed as a person.	0.79	In competitions/matches, I feel like I can't-reach my parents' goals.	0.65
People will like me more if I make fewer mistakes in a match or competition.	0.56	Only an outstanding performance in a competition/match is good enough for my family.	- 0.75
I should be upset if I make a mistake in a competition or match.	0.63	My parents always have higher expectations -for me in sports.	0.76
If my teammate or opponent who plays the same position as me plays better than me.	0.61	I feel like my parents criticize me as soon as I-perform slightly worse.	0.75
If I fail in a competition, people will not respect me as an athlete.	0.77	I feel like I can't live up to my parent's-expectations in a competition.	0.76
People will think less of me if I make mistakes in competitions.	0.70	My parents expect excellence from me in my-sport.	0.80
If I perform well throughout the game or competition but make a small and obvious mistake, I will still be disappointed.	0.79	My parents never thoroughly tried understanding my mistakes in a match/competition.	- 0.67
		My parents want me to be better than all the-other athletes who play my sport.	0.72
VARIANCA FACTOR	2.91	VARIANCA FACTOR	2.65
% VARIANCA	6.92	% VARIANCA	6.30
HIGH EXPECTATIONS OF THE COACH		INSECURITY IN SPORTS PERFORMANCE	
I feel that the trainer criticizes me if I do a little worse-than perfect in a competition/match.	0.82	I usually feel unsure if training has successfully prepared me for a match or competition.	0.77
Only an outstanding performance is good enough for my-coach.	0.81	I usually feel insecure about the adequacy of my training before a game or competition.	0.73
I feel like I can't meet all the coach's expectations.	- 0.65	I rarely feel that training has fully prepared me for a game or competition.	0.80
My coach sets high expectations for substitutions from-competition to competition.	0.63	Before a competition/match, I rarely feel satisfied with my training.	0.86
My coach expects excellence from competition to-training.	0.68	I rarely feel that I have trained enough before a game/competition.	0.80
I feel that the coach doesn't want us to understand my-mistakes.	0.71	I usually can't decide if I've trained enough before a game/competition.	0.83
VARIANCA FACTOR	1.77	VARIANCA FACTOR	1.58
% VARIANCA	4.22	% VARIANCE	3.77

The study analyzed differences in perfectionism based on the type of sport (team and individual) of the respondents. Due to the non-normal distribution of the data, a non-parametric statistical method, the Kolmogorov-Smirnov test, was used.

The Mann–Whitney U test was employed to analyze the independent samples. The results revealed statistically significant differences in perfectionism based on the type of sport and the factors of high expectations and insecurity in sports performance.

Team sports athletes exhibited higher levels of perfectionism regarding high expectations, while individual sports athletes showed a statistically significantly higher level of uncertainty in sports performance.

Table 2. Differences in perfectionism with regard to the type of sport
p<0,05*; p<0,01**; p<0,001***

FACTOR	TYPE OF SPORT	N	M	S.D.	U	Z
High expectations	Individual	93	3.45	0.81	5527	-3.61***
	Team	163	3.83	0.68		
Routine before the competition	Individual	93	3.43	1.08	6920	1.16
	Team	163	3.28	1.02		
Not accepting mistakes	Individual	93	2.77	0.96	6795.5	1.38
	Team	163	2.58	0.85		
High expectations of parents	Individual	93	2.28	1.00	7220.5	0.63
	Team	163	2.16	0.81		
High expectations of the coach	Individual	93	2.74	0.92	7435.5	-0.25
	Team	163	2.79	0.86		
Insecurity in sports performance	Individual	93	2.52	0.97	6007.5	2.77**
	Team	163	2,19	0,92		

Differences in perfectionism based on the respondents' gender were analyzed using the Mann–Whitney U test for independent samples. The results indicated statistically significant differences in the factors of not accepting mistakes and insecurity in sports performance. Female respondents displayed more significant uncertainty in sports performance and a more pronounced nonacceptance of mistakes than their male counterparts.

