Perfectionism, mental health, and injuries in women footballers

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Resumen
El perfeccionismo es un rasgo de personalidad que en función de su carácter adpatativo o desaptativo podría afectar positiva o negativamente a la salud mental del deportista, y a su vulnerabilidad a la lesión deportiva. El objetivo de este trabajo es determinar la relación entre el perfeccionismo, indicadores de salud mental (depresión, ansiedad y estrés) y las lesiones deportivas en mujeres futbolistas. Participaron 74 jugadoras de fútbol con una edad media de 19.6±4.7 años. Para el análisis de los datos se utiñlizó un modelo de ecuaciones estructurales. Los resultados indicaron que la relación entre el perfeccionismo adaptativo respecto al estrés, la ansiedad y la depresión fue negativa. En contraste, la relación entre el perfeccionismo desadaptativo respecto al estrés, la ansiedad y la depresión fue positiva. Así mismo, el estrés, la ansiedad y la depresión se relacionaron positivamente con el número de lesiones en los dos últimos años. En conclusión, un mayor nivel de perfeccionismo adaptativo implica menores síntomas de ansiedad, estrés y depresión en mujeres futbolistas, pudiendo ser un factor de protección. Por el contrario, un mayor nivel de perfeccionismo desadaptativo conlleva niveles altos de estos síntomas. Finalmente, debido a que estos indicadores de salud mental están vinculados con las lesiones, determina una relación estadísticamente positiva entre el perfeccionismo desadaptativo y la probabilidad de lesionarse, y de carácter inverso, negativo, entre ésta y el perfeccionismo adaptativo.
Palabras clave: perfeccionismo, salud mental, fútbol, lesión, deporte, ansiedad

Resumo
O perfeccionismo é um traço de personalidade que, dependendo de sua natureza adaptativa ou desadaptativa, pode afetar positiva ou negativamente a saúde mental do atleta e sua vulnerabilidade a lesões esportivas. O objetivo deste trabalho é determinar a relação entre perfeccionismo, indicadores de saúde mental (depressão, ansiedade e estresse) e lesões esportivas em jogadoras de futebol feminino. Participaram 74 jogadores de futebol com idade média de 19,6±4,7 anos. Para análise dos dados, foi utilizado um modelo de equações estruturais. Os resultados indicaram que a relação entre o perfeccionismo adaptativo com relação ao estresse, ansiedade e depressão foi negativa. Em contraste, a relação entre o perfeccionismo desadaptativo em relação ao estresse, ansiedade e depressão foi positiva. Da mesma forma, estresse, ansiedade e depressão foram positivamente relacionados ao número de lesões nos últimos dois anos. Em conclusão, um maior nível de perfeccionismo adaptativo implica menos sintomas de ansiedade, estresse e depressão em jogadoras de futebol feminino, podendo ser um fator de proteção. Por outro lado, um nível mais alto de perfeccionismo desadaptativo leva a níveis mais altos desses sintomas. Por fim, como esses indicadores de saúde mental estão ligados a lesões, determina uma relação estatisticamente positiva entre o perfeccionismo desadaptativo e a probabilidade de ser ferido, e uma relação inversa negativa entre ele e o perfeccionismo adaptativo.
Palavras chave: perfeccionismo, saúde mental, futebol, lesão, esporte, ansiedade

Abstract
Perfectionism is a personality trait that may have beneficial or harmful effects on the athlete's mental health and injury susceptibility depending on its adaptive or maladaptive nature. This study examines the association between perfectionism, mental health markers (depression, anxiety, and stress), and sports injuries in female soccer players. There were 74 soccer players with a mean age of 19.6 ±4.7 years. A model based on structural equations was utilized for data analysis. The results demonstrated a negative link between adaptive perfectionism and stress, anxiety, and depression. In contrast, there was a positive association between maladaptive perfectionism and stress, anxiety, and depression. Similarly, stress, anxiety, and depression were strongly associated with the number of injuries over the past two years. In conclusion, a higher level of adaptive perfectionism is associated with lesser anxiety, tension, and depressive symptoms in female soccer players and maybe a protective factor. Inversely, a greater degree of maladaptive perfectionism is associated with a greater degree of these symptoms. Because these mental health indicators are associated with injuries, a statistically positive relationship is established between maladaptive perfectionism and the likelihood of being injured, and a negative, inverse relationship is established between maladaptive perfectionism and adaptive perfectionism.
Keywords: perfectionism, mental health, soccer, injury, sport, anxiety

