

Goal Orientation and Feedback-Seeking Behavior of Equestrian Athletes

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Abstract. The aim of this study was to explore the relation between goal orientation and feedback-seeking behavior within the equestrian sport, focusing on dressage. In total 222 equestrian athletes filled in a questionnaire revealing their goal orientations and the feedback information they seek when practicing their sport and engaging in dressage competitions. A hierarchical multiple regression analysis found a significant relation between the seeking of self-improvement information and a learning-approach goal orientation ($F(9, 181) = 8.14, p < .001$) alongside with a significant relation between the seeking of self-validation information ($F(9, 181) = 5.94, p < .001$) and both the performance-avoidance and learning-avoidance goal orientations. Multiple athlete characteristics were found to be affecting one's goal orientation and feedback-seeking behavior. Findings conclude that the concepts of goal orientation and feedback-seeking behavior are applicable in the field of equestrian sport. Further research is needed to get more insights about the practical implications of this information.

Keywords: goal orientation, feedback-seeking behavior, equestrian sport, dressage.

Introduction

Within the equestrian field, adequate feedback is particularly important, as working with equine poses a constant danger (Meyers & Sterling, 2000). While risks for the rider can be minimized with practical precautions, such as checking equipment and wearing proper gear (KNHS Kenniscentrum, 2014a), taking riding lessons from a qualified instructor is another important risk-minimizing factor (KNHS Kenniscentrum, 2014b). Hours of practice are needed for an equestrian to develop him-/herself as a proficient rider and caretaker. To this end, the knowledge and support of an instructor are indispensable, as an instructor is crucial when it comes to letting people enjoy equestrian sports (KNHS Kenniscentrum, 2014c) and is yet more important when it comes to providing feedback to improve riding.

Whereas in most equestrian sports there is only one human athlete, in riding, there is always a team performing (Pretty & Bridgeman, 2005), and this is exactly where the complexities of the equestrian sports appear to emerge. The team consists of a rider and his/her horse. Since a horse is incapable of understanding verbal feedback of an instructor, an equestrian athlete is responsible for processing the feedback not only on his/her own performance, but also on the performance of his/her horse. Therefore, as stated by Pretty and Bridgeman (2005), “*the training process and performance outcomes are dependent on the cooperative interaction of two species to achieve a goal*” (p. 570). In this situation a difficult aspect is that the primary focus of the rider is the well-being and performance of their horse, forgetting their own performance and progress (Pretty, 2002 in Pretty & Bridgeman, 2005). When providing feedback on the performance of any equestrian athlete, whether this athlete is a novice or a professional, the fact that a rider has to constantly split the attention between him- or herself and the horse has always to be taken in account by the instructor and the athlete. Because of this complex situation feedback to an equestrian athlete has to be given with extra care.

Feedback, or instruction as it is called in the equestrian jargon, is one of the key characteristics of quality teaching (Carless, 2006); however, good feedback alone is never a guarantee of an athlete’s learning. Previous research shows that, with regard to feedback and feedback-seeking behavior, there is a connection between peoples’ characteristics and their preferences (Janssen & Prins, 2007; Vande