Table 3. Differences in perfectionism with respect to gender

FACTOR	GENDER	N	M	S.D.	U	Z
High expectations	female	105	3.55	0.87	6922.500	-1.72
	male	151	3.79	0.64		
Routine before the competition	female	105	3.26	1.12	7491.500	-0.75
	male	151	3.38	0.98		
Not accepting mistakes	female	105	2.85	0.94	6293.500	2.80**
	male	151	2.51	0.84		
High expectations of parents	female	105	2.16	0.98	7283.000	-1.11
	male	151	2.23	0.81		
High expectations of the coach	female	105	2.88	1.06	6974.000	1.64
	male	151	2.69	0.72		
Insecurity in sports performance	female	105	2.53	1.01	6159.500	3.03**
	male	151	2.16	0.88		

p<0.05*; p<0.01**; p<0.001***

Hierarchical cluster analysis was conducted using Ward's method and Euclidean distance, identifying three distinct clusters. Subsequently, the analysis was performed using the K-means clustering algorithm. This clustering analysis was applied to the questionnaire to measure the level of perfectionism in athletes (SMPS-2), with the cluster names determined based on the cluster's center. The first cluster is labelled "Maladaptive Perfectionists" because it consists of respondents with the highest values within the perfectionism factor who did not accept mistakes (M = 3.26), report a sense of high expectations (M = 3.97), and have high expectations from their coaches (M = 3.79). This cluster includes 49 respondents, which represents 19.14% of the sample. The second cluster was named "Routine Focused Athletes." The central value of routine characterizes routine before the competition (M = 2.06). This cluster is the second largest and comprises 54 respondents, that is, 21.09% of

the sample. Compared to unerring perfectionists, respondents in this group give significantly lower ratings of expectations and errors, while their central value is expressed in the routine before matches or competitions. The third cluster, the largest, is called moderate perfectionists. It consists of 153 respondents, that is, 59.77% of the sample. The central value of this cluster is "High expectations of the coach," with a mean value of $M = 2.84$. This group is located between the values of "High perfectionists" and "Routine athletes." Respondents in this cluster indicated perfectionism that came from the environment.

Table 4. Cluster analysis

	Cluster		
	1	2	3
High expectations	3.97	3.19	3.78
Routine before the competition	3.77	2.48	3.50
Not accepting mistakes	3.72	1.86	2.58
High expectations of parents	3.08	1.38	2.21
High expectations of the coach	3.79	1.95	2.73
Insecurity in sports performance	3.47	1.51	2.23
SIZE OF CLUSTER	49	54	153
MEAN CLUSTER	3.63	2.06	2.84

Table 5 shows statistically significant differences in sports activity preferences among different clusters. Respondents in individual sports expressed a higher level of perfectionism than in team sports. Respondents from the "Moderate" cluster perfectionists are more in team sports.

Table 5. Differences according to the type of sport with regard to the cluster

SPORT	CLUSTER 1		CLUSTER 2		CLUSTER 3		CHI-SQUARE
	%	N	%	N	%	N	
TEAM	14.18	23	21.5	35	64.4	105	7.59*
INDIVIDUAL	28.0	26	20.4	19	51.6	48	

Discussion

This study aimed to identify perfectionism in young athletes, regardless of age or sport. It also aimed to differentiate between various aspects of perfectionism and assess their occurrence in clusters. Higher expectations are present in team sports, while individual athletes show more significant uncertainty. The factor of higher expectations can be explained through the prism of competitiveness present in athletes' daily training. The stated information is based on previous theoretical and empirical foundations, which state that it is precisely setting high goals, often because of pressure from the environment. However, from the athlete himself, this is also significant for team-organized sports (Doob, 2018). This is especially important for young athletes in different developmental stages (Bishop, Edge, & Thomas, 2010). It is recommended that sports program leaders for children and young people at that age monitor their development outside of the sports context so that there are no problems in their mental health. The second result regarding certain aspects of perfectionism and the type of sport is also based on recent scientific literature in this area, which indicates generally more significant difficulties in mental health among individual athletes (Nixdorf, Frank, & Beckmann, 2016; Matijašević & Matijašević, 2023). In previous longitudinal research conducted on adolescents, perfectionism pertaining to the aspects of strivings and concerns was found to be a significant predictor of burnout syndrome in young athletes and an indicator of the risk of overtraining (Květon, Jelínek, & Burešová, 2021).