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Introduction

Perfectionism has been defined as a personality trait characterized by excessively high personal standards and overly critical self-evaluations and has been viewed as a multidimensional construct (Frost et al., 1990; Hewitt & Flett, 1991). In recent years, there has been an increase in perfectionist attitudes among the general population, possibly due to sociocultural factors associated with highly competitive environments with high and often unrealistically high expectations that young people assume and with parents who are more anxious and controlling than in previous generations (Curran & Hill, 2019). Currently, perfectionism has given rise to growing interest in the scientific literature (Muñoz & González, 2017; Vanstone & Hicks, 2019) due to its influence as a personality trait, both with adaptive variables (positive affect, performance, cohesion towards the task) and maladaptive variables (anxiety, depression, worry). Two components have characterized the perfectionistic disposition, the setting of high standards or goals (perfectionistic striving) and the tendency to worry excessively about evaluations (perfectionistic worries). Adaptive aspects have been identified with the first component, in contrast to maladaptive elements related to the second (González-Hernández et al., 2021; Stoeber et al., 2020).

Perfectionism appears to be a personality trait of considerable interest due to its possible interactions with other psychological elements and their repercussions and its research in various situations such as athletics (Hill et al.,. According to Andersen and Williams' (1988) model of stress and injury, personality traits may predispose athletes to high-stress levels (Williams and Andersen, 1998), which may increase the chance of injury. In addition, the Global Psychological Model of Sports Injury Souter et al. (2018) suggests that psychological negative (depression, anxiety, stress) may further enhance the risk of injury (Ivarsson et al., 2017; Jensen et al., 2018).

Furthermore, it is essential to differentiate between adaptive and maladaptive perfectionism as the consequences for the athlete are different, both for sports performance and health. Vink and Raudsepp (2020) study shows that perfectionistic efforts increase the athletes' perception of the quantity and quality of sport-specific practice. It also plays a central role in achieving success and reaching the sporting elite (Do Nascimento Junior et al., 2020; González-Hernández et al., 2021; Lowe, 2018). Pineda-Espejel et al. (2017) f ound that global perfectionism predicts ego orientation, and ego orientation predicts cognitive anxiety, but that perfectionistic effort in competition reduces pre-competitive anxiety symptoms through task orientation so that perfectionism may be adaptive.

Perfectionism has been linked to mental health indicators (Ivarsson et al., 2017; Leguizamo et al., 2021; Pérez-Hernández et al., 2020) and other significant psychological features of the sport setting (Freire et al., 2020; Hall & Jowett, 2014; Ivarsson et al., 2017; Leguizamo et al., 2021; Pérez-Hernández et al., 2020; Pineda-Espejel et al., 2017). Maladaptive perfectionism is connected to these mental health markers (Pérez-Hernández et al., 2020), whereas most studies link perfectionism with depression, anxiety, and stress. In a sample of young high-performance athletes, Leguizamo et al. (2021) found that maladaptive perfectionism was related to all mental health indicators in athletes. Despite relatively low anxiety, stress, and depressive symptoms, women reported higher anxiety, stress, and depression than men. In addition, values of "good" and healthy perfectionism were associated favorably with the mood components of Tension and Vigour, but "poor" perfectionism correlated considerably and adversely with Tension and Vigour and positively with negative characteristics such as depression. In the study conducted by Iancheva et al. (2020) with a sample of Russian and Bulgarian university athletes during COVID-19 confinement, they discovered high levels of adaptive perfectionism, which corresponded substantially with good emotional states and adaptive coping mechanisms.

On the other hand, perfectionism and the associated psychological characteristics may significantly influence the athlete's susceptibility to injury and the rehabilitation process of sports injuries, where coping mechanisms and adherence behaviors have been researched. Following (Andersen & Williams, 1988) model of stress and injury, Madigan et al. (2019) demonstrated that perfectionism positively predicted injury, but only perfectionistic concerns emerged as substantial positive predictors. For every 1-point rise in perfectionistic concerns, the incidence of injury increased by more than 2 times, demonstrating that perfectionistic concerns may predispose athletes to an increased risk of injury. On the other hand, research indicates the influence of perfectionism on rehabilitative processes. Jowett et al. (2021) show evidence that perfectionism influences the coping techniques of injured marathon runners, with emotion-focused coping being more prevalent among perfectionist runners than among non-perfectionist runners. In a study on the prevalence of perfectionism among young competitive female dancers and its effect on coping strategies, Pentith et al. (2021) discovered that the mixed perfectionism group primarily used "planned problem solving" and the non-

perfectionism group primarily used "confrontational coping" when suffering an injury.

Thus, it is pertinent to investigate the associations between perfectionism and mental health indicators and their impact on injury risk and rehabilitation. Following the stress and injury model of Williams and Andersen (1998) and the Donachie and Hill (2020), it is investigated whether female football players with high levels of perfectionism exhibit poorer mental health indicators than players with low levels and whether they are therefore more susceptible to sports injury. This study examines the connection between perfectionism, pertinent mental health markers (depression, anxiety, and stress), and injuries in female football players. Specifically to examine the relationship between perfectionism (global, adaptive, and maladaptive) and mental health markers (depression, anxiety, and stress) and the occurrence or absence of a sports injury.

