

ORIGINAL RESEARCH

Perfectionism and psychological (in)flexibility as predictors of coping strategies in fencers

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Abstract

Background: Coping strategies refer to the repertoire of behaviors used to manage challenging and stressful relational situations. **Objective:** The aim was to examine the association between perfectionism, psychological inflexibility, and coping strategies in fencers, taking gender differences into account. **Methods:** Psychological inflexibility was assessed using the Acceptance and Action Questionnaire-II; perfectionism with the Multidimensional Inventory of Perfectionism in Sport; and coping strategies with the short version of the Coping Inventory for Competitive Sport. Seventy-eight fencers took part, with a mean age of 29.19 (*SD* 10.68) years, of whom 61.5% were men. **Results:** Among women, adaptive perfectionism positively predicted task-oriented strategies ($\beta = .472$), while the predictive capacity of psychological inflexibility was not significant. Among men, the regression models for emotion-oriented coping strategies were significant. Maladaptive perfectionism made a very robust ($\beta = .540$) and significant prediction, while the predictive contribution of psychological inflexibility decreased, keeping only residual significance. For distraction-oriented strategies, psychological inflexibility was the sole significant predictor found ($\beta = .290$). **Conclusions:** Gender moderates the influence of maladaptive perfectionism and psychological inflexibility on coping mechanisms.

Keywords: coping, fencers, perfectionism, gender, psychological flexibility

Introduction

In the sporting domain, success is closely linked to athletes' ability to cope with environmental demands—that is, their behavioral effectiveness and efficiency in responding to the stressful situations that arise during training and competition (Gaudreau & Blondin, 2004; Lazarus, 2000). Effectively managing competition- or training-induced stress enables athletes to focus on relevant stimuli and achieve higher performance (Gaudreau & Blondin, 2004).

Managing this issue requires investigating how individuals adapt to environments characterized by unpredictability and stress (Vela & Arbinaga, 2018). Building on the foundational contributions of Lazarus and Folkman (1984), a three-dimensional framework of coping has been introduced: task-oriented coping (TOC), emotion-oriented coping (EOC), and distraction-oriented coping (DOC). From the perspective of this three-dimensional model, athletes become vulnerable to health problems if they do not develop effective coping strategies (Nagayoshi et al., 2023; Nuetzel, 2023) and performance-related difficulties (Orouji et al., 2022). Empirical evidence suggests that functional coping responses, grouped under TOC-based approaches, contribute favorably to both health-related variables and sport performance efficacy (Crocker et

al., 2015; Doron & Martinent, 2021). In contrast, athletes scoring high on EOC and DOC strategies tend to experience more problems and reduced effectiveness in sporting outcomes (Bracco et al., 2025; Crocker et al., 2015). Specifically, DOC strategies are associated with activities unrelated to the stressor or avoidance, which are considered inflexible and less effective (Zhang et al., 2023).

Another aspect to consider is the relationship between the type of coping strategy and the gender of the athlete. In this regard, findings in the literature show a lack of consensus: some studies associate athletes' gender with the coping strategies they most frequently employ, while others find no such relationship (Nagayoshi et al., 2023; Nuetzel, 2023).

In recent years, research has paid particular attention to the construct of perfectionism, which has been conceptualized as a multidimensional trait, characterized primarily by the persistent pursuit of excessively high and rigidly defined standards (Stoeber, 2018). Its defining features are often described as high personal standards, which may represent adaptive or functional perfectionism, and negative self-evaluation, which is maladaptive (Hill et al., 2020).

Perfectionism has received considerable empirical attention in the sport domain (Arbinaga, 2004; González-Hernández et al., 2025; Hill et al., 2020). Among athletes,

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it is closely related to performance and plays a key role in both functional and maladaptive outcomes (González-Hernández et al., 2025; M. C. Ruiz et al., 2023). In sport, perfectionism is particularly relevant due to its high prevalence among athletes, as it is often reinforced—sometimes deliberately—by the very demands of the competitive environment. This has contributed to many athletes recognizing themselves as perfectionists (Hill et al., 2020). A substantial proportion of athletes indicate that perfectionism can provide greater activation and motivation; however, it may also give rise to intrapersonal and interpersonal problems, such as tensions with teammates or the coaching staff (Hill et al., 2020). For these reasons, perfectionism has also been analyzed as a vulnerability factor (González-Hernández et al., 2025), characterized by psychological inflexibility and a certain cognitive rigidity in their relationship with their environment (Delor et al., 2019).