Walle, 2004). In the present study, this relation is based on the goal orientation of a learner, or equestrian athlete. While research on athletes' psychological characteristics has been carried out in many different fields of sport, including, among others, speed skating, badminton, basketball, and swimming (Horn, Duda & Miller, 1993; Tissingh & van Heijzen, 2005), in the equestrian field, this kind of research is still limited (Blakeslee & Goff, 2007; Meyers, Bourgeois, LeUnens & Murray, 1999; Wolframm & Micklewright, 2011). Most studies focus on sport-related injuries and their prevention (Fox, Ridgway, Slavin, Upton, & Lee, 2008; Hasler, Gyssler, Benneker, Martinolli, Schötzau, Zimmermann, & Exadaktylos, 2011). With the scarcity of studies focusing on equestrian athletes, the role of feedback in this specific kind of sport remains unclear and thus deserves more attention; in particular, good feedback is important for developing one's competences and reaching the desired level of competency (Shute, 2008). Furthermore, feedback can cause learning gains by itself (Black & Wiliam, 1998) and, within the sports field, it also has a strong motivating function. Feedback from a coach is related to athletes' self-perception and motivation (Allen and Howe, 1998), as well as it affects children's perceptions of their physical competence (Horn, 1985). Although too much help from an instructor or coach can lead to a feeling of lower ability, feedback increases the level of competence satisfaction (Allen & How, 1998). Being more satisfied about one's own competences, an athlete's autonomous motivation is amplified, while the demotivation, the opposite of motivation, diminishes. This leads to an augmentation of the positive effects, the perceived vitality, the athletes' performances, and their participation intentions (Mouratidis, Vansteenkiste, Lens & Sideridis, 2008). Alongside with the improvement of athletes' motivation, feedback increases the level of attention, provides additional information about the task, and facilitates task performance (Tzetzis, Votsis & Koutessis, 2008), which makes feedback a very valuable tool in view of athletes' characteristics (Janssen & Prins, 2007).

Previous research has shown that there is a certain connection between peoples' characteristics and their preferences regarding feedback (Janssen & Prins, 2007). This relation is based on the goal orientation of a learner, or athlete, in this case. The goal orientation of an athlete determines the focus of his/her actions and is the foundation of the behavior used to reach the set goals. It is a drive from which many acts originate. Butler (1993) was one of the first who linked two types of goal

orientation—*learning goal orientation* and *performance goal orientation*— to the mechanism of feedback seeking. The former type of goal orientation, the *learning goal orientation*, has a strong focus on developing one’s abilities to master new skills and new knowledge. Athletes with a learning goal orientation believe that abilities can develop. They are convinced that learning is a useful way to reach new goals and are willing to put effort into practicing (Janssen & Prins, 2007; VandeWalle, Cron & Slocum, 2001; VandeWalle & Cummings, 1997). People with a performance goal orientation have a different focus, specifically, that of demonstrating and validating their abilities. With this goal orientation emerges the belief that competencies and abilities are difficult to develop, as competence is determined by an innate ability. Athletes are convinced that abilities cannot, or can hardly be learned, leading to a perception where learning is seen as a sign of inability (Janssen & Prins, 2007; Vande Walle, Cron & Slocum, 2001; VandeWalle & Cummings, 1997).

Within the dimensions of learning and performance orientation, another distinction is made between people who use an approach strategy and those who use an avoidance strategy (Vande Walle, 2003). As can be seen in Figure 1, the approach strategy, or the so-called ‘proving strategy’, drives athletes to learn or perform and to actively fulfill the behavior coherent with their goal orientation. By contrast, the avoidance strategy is the one that prevents learning or performing. Athletes with an avoidance strategy will actively waive the behavior that is coherent with their goal orientation (Janssen & Prins, 2007).