Method

Participants

The sample consisted of 74 female 11-a-side football players, aged between 13 and 33 years, with an average age of 19.6 ±4.7 years and an experience of 7.23 years. 6.8% were goalkeepers, 30.2% defenders, 28.8% midfielders, and 34.2% forwards. All belonged to teams participating in Football Federation competitions.

Measurements

A protocol from prior studies (Olmedilla-Zafra et al., 2017) was utilized for injury data collection. A sports injury was defined as any physical issue experienced by an athlete during competition or training that resulted in at least one day of participation restriction. A collection of data on injuries that occurred during the previous two seasons was collected. In addition to the number of injuries, information was supplied regarding whether they occurred during training or matches, the type of injury (muscle, contusion, sprain, tendinitis, bone injury), and the severity of the injury. According to the recommendations of several authors (Olmedilla-Zafra et al., 2017), the questionnaire described four levels of injury severity: mild (requiring treatment and interrupting at least one day of training), moderate (requiring treatment and interrupting six days of training and even some matches), severe (involving one to three months of sick leave), and very severe (concerning four months or more of sick leave, requiring hospitalization, surgery and, sometimes, ongoing rehabilitation to avoid worsening).

To assess perfectionism, the *Escala Multidimensional de Perfeccionismo* (EMP) Spanish version by Carrasco et al. (2009)) of the Multidimensional Perfectionism Scale (MPS) by Frost et al. (1990) was administered. This scale comprises 35 items on a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). The scale measures four first-order factors: fear of mistakes (e.g., *Debería sentirme mal si cometo un error*), parental influences (e.g., *En mi familia sólo se acepta un rendimiento sobresaliente*), achievement expectations (e.g., *Me pongo metas más altas a mí mismo que la mayoría de la gente*) and organization (e.g., *Intento ser organizado/a*); and two second-order factors: functional or adaptive perfectionism (average scores for achievement expectations and organization) and dysfunctional or maladaptive perfectionism (average scores for parental influences and fear of mistakes). The Carrasco et al. (2009) PME had a Cronbach's alpha of .93 for the total scale and fear of errors (α=.88), parental influences (α=.90), achievement expectations (α=.87), and organization (α=.89), and functional perfectionism (α=.79) and dysfunctional perfectionism (α=.88).

The abbreviated version of Lovibond and Lovibond (1996) Depression, Anxiety and Stress Scales (DASS-21) was used to assess mental health. It is a 21-item self-report questionnaire, and each item is responded to on a Likert-type response scale ranging from 0 to 3 points proportional to the existence and intensity of each symptom in the previous week. Each scale has seven items, and its total score is calculated with the sum of the items belonging to that scale and varies between 0 and 21 points with three subscales: depression (e.g., *Me sentí abatido y triste*), anxiety (e.g., *Noté sequedad en la boca*) and stress (e.g., *Me resulta difícil relajarme*). It assesses the presence and intensity of depression, anxiety, and effective stress states. The Depression scale assesses dysphoria, lack of meaning, self-deprecation, lack of interest, and anedonia. The Anxiety scale considers subjective and somatic symptoms of fear, autonomic activation, situational anxiety, and subjective experience of anxious affect. The Stress scale assesses persistent non-specific arousal, difficulty relaxing, irritability, and impatience. The work of Antúnez and Vinet (2012) validated the Spanish version, finding an internal consistency of a high Cronbach's α (α=0.91) for the total scale and a fully adequate internal consistency for each factor, depression with α=0.85, stress with α=0.83 and anxiety with α=0.73.

Procedure

Communication was made with the Sports Director through the Football Federation of the Region of Murcia, who enabled contact with the women's teams. A meeting was arranged with the coach and the players to discuss the research. The questionnaires were administered following a training session in the team's locker room after the info

signed the informed permission form. During this meeting, it was also emphasized that their involvement would be anonymous and voluntary. Individuals who refused to participate would be excluded from the study without being penalized. During the administration of the questionnaires, a member of the research team was present if any questions emerged from the participants. This study followed all of the American Psychological Association's ethical guidelines. In addition, approval from the research bioethics committee was acquired. (UALBIO 2019/014) of the University of Almeria.