Considering perfectionism from a contextual perspective has eased the analysis of its relationships with psychological flexibility (Gentili et al., 2019). Psychological flexibility refers to the ability to remain fully engaged in the present moment as a conscious individual—genuine and without unnecessary defenses—accepting oneself as one truly is rather than as one imagines oneself to be, while continuing or adjusting behavior in accordance with freely chosen values (Hayes, 2015). According to Hayes (2015), the psychological flexibility framework supports adaptive coping through six fundamental processes: acceptance, cognitive defusion, present-moment awareness, self-as-context, connection with personal values, and committed action. Flexibility has a positive influence on psychological skills, which are shown to be essential for achieving efficient performance (González-Hernández et al., 2025).

In contrast, psychological inflexibility refers to unhelpful private events that hinder effective action, long-term goals, constructive thoughts, and adaptive emotions (Bond et al., 2011). Psychological inflexibility has been recognized as a transdiagnostic etiological factor that facilitates the development and maintenance of a variety of psychological disorders and emotional difficulties (Orouji et al., 2022; F. J. Ruiz et al., 2013; Uğur et al., 2021). The behavioral pattern that characterizes these inflexible processes is experiential avoidance, which becomes pervasive and rigid, lacking actions guided by what is meaningful to the individual (Hayes, 2015). The processes through which individuals construct their sense of identity based on their thought—processes that are fundamental to the development of psychological inflexibility—include cognitive fusion, experiential avoidance, and the conceptualized self (Hayes, 2015). In the sporting environment, athletes with low psychological flexibility tend to exhibit less effective behaviors and are less likely to achieve optimal performance (Moore, 2009), associating with a greater number of symptoms related to discomfort (Arbinaga et al., 2025; Zhang et al., 2023).

Given the limited evidence linking perfectionism and psychological inflexibility with coping strategies, the present study aimed to analyze the role of these two constructs as predictors of coping strategies in fencers, considering gender differences. The first hypothesis proposed that

women would report a greater use of emotion-oriented coping strategies. The second hypothesis stated that, in the full sample, psychological inflexibility would negatively predict task-oriented coping strategies, while adaptive perfectionism would positively predict them. In contrast, psychological inflexibility and maladaptive perfectionism were expected to predict both emotion-oriented and distraction-oriented coping strategies. Finally, the third hypothesis posited that psychological inflexibility would negatively predict task-oriented coping strategies among men, while adaptive perfectionism would positively predict them. Conversely, psychological inflexibility and maladaptive perfectionism were expected to primarily predict emotion-oriented and distraction-oriented coping strategies among women.

Methods

Participants

The study involved 78 fencers, representing an age interval of 19 to 50 years ($M = 29.19$, $SD = 10.68$), of whom 48 (61.5%) were men. The time they admit having been practicing and training fencing presents a mean of 14.18 years ($SD = 5.69$) with a range from 5 to 27 years. With respect to the level of education, 5.1% of the survey respondents recognized a basic education, 33.3% a high school education and 61.5% a university education. The 87.2% identified and practiced with the epee as their main weapon, 7.7% with the sabre and 5.1% with the foil. The number of sessions they say they train per week ranges from a minimum of 2 to a maximum of 11 sessions, with a minimum of 2 hours and a maximum of 30 hours.

The requirements for participation were: to be over 18 years of age, to be a member of the club, to have been actively practicing fencing for at least four years, to take part in competitions and to accept the informed consent. Exclusion criteria were: taking medication that prevents them from fencing, being injured for more than three months, fencing only for training purposes and without the intention of competing.

Instruments

Demographic data and sport-specific information were collected. Psychological inflexibility was assessed using the Acceptance and Action Questionnaire (AAQ-II; Bond et al., 2011, in its Spanish adaptation by F. J. Ruiz et al., 2013). A lower-scoring pattern denotes enhanced psychological flexibility. The test administered in the present study has shown robust internal consistency (Cronbach's $\alpha = .911$).

Assessment of perfectionism was conducted using the short form of the Multidimensional Inventory of Perfectionism in Sport (MIPS; Stoeber et al., 2006, in its Spanish version adapted by Pineda-Espejel et al., 2017). This instrument includes two subscales: PF-adaptive, “striving for perfection”, and PF-maladaptive, “negative reactions to imperfection”. In the present study, and evaluated using Cronbach's α , the scale presented a good internal consistency in its total score ($\alpha = .883$) and PF-adaptive ($\alpha = .834$), and PF-maladaptive ($\alpha = .872$).

To assess coping strategies, we used the short version of the Coping Inventory for Competitive Sport (ISCCS, Inventaire des Stratégies de Coping en Compétition Sportive; Gaudreau & Blondin, 2002, in its Spanish version adapted by Molinero et al., 2010). The items are distributed over eight factors grouped into three second-order dimensions: TOC, EOC and DOC. The reliability for the total score in this study was Cronbach's $\alpha = .898$ (TOC: $\alpha = .883$, EOC: $\alpha = .807$, DOC: $\alpha = .745$).