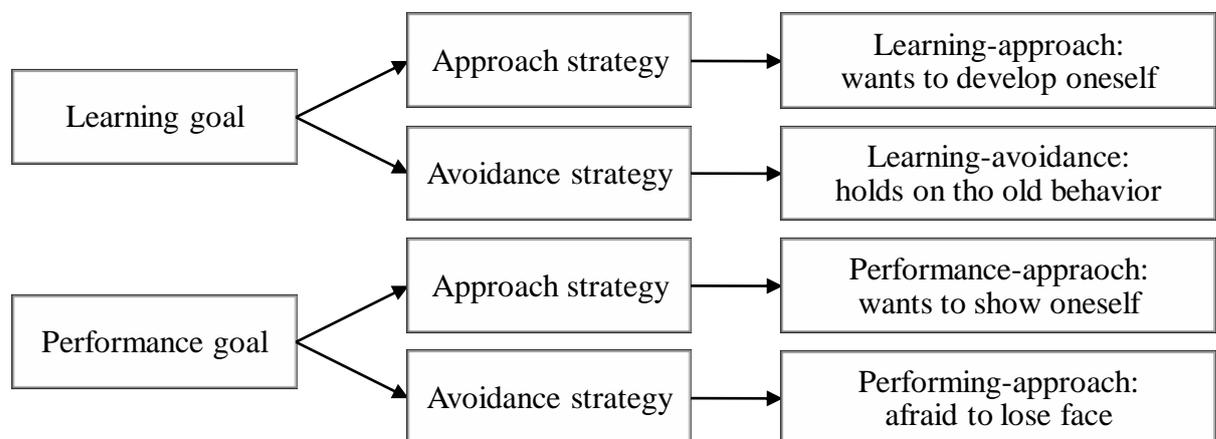


Figure 1. A schematic representation of the two goal orientations and the behavior that aligns with the approach or avoidance strategy related to the goal orientation.

The goal orientations of learners affect their feedback preference and their attitude towards feedback. According to VandeWalle the '*goal orientation is proposed to influence how individuals cognitively process the cost and value of feedback-seeking opportunities*' (2003, p581). Equestrian athletes with a learning goal orientation are most likely to be willing to learn. They want to develop their competences and are not afraid of investing effort into this. This also means that they are not afraid to face the confrontation of receiving feedback (Janssen & Prins, 2007) and are likely to work with the given feedback. Thus, a learning goal orientation leads to a positive valuation of feedback. Received feedback is seen as useful and as a diagnosis that will stimulate development (VandeWalle, 2003). Athletes will desire useful information and will actively seek for it (Ashford & Cumming, 1983; Tuckey, Brewer, & Williamson, 2002). On the other hand, athletes with a performance-goal orientation want to demonstrate their abilities and, therefore, will avoid tasks they find difficult, which might show their inabilities (Janssen & Prins, 2007). They perceive the possibility of the feedback being negative as a threat and they have a strong desire to protect their own egos and self-esteem. Feedback is seen as an evaluation and, therefore, is conceived as judgmental (Janssen & Prins, 2007; VandeWalle, 2003) not as an assistance to signal the gap between the current state and the desired level of performance (Shute, 2008). This means that feedback, even when it could be positive, is often avoided or ignored (Ashford & Cumming, 1983; Tuckey, Brewer, & Williamson, 2002).

Important to take in account is that people do not 'fit' into one of the goal orientations. It is possible for an athlete to score high on more than one goal orientation, even though most people do have a dominant one (Janssen & Prins, 2007). Athletes vary in the degree to which they relate to the goal orientations (Williams, 1994). Biddle, Wang, Kavussanu, and Spray state that a combination of both goal orientations is also possible (2003).

While most studies on the concepts of goal orientation and feedback-seeking behavior have been conducted in educational or business settings, some studies have focused on the sports domain. The findings of these studies in these two fields do align; however, the tests used are slightly different. Specifically, Horn, Duda, and Miller (1993) used the term task- and ego-orientations to define the two goal orientations and found correlations between goal orientation, beliefs about success, and perceptions about oneself among young athletes. To determine these orientations, they used the 13-

item Task and Ego Orientation in Sport Questionnaire (TEOSQ) designed by Duda (1989) to assess individuals' goal orientation. In this method, no distinction is made between the avoidance and approach methods and the study does not include feedback-seeking behaviors. Williams (1994) does relate athletes' goal orientation with feedback-seeking behaviors, but this kind of research has never been done in the field of equestrian sports. In this context, the present study aims to investigate the relationships between athletes' goal orientation and the type of feedback they prefer in the equestrian sport. First, the question '*Are the concepts of goal orientation and feedback-seeking behavior applicable to dressage?*' will be addressed, as, due to the interaction between the athlete and the horse, this type of sport is complex. This will be followed by addressing the question '*How does the goal orientation of equestrian athletes affect feedback-seeking behavior?*' Expectations for these two questions are based on previous studies and lead to the formulation of the following hypotheses:

H₁: *The concepts of goal orientation and feedback-seeking behavior is applicable to the dressage.*

H₂: *There is a relation between goal orientation of equestrian athletes and their feedback-seeking behavior.*

Finally, we will consider the issue of the relation between athlete characteristics and their goal orientation: '*How do characteristics of equestrian athletes affect goal orientation and feedback-seeking behavior?*' Since there are many characteristics involved, no hypothesis is formulated, although it is expected that there are relations between athletes' characteristics and their goal orientation and feedback-seeking behavior.

