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**Perfectionism, Achievement Motives, and Attribution of Success and Failure
in Female Soccer Players**

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Abstract

While some researchers have identified adaptive perfectionism as a key characteristic to achieving elite performance in sport, others see perfectionism as a maladaptive characteristic that undermines, rather than helps athletic performance. Arguing that perfectionism in sport contains both adaptive and maladaptive facets, the present article presents a study of $N = 74$ female soccer players investigating how two facets of perfectionism—perfectionistic strivings and negative reactions to imperfection (Stoeber, Otto, Pescheck, Becker, & Stoll, 2007)—are related to achievement motives and attributions of success and failure. Results show that striving for perfection was related to hope of success and self-serving attributions (internal attribution of success). Moreover, once overlap between the two facets of perfectionism was controlled for, striving for perfection was inversely related to fear of failure and self-depreciating attributions (internal attribution of failure). In contrast, negative reactions to imperfection were positively related to fear of failure and self-depreciating attributions (external attribution of success) and inversely related to self-serving attributions (internal attribution of success and external attribution of failure). It is concluded that striving for perfection in sport is associated with an adaptive pattern of positive motivational orientations and self-serving attributions of success and failure, which may help athletic performance. In contrast, negative reactions to imperfection are associated with a maladaptive pattern of negative motivational orientations and self-depreciating attributions, which is likely to undermine athletic performance. Consequently, perfectionism in sport may be adaptive in those athletes who strive for perfection, but can control their negative reactions when performance is less than perfect.

Keywords: perfectionism; sport; achievement motivation; attribution; success; failure

Introduction

Perfectionism is characterized by striving for flawlessness and setting of excessively high standards for performance accompanied by tendencies toward overly critical evaluations of one's behavior (Flett & Hewitt, 2002; Frost, Marten, Lahart, & Rosenblate, 1990). While some researchers have identified adaptive perfectionism as a key characteristic to achieving elite performance in sport (Gould, Dieffenbach, & Moffett, 2002), others see perfectionism as a maladaptive characteristic that undermines, rather than helps athletic performance (Flett & Hewitt, 2005; Hall, 2006). However, research has suggested that two major dimensions of perfectionism be differentiated (Stoeber & Otto, 2006): a positive dimension which has been described as normal, healthy, or adaptive perfectionism, and a negative dimension which has been described as neurotic, unhealthy, or maladaptive perfectionism (Hamachek, 1978; Rice & Preusser, 2002; Stumpf & Parker, 2000). The negative dimension of perfectionism subsumes those facets of perfectionism that relate to perfectionistic concerns such as concern over mistakes, doubts about actions, feelings of discrepancy between expectations and results, and negative reactions to mistakes. This dimension has been associated with negative outcomes, for example, test anxiety, fear of negative evaluation, and low self-esteem. In contrast, the positive dimension of perfectionism subsumes those facets of perfectionism that relate to perfectionistic strivings such as having high personal standards and striving for excellence. This dimension has been associated with positive outcomes, for example, positive evaluations of past academic achievement, positive expectancies regarding future achievement, and higher academic performance (see Stoeber & Otto, 2006 for a comprehensive review). Consequently, the distinction between

positive and negative facets of perfectionism may also prove crucial when investigating how perfectionism relates to achievement motives and attributions in sport.

Regarding achievement motives, research traditionally differentiates between two basic motives: hope of success and fear of failure (Atkinson, 1957; DeCharms & Davé, 1965). Concerning the relationship between perfectionism and achievement motives in sport, only one study has been conducted so far. Frost and Henderson (1991) investigated how perfectionism related to success and failure orientation in female college athletes. Perfectionism was measured using the Frost Multidimensional Perfectionism Scale (FMPS; Frost et al., 1990), which assesses two facets of perfectionism—personal standards and concern over mistakes—that have been identified as core facets of positive and negative perfectionism, respectively (Stoeber & Otto, 2006). Frost and Henderson found that overall perfectionism showed high correlations with both success and failure orientation, corroborating the paradoxical nature of perfectionism in athletes (Flett & Hewitt, 2005). On the facet level, however, correlations were more differentiated: Whereas personal standards showed correlations with both success and failure orientation, the correlation with success orientation was significantly larger than that with failure orientation. In contrast, concern over mistakes showed a significantly larger correlation with failure orientation than with success orientation, indicating that negative facets of perfectionism in athletes are more closely related to fear of failure than to hope of success, whereas positive facets of perfectionism are more closely related to hope of success than to fear of failure.