Procedure

The method used was characterized by non-probabilistic sampling with a cross-sectional, anonymous, online design. Fencing clubs in Spain were contacted and asked to disseminate the study to their members. The procedure began with a description of the research goals and ethical information. Informed consent was obtained from each participant before data collection started.

Data analysis

Prior to conducting the study, a power analysis was performed using G*Power 3 to estimate the sample size needed for assessing the proposed hypotheses. The analysis showed that, to detect a medium effect with 95% statistical power and a significance threshold of $\alpha = .05$, the proper sample size was $N = 68$ when applying an independent samples Student's t -test. Therefore, the obtained sample size of $N = 78$ is adequate to assess the study hypothesis.

Descriptive statistics—such as frequencies, percentages, means, and standard deviations—were used to summarize the main study variables. Data normality was evaluated using the Kolmogorov–Smirnov test along with an assessment of skewness and kurtosis. The assumptions underlying each statistical procedure were verified, such as homoscedasticity and collinearity (evaluated using the variance inflation factor, VIF). Reliability was estimated with Cronbach's α . For the independent samples Student's t -test, Cohen's d was used to compute the effect size. The effect size was interpreted according to Cohen's criteria, with values of 0.20, 0.50, and 0.80 indicating small, medium, and large effects, respectively, for both Phi and Cramer's V . Associations among variables were examined through Pearson correlations, while hierarchical linear regression was conducted to identify predictors of coping strategies. Data analyses were performed using IBM SPSS Statistics (Version 25.0; IBM).

Ethical considerations

This study was conducted in accordance with the ethical standards of the committee responsible for human experimentation (institutional and national). The procedures used in this work adhere to the tenets of the Declaration of Helsinki of 1975, revised in 2013. This work was part of a broader study entitled “Coping characteristics, perfectionism and mental health in sport” approved by the Andalusian Ethics Committee of Biomedical Research, pertaining to the Regional Government of the Autonomous Community of Andalusia (Junta de Andalucía). Evaluation Committee of Huelva. Act: 05/24. Date of approval: May 14,

2024, Internal Code: SICEIA-2024-001020, Study code: 21071. Informed consent was obtained from all individual participants included in the study.

Results

The final sample consisted of 78 fencers ($M = 29.19$ years, $SD = 10.68$). Table 1 shows their socio-sporting characteristics.

Men, with a medium effect size, were found to be older ($d = 0.54$), to have greater fencing experience ($d = 0.77$), and to have more experience with their current weapon ($d = 0.70$). However, a higher proportion of women reported having achieved a greater number of podium finishes during the last five seasons, with a small effect size ($\Phi = 0.25$).

To evaluate the normality of the distribution, the Kolmogorov–Smirnov test was performed, indicating that the data for psychological inflexibility conformed to a normal distribution ($Z = 1.02$, $p = .252$), adaptive perfectionism ($Z = 0.93$, $p = .356$), maladaptive perfectionism ($Z = 0.68$, $p = .739$), and coping strategies: TOC ($Z = 0.87$, $p = .441$), EOC ($Z = 0.66$, $p = .777$) and DOC ($Z = 1.05$, $p = .219$). The skewness (S) and kurtosis (K) were additionally examined: psychological inflexibility ($S = 0.38$, $K = -0.90$), adaptive perfectionism ($S = -0.53$, $K = -0.23$), maladaptive perfectionism ($S = 0.28$, $K = -0.33$), TOC ($S = -0.50$, $K = 0.18$), EOC ($S = 0.08$, $K = -0.53$) and DOC ($S = 0.54$, $K = -0.55$). Collectively, these indices suggest that the variables proved an adequate fit to the assumption of normality (Munro, 2001).

Considering the scores obtained by gender across the different variables assessed (Table 2), women scored higher on the overall perfectionism scale, with a medium effect size ($d = 0.62$). These differences were not seen for adaptive perfectionism. They were attributable to the subscale of negative reactions to imperfection, or maladaptive perfectionism, where women scored significantly higher, with a large effect size ($d = 0.87$). Women also scored higher on EOC, with a medium effect size ($d = 0.60$). Finally, women showed higher levels of psychological inflexibility than men, with a medium effect size ($d = 0.53$).

Psychological inflexibility showed significant positive associations with maladaptive perfectionism and the total EOC score. Adaptive perfectionism, in turn, showed significant positive associations with the total TOC, and positive and significant correlations were also seen with the total DOC. On the other hand, maladaptive perfectionism was significantly and positively associated with the total EOC and DOC scores.

