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Perfectionism and Performance in a New Basketball Training Task:  
Does Striving for Perfection Enhance or Undermine Performance?

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## Abstract

*Objectives:* In the psychology of sport and exercise, the question of how perfectionism affects performance is highly debated. While some researchers have identified perfectionism as a hallmark quality of elite athletes, others see perfectionism as a maladaptive characteristic that undermines, rather than helps athletic performance. Against this background, the purpose of the present study was to investigate how different aspects of perfectionism predict performance and performance increments.

*Method:* A study was conducted with 122 undergraduate athletes to investigate how perfectionism during training affects performance and performance increments in a series of trials with a new basketball training task. Two aspects of perfectionism were examined: striving for perfection and negative reactions to imperfection.

*Design:* The design was a correlational prospective design.

*Results:* Results showed that striving for perfection during training predicted higher performance in the new task. In contrast, negative reactions to imperfection predicted lower performance when athletes attempted the task for the first time, once the positive influence of striving for perfection on task performance was partialled out. However, negative reactions to imperfection did not undermine performance in the consecutive trials. On the contrary, athletes with both high levels of striving for perfection and high levels of negative reactions to imperfection showed the greatest performance increments over the series of trials.

*Conclusion:* The findings suggest that perfectionism is not necessarily a maladaptive characteristic that generally undermines sport performance. Instead, when learning a new training task, perfectionism may enhance performance and lead to performance increments over repeated trials.

**Keywords:** Perfectionism; Sport; Training; Performance; Motivation

## Perfectionism and Performance in a New Basketball Training Task:

### Does Striving for Perfection Enhance or Undermine Performance?

According to dictionary definitions, perfectionism simply is the disposition to regard anything short of perfection as unacceptable (Merriam-Webster, 2006). Scientific theory and research, however, has progressed to a more differentiated view. Perfectionism is seen as a multidimensional personality disposition (Frost, Marten, Lahart, & Rosenblate, 1990; Hewitt & Flett, 1991) that is characterized by striving for flawlessness and the setting of excessively high standards for performance accompanied by tendencies for overly critical evaluations of one's behavior and an over-sensitivity to mistakes (Flett & Hewitt, 2002; Frost et al., 1990; Rice & Preusser, 2002). How perfectionism affects performance is highly debated, however, particularly in sports. While some researchers have identified perfectionism as a psychological characteristic that makes Olympic champions (Gould, Dieffenbach, & Moffett, 2002), others see perfectionism as a maladaptive characteristic that undermines, rather than helps athletic performance (Anshel & Mansouri, 2005; Flett & Hewitt, 2005).

However, cumulative evidence indicates that two major dimensions of perfectionism should be differentiated (Enns & Cox, 2002; Stoeber & Otto, 2006). The first dimension has been described as positive striving perfectionism (Frost, Heimberg, Holt, Mattia, & Neubauer, 1993) and captures those facets of perfectionism that relate to perfectionistic strivings such as having high personal standards, setting exacting standards for one's performance, and striving for excellence. This dimension has shown positive correlations with indicators of good adjustment such as positive affect, endurance, and higher academic performance (Bieling, Israeli, Smith, & Antony, 2003; Frost et al., 1993; Stumpf & Parker, 2000). The second dimension has been described as self-critical perfectionism (Dunkley, Zuroff, & Blankstein, 2003) and captures those facets of

perfectionism that relate to critical self-evaluations of one's performance, concern over mistakes, and feelings of discrepancy between expectations and results. This dimension has shown positive correlations with indicators of maladjustment such as depression, stress, and anxiety (see Stoeber & Otto, 2006 for a comprehensive review).

In the psychology of sport and exercise, the differentiation between positive striving perfectionism and self-critical perfectionism is crucial. The reason for this is that, when regarding the evidence put forward in support of the view that perfectionism is associated with maladaptive characteristics and behaviors that have the potential to be detrimental to sport performance (e.g., Flett & Hewitt, 2005; Hall, 2006), it is mainly the aspects of perfectionism associated with the self-critical dimension of perfectionism that show close relationships with negative characteristics and outcomes, not the aspects associated with the positive striving dimension. On the contrary, aspects associated with the positive striving dimension have shown relationships with positive characteristics and outcomes. One example is athlete burnout. Comparing a group of junior elite tennis players with high levels of burnout with a control group on dimensions of perfectionism, Gould, Udry, Tuffey, and Loehr (1996) found that burned-out players reported higher levels of concern over mistakes, but lower personal standards. As concern over mistakes is a core aspect of the self-critical dimension of perfectionism and personal standards a core aspect of the positive striving dimension (Stoeber & Otto, 2006), the results suggest that only self-critical perfectionism is related to athlete burnout, whereas positive striving perfectionism is not.