Data Analysis

This study followed a descriptive-cross-sectional and comparative design (Ato et al., 2013), using various statistical programs such as SPSS v.27 and AMOS v.21 to conduct statistical analyses: descriptive statistics, reliability analysis, structural equation modeling (SEM) and MANOVA. A bootstrapping of 5000 interactions was used with a maximum likelihood estimation to analyze the hypothesized model through SEM. The estimators were found to be robust despite non-normality. The cut-off indices for the model tested were as follows (Hair et al., 2006): $\chi 2/df$, equal to or less than 3; Comparative Fit Index, Tucker Lewis Index, and Incremental Fit Index, equal to or greater than 0.95; RMSEA (plus its 90% confidence interval) equal to or less than .06 and the SRMR equal to or less than .08. These cut-off indices are very restrictive when testing complex models and should be taken into account with some caution (Marsh et al., 2004).

Results

Firstly, Table 1 shows the descriptive statistics corresponding to the study variables.

Table 1

Descriptive statistics according to study variables, professional category, and years of practice.

		Category				Number of years of practice		
		N	Mean	SD		N	Mean	SD
Adaptive Perfectionism	1,00	9	17,0556	4,49614	1,00	34	19,5882	5,57384
	2,00	15	17,8667	5,09715	2,00	21	21,7619	4,99655
	3,00	19	24,0789	5,12419	3,00	19	23,8684	3,66986
	4,00	31	22,5000	3,94968	Total	74	21,3041	5,22954
Maladaptive Perfectionism	1,00	9	17,8333	2,75000	1,00	34	21,3676	5,65191
	2,00	15	20,3000	5,44715	2,00	21	20,2381	6,43160
	3,00	19	24,3684	6,37452	3,00	19	21,4211	5,38584
	4,00	31	20,3387	5,44577	1,00	34	4,1765	4,33080
Depress	1,00	9	1,2222	1,56347	2,00	21	5,7143	5,60484
	2,00	15	3,0667	3,63449	3,00	19	5,1053	4,55698
	3,00	19	6,3158	5,08869	1,00	34	,7353	1,05339
	4,00	31	5,8710	4,97823	2,00	21	,9524	1,24403
Anxiety	1,00	9	,1111	,33333	3,00	19	1,7895	,91766
	2,00	15	,6000	,82808	1,00	34	,6176	1,12855
	3,00	19	1,4211	1,34643	2,00	21	1,1905	1,43593
	4,00	31	1,3548	1,11201	3,00	19	1,1579	1,11869
Stress	1,00	9	,4444	1,01379	1,00	34	19,5882	5,57384
	2,00	15	,4667	,91548	2,00	21	21,7619	4,99655
	3,00	19	1,3684	1,53516	3,00	19	23,8684	3,66986
	4,00	31	1,0000	1,15470	Total	74	21,3041	5,22954

Table 2 presents a MANOVA analysis to determine whether category or years of practice influences the study variables. Statistically significant differences were found for category F(15)=1.744; p=.047; eta^2 p=.128. No statistically significant differences were found for years of practice F(10)=1.578; p=.121; eta^2 p=.118, although the effect size indicates moderate differences. Therefore, the inter-subject effects corresponding to this analysis are shown in Table 2. Interactions between variables were not significant (p>.05).

Table 2

Inter-subject effects between the variables development and mental health as a function of professional category and years of practice.

	Dependent variable	df	F	Sig.	Partial Eta squared
Category	Adaptive Perfectionism	3	2,743	,050	,116
	Maladaptive Perfectionism	3	2,582	,061	,109
	Depress	3	2,555	,063	,108
	Anxiety	3	2,807	,047	,118
	Stress	3	,853	,470	,039
Number of practical years	Adaptive Perfectionism	2	2,114	,129	,063
	Maladaptive Perfectionism	2	,858	,429	,027
	Depress	2	,096	,908	,003
	Anxiety	2	2,061	,136	,061
	Stress	2	1,866	,163	,056
Category * Number of practical years	Adaptive Perfectionism	5	1,368	,248	,098
	Maladaptive Perfectionism	5	,426	,829	,033
	Depress	5	1,856	,115	,128
	Anxiety	5	,439	,820	,034
	Stress	5	1,332	,262	,096

Structural Equation Model

The results achieved in the hypothesised model (Figure 1) through SEM showed acceptable fit indices: $\chi 2$ (324, N= 1124) = 693.36, $\chi 2/df$= 2.14, p< .001, CFI= .95, TLI= .95, IFI= .95, RMSEA= .048 (CI 90%= .041-.057), SRMR= .039. The relationship between the study variables was based on the standardised regression weights specified in Table 3:

a) The correlation between adaptive and maladaptive perfectionism was negative (β = -0.49, p < 0.001).
b) The relationship between adaptive perfectionism and stress (β = -0.31, p < 0.001), anxiety (β = -0.44, p < 0.01) and depression (β = -0.29, p < 0.05) was negative.
c) The relationship between maladaptive perfectionism with respect to stress (β = 0.27, p < 0.001), anxiety (β = 0.52, p < 0.001) and depression (β = 0.32, p < 0.01) was positive.
d) Stress, anxiety and depression were positively related to the number of injuries in the last two years, being respectively β = 0.17, (p < 0.001); β = 0.22 (p < 0.01); and β = 0.20 (p < 0.05).