Table 3 presents the Pearson bivariate correlations between coping strategies, perfectionism, and psychological inflexibility in fencers.

To examine the contribution of psychological inflexibility and perfectionism dimensions to coping strategies, a series of linear regression analyses was conducted on the overall sample of fencers. Two models were estimated for each outcome variable (TOC, EOC, and DOC; see Table 4). Model 1 included psychological inflexibility

Table 1 Socio-sporting characteristics of the fencers' sample

Variable	Total	Women	Men	<i>t</i> or χ^2	<i>p</i>
Participants	78	30 (38.5)	48 (61.5)		
Age (years)	29.19 (10.68)	25.87 (8.50)	31.27 (11.44)	2.39	.020
Educational level				0.41	.813
Basic	4 (5.13)	2 (6.7)	2 (4.2)		
Secondary	26 (33.33)	9 (30)	17 (35.4)		
University	48 (61.54)	19 (63.3)	29 (60.4)		
Fencing experience (years)	14.18 (5.69)	11.73 (4.13)	15.71 (6.03)	3.17	.002
Number of training sessions/week	3.44 (1.88)	3.77 (1.85)	3.23 (1.89)	1.23	.222
Number of training hours/week	6.44 (5.35)	7.33 (5.98)	5.89 (4.89)	1.17	.247
Years with current weapon	12.73 (7.28)	9.93 (4.12)	14.48 (8.26)	2.80	.006
Current weapon				2.41	.300
Foil	4 (5.1)	3 (10.0)	1 (2.1)		
Épée	68 (87.2)	25 (83.3)	43 (89.6)		
Sabre	6 (7.7)	2 (6.7)	4 (8.3)		
High performance centre				0.01	.966
Yes	18 (23.1)	7 (23.3)	11 (22.9)		
No	60 (76.9)	23 (76.7)	37 (77.1)		
Called up in last five seasons				0.14	.709
< 3 occasions	28 (35.9)	10 (33.3)	18 (37.5)		
≥ 3 occasions	50 (64.1)	20 (66.7)	30 (62.5)		
Podiums in last five seasons				4.93	.026
Yes	32 (41.0)	17 (56.7)	15 (31.2)		
No	46 (59.0)	13 (43.3)	33 (68.8)		

Note. Quantitative data are shown as *M* (*SD*) and were analyzed using a *t*-test; categorical data as *n* (%) and were analyzed using a χ^2 test.

Table 2 Scores of fencers in the psychological inflexibility, perfectionism and coping tests

Variable	Total <i>n</i> = 78	Women <i>n</i> = 30 (38.5%)	Men <i>n</i> = 48 (61.5%)	<i>t</i>	<i>p</i>
Psychological inflexibility	18.35 (7.19)	20.70 (7.90)	16.88 (6.35)	2.24	.030
Perfectionism					
Total	38.68 (9.37)	42.10 (8.49)	36.54 (9.35)	2.65	.010
Adaptive	22.04 (5.32)	22.80 (4.84)	21.56 (5.609)	1.00	.321
Maladaptive	16.64 (5.33)	19.30 (5.08)	14.98 (4.82)	3.77	< .001
Coping strategies					
Task oriented	62.21 (11.17)	62.50 (12.92)	62.02 (10.07)	0.18	.855
Emotion oriented	32.41 (5.95)	34.53 (5.56)	31.08 (5.86)	2.58	.012
Distraction oriented	12.33 (4.25)	12.73 (4.75)	12.08 (3.93)	0.66	.514

Note. Data are shown as *M* (*SD*).

Table 3 Pearson's bivariate correlations between psychological inflexibility, perfectionism and coping strategies in fencers

Variable	1	2	3	4	5
1. Psychological inflexibility	–				
2. Perfectionism – adaptive	.036	–			
3. Perfectionism – maladaptive	.488***	.549***	–		
4. Task oriented coping	–.214	.338**	.123	–	
5. Emotion oriented coping	.419***	.172	.475***	.475***	–
6. Distraction oriented coping	.211	.243*	.330**	.312**	.492***

Note. **p* < .05, ***p* < .01, ****p* < .001.

as the predictor, whereas Model 2 incorporated the two perfectionism dimensions in addition to psychological inflexibility. Following the verification of essential regression assumptions such as homoscedasticity and collinearity—collinearity being examined through VIF values—significant models emerged. Predictor variables included psychological inflexibility, adaptive perfectionism, and

maladaptive perfectionism. Independence of residuals, assessed using the Durbin–Watson statistic (*D–W*), was adequate across all three models: TOC (*D–W* = 2.18), EOC (*D–W* = 2.16), and DOC (*D–W* = 2.02).