Other examples include the findings on perfectionism and goal orientations in athletes. Traditionally, two orientations can be differentiated: task orientation and ego orientation (Duda & Nicholls, 1992). Task orientation represents an emphasis on mastering a task and improving ability and thus is a good predictor of athletic

development. In comparison, ego orientation represents an emphasis on out-performing others and demonstrating ability in comparison to others, which may motivate athletes towards higher performance on the one hand, but may also increase fear of failure on the other (Elliot, 1997). Consequently, a strong and exclusive ego orientation must be regarded as a potential risk to competitive performance, whereas in combination with high levels of task orientation, ego orientation may enhance athletic performance (Ommundsen, 2004). Studies investigating how dimensions of perfectionism relate to goal orientations in athletes (Dunn, Dunn, & Syrotuik, 2002; Hall, Kerr, & Matthews, 1998; Ommundsen, Roberts, Lemyre, & Miller, 2005) have found that perfectionistic concern over mistakes showed positive correlations with ego orientation and inverse correlations with task orientation. In contrast, perfectionistic personal goals showed positive correlations with both task orientation and ego orientation, suggesting that only self-critical perfectionism is associated with a dysfunctional pattern of goal orientations (focusing only on performance and disregarding mastery) whereas positive striving perfectionism is associated with a functional pattern (focusing on both mastery and performance). Moreover, a recent study on how perfectionism relates to avoidance and approach orientations in mastery and performance goals (Stoeber, Stoll, Pescheck, & Otto, in press) found that negative reactions to imperfection were related to both avoidance and approach orientations (mastery-avoidance, performance-approach, performance-avoidance) whereas striving for perfection was exclusively related to approach orientations (mastery-approach, performance-approach) which further underscores the contention that positive striving perfectionism is an adaptive, rather than maladaptive characteristic in athletes.

A final example indicating the importance of differentiating positive and negative aspects of perfectionism is illustrated in the findings on perfectionism and competitive anxiety in athletes (Frost & Henderson, 1991; Hall et al., 1998; Koivula, Hassmén, &

Fallby, 2002; Stoeber, Otto, Pescheck, Becker, & Stoll, 2007). Overall, perfectionism in athletes has been associated with higher levels of competitive anxiety (Flett & Hewitt, 2005; Hall, 2006). However, when the relationships of different aspects of perfectionism were regarded, the findings across studies show that only concern over mistakes and negative reactions to imperfection showed consistent relationships with high competitive anxiety and low self-confidence in competitions (Stoeber et al., 2007). In contrast, personal goals and striving for perfection showed inverse relationships with competitive anxiety and positive relationships with self-confidence. These findings indicate that athletes, who strive for perfection and are unconcerned about making mistakes, experience lower anxiety and higher confidence in competitions, which is a combination that has been associated with higher performance (Craft, Magyar, Becker, & Feltz, 1993).

In sum, the findings suggest that only self-critical perfectionism is related to characteristics and behaviors that may impede sport performance. In contrast, positive striving perfectionism is related to characteristics and behaviors that have the potential to enhance performance. However, to the best of our knowledge, only one empirical study so far has investigated the relationship between perfectionism and performance in athletes (Anshel & Mansouri, 2005): Thirty male undergraduate athletes completed a measure of perfectionism including both positive striving (personal standards) and self-critical (concern over mistakes) aspects. Following this, they were asked to perform a body balancing task on a stabilometer for twenty trials under laboratory conditions. In half of the trials, athletes received no feedback regarding their motor performance. In the other half, they received false negative feedback by being told that they were failing to reach their previous best. Results suggested that both personal standards and concern over mistakes were unrelated to motor performance when no feedback was given, but associated with impaired performance when false negative feedback was given.