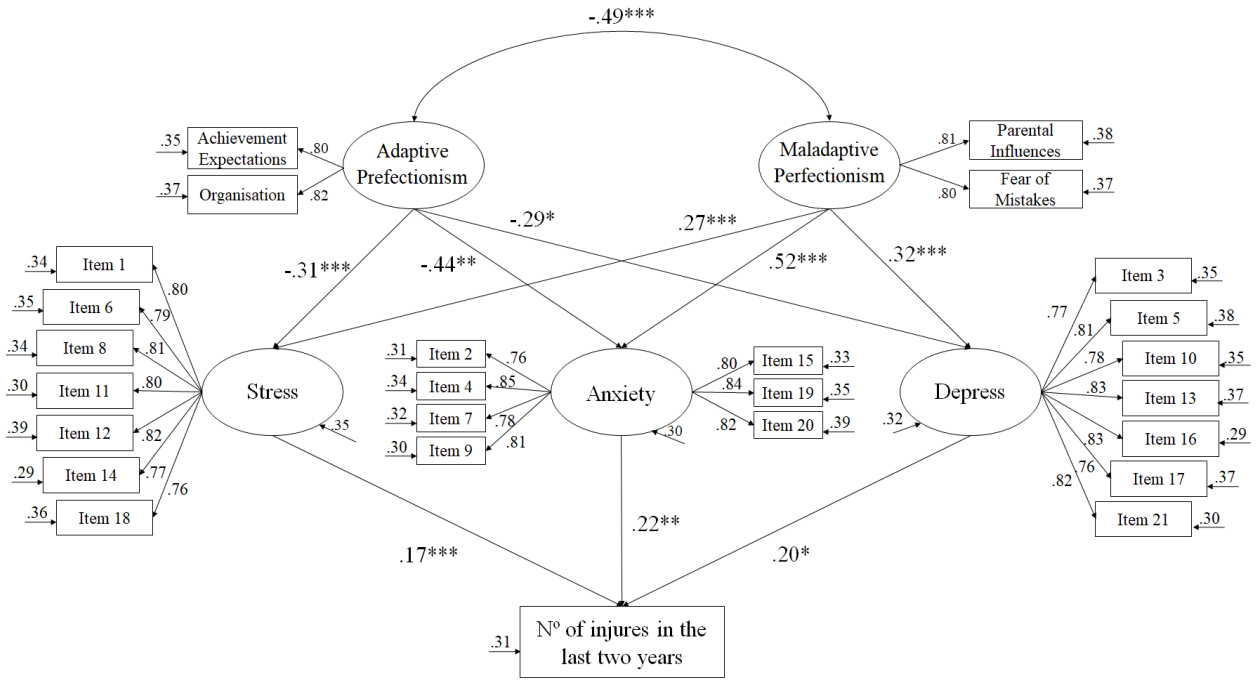

Figure 1. Structural Equation Model (SEM)

Reliability Analysis

Cronbach's alpha was used to analyze the reliability of each of the factors present in the model. The results are as follows: Adaptive Perfectionism .82; Maladaptive Perfectionism .84; Stress .80; Anxiety .83 and Depress .80.

Discussion

This study examined the association between perfectionism and related mental health indicators such as depression, anxiety, stress, and injuries in female football players. The specific objective was to establish a correlation between perfectionism, both internationally and in its two principal components (adaptive and maladaptive), mental health indicators, and the occurrence or absence of a sports injury. Regarding the first objective, the results indicate that the perfectionism factor has a significant relationship with psychological health factors, specifically with emotional aspects such as depression, anxiety, and stress. This relationship is consistent with previous results obtained in other research (Garinger et al., 2018; Iancheva et al., 2020; Jensen et al., 2018; Smith et al., 2018; Zafra & García-Mas, 2009; Zafra et al., 2006), in the sense that the maladaptive approach to perfectionism is positively associated with psychological health problems. Similarly, and supporting the previous conclusion, when the approach to perfectionism is adaptive, the relationship is inverse, and it may be a protective factor or, at the very least, a positive influence so that the negative aspects of these emotional states are not harmful (Do Nascimento Junior et al., 2020; González-Hernández et al., 2021; González-Hernández et al., 2019; Lowe, 2018; Vink & Raudsepp, 2020).