Among the regression models examining task-oriented coping (TOC), only the model incorporating psychological inflexibility and perfectionism reached statistical

significance. This model accounted for 16.9% of the variance in the use of this coping strategy. In this model, the predictive contribution of psychological inflexibility remained negative ($\beta = -.269$) and reached significance. Adaptive perfectionism also emerged as a significant predictor, explaining $\beta = .298$ of the increase in task-oriented coping.

In contrast, psychological inflexibility emerged as a significant positive predictor of emotion-oriented coping strategies ($\beta = .419$). When both dimensions of perfectionism were included, the model remained significant and accounted for 27.4% of the variance. In this expanded model, psychological inflexibility was no longer a significant predictor, whereas maladaptive perfectionism significantly predicted an increase of $\beta = .391$ in emotion-oriented coping strategies.

Finally, psychological inflexibility did not significantly predict distraction-oriented coping strategies. When the perfectionism scales were added, the model became significant, yielding an explanatory power of $R^2 = .122$. However, the predictive contributions of the three constructs did not reach statistical significance for distraction-oriented coping.

Gender-specific regression models for coping strategies (TOC, EOC, DOC) revealed distinct patterns in the explanatory and predictive roles of psychological inflexibility and perfectionism (see Table 5).

For women, psychological inflexibility did not significantly predict task-oriented coping strategies. Model 2, which included the perfectionism dimensions, reached statistical significance and explained 38.3% of the variance. In this model, adaptive perfectionism positively predicted an increase of $\beta = .472$ in task-oriented coping, whereas psychological inflexibility did not exhibit a statistically significant predictive effect. Conversely, for women, no

significant models were identified for either DOC or EOC strategies, neither in terms of explained variance nor in predicting changes in the dependent variable.

Among male participants, no significant regression models were found for TOC strategies. However, significant models appeared for EOC and DOC strategies. For EOC, psychological inflexibility significantly explained 18.8% of the variance and accounted for $\beta = .434$ of the prediction. When the perfectionism subscales were included, explanatory power increased to 34.7%, with maladaptive perfectionism appearing as the strongest predictor ($\beta = .540$). Psychological inflexibility showed a predictive effect ($\beta = .266$), although with marginal significance, whereas adaptive perfectionism did not exhibit a significant predictive contribution.

For men, Model 1 was significant, accounting for 8.4% of the variance, and psychological inflexibility emerged as a significant predictor of distraction-oriented coping ($\beta = .290$). Model 2, which incorporated the perfectionism dimensions, also reached statistical significance, accounting for 19.4% of the variance. However, none of the individual predictor variables showed statistically significant effects. The increase in explained variance suggests that the inclusion of perfectionism dimensions improved the model, despite the lack of significant unique contributions.

Discussion

The aim has been to analyze how psychological inflexibility and perfectionism can predict coping strategies in fencers, taking gender into account. It has been proposed, as a first hypothesis, that women would report greater use of EOC strategies. The findings supported this hypothesis, showing that female fencers reported higher use of EOC strategies.

Table 4 Linear regression analysis, taking coping as the predicted variable and perfectionism and psychological inflexibility as predictor variables in fencers

Variable	β	t	p	R^2	ΔR^2	p	F	p
Task oriented coping								
Model 1				.046	.046	.060	$F(1,76) = 3.65$	.060
Psychological inflexibility	-.214	1.910	.060					
Model 2				.169	.123	.006	$F(3,74) = 5.03$	.003
Psychological inflexibility	-.269	2.099	.039					
Perfectionism – adaptive	.298	2.231	.029					
Perfectionism – maladaptive	.090	0.587	.559					
Emotion oriented coping								
Model 1				.176	.176	< .001	$F(1,76) = 16.21$	< .001
Psychological inflexibility	.419	4.026	< .001					
Model 2				.274	.098	.009	$F(3,74) = 9.29$	< .001
Psychological inflexibility	.231	1.927	.058					
Perfectionism – adaptive	-.051	0.406	.686					
Perfectionism – maladaptive	.391	2.729	.008					
Distraction oriented coping								
Model 1				.045	.045	.063	$F(1,76) = 3.55$	.063
Psychological inflexibility	.211	1.884	.063					
Model 2				.122	.077	.044	$F(3, 74) = 3.42$	.022
Psychological inflexibility	.103	0.780	.438					
Perfectionism – adaptive	.122	0.885	.379					
Perfectionism – maladaptive	.214	1.357	.179					