But what happens when success is attained or failure could not be avoided? Here causal attributions come into play and provide the important link between motivation and emotion (Weiner, 1985). Regarding causal attributions, one fundamental dimension is locus of causality and the distinction between internal and external attribution, that is, whether success and failure are attributed to factors within the person (e.g., talent, competence) or to factors in the environment (e.g., others). Internal attributions of success are linked to positive emotions such as pride and high self-esteem, and internal attributions of failure are linked to negative emotions such as shame and guilt (Weiner, 1985). Research has shown that successful athletes show a self-serving bias in that they attribute success internally while attributing failure externally, thus protecting self-esteem and preserving motivation for future achievement situations (Biddle & Hanrahan, 1998; Weiner, 1985). However, so far only one study has investigated perfectionism and causal attributions in athletes. Anshel and Mansouri (2005) investigated how perfectionism was related to causal attributions in college-aged male athletes following negative feedback on a body-balancing task. Perfectionism was measured with the FMPS. Results showed that overall perfectionism was related to making internal attributions of failure, with concern over mistakes showing the strongest relationships. This suggests that negative facets of perfectionism may be more closely related to self-deprecating attributions compared to positive facets.

Some open questions remain, however. First, Anshel and Mansouri (2005) investigated only attributions in relation to failure, not in relation to success. Moreover, athletes performed an unfamiliar task (body-balancing on a stabilometer) in a laboratory setting, and the negative performance feedback they received was a “bogus” feedback that followed a randomized experimental design and thus was unrelated to their actual performance. Consequently, it is unclear how perfectionism would relate to attributions of actual success and failure in real-life situations like competitions or league games. Second, both Frost and Henderson (1991) and Anshel and Mansouri (2005) investigated athletes’ general perfectionism, not perfectionism regarding their sport. A recent study comparing intercollegiate athletes’ perfectionistic orientations across different domains (sport, school, general life) found that athletes reported significantly higher perfectionism with respect to

sport than to school and general life (Dunn, Gotwals, & Dunn, 2005), indicating that athletes' general perfectionism may not accurately reflect the degree of their perfectionism in sport. Consequently, it is important to use measures specifically designed to capture perfectionism in sports when investigating the relationships between perfectionism, achievement motives, and attribution of success and failure in athletes. Finally, research has shown that athletes set different types of goals for training and for competition, such that athletes' focus during training is on goals such as training effectively, making the most of the opportunity to practice, or just having fun; whereas their focus during competitions is on goals such as winning the competition or beating an opponent (Munroe-Chandler, Hall, & Weinberg, 2004). Consequently, when investigating perfectionism, achievement motives, and attribution of success and failure, it may be important to focus on athletes' perfectionism during competitions.

Against this background, the aim of the present study was to investigate further the relationship between perfectionism, achievement motives, and attribution of success and failure in athletes. In this, we focused on perfectionism during competitions differentiating two facets in the experience of perfectionism: striving for perfection and negative reactions to imperfection (Stoeber, Otto, Pescheck, Becker, & Stoll, 2007). Striving for perfection has been found to represent the core element of the positive dimension of perfectionism (Stoeber & Otto, 2006), and negative reactions to imperfection have been found to be closely related to concern over mistakes and maladaptive perfectionism (Frost & Henderson, 1991; Rice & Preusser, 2002). Accordingly, studies investigating these two facets have found them to display a differentiated pattern of relationships with competitive anxiety and achievement motives: In a study with student athletes, negative reactions to imperfection showed intimate relationships with competitive anxiety whereas striving for perfection showed inverse relationships with competitive anxiety once overlap with negative reactions to imperfection was partialled out (Stoeber et al., 2007). Regarding achievement motives, a study with adolescent school students found that negative reactions to imperfection were related to fear of failure whereas striving for perfection was related to hope of success (Stoeber & Rambow, *in press*). Consequently, for the present study, we also expected striving for perfection to be positively related to hope of success and negative reactions to imperfection positively related to fear of failure.