The relationship between perfectionism and the prevalence of injuries in the last two years among the evaluated athletes appears to be supported insofar as it correlates with health factors that are linked to injuries (Jowett et al., 2021); this is also under previous studies mentioned at the beginning of this paper. Influence as a potential mediator would follow the predicted pattern: a statistically significant link between maladaptive perfectionism and injury risk and a negative inverse association between maladaptive and adaptive perfectionism (Madigan et al., 2018).

This leads to some practical conclusions along Pentith et al. (2021). A high degree of adaptive perfectionism and the concurrent application of problem-focused coping mechanisms can lower the chance of negative psychological impact when coping with the injury. Moreover, the arduous effort inherent in such perfectionism is likely to be positively associated with eudaimonic well-being, as suggested by Ryff (1989), in which overexertion and working at the limit, including possible discomfort, can be both a source of personal satisfaction and a motivator of successful behavior in achieving the most difficult challenges. In addition, Breeding and Anshel (2015) research indicates that perfectionism is a function of perceived competence, i.e., a state rather than a trait construct, in which perceived competence appears to influence perfectionism scores, with perfectionism being more likely to manifest as a function of the athlete's perceived level of ability, specifically high perceived ability. From an applied standpoint, these findings are intriguing since they may assist coaches in personalizing training according to skill levels and displays of perfectionism, specifically maladaptive perfectionism.

Conclusion

Perfectionism is a cognitive-motivational psychological variable that can be approached in at least two ways. One of them is negative, maladaptive for health (and for the generation of injuries), which is characterized by considering the criterion of perfection from the expectation of maximums as something possible, present, rigid, and necessarily attainable, generating emotional reactions linked to the perception of "I can't" at the slightest possibility of failure that would negatively affect the athlete. On the contrary, another way of understanding perfectionism is as a direction or path in which to continue improving. Consider it as the permanent search for improvement, which logically happens by considering that there is neither there nor should there be a perfect achievement. This would be insurmountable and, therefore, the end of the road and progression. In the first case, it would be an end in itself. In the second, a means or way of advancing ends.

A clear corollary of these conclusions from an applied perspective is the necessity to conceive the pursuit of excellence and perfection as a criterion or horizon of perpetual improvement, without actual limitations, beyond what ability and time allow. In this way, the fundamental level of achievement may be judged more accurately, preventing the potential maximum from being changed into the acceptable minimum, which is the foundation for a correct achievement orientation toward success and not failure avoidance. This last aspect could be examined in greater depth to determine how a correctly oriented concept of seeking perfection generates a sense of success and emotional satisfaction and pride while avoiding the perception of continuous stress or feelings of sadness. And shame for failing to attain this misunderstood perfection, which, as we have seen, leads to poor athletic performance, discomfort, and injuries. In

summary, loss of well-being and health undoubtedly involves complicated emotional factors like shame, which should be examined further in future research.

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References

Andersen, M. B., & Williams, J. M. (1988). A model of stress and athletic injury: Prediction and prevention. *Journal of sport and exercise psychology, 10*(3), 294-306. https://doi.org/10.1123/jsep.10.3.294

Antúnez, Z., & Vinet, E. V. (2012). Escalas de depresión, ansiedad y estrés (DASS-21): Validación de la versión abreviada en estudiantes universitarios chilenos. *Terapia psicológica, 30*(3), 49-55. https://doi.org/10.4067/S0718-48082012000300005

Ato, M., López-García, J. J., & Benavente, A. (2013). Un sistema de clasificación de los diseños de investigación en psicología. *Anales de Psicología/Annals of Psychology, 29*(3), 1038-1059. https://doi.org/10.6018/analesps.29.3.178511

Breeding, W. T., & Anshel, M. H. (2015). Relationship between Sport Perfectionism and Perceived Competence as a Function of Skill Level and Sport Type. *Journal of Sport Behavior, 38*(4). https://doi.org/10.1037/t58124-000

Carrasco, Á., Belloch, A., & Perpiñá, C. (2009). La evaluación del perfeccionismo: utilidad de la Escala Multidimensional de Perfeccionismo en población española. *Análisis y modificación de Conducta, 35*(152). https://doi.org/10.33776/amc.v35i152.1225

Curran, T., & Hill, A. P. (2019). Perfectionism is increasing over time: A meta-analysis of birth cohort differences from 1989 to 2016. *Psychological bulletin, 145*(4), 410. https://doi.org/10.1037/bul0000138

Do Nascimento Junior, J. R. A., Batista, R. P. R., da Silva, A. A., Granja, C. T. L., Fiorese, L., & y Fortes, L. d. S. (2020). Is an athlete's perfectionism associated with the performance of indoor football teams? *Psicologia: Teoria e Prática, 22*(2), 31. https://doi.org/10.5935/1980-6906/psicologia.v22n2p317-337