Table 5 Linear regression analysis according to the gender of the fencers, taking coping as the predicted variable and perfectionism and psychological inflexibility as predictor variables

Variable	β	t	p	R^2	ΔR^2	p	F	p
Task oriented coping in women								
Model 1				.110	.110	.074	$F(1, 28) = 3.44$	.074
Psychological inflexibility	-.331	1.856	.074					
Model 2				.383	.273	.009	$F(3, 26) = 5.37$	.005
Psychological inflexibility	-.346	1.679	.105					
Perfectionism – adaptive	.472	2.426	.023					
Perfectionism – maladaptive	.095	0.408	.687					
Task oriented coping in men								
Model 1				.016	.016	.396	$F(1, 46) = 0.74$	.396
Psychological inflexibility	-.125	0.858	.396					
Model 2				.066	.050	.316	$F(3, 44) = 1.04$	.386
Psychological inflexibility	-.163	1.032	.308					
Perfectionism – adaptive	.171	0.914	.366					
Perfectionism – maladaptive	.079	0.397	.693					
Emotion oriented coping in women								
Model 1				.089	.089	.110	$F(1, 28) = 2.72$	.110
Psychological inflexibility	.298	1.649	.110					
Model 2				.186	.098	.228	$F(3, 26) = 1.99$	.141
Psychological inflexibility	.321	1.356	.187					
Perfectionism – adaptive	.313	1.401	.173					
Perfectionism – maladaptive	.001	0.005	.996					
Emotion oriented coping in men								
Model 1				.188	.188	.002	$F(1, 46) = 10.66$	.002
Psychological inflexibility	.434	3.265	.002					
Model 2				.347	.159	.008	$F(3, 44) = 7.81$	< .001
Psychological inflexibility	.266	2.009	.051					
Perfectionism – adaptive	-.269	1.722	.092					
Perfectionism – maladaptive	.540	3.252	.002					
Distraction oriented coping in women								
Model 1				.010	.010	.596	$F(1, 28) = 0.29$	.596
Psychological inflexibility	.101	0.536	.596					
Model 2				.080	.070	.387	$F(3, 26) = 0.75$	.531
Psychological inflexibility	.066	0.264	.794					
Perfectionism – adaptive	.211	0.886	.384					
Perfectionism – maladaptive	.092	0.326	.747					
Distraction oriented coping in men								
Model 1				.084	.084	.045	$F(1, 46) = 4.24$	.045
Psychological inflexibility	.290	2.058	.045					
Model 2				.194	.109	.061	$F(3, 44) = 3.52$	.023
Psychological inflexibility	.172	1.173	.247					
Perfectionism – adaptive	.016	0.093	.926					
Perfectionism – maladaptive	.341	1.850	.071					

These differences were seen in the total EOC score and not in the TOC or DOC scores.

These results are consistent with a substantial body of prior research indicating that women are more prone to employing coping strategies oriented toward the regulation of emotional states (Tamres et al., 2002). From this perspective, it has been suggested that in adverse situations, women rely more heavily on coping strategies involving emotional support (Arbinaga et al., 2026; Nagayoshi et al., 2023; Tamres et al., 2002). In line with this, Costa et al. (2020) reported that while men are more prone to “planning” and “blaming others,” female athletes are more inclined toward “rumination” and “putting things into a social perspective.” Similarly, meta-analytic studies have shown that the most robust effects highlight women’s greater propensity to use

strategies involving verbal expression (to others or themselves), seeking emotional support, reflecting on problems, and engaging in positive self-talk (Tamres et al., 2002). These differences show a degree of consistency across studies, which may support a dispositional hypothesis (Tamres et al., 2002) rooted in socialization processes, gender role stereotypes, and expectations within the social environment (Nuetzel, 2023). Likewise, the results reinforce earlier studies showing that less adaptive personality traits are associated with lower-performing strategies (Piepiora et al., 2025). Personality traits have been consistently linked to long-term athletic success (Piepiora et al., 2022). These traits, conceptualized as mental skills, may exert a meaningful influence on sports performance (Piepiora et al., 2025). Nevertheless, it is important to acknowledge that athletic experience itself

shapes athletes' personality profiles, which are often sought and valued by coaches (Piepiora et al., 2022).

The second hypothesis stated that, for the full sample, psychological inflexibility would show a negative relationship and adaptive perfectionism a positive relationship as predictors of task-oriented coping (TOC). In contrast, psychological inflexibility and maladaptive perfectionism were expected to positively predict emotion-oriented (EOC) and distraction-oriented (DOC) coping strategies. A negative but non-significant effect of psychological inflexibility on TOC strategies was seen in the regression analyses. When perfectionism was added, the model reached statistical significance, with adaptive perfectionism emerging as the main positive predictor. In turn, the predictive capacity of psychological inflexibility increased, becoming statistically significant. Therefore, the hypothesis was supported in this fencing sample.