Methods

Participants

Two selection criteria were used when selecting the data: (1) 'age': to ensure a minimal level of understanding, the participants had to be at least 11 years old; (2) 'level of dressage': it had to be between B (basic) and Z2 (heavy 2), as the majority of equestrian athletes are competing in these categories. In total, 222 equestrian athletes participated in this research. Of this group, 92 athletes

(41%) did fill in the questionnaire online. The other 137 athletes (59%) of the group gave their information through the pen-and-paper version of the questionnaire. As not all participant did answer all the questions about their characteristics, in some cases the n will be lower than 222. The average age of the participants was 25 ($n = 222$, $SD = 10.25$), with the oldest participant being 63 and the youngest 11 years old. Most participants (94%) were female and their highest educational diploma was from high school (20%) or a vocational education (19%). The years of experience of the participants varied, with the most experience amounting to 43 years, as compared to 2 years for the least experienced athlete ($M = 16.11$, $n = 201$, $SD = 8.19$). In total, 8% of the athletes were professionals. Of all the athletes, 88% did get support from an instructor while practicing for a competition. On every possible sport level, a minimum of 12 athletes participated. A visual representation of the distribution of the participants is shown in Figure 2, suggesting that the majority of the athletes (50) competed on level L1. Only 37% of the participants have not competed on this current dressage level before.

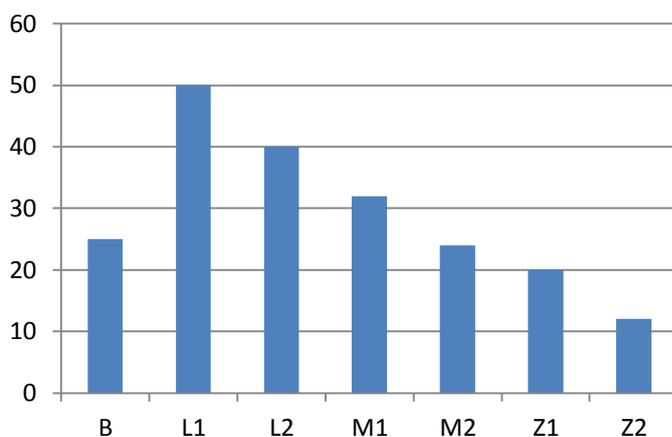


Figure 2. Distribution of participating athletes per dressage level.

Descriptive statistics sorted per data-collection method can be found in Table 1. There was no equality of variances between these characteristics 'gender' ($F(218, 169) = 31.63$, $p < .001$), 'dressage level' ($F(211, 209) = 24.84$, $p < .001$) and 'instructor' ($F(216, 176) = 4.67$, $p = .032$), but as these variables are independent of the method of data collection – the answers would have been exactly the same when filled on paper or online – no problems evolved from this inequality.