Donachie, T. C., & Hill, A. P. (2020). Helping soccer players help themselves: Effectiveness of a psychoeducational book in reducing perfectionism. *Journal of applied sport psychology,* 1-21. https://doi.org/10.1080/10413200.2020.1819472

Freire, G. L. M., da Cruz Sousa, V., Alves, J. F. N., de Moraes, J. F. V. N., de Oliveira, D. V., & do Nascimento Junior, J. R. A. (2020). Are the traits of perfectionism associated with pre-competitive anxiety in young athletes? Perfectionism and pre competitive anxiety in young athletes. *Cuadernos de Psicología del Deporte, 20*(2), 37-46. https://doi.org/10.6018/cpd.406031

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

Garinger, L. M., Chow, G. M., & Luzzeri, M. (2018). The effect of perceived stress and specialization on the relationship between perfectionism and burnout in collegiate athletes. *Anxiety, Stress, & Coping, 31*(6), 714-727. https://doi.org/10.1080/10615806.2018.1521514

González-Hernández, J., Baños, R., Morquecho-Sánchez, R., Pineda-Espejel, H. A., & Chamorro, J. L. (2021). Perfectionism Patterns, Dark Personality, and Exercise Addiction Trend in High-Intensity Sports. *International Journal of Mental Health and Addiction*, 1-13. https://doi.org/10.1007/s11469-021-00595-y

González-Hernández, J., Capilla Díaz, C., & Gómez-López, M. (2019). Impulsiveness and cognitive patterns. understanding the perfectionistic responses in Spanish competitive junior athletes. *Frontiers in psychology, 10*, 1605. https://doi.org/10.3389/fpsyg.2019.01605

Hall, H. K., & Jowett, G. E. (2014). Perfectionism: the role of personality in shaping an athlete's sporting experience. In A. G. Papaioannou & D. Hackfort (Eds.), *Routledge Companion to Sport and Exercise Psychology* (pp. 152 - 168). Routledge. https://www.routledge.com/products/9781848721289

Hewitt, P. L., & Flett, G. L. (1991). Dimensions of perfectionism in unipolar depression. *Journal of abnormal psychology, 100*(1), 98. https://doi.org/10.1037/0021-843X.100.1.98

Iancheva, T., Rogaleva, L., GarcíaMas, A., & Olmedilla, A. (2020). Perfectionism, mood states, and coping strategies of sports students from Bulgaria and Russia during the pandemic COVID-19. *Journal of Applied Sports Sciences,* (1), 22-38. https://doi.org/10.37393/JASS.2020.01.2

Ivarsson, A., Johnson, U., Andersen, M. B., Tranaeus, U., Stenling, A., & Lindwall, M. (2017). Psychosocial factors and sport injuries: meta-analyses for prediction and prevention. *Sports medicine, 47*(2), 353-365. https://doi.org/10.1007/s40279-016-0578-x

Jensen, S. N., Ivarsson, A., Fallby, J., Dankers, S., & Elbe, A.-M. (2018). Depression in Danish and Swedish elite football players and its relation to perfectionism and anxiety. *Psychology of Sport and Exercise, 36*, 147-155. https://doi.org/10.1016/j.psychsport.2018.02.008

Jowett, G. E., Hill, A. P., Curran, T., Hall, H. K., & Clements, L. (2021). Perfectionism, burnout, and engagement in dance: The moderating role of autonomy support. *Sport, Exercise, and Performance Psychology, 10*(1), 133. https://doi.org/10.1037/spy0000232

Leguizamo, F., Olmedilla, A., Núñez, A., Verdaguer, F. J. P., Gómez-Espejo, V., Ruiz-Barquín, R., & Garcia-Mas, A. (2021). Personality, coping strategies, and mental health in high-performance athletes during confinement derived from the COVID-19 pandemic. *Frontiers in public health, 8*, 561198. https://doi.org/10.3389/fpubh.2020.561198

Lovibond, S. H., & Lovibond, P. F. (1996). *Manual for the depression anxiety stress scales.* Psychology Foundation of Australia. https://doi.org/10.1037/t01004-000

Lowe, L. M. (2018). *How do Adolescent Elite Athletes Adaptively Use Fear of Failure to Motivate Success? 1-20. .* (Dissertation). The Wright Institute ProQuest Dissertations Publishing.