Regarding EOC, the hypothesis was also corroborated. When all scores from the various measures were included in the model, psychological inflexibility lost significance in its predictive capacity, and maladaptive perfectionism became the main significant predictor in the second model. In the case of DOC strategies, psychological inflexibility was not a significant predictor, but the full model reached statistical significance despite the absence of significant individual contributions.

These findings support previous research identifying low levels of psychological inflexibility (or high psychological flexibility) and high levels of adaptive perfectionism as constructs that facilitate more effective coping strategies, with positive implications for both health and athletic performance (Arbinaga et al., 2026; Nagayoshi et al., 2023; Nuetzel, 2023). In this regard, psychological inflexibility has been found to be related to perfectionism (Miles et al., 2023). A high degree of maladaptive perfectionism facilitates psychologically inflexible behaviors, characterized by rigid responses to thoughts, feelings, and bodily sensations, leading to psychological distress and avoidance behaviors (Crosby et al., 2013; Delor et al., 2019).

A central feature of psychological inflexibility is avoidance, and perfectionists often tend to employ unhelpful avoidance strategies such as experiential avoidance (Santanello & Gardner, 2007), avoidant coping (Noble et al., 2014), and emotional suppression (Noble et al., 2014). The results suggest that individuals with higher levels of self-critical perfectionism are less flexible when things do not go as planned (González-Hernández et al., 2025). Thus, adaptive perfectionism can be interpreted as emphasizing structured behavior and goal setting to enhance athletic performance. In contrast, maladaptive perfectionism focuses on responses to errors or failures in goal attainment. Therefore, perfectionism should be considered a vulnerability factor characterized by cognitive rigidity and behavioral inflexibility (Delor et al., 2019).

On the other hand, the predictive differences observed for TOC strategies are consistent with evidence from other athletic populations, where psychological flexibility has been strongly associated with effective coping (Arbinaga et al., 2026; Nagayoshi et al., 2023; Nuetzel, 2023). These

results further corroborate those of Gentili et al. (2019), who emphasized the role of psychological inflexibility in modulating individuals' responses to adverse situations, with flexible individuals demonstrating reduced vulnerability to negative outcomes (Daks et al., 2020).

Moreover, the present findings support the conceptualization of psychological flexibility and adaptive perfectionism as mechanisms that improve problem solving through adaptive coping strategies (González-Hernández et al., 2025; Hayes, 2015; M. C. Ruiz et al., 2023). This aligns with empirical evidence suggesting that low levels of psychological inflexibility are closely associated with self-regulatory mechanisms that foster enhanced psychological well-being and greater efficiency in performance (Zhang et al., 2023). In contrast, cognitive fusion—manifested as excessive self-criticism, doubt, or intrusive distractions—can compromise athletes' attentional control and performance, ultimately increasing the risk of burnout (Nagayoshi et al., 2023; Nuetzel, 2023).

Regarding EOC and DOC strategies, individuals who display high psychological inflexibility tend to avoid aversive experiences (Bond et al., 2011), which is consistent with the literature associating inflexibility with emotion- and avoidance-based coping strategies, including self-distraction, behavioral disengagement, self-blame, reliance on emotional support, and avoidance (Nielsen et al., 2016). It should be noted that, in this study, psychological inflexibility alone did not significantly predict DOC strategies, except when considered in combination with maladaptive perfectionism. High maladaptive perfectionism encourages rigid responses to internal experiences, which in turn encourage avoidance behaviors (Crosby et al., 2013). Avoidance is a central component of psychological inflexibility, with perfectionists frequently employing maladaptive strategies such as experiential avoidance, avoidant coping, and emotional suppression when confronted with challenges (Noble et al., 2014; Richardson et al., 2014; Santanello & Gardner, 2007). Such DOC strategies, involving disengagement or diversion from stressors, are inherently inflexible (Zhang et al., 2023). Consequently, individuals characterized by psychological inflexibility or maladaptive perfectionism are likely to exhibit rigid, non-goal-directed behavioral patterns, lacking structured and adaptive coping responses (Tanhan, 2019).