Regarding attribution of success and failure, we expected negative reactions to imperfection to be related to self-depreciating attributions, based on two studies with non-athletes that found negative dimensions and facets of perfectionism to be related to self-depreciating attributions (Chang & Sanna, 2001; Flett, Hewitt, Blankstein, & Pickering, 1998) and based on Anshel and Mansouri's (2005) finding that concern over mistakes was related to internal attributions of failure. In contrast, we expected striving for perfection to be related to self-serving attributions. This expectation was based on the conception that perfectionistic strivings represent a form of positive perfectionism (Stoeber & Otto, 2006), and positive perfectionism has been found to be related to feelings of pride (Fedewa, Burns, & Gomez, 2005) and higher self-esteem (Grzegorek, Slaney, Franze, & Rice, 2004). As attribution theory links pride and self-esteem to internal attributions of success (Weiner, 1985) and internal attributions of success represent self-serving attributions, we expected perfectionistic striving to be related to self-serving attributions. Finally, in line with previous findings (Stoeber & Otto, 2006; Stoeber et al., 2007), we expected the hypothesized relationships to be more pronounced once overlap between striving for perfection and negative reactions to imperfection was partialled out.

Method

Participants and Procedure

A sample of $N = 74$ female soccer players was recruited from three fourth-league teams (“Verbandsliga Sachsen-Anhalt”) and three fifth-league teams (“Landesliga Mitte-Ost”) in Saxony Anhalt, Germany.¹ Mean age was 24.1 years ($SD = 6.3$; range = 15-43 years). Teams were visited by the second author who distributed a total of 120 questionnaires together with prestamped return envelopes. With 68% of questionnaires returned, the return rate was satisfactory.

Measures

Perfectionism during competitions. To measure perfectionism during competition, the ten items from the Multidimensional Inventory of Perfectionism in Sport (Stöber, Otto, & Stoll, 2004) were employed that Stoeber et al. (2007) used to differentiate striving for perfection and negative reactions to imperfection during competition/league games, but replacing “during competitions/league games” with “during league games”: five items to measure striving for perfection (e.g., “During league games, I strive to be as perfect as possible”) and five items to measure negative reactions to imperfection (e.g., “During league games, I feel extremely stressed if everything does not go perfectly”) (see Stoeber et al., 2007, for the complete list of items). Participants were asked to indicate how they generally felt during league games and responded on a 6-point scale from “never” to “always.” As a measure of overall perfectionism during competitions, a total score was computed, combining striving for perfection and negative reactions to imperfection. All three measures displayed high reliability (see Table 1).

Achievement motives. To measure achievement motives, the short form of the Achievement Motives Scale-Sport (Elbe, Wenhold, & Müller, 2005; short form: Wendland, Elbe, Wenhold, & Thonke, 2003) was employed which comprises a five-item scale to measure hope of success (e.g., “I like being confronted with a difficult athletic task”) and a five-item scale to measure fear of failure (e.g., “I find it unsettling to do something in sport when I am not sure that I can accomplish it”). Participants responded on a 6-point scale from “totally disagree” to “totally agree.” Both measures displayed high reliability (see Table 1).

Attributions. To measure internal and external attributions of success and failure, a new measure of attributions of success and failure in soccer players was employed (Becker, 2005). To measure attributions of success, participants were to think of the last league game in which their team had experienced success and then indicate to what degree they attributed this success to a list of fourteen items, of which seven comprised internal attributions to oneself (e.g., “I played well”) and seven external attributions to the opposing team (e.g., “The players in the opposing team did not play well”). To measure attributions of failure, participants were to think of the last league game in which their team had experienced failure and then indicate to what degree they attributed this failure to a list of fourteen items, of which seven comprised internal attributions to oneself (e.g., “I did not play well”) and seven external attributions to the opposing team (e.g., “The players in the opposing team played well”).² To all items, participants responded on a 6-point scale from

¹Players from these leagues are amateurs and usually compete regionally.

²The measure also contained attributions of success and failure to the own team (“my team”). These attributions, however, are ambiguous as to whether they represent internal or external attributions. Consequently, they were excluded from the present analyses. The full list of items is available upon

“totally disagree” to “totally agree.” Finally, to obtain an overall measure of self-serving attributions, a combined score was computed by first reverse-coding the answers to the items that measured self-depreciating attributions (i.e., external attribution of success, internal attribution of failure) and then combining them with the answers to the items that measured self-serving attributions (i.e., internal attribution of success, external attribution of failure). All measures displayed high reliability (see Table 1).