However, Anshel and Mansouri's study had some limitations. First, it did not measure athletes' sport-related perfectionism, but general perfectionism. As a recent study comparing athletes' perfectionistic orientations across different domains (sport, school, general life) demonstrates, athletes show significantly higher perfectionism with respect to sport than to school and general life (Dunn, Gotwals, & Dunn, 2005). Consequently, measures of general perfectionism may not capture the degree of athletes' perfectionism in sport. Second, the study employed only a small sample so that statistical power to find differential effects of positive striving versus self-critical aspects of perfectionism on performance was low (Cohen, 1988). Finally, it is unclear whether the study's measure of motor performance (i.e., stabilometer performance) has predictive validity for athletes' sport performance, as body balancing may be a central requirement in some disciplines, but not in others. Thus, while the study shows that false negative feedback may distort the body balancing performance of perfectionistic athletes under laboratory conditions, it provides no answer to the question of how positive striving and self-critical perfectionism affect athletic performance when no distorting feedback is given, but athletes get veridical feedback about their performance and their performance progress.

Against this background, the aim of the present study was to investigate how perfectionism predicts performance by measuring performance and performance increments over a series of trials with a new basketball training task. Regarding athletes' perfectionism, two aspects were differentiated: striving for perfection representing the positive striving dimension of perfectionism,<sup>1</sup> and negative reactions to imperfection representing the self-critical dimension (Stoeber & Becker, in press; Stoeber et al., 2007, in press). Because we investigated performance with a training task, we measured striving for perfection and negative reactions to imperfection during training (Stoeber et al., in press). In line with findings from outside sports showing that striving for perfection is

associated with higher grades in students (Bieling et al., 2003; Stoeber & Rambow, 2007) and predicts better results in aptitude tests (Stoeber & Kersting, 2007), we expected striving for perfection during training to predict higher training performance and greater performance increments over the series of trials. In comparison, because the dimension of self-critical perfectionism has not shown any systematic association with performance (Stoeber & Otto, 2006), we had no specific expectations for negative reactions to imperfection and thus approached the relationships with this aspect of perfectionism in an exploratory fashion.

## Method

### *Participants*

A sample of  $N = 122$  undergraduate students of sport science (53% female) participated in the present study. Mean age of participants was 24.4 years ( $SD = 2.4$ , range = 21-35). All students participated as part of their course requirements for a practical on motor training in basketball and received course credit for their participation.

### *Procedure and Task*

Participants first completed the measure of perfectionism during training. Afterwards the exact rules for performing the new basketball training task were explained: Participants were given the ball and had to stand behind the basketball board at the baseline of the field, but still within the field. Their task was to score a basket by performing a pivot step (one-legged step or jump) to the front of the basket and to sink the ball into the basket. No dribbling was allowed so that participants were restricted to one step plus throw for each trial. (A video file showing a basketball league player demonstrating the optimal solution of the task is available from the corresponding author upon request.) Taking turns, all participants performed four series of seven trials over the course of the training session. The task was part of a practical and was obligatory for all



students. Participants individually attempted the task while the other participants were watching. The results were documented by the practical leader (the second author) and his demonstrators. The files with all results were made available to all participants for further analyses, thus allowing comparisons between individual participants' performance and performance increments.

### *Measures*

*Perfectionism.* To measure perfectionism during training (striving for perfection, negative reactions to imperfection), we chose from the Multidimensional Inventory of Perfectionism in Sport (Stöber, Otto, & Stoll, 2004) the scales that Stoeber et al. (in press) employed to measure striving for perfection and negative reactions during training (see items in the Appendix). To all items, participants responded on a 6-point scale from 1 = "never" to 6 = "always." With Cronbach's  $\alpha$ s of .78 and .79, both scales displayed satisfactory reliability (internal consistency).

*Performance.* Participants performed four series of seven trials (throws). To measure performance and performance increments, participants were given points for each throw: 3 points for scoring a basket without the ball touching the rim; 2 points for scoring a basket with the ball touching the rim; 1 point for scoring no basket, but having the ball touching the rim from above; 0 points for no basket and the ball either touching the rim from below or not touching the rim at all. With this, participants could achieve from 0 to 21 points per series. Table 1 shows the sample statistics. To compute for each participant an average performance increment per series, a simple regression was calculated regressing performance points on series. For each participant, four variables ( $s_1$ – $s_4$ ) were created and set to values of 1–4, corresponding to Series 1–4 ( $s_1 = 1$ ,  $s_2 = 2$ ,  $s_3 = 3$ , and  $s_4 = 4$ ). Then, the points achieved in Series 1–4 were regressed on  $s_1$ – $s_4$ , and an unstandardized regression slope  $b$  was computed using the raw score formula provided by

Runyon, Coleman, and Pittenger (2000, p. 207, formula [9.2]). The resulting slope  $b$  represents the least-square estimate of each participant's average performance increment per series across the four series. For the present sample and present task, the average performance increment per series was 0.81 points (see Table 1).