Tabel 1

Descriptive statistics and frequencies per data-collection method

Variable	Pen-and- paper (<i>n</i> = 130)	Online (<i>n</i> = 92)
	<i>M</i> (<i>SD</i>)	<i>M</i> (<i>SD</i>)
Age	24 (11.28)	26 (8.58)
Years of experience	15 (8.24)	17 (8.00)
	% of <i>n</i>	% of <i>n</i>
Gender		
Male	9	1
Female	91	99
Level of dressage		
B	17	16
L1	17	32
L2	14	25
M1	14	16
M2	16	5
Z1	12	5
Z2	10	0
Instructor		
Yes	90	85
No	10	15

Procedure

A questionnaire was used in the present study to collect the data. The questionnaire had to be filled in by the participants on the day of the competition. To ensure that this happened, different riding clubs throughout the Netherlands were approached and asked for help (see Appendix A). If these organizations cooperated and agreed on distributing the questionnaires during the ‘game day’, the questionnaires and a return envelope were sent to them by post. The instruction for the organizations was to distribute the questionnaires when the participants reported their presence or before the prize-awarding ceremony. Before the actual data collection, a pilot study was carried out, including 18 participants from one riding organization. Based on this pilot study one question was edited and the lay-out of the questionnaire was changed to be more compact and clear. After the pilot study, a total of 700 questionnaires were sent to 21 riding organizations, of which 175 in total were filled in and send back. In order to reduce the costs and the use of paper, as well as to enlarge the number of participants, the online way of distributing the questionnaire was used as well. Through

social media and online fora, a link following which equestrian athletes could sign up to participate in the present study was distributed. The participants had to fill in their current level and the date of their next competition. On this specific date, they received an email with a link to the questionnaire. In this fashion, emails were sent to 121 participants, of which 92 participated in the study and filled in the questionnaire online. The collection of data took place within a 3-month period (April 1– June 1, 2015).

Measures

In this research different subjects are measured in one questionnaire. For this reason three sub parts are created: *Athlete Characteristics*, *Goal Orientation* and *Feedback Preferences*.

Athlete Characteristics. To make a thorough data analysis, the characteristics of the athletes and their sport career have to be known, as these features can be related to the other outcomes (Field, 2009). The participants had to fill in the following characteristics: *gender*, *age*, *years of experience* as an equestrian athlete, and the *current level* of riding. Furthermore, the *educational level*, the use of an *instructor*, the *role of the athlete*: competing as a hobby or as a profession, as well as the *number of game-licensed combinations* were also asked (see Appendix B for the questions).

Goal orientation. The second part of the questionnaire contained questions targeting the goal orientation of the participants. This part was translated from the questionnaire used by Janssen and Prins (2007), based on the work of Biemond and van Yperen (2001), and contained 20 items. Every item describes one of the four goal orientations, namely, performance-approach, performance-avoidance, learning-approach, and learning-avoidance. The participants rated every statement on a 7-point Likert scale (1= *not important at all*; 7= *very important*) (Field, 2009; Janssen & Prins, 2007). The original scale was preserved in the present study, as it is the most appropriate way of measuring one's opinion. An overview of the items about goal orientation can be found in Appendix C. The internal reliability for this scale was checked and was found to be highly reliable with a Cronbach's alpha of .90 for 20 items.

Feedback-seeking behavior and feedback preferences. The last addresses the feedback –seeking behavior and feedback preferences of the participants. To get a complete and overall view of the

athletes' preferences, the factors *timing of feedback* and *focus of feedback* (Pretty, 2002, as quoted in Pretty & Bridgeman, 2005; Silverman et al., 1992) were added to 10 items about types of feedback information sought, derived also from Janssen and Prins (2007). The existing five-point scale was used for the participants to indicate if they *strongly agreed* (5) or *strongly disagreed* (1) with the statements. This scale constituting feedback-seeking behavior was reliable with a Cronbach's alpha of .78 for 10 items and can be found in Appendix D.

Sanity check. The questionnaire was completed with two additional questions that are not related to the parts described above, but can nevertheless provide essential information and check if socially desirable answers were given. These questions asked the participants if they wanted to see their personal feedback profile and the results of this study. Both questions were asked in the 'yes'/'no' format.

Data analysis

Although the developers of this test have already proven its validity, a confirmative factor analysis will be performed to get an insight into the construct validity of both parts of the questionnaire. The reason for this is that the questionnaire was used with a different group of participants than it was originally designed for.