The third hypothesis proposed that psychological inflexibility would negatively predict task-oriented coping (TOC) in men, whereas adaptive perfectionism would positively predict it. In contrast, psychological inflexibility and maladaptive perfectionism would primarily predict emotion-oriented (EOC) and distraction-oriented coping (DOC) in women. The results, however, did not support this proposition. In men, regression analyses did not significantly predict TOC strategies, whereas adaptive perfectionism unexpectedly emerged as a predictor among female fencers. Similarly, the anticipated patterns for EOC and DOC were not observed: psychological inflexibility and maladaptive perfectionism did not significantly predict these coping strategies in women but demonstrated significant explanatory and predictive capacity in men.

The implementation of TOC strategies revealed gender-related patterns that were not entirely consistent with existing literature. Psychological flexibility and adaptive perfectionism have been identified as facilitators of task-focused strategies (González-Hernández et al., 2025; M. C. Ruiz et al., 2023), a pattern that was confirmed when analyzing the full sample. While no gender differences were observed in the actual use of TOC strategies, gender influenced their prediction via perfectionism and psychological inflexibility. Although men and women did not differ in adaptive perfectionism, they did differ in total and maladaptive perfectionism. Notably, adaptive perfectionism predicted TOC strategies in women but not men, partially supporting previous findings regarding its moderating role (González-Hernández et al., 2025; M. C. Ruiz et al., 2023).

In male fencers, EOC and DOC strategies were significantly associated with psychological inflexibility and maladaptive perfectionism, corroborating previous research linking these constructs to emotion- and avoidance-based coping, including disengagement, denial, and self-blame (González-Hernández et al., 2025; M. C. Ruiz et al., 2023). Gender differences in the predictive capacity of these variables should be interpreted within the broader context of inconsistent findings in gender-specific coping research (Crocker et al., 2015), which have been explained through situational and developmental hypotheses (Kaiseler et al., 2012). Women may employ a wide range of coping strategies, yet the type of stressor moderates these differences (Tamres et al., 2002). Overall, men and women appear more similar than different in coping responses, emphasizing the importance of stressor characteristics and cognitive appraisal (Kaiseler et al., 2012).

Discrepancies in coping research may reflect contextual variability, stressor type, and interpretative approaches (Nagayoshi et al., 2023; Nuetzel, 2023). For instance, avoidance strategies may mitigate short-term stress but compromise physical well-being, whereas adaptive emotion-focused strategies such as positive reappraisal are associated with reduced negative affect (Kelly et al., 2008). The results may suggest that the effectiveness of coping strategies is difficult to categorize per se. In specific sporting contexts, gender differences are less pronounced among high-level athletes competing under comparable demands (Nuetzel, 2023); the athletes of both sexes can make similar cognitive appraisals and adopt equally effective coping strategies.

From a contextual and process-oriented perspective, perfectionism, psychological flexibility, and coping strategies are modifiable, underscoring their relevance for specific interventions (Gentili et al., 2019). Approaches such as Acceptance and Commitment Therapy (ACT), which promote psychological flexibility, have demonstrated efficacy in reducing maladaptive perfectionistic tendencies, supporting the application of process-based interventions in sport.

Limitations and directions for further research

Although this study contributes to knowledge about coping strategies in the sporting context according to athlete gender, several limitations must be acknowledged and addressed in future research. One limitation concerns the

sample size and its representativeness within the fencing community, which restricts the generalizability of the findings. It would therefore be valuable to increase the representation of participants across different performance levels, competitive categories, and weapon specializations. Similarly, it would be useful to monitor sport performance indicators and examine their relationship with coping strategies. Moreover, the cross-sectional nature of the study and the methodological approach employed preclude any causal interpretations. An experimental design with greater control over relevant variables would be required to enable causal interpretation. Similarly, longitudinal studies employing repeated measures would allow researchers to monitor the evolution of these variables as a function of athletes' developmental and performance trajectories. Additionally, the exclusive reliance on self-report instruments may introduce response biases associated with social desirability, a well-documented limitation of questionnaire-based assessments.

Finally, future studies should consider assessments at different points during the season, taking into account the importance of competitions, the occurrence of injuries, and sport-specific demands. Such considerations would provide a more comprehensive understanding of the implementation of specific coping strategies.

Conclusions

The present findings highlight how gender serves as a mediating factor in the relationship between perfectionism and coping strategies. Specifically, among women, adaptive perfectionism was positively associated with task-oriented coping, whereas psychological inflexibility did not show a significant association. In contrast, among men, emotion-focused coping was significantly predicted by both psychological inflexibility and maladaptive perfectionism. Furthermore, distraction-oriented coping strategies were influenced solely by psychological inflexibility. These results highlight the importance of considering gender differences when examining the psychological mechanisms underlying coping behaviors, and suggest that interventions aimed at enhancing adaptive coping should be tailored accordingly.

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Conflict of interest

The authors report no conflict of interest.

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