### Results

First, the correlation of the two aspects of perfectionism during training was inspected. In line with previous findings (Stoeber & Becker, in press; Stoeber et al., 2007, in press), striving for perfection showed a significant correlation with negative reactions to imperfection,  $r = .30$ ,  $p < .001$ , indicating that athletes who strive for perfection during training also tend to react negatively when they do not achieve perfect results. Moreover, the significant correlation suggested that, in addition to zero-order correlations, partial correlations should be examined to investigate the relationships with performance to control for the overlap between the two aspects of perfectionism (cf. Stoeber & Becker, in press; Stoeber et al., 2007, in press).

Next, the zero-order correlations of the two aspects of perfectionism with performance were inspected (see Table 2). In line with our expectations, striving for perfection showed positive correlations with performance across the four series, with all correlations being significant except for the one in Series 3. Student athletes with high levels of striving for perfection scored more points across the four series than athletes with low levels of striving for perfection. In contrast, negative reactions to imperfection were unrelated to performance when zero-order correlations were regarded. When partial correlations were regarded, striving for perfection displayed the same pattern of significant correlations as in the zero-order correlations (Table 2). However, negative reactions to imperfection now showed a significant negative correlation with the number of points achieved in Series 1, but not with the number of points in Series 2-4. This suggests that,

when the positive influence of striving for perfection was controlled for, negative reactions to imperfection had a detrimental effect on the first-time performance of the novel training task, but did not seem to impede task performance in consecutive trials.

Regarding the correlations with average performance increment per series, neither striving for perfection nor negative reactions to imperfection seemed to predict performance increments over the four series of trials (see Table 2). However, when interaction effects were examined using moderated regression analysis (Aiken & West, 1991), the interaction of striving for perfection and negative reactions to imperfection had a significant effect on average performance increment per series (see Table 3). To understand the nature of this interaction, regression graphs for values of 1 *SD* above and 1 *SD* below the means of the two interacting variables were plotted (Aiken & West, 1991, pp. 12-14). The resulting graphs showed that athletes with high levels of striving for perfection and high levels of negative reactions to imperfections showed the greatest performance increments from series to series, whereas athletes with high levels of striving for perfection and low levels of negative reactions to imperfection showed the smallest increments (see Figure 1). In contrast, for athletes with low levels of striving for perfection during training, the performance increments were larger when they showed low levels of negative reactions to imperfections than when they showed high levels of negative reactions to imperfection. Thus, negative reactions to imperfection during training had a positive effect on improved performance in the new task only in those participants who wanted to achieve perfect results in training.

### Discussion

The aim of the present research was to investigate how perfectionism in athletes relates to athletic performance by examining how two aspects of perfectionism during training (striving for perfection, negative reactions to imperfection) predict performance

and performance increments in a new basketball training task. In line with our expectations and with previous findings from outside sport, striving for perfection predicted higher performance in the training task, suggesting that athletes who strive for perfection outperform those who do not. In comparison, negative reactions to imperfection during training had a small detrimental effect on task performance in the first trials, once the positive influence of striving for perfection was partialled out. Unexpectedly, striving for perfection itself did not predict greater performance increments over the series of trials. Instead, it only had a positive effect on performance increments in combination with high levels of negative reactions to imperfection, suggesting that athletes who strive for perfection and, at the same time, show strong negative reactions towards imperfect results during training make the greatest progress in a new training task.