The collected data will be analyzed with the SPSS software. First, the descriptive statistics will be analyzed, complemented with a Pearson correlation test among the different variables. Furthermore, hierarchical multiple linear regression analyses will be performed to test the relation between goal orientation and feedback-seeking behavior. This will be followed by a multiple linear regression analysis used to see if there are relations between athlete characteristics, goals orientations, and feedback-seeking behavior. Finally, the relation between goal orientations, feedback-seeking behavior, and the desire to receive information about ones feedback-seeking behavior will be analyzed using a multiple linear regression. Throughout this entire study the significance level of $\alpha=.05$ was followed.

Results

First, all incomplete and unclear results were excluded; therefore all the questionnaires that needed any kind of interpretation of the answers were left out. Furthermore every questionnaire with missing items on the goal orientation scale or the feedback-information scale was excluded. Because of incomplete questionnaires, containing missing cases, 37 questionnaires had to be removed from the sample. Another five participants were not meeting the required minimum age, therefore their questionnaires were excluded. This made the total number of useful questionnaires 222. The statistical power and the minimal required sample size are relevant to the overall interpretation of the results. Therefore a post hoc power analysis was conducted to conclude that the power of the study was sufficient enough to interpret the results as reliable. The minimum sample size in order to obtain the recommended statistical power of .80 (Cohen, 1988) was 91 participants or less for all the analysis.

Based on the literature overviewed in Janssen and Prins (2007), four factors were expected and a confirmative factor analysis was executed, defining the factors within the *Goal Orientation* items. With a KMO-score of .88 and a significant level of $p < .001$, this factor analysis and its outcome are reliable. Table 2 presents the 20 items constituting the goal orientation with the loadings per factor. Loadings below .30 are left out. As can be seen in Table 2, the five items for Performance Approach (PAP) can be grouped into one factor. This is similar for the five items on Performance Avoidance (PAV). Following the study of Janssen and Prins (2007) and the small difference between the two loadings the item '*Others will not think I achieve at lower levels than they do*' was included in the variable PAV. For the Learning Approach (LAP) and the Learning Avoidance (LAV) orientations, the same relations can be made, resulting in two factors, each containing five related items. The internal reliability of these new variables was checked, and all had an appropriate level with a Cronbach's alpha of .91 for LAP, .83 for LAV, .75 for PAP, and .92 for PAV (Field, 2009).

Table 2

Factor Loadings for Confirmative Factor Analysis with Oblimin Rotation of Goal Orientation Scale

Items	Factors			
	1	2	3	4
When I practice my sport, it is important to me that...				
Performance-approach goal orientation				
I am more competent compared to other athletes	.63			
I achieve more than other athletes	.86			
I am the best	.88			
I receive better performance appraisals than other athletes do	.81			
I perform better than other athletes do	.89			
Performance-avoidance goal orientation				
Others will not think I am performing badly		.89		
I do not make a bad impression on other people		.85		
I do not look incompetent towards others		.93		
I do not lose my face in front of other people		.83		
Others will not think I achieve at lower levels than they do	.51	.45		
Learning-approach goal orientation				
I can feel that I am improving			.68	
I do tasks from which I learn a lot			.73	
I am able to develop myself			.88	
I can establish competence			.75	
I can learn as much as possible			.80	
Learning-avoidance goal orientation				
I perform a task I am certainly able to manage				.74
I make no mistakes				.58
I perform tasks with little risk of failure				.73
I perform task I can control entirely				.84
I have to do tasks that are easy to perform	.32			.44
Eigenvalue	7.18	1.48	3.08	1.76
Percentage explained variance	35.91	7.38	15.41	8.79
Cronbach's alpha	.75	.92	.83	.91

According to Janssen and Prins (2007), two factors were expected within the feedback-seeking behavior scale. A confirmative factor analysis was carried out and showed two factors with an eigenvalue greater than 1.0. With a KMO-score of .81 and a significant level of $p < .001$, this factor analysis and outcomes are