Results

First, the sample means and standard deviations of the measures were inspected (see Table 1). Results showed that the present sample of female soccer players displayed, on average, high levels of striving for perfection, hope of success, and self-serving attributions (success internal, failure external), medium levels of negative reactions to imperfection, and low levels of fear of failure and self-depreciating attributions (success external, failure internal). Next, the correlation between striving for perfection and negative reactions to imperfection during competitions was inspected. In line with previous findings (Stoeber et al., 2007), striving for perfection and negative reactions to imperfection showed a substantial correlation, $r = .58, p < .001$, indicating that soccer players who strive for perfection during league games are also likely to react negatively to mistakes. Consequently, partial correlations were inspected in addition to zero-order correlations to control for the overlap between the two facets of perfectionism. In line with our directional expectations, correlations of perfectionism were inspected employing one-tailed tests (see Table 2). Corroborating previous findings of paradoxical relationships of perfectionism in sport (Flett & Hewitt, 2005), overall perfectionism was related to hope of success on the one hand and external attribution of success on the other, indicating that athletes with overall high levels of perfectionism hope to achieve success, but when they achieve success, attribute it to external factors.

However, when the two facets of perfectionism were regarded individually (see Table 2), a differential pattern of correlations emerged, particularly once partial correlations were computed to control for the overlap between the two facets of perfectionism. Regarding achievement motives and focusing on the partial correlations, striving for perfection showed a positive correlation with hope of success and a negative correlation with fear of failure. In contrast, negative reactions to imperfection showed a positive correlation with fear of failure. Regarding attributions of success and failure and again focusing on the partial correlations, striving for perfection was related to internal attribution of success and inversely to internal attribution of failure, whereas negative reactions to imperfection were inversely related to internal attribution of success and external attribution of failure. Moreover, in the zero-order correlations, negative reactions to imperfections were related to external attribution of success. Consequently, when the combined score for all attributions was regarded, negative reactions to imperfection were inversely related to overall self-serving attributions of success and failure. In contrast, striving for perfection displayed a significant positive correlation with overall self-serving attributions, once the influence of negative reactions to imperfection was partialled out.

Discussion

The aim of the present research was to further investigate the relationships between perfectionism, achievement motives, and attributions of success and failure in athletes. Results show that overall perfectionism—combining striving for perfection and negative reactions to imperfection—was related to both adaptive (hope of success) and maladaptive (external attribution of success) characteristics, supporting the view that perfectionism in sport shows paradoxical relationships (Flett & Hewitt, 2005). However, when striving for perfectionism and negative reactions to imperfection were differentiated and the overlap between the two facets of perfectionism was controlled for, a pattern of correlations emerged that presented a clear-cut separation between adaptive and maladaptive characteristics: Whereas negative reactions to imperfection showed a positive correlation with fear of failure, striving for perfection showed a positive correlation with hope of success, thus supporting views that positive forms of perfectionism are associated with approach motivation and negative forms with avoidance motivation (Slade & Owens, 1998). Moreover, striving for perfection showed a negative correlation with fear of failure and a positive correlation with self-serving attributions, whereas negative reactions to imperfection showed a negative correlation with self-serving attributions.

The findings provide further evidence that overall perfectionism in athletes shows paradoxical relationships with fear of failure and self-serving attributions and thus may be a maladaptive characteristic (Flett & Hewitt, 2005; Hall, 2006). However, they also show that striving for perfection is related to positive, functional, and possibly adaptive characteristics, once overlap with negative aspects of perfectionism is partialled out (Stoeber & Otto, 2006; Stoeber et al., 2007). In particular, the present research suggests that athletes who strive for perfection during competitions (and succeed in keeping negative reactions to imperfection at bay) show high levels of hope of success and low levels of fear of failure. Consequently, they are motivated by the desire to attain success, not the desire to avoid failure. When they attain success, they attribute the success internally to themselves and consequently may feel pride in their accomplishment. When they experience failure, however, they are unlikely to attribute the failure internally so that self-esteem is protected and feelings of shame are averted, which dovetails with findings that positive perfectionism is related to pride and inversely related to shame (Fedewa et al., 2005). In contrast, negative reactions to imperfection were related to fear of failure and self-depreciating attributions, confirming that negative reactions to mistakes are an aspect of perfectionism that is closely related to those dimensions and facets of perfectionism which have been shown to be related to negative, dysfunctional, and maladaptive characteristics and outcomes in both athletes and non-athletes (Flett & Hewitt, 2005; Hall, 2006; Stoeber & Otto, 2006).