While the results confirm that it is important to regard positive and negative aspects of perfectionism in combination to understand the effects of perfectionism, the interaction effect of striving for perfection and negative reactions to imperfection predicting performance increments represents a challenging finding for perfectionism research. Negative reactions to imperfection are closely associated with the self-critical dimension of perfectionism which has shown to be related to a range of negative characteristics and outcomes such as depression, stress, and anxiety (e.g., Dunkley et al., 2003; see Stoeber & Otto, 2006 for review). Moreover, studies with athletes have shown that negative reactions during training are associated with higher levels of mastery-avoidance and performance-avoidance goals (Stoeber et al., in press). In the present training study, however, negative reactions to imperfection—in combination with perfectionistic strivings—predicted greater progress in performing a new training task. As to why this is the case, we can only speculate. First, it may have been that athletes who were high in both aspects of perfectionism (high in strivings for perfection during training, high in negative reactions to

imperfection during training) experienced more anger, frustration, and dissatisfaction when performance was not perfect and thus may have attached greater importance to the new training task, felt greater personal responsibility for the mistakes they made, and ruminated more about their mistakes in between series of trials (cf. Frost et al., 1997). As a result, they may have been more motivated to achieve a better performance in the next series of trials to avoid further anger, frustration, and dissatisfaction (Frost & Henderson, 1991; Vallance, Dunn, & Dunn, 2006). In comparison, athletes, who strive for perfection during training, but do not show strong negative reactions when performance is not perfect, may have been less concerned about their performance and less motivated to improve their performance, as they showed higher task performance across the series of trials to begin with.

Second, it may have been that these athletes were particularly motivated to avoid failure. Individuals who show both high levels of need for achievement (hope of success) and high levels of failure avoidance (fear of failure) are characterized by a motivational pattern called “overstriving” (Covington, 1992). As striving for perfection is associated with higher levels of hope of success and negative reactions to imperfection are associated with higher levels of fear of failure (Stoeber & Becker, in press; Stoeber & Rambow, 2007), the athletes who combined high levels of the two aspects of perfectionism may have shown overstriving (see also Hall, Kerr, Kozub, & Finnie, 2007). According to Covington (1992), individuals who show overstriving are motivated to avoid failure by exerting high levels of effort or, to put it differently, they are motivated to avoid failure by succeeding (Martin & Marsh, 2003). Alternatively, it may have been that the athletes who combined high levels of the two aspects of perfectionism during training had particularly high levels of mastery-performance goals. Stoeber et al. (in press) found that striving for perfection during training and negative reactions to imperfection during training both

showed positive correlations with performance-approach goals. Because athletes with high levels of performance-approach goals are focused on the achievement of normative competence (i.e., they strive to do better than others; Conroy, Elliot, & Hofer, 2003; Elliot & Conroy, 2005), athletes who combined high levels of the two aspects of perfectionism may have been particularly motivated to demonstrate improved performance in the new basketball training task.

Future research will have to explore which of these possible explanations will find empirical support. Moreover, it should address the limitations of the present study. In our view, there are three main limitations. First, the interaction effect was not predicted and thus may represent a chance finding. As the present study is the first to investigate perfectionism and training performance in athletes, future studies will show if this effect can be replicated in other samples with different training tasks and alternative measures of perfectionism in sport (e.g., Dunn et al., 2006; Haase & Prapavessis, 2004). Moreover, performance was measured using a new basketball training task that comprised scoring a basket from a position (behind the basketball board) from which basket players would usually pass the ball, not try to score. Whereas this task had the advantage that it was new to all participants (and therefore individual differences in prior experience with this task could not distort the findings), future studies will have to show that striving for perfection may also enhance performance in tasks that are part of standard training programs.

Second, the present study only investigated performance outcomes without including any appraisals. Consequently, we do not know whether participants appraised the new task as meaningful or meaningless, as challenging or threatening. Moreover, we do not know if they appraised their performance and their performance increments as success or failure, nor how they responded to performance decrements. Because it is important to know perfectionists' cognitions when investigating success and failure (e.g., Besser, Flett, &

Hewitt, 2004), future studies on perfectionism and sport performance should include appraisals of performance, performance increments, and performance decrements. Finally, the present study focused on perfectionism during training and training performance. Future studies will have to investigate if the present findings would generalize to perfectionism during competitions and competitive performance. During training, negative emotional reactions to mistakes may increase motivation and emotional involvement in perfectionistic athletes and thus help them to move into their individual zone of optimal functioning (Hanin, 2000) which may lead to improved performance. During competitions, however, when the stakes are high and athletes are already motivated to give their very best, negative reactions to mistakes may prove detrimental to performance.