Madigan, D. J., Curran, T., Stoeber, J., Hill, A. P., Smith, M. M., & Passfield, L. (2019). Development of perfectionism in junior athletes: A three-sample study of coach and parental pressure. *Journal of Sport and Exercise Psychology, 41*(3), 167-175. https://doi.org/10.1123/jsep.2018-0287

Madigan, D. J., Stoeber, J., Forsdyke, D., Dayson, M., & Passfield, L. (2018). Perfectionism predicts injury in junior athletes: Preliminary evidence from a prospective study. *Journal of sports sciences, 36*(5), 545-550. https://doi.org/10.1080/02640414.2017.1322709

Marsh, H. W., Hau, K.-T., & Wen, Z. (2004). In search of golden rules: Comment on hypothesis-testing approaches to setting cutoff values for fit indexes and dangers in overgeneralizing Hu and Bentler's (1999) findings. *Structural equation modeling, 11*(3), 320-341. https://doi.org/10.1207/s15328007sem1103_2

Muñoz, A. J., & González, J. (2017). Percepción de estrés y perfeccionismo en estudiantes adolescentes. Influencias de la actividad física y el género. *Ansiedad y estrés, 23*(1), 32-37. https://doi.org/10.1016/j.anyes.2017.04.001

Olmedilla-Zafra, A., Rubio, V. J., Ortega, E., & García-Mas, A. (2017). Effectiveness of a stress management pilot program aimed at reducing the incidence of sports injuries in young football (soccer) players. *Physical Therapy in Sport, 24*, 53-59. https://doi.org/10.1016/j.ptsp.2016.09.003

Pentith, R., Moss, S. L., Lamb, K., & Edwards, C. (2021). Perfectionism Among Young Female Competitive Irish Dancers-Prevalence and Relationship with Injury Responses. *Journal of Dance Medicine & Science, 25*(2), 152-158. https://doi.org/10.12678/1089-313X.061521k

Pérez-Hernández, P., Olmedilla-Caballero, B., Gómez-Espejo, V., & Olmedilla, A. (2020). Relación entre perfeccionismo y salud mental en futbolistas jóvenes: diferencias entre categorías deportivas. *JUMP,* (2), 7-15. https://doi.org/10.17561/jump.n2.1

Pineda-Espejel, H. A., Alarcón, E., López-Ruiz, Z., & Trejo, M. (2017). Orientaciones de meta como mediadoras en la relación entre perfeccionismo y ansiedad precompetitiva.[Goal orientations as mediators in the relationship between perfectionism and precompetitive anxiety]. *RICYDE. Revista Internacional de Ciencias del Deporte. doi: 10.5232/ricyde, 14*(52), 148-162. https://doi.org/10.5232/ricyde

Ryff, C. D. (1989). Beyond Ponce de Leon and life satisfaction: New directions in quest of successful ageing. *International journal of behavioral development, 12*(1), 35-55. https://doi.org/10.1177/016502548901200102

Smith, E. P., Hill, A. P., & Hall, H. K. (2018). Perfectionism, burnout, and depression in youth soccer players: A longitudinal study. *Journal of Clinical Sport Psychology, 12*(2), 179-200. https://doi.org/10.1123/jcsp.2017-0015

Souter, G., Lewis, R., & Serrant, L. (2018). Men, mental health and elite sport: a narrative review. *Sports medicine-open, 4*(1), 1-8. https://doi.org/10.1186/s40798-018-0175-7

Stoeber, J., Madigan, D. J., & Gonidis, L. (2020). Perfectionism is adaptive and maladaptive, but what's the combined effect? *Personality and Individual Differences, 161*, 109846. https://doi.org/10.1016/j.paid.2020.109846

Vanstone, D. M., & Hicks, R. E. (2019). Transitioning to university: Coping styles as mediators between adaptive-maladaptive perfectionism and test anxiety. *Personality and Individual Differences, 141*, 68-75. https://doi.org/10.1016/j.paid.2018.12.026

Vink, K., & Raudsepp, L. (2020). Longitudinal associations between perfectionistic strivings, perfectionistic concerns, and sport-specific practice in adolescent volleyball players. *Perceptual and Motor Skills, 127*(3), 609-625. https://doi.org/10.1177/0031512520908699

Williams, J. M., & Andersen, M. B. (1998). Psychosocial antecedents of sport injury: Review and critique of the stress and injury model'. *Journal of applied sport psychology, 10*(1), 5-25. https://doi.org/10.1080/10413209808406375

Zafra, A. O., & García-Mas, A. (2009). El modelo global psicológico de las lesiones deportivas. *Acción psicológica, 6*(2), 77-91. https://doi.org/10.5944/ap.6.2.223

Zafra, A. O., Montalvo, C. G., & Sánchez, F. M. (2006). Factores psicológicos y vulnerabilidad a las lesiones deportivas: un estudio en futbolistas. *Revista de psicología del Deporte, 15*(1), 37-52. https://www.redalyc.org/pdf/2351/235119204006.pdf