The available scientific literature also compares individual aspects by gender and indicates that the female gender is at greater risk in the context of the development of negative consequences for mental health and behavioral deviations (Kwong et al., 2019; Herrero, Jejuriar, & Carter, 2021). In this context, perfectionism can also be observed, given that in this paper, it is observed and analyzed as a negative behavioral deviation with consequences for overall mental health. Compared with men, women tend to exhibit a stronger inclination toward developing higher levels of perfectionism, particularly in terms of not tolerating mistakes and feeling insecure about their performance in sports. The heightened negative perfectionism stemming from the fear of failure has a substantial impact on women's mental health (Coreia et al., 2017). As in previous research, the results established that female gender is a risk factor for the development of mental health problems. What is optimistic about this phenomenon is that women are more inclined to seek help with the stated problem (McRae et al., 2016). To gain a better understanding of female gender as a risk factor for the development of mental health problems, qualitative research is needed.

The cluster analysis results are one of the few scientific indicators of differences within the category of athletes who have experienced perfectionist symptoms while making an additional division within the category, as mentioned earlier. The largest cluster, "Moderate Perfectionists," indicates that many young athletes manifest perfectionism in their sports career. What is important for this cluster is the indicative influence of the coach on the athlete because it turned out to be the central variable of this cluster. Environmental influence is researched and essential in the developmental context of a person, which is also shown in this paper (Bronfenbrenner & Morris, 2006). In this case, coaching influence can be developmentally risky for creating negative perfectionism. The obtained results indicate that "other-oriented" perfectionism is present in the mentioned cluster, which means it is caused by external influence. However, the results regarding perfectionists and other internalized behavioral deviations in young athletes differ. Veljkovic et al. (2019) stated that in their sample of athletes, the coach does not influence the development of perfectionism, which does not agree with the results of this research. Different coaching styles can reveal inconsistency.

Every athlete does not react the same way to an approach or way of conducting sports. The athlete's coach's approach is considered a critical factor that, depending on the interaction with the athlete, can be risky or protective depending on the effect it has on the athlete in the context of the development of behavioral deviations and perfectionism (Čaprić et al., 2023). Identifying the coach's influence on the athlete is essential because a negative coaching influence through the development of socially prescribed perfectionism can result in athlete burnout (Olsson et al., 2022; Hassmén, Webb, & Stevens, 2023). This research is also in line with previous scientific findings, which, in the broader age sample, in addition to young athletes, show that perfectionism about clusters is present in similar proportions but with a distinction in the names of individual clusters (Gucciardi et al., 2012). The identification of inflexible perfectionists in this sample is significant, and the representation of the most represented variables in the other clusters is similar. Cluster differences indicate that, depending on the type of sport, a different type and extent of perfectionism can develop in young athletes. It is known that individual sports are significantly riskier for the development of internalized behavioral problems (Matijašević & Matijašević, 2023). This sample showed that the perfectionist deviation for individual athletes is more significant for adaptive perfectionists. At the same time, it is more significant for people from team sports for the "Moderate Perfectionists" cluster.

This indicates a wide distribution of perfectionism among young athletes. However, it is also important to identify differences in perfectionism for the potential prevention and intervention of behavioral deviations regarding the type of sport a person plays. If we consider the premise of greater risk in athletes who engage in individual sports compared with athletes in team sports, then the results obtained are expected. Maladaptive perfectionism is considered the most risky for a person's mental health and development, and in this sample, it proved to be significant for individual sports athletes (Núñez et al., 2024). More difficult adaptation to the environment's demands and innate perfectionistic aspects that cannot be fulfilled, which is significant for maladaptive perfectionism, can lead to athlete burnout. For this reason, it is necessary to emphasize the importance of the differences between different types of perfectionism, mainly when it refers to the development-risk phase of athletes, that is, adolescence (Hill et al., 2018; González-Hernández et al., 2021). In this respect, team sports provide a healthier environment for preventing internalized behavioral problems. The explanation for why it is so can be found in belonging to a group as a protective developmental factor (Ruvalcaba et al., 2017; Matijašević & Maglica, 2022). On the other hand, individual athletes lack the team aspect, which would mean mutual support of athletes, easier coping with negative but positive aspects of sports, and mutual encouragement in sports progress.