Nonetheless, the present findings have important implications for research on perfectionism in sports and beyond, because they provide further empirical support for the claim that striving for perfection is mostly related to adaptive characteristics and positive outcomes (Stoeber & Otto, 2006). Moreover, they show that perfectionistic striving is not only associated with higher academic achievement and better test results in students, but also may predict higher performance in athletes. Whereas the present findings do not suggest that perfectionism is a psychological characteristic that makes Olympic champions (Gould et al., 2002), they do suggest that perfectionism in sports has the potential to enhance training performance. Consequently, perfectionism is not necessarily a maladaptive characteristic which undermines athletic performance (Anshel & Mansouri, 2005; Flett & Hewitt, 2005). Instead, perfectionistic strivings may form part of a healthy pursuit of excellence and may be adaptive in situations where such strivings may give athletes an additional motivational “boost” to do their best, and thus achieve better results and make greater progress.





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Footnotes

<sup>1</sup>Because some researchers have questioned the concept of positive perfectionism (e.g., Flett & Hewitt, 2006), it is important to not equate striving for perfection with conscientious achievement striving, as was recently demonstrated by Stoeber and Kersting (2007): While striving for perfection and conscientious achievement striving showed a high correlation, only striving for perfection predicted aptitude test performance.

Table 1  
*Sample Statistics*

Variable	<i>M</i>	<i>SD</i>	Min	Max
Perfectionism				
Striving for perfection	4.12	0.80	1.80	5.80
Negative reactions to imperfection	2.82	0.84	1.00	4.80
Performance				
Points Series 1	8.32	3.71	1	18
Points Series 2	9.78	3.64	1	18
Points Series 3	10.20	3.81	1	21
Points Series 4	10.88	3.72	3	31
Total points (Series 1-4)	39.17	11.77	13	73
Average increment per series (in points)	0.81	1.33	-1.80	4.90

*Note.*  $N = 122$ . Perfectionism = perfectionism during training (mean scores with a range of 1-6, cf. Stoeber et al., in press). Average increment per series (in points) = coefficient  $b$  of simple regression of points Series 1-4 on Series 1-4 (see text for details).



Table 2  
*Perfectionism and Performance: Correlations*

Performance	Perfectionism			
	Correlation		Partial correlation	
	Striving for perfection	Negative reactions to imperfection	Striving for perfection	Negative reactions to imperfection
Points Series 1	.21*	-.15	.27**	-.23*
Points Series 2	.21*	.02	.22*	-.05
Points Series 3	.13	.06	.12	.02
Points Series 4	.24**	-.04	.26**	-.12
Total points (Series 1-4)	.25**	-.04	.27**	-.12
Average increment per series (in points)	.00	.11	-.03	.11

*Note.*  $N = 122$ . Perfectionism = perfectionism during training (see Appendix). Correlation = zero-order correlation.

\* $p < .05$ , \*\* $p < .01$ , two-tailed.

Table 3  
*Summary of Hierarchical Regression Analysis for Interaction of  
 Striving for Perfection and Negative Reactions to Imperfection  
 Predicting Performance Increments*

Variable	<i>B</i>	<i>SE B</i>	$\beta$
Step 1			
Striving for perfection	-0.06	0.16	-.03
Negative reactions to imperfection	0.18	0.15	.12
Step 2			
Striving for perfection	0.06	0.16	.03
Negative reactions to imperfection	0.14	0.15	.09
Interaction	0.48	0.17	.27**

*Note.*  $N = 122$ . Dependent variable = average performance increment per week (in points).  $R^2 = .01$ , *ns* for Step 1;  $\Delta R^2 = .07$ ,  $p < .01$ , two-tailed for Step 2. Interaction = striving for perfection  $\times$  negative reactions to imperfection.

\*\* $p < .01$ , two-tailed.

Appendix

*Perfectionism During Training: Subscales and Items*

*Striving for Perfection*

During training, I strive to be as perfect as possible.

During training, it is important to me to be perfect in everything I attempt.

During training, I feel the need to be perfect.

During training, I am a perfectionist as far as my targets are concerned.

During training, I have the wish to do everything perfectly.

*Negative Reactions to Imperfection*

During training, I feel extremely stressed if everything doesn't go perfectly.

After training, I feel depressed if I have not been perfect.

During training, I get completely furious if I make mistakes.

During training, I get frustrated if I do not fulfill my high expectations.

If something doesn't go perfectly during training, I am dissatisfied with the whole training session.

Figure Caption

*Figure 1.* Interaction of striving for perfection and negative reactions to imperfection on average performance increment per series (in points).