The present study has some limitations, however. First, the sample included only female soccer players who were amateurs and displayed a great age range, which may limit the generalizability of our findings as does the fact that one third of the projected sample did not return the questionnaires. Consequently, future studies should secure higher completion rates and investigate whether the findings also hold for male soccer players and for (semi-) professional players who usually show a more restricted age range. Moreover, the present study focused on two facets of perfectionism, namely striving for perfection and negative reactions to imperfection (Stoeber et al., 2007). Consequently, it is important that future studies investigate whether the findings generalize to other positive and negative facets of perfectionism, particularly to personal standards and concern over mistakes of the FMPS, which is now available in a version adapted and validated for sport (Dunn et al., 2006). Second, regarding achievement motives, the present study followed the classical

approach to achievement motivation and focused on achievement motives (cf. Elliot, 1997). Studies which followed the contemporary approach and focused on achievement goals have found that different facets of perfectionism also display different relationships with achievement goals, for example, that personal standards are related to more favorable goal orientations than concern over mistakes (e.g., Ommundsen, Roberts, Lemyre, & Miller, 2005). Consequently, future studies should combine the two approaches to create a more comprehensive picture of how perfectionism relates to achievement motivation. Finally, regarding attributions, the present study focused on the locus of causality dimension and differentiated only between internal and external attribution of success and failure. While locus of causality is the most central dimension, attribution research has identified a number of other dimensions of which the dimensions of stability and controllability may be of particular importance (Rees, Ingledeu, & Hardy, 2005). This is because internal attributions of failure may well be functional as long as failure is attributed to unstable and controllable internal factors (e.g., lack of effort, lack of practice) and not to stable and uncontrollable internal factors (e.g., low aptitude) (Weiner, 1985). Consequently, future studies should employ measures of attribution that also capture the dimensions of stability and controllability to further our knowledge of the relationships between attributions and perfectionism in athletes.

Nonetheless, the present findings have important implications for the understanding of perfectionism in sports and in general. First, they provide further support for the view that perfectionism has many faces (Benson, 2003) and that only some dimensions and facets of perfectionism are clearly negative and harmful, whereas others may be positive and benign. Consequently, only certain forms of perfectionism are associated with high levels of distress and present a serious risk to a person's physical and mental health, whereas other forms of perfectionism may be regarded as a "healthy pursuit of excellence" (Shafran, Cooper, & Fairburn, 2002, p. 778).³ Moreover, the present findings support conceptions that striving for perfection is possibly adaptive when separated from maladaptive aspects of perfectionism such as engaging in harsh self-criticism when results are below expectations (Dunkley, Blankstein, Masheb, & Grilo, 2006). Consequently, athletes may well strive for perfection, but should not be overly dissatisfied, angry, or frustrated when things do not turn out perfectly.

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³For a detailed review of positive/adaptive/healthy and negative/maladaptive/unhealthy conceptions of perfectionism and a critical discussion of these concepts, see Stoeber and Otto (2006).

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Table 1

Perfectionism During Competitions, Achievement Motives, Attributions of Success and Failure in Female Soccer Players: Sample Statistics

	α	M	SD
Perfectionism during competitions			
Overall perfectionism	.90	4.30	0.90
Striving for perfection	.90	4.84	0.90
Negative reactions to imperfection	.86	3.76	1.12
Achievement motive			
Hope of success	.91	4.49	0.90
Fear of failure	.91	2.55	1.11
Attributions			
Success internal	.81	4.79	0.74
Success external	.83	2.84	0.98
Failure internal	.80	2.43	0.87
Failure external	.81	4.53	0.84
Overall self-serving	.83	4.06	2.10

Note. $N = 74$. Overall perfectionism = sum of striving for perfection and negative reactions to imperfection. Overall self-serving attributions = sum of success internal, success external (reversed-scored), failure internal (reverse-scored), and failure external. α = Cronbach's alpha. All scores are mean scores with a possible range of 1–6.

Table 2

Correlations of Perfectionism During Competitions with Achievement Motives and Attributions of Success and Failure in Female Soccer Players

	Correlation			Partial correlation	
	Overall perfectionism	Striving for perfection	Negative reactions to imperfection	Striving for perfection	Negative reactions to imperfection
Achievement motive					
Hope of success	.25*	.28**	.18	.22*	.02
Fear of failure	.07	-.07	.16	-.20*	.25*
Attributions					
Success internal	.06	.21*	-.07	.31**	-.24*
Success external	.21*	.14	.23*	.00	.19
Failure internal	-.02	-.14	.07	-.22*	.19
Failure external	-.14	-.04	-.20*	.10	-.22*
Overall self-serving	-.12	.05	-.24*	.24*	-.34**

Note. $N = 74$. Correlation = zero-order correlation. Partial correlation = correlation of striving for perfection controlling for negative reactions to imperfection and correlation of negative reactions to imperfection controlling for striving for perfection, respectively. Else, see Table 1.

* $p < .05$, ** $p < .01$, one-tailed.