Conclusion

This paper provides essential insights into young athletes' potential psychological challenges during adolescence, including the risks associated with perfectionism. The analysis revealed specific risk trends in female athletes and individual sports, highlighting the importance of gender- and context-sensitive approaches to prevention and intervention. The results have broad implications, particularly for coaches, parents, and teachers, who can serve as a basis for adapting pedagogical and training methods to preserve mental health and encourage positive patterns of perfectionism. This paper's significance lies in its contribution to the relatively limited field of research on perfectionism in young athletes. Future research should include more representative samples and additional stakeholders, such as parents and coaches, to gain a more comprehensive understanding of the influence of microstructure on the development of perfectionism. It is essential to investigate the long-term consequences of different forms of perfectionism on mental health and sports performance and to develop preventive programs aimed at reducing maladaptive forms of perfectionism.

The results obtained can significantly contribute to developing strategies to improve young athletes' mental health, thereby supporting their overall development and long-term participation in sports. By introducing structured support in clubs, schools and families, it is possible to reduce the adverse effects of perfectionism and ensure healthier sporting and psychological development of young athletes.

Conflicts of interest - The authors have no conflicts of interest.

Acknowledgement - This research would like to thank Croatian sports clubs for allowing it to be conducted and the athletes and their parents for providing adequate consent.

References:

- Bishop, D., Edge, J., & Thomas, C. (2010). High-intensity exercise acutely improves the functional state of human skeletal muscle in athletes. *International Journal of Sports Physiology and Performance*, 5(1), 103-109. <https://doi.org/10.1123/ijsp.5.1.103>
- Bronfenbrenner, U., & Morris, P. A. (2006). The bioecological model of human development. In R. M. Lerner & W. Damon (Eds.), *Handbook of child psychology: Theoretical models of human development* (6th ed., pp. 793–828). John Wiley & Sons, Inc. <https://doi.org/10.1002/9780470147658.chpsy0114>
- Čaprić, I., Stanković, M., Đorđević, D., Špirtović, O., Mavrić, A., & Zečirović, A., et al. (2023). The impact of basketball coach's leadership style on perfectionism of basketball players. *Journal of Physical Education and Sport*, 23(5). <https://doi.org/10.7752/jpes.2023.05163>
- Chen, C., Hewitt, P. L., & Flett, G. L. (2017). Ethnic variations in other-oriented perfectionism's associations with depression and suicide behaviour. *Personality and Individual Differences*, 104, 504-509. <https://doi.org/10.1016/j.paid.2016.09.021>
- Coreia, M. E., Rosado, A., Serpa, S., & Ferreira, V. (2017). Fear of failure in athletes: Gender, age, and type of sport differences. *Revista Iberoamericana de Psicología del Ejercicio y el Deporte*, 12(2), 185-193.
- Doob, C. B. (2018). *Great expectations: The sociology of survival and success in organized team sports* (1st ed.). Routledge. <https://doi.org/10.4324/9781351039024>
- Flett, G. L., & Hewitt, P. L. (2005). The perils of perfectionism in sports and exercise. *Current Directions in Psychological Science*, 14(1), 14-18. <https://doi.org/10.1111/j.0963-7214.2005.00326.x>
- Frost, R. O., Marten, P., Lahart, C., & Rosenblate, R. (1990). The dimensions of perfectionism. *Cognitive Therapy and Research*, 14(5), 449-468. <https://doi.org/10.1007/BF01172967>
- González-Hernández, J., Nogueira, A., Zangeneh, M., & López-Mora, C. (2021). Exercise addiction and perfectionism, joint in the same path? A systematic review. *International Journal of Mental Health and Addiction*, 19(1), 1-24. <https://doi.org/10.1007/s11469-020-00476-w>
- Gotwals, J. K., & Dunn, J. G. (2009). A multi-method multi-analytic approach to establishing internal construct validity evidence: The Sport Multidimensional Perfectionism Scale 2. *Measurement in Physical Education and Exercise Science*, 13(2), 71-92. <https://doi.org/10.1080/10913670902812663>
- Gucciardi, D. F., Mahoney, J., Jalleh, G., Donovan, R. J., & Parkes, J. (2012). Perfectionistic profiles among elite athletes and differences in their motivational orientations. *Journal of Sport and Exercise Psychology*, 34(2), 159-183. <https://doi.org/10.1123/jsep.34.2.159>
- Hassmén, P., Webb, K., & Stevens, C. J. (2023). Athlete burnout and perfectionism in objectively and subjectively assessed sports. *International Journal of Sports Science & Coaching*, 18(6), 2251-2258. <https://doi.org/10.1177/174795412211329>
- Herrero, C. P., Jejuri, N., & Carter, C. W. (2021). The psychology of the female athlete: How mental health and wellness mediate sports performance, injury, and recovery. *Annals of Joint*, 6, 1-7. <https://doi.org/10.21037/aoj-20-53>
- Hewitt, P. L., Flett, G. L., & Mikail, S. F. (2017). *Perfectionism: A relational approach to conceptualization, assessment, and treatment*. Guilford Publications.
- Hill, A. P., Mallinson-Howard, S. H., & Jowett, G. E. (2018). Multidimensional perfectionism in sport: A meta-analytical review. *Sport, Exercise, and Performance Psychology*, 7(3), 235-270. <https://doi.org/10.1037/spy0000125>
- Květon, P., Jelínek, M., & Burešová, I. (2021). The role of perfectionism in predicting athlete burnout, training distress, and sports performance: A short-term and long-term longitudinal perspective. *Journal of Sports Sciences*, 39(17), 1969-1979. <https://doi.org/10.1080/02640414.2021.1911415>
- Kwong, A., Manley, D., Timpson, N. J., Pearson, R. M., Heron, J., Sallis, H., Stergiakouli, E., Davis, O., & Leckie, G. (2019). Identifying critical points of trajectories of depressive symptoms from childhood to young adulthood. *Journal of Youth and Adolescence*, 48(4), 815-827. <https://doi.org/10.1007/s10964-018-0976-5>
- Matijašević, B., & Maglica, T. (2022). Leisure time in the prevention of problematic behavior of children and adolescents. *Socijalna Psihijatrija*, 50(1), 75-92.
- Matijašević, B., & Matijašević, P. (2023). The relationship between perfectionism and symptoms of depression in young athletes. In *Human, Technologies, and Quality of Education: Proceedings of Scientific Papers. University of Latvia*. <https://doi.org/10.22364/hqte.2023.43>
- McRae, L., O'Donnell, S., Loukine, L., Rancourt, N., & Pelletier, C. (2016). Report summary-mood and anxiety disorders in Canada, 2016. *Health Promotion and Chronic Disease Prevention in Canada: Research, Policy, and Practice*, 36(12), 314. <https://doi.org/10.24095/hpcdp.36.12.05>
- Nixdorf, I., Frank, R., & Beckmann, J. (2016). Comparison of athletes' proneness to depressive symptoms in individual and team sports: Research on psychological mediators in junior elite athletes. *Frontiers in Psychology*, 7, 893. <https://doi.org/10.3389/fpsyg.2016.00893>
- Núñez, E. F. D., Villanueva, L. M. S., Mendoza, M. A. T., Alcóser, S. D. I., Garay, J. P. P., & Hernández-Vásquez, R. (2024). Perfectionism as a paradoxical factor in sport and exercise performance: An umbrella review. *Iranian Journal of Psychiatry*, 19(2), 247. <https://doi.org/10.18502/ijps.v19i2.15111>

- Olsson, L. F., Madigan, D. J., Hill, A. P., & Grugan, M. C. (2022). Do athlete and coach performance perfectionism predict athlete burnout? *European Journal of Sport Science*, 22(7), 1073-1084. <https://doi.org/10.1080/17461391.2021.1916080>
- Ruvalcaba, N. A., Gallegos, J., Borges, A., & Gonzalez, N. (2017). Extracurricular activities and group belonging as a protective factor in adolescence. *Psicología Educativa*, 23(1), 45-51. <https://doi.org/10.1016/j.pse.2016.09.001>
- Sevilla, A., & Borra, C. (2015). Parental time investments in children: The role of competition for university places in the UK. Germany. <http://dx.doi.org/10.2139/ssrn.2655117>
- Veljkovic, A., Herodek, K., Djurovic, D., Živkovic, M., Arsic, N., & Veljkovic, A. A., et al. (2019). The impact of the coaches' behavior on the perfectionism of athletes. In International Scientific Congress "Applied Sports Sciences" and the Balkan Scientific Congress "Physical Education, Sports, Health" (pp. 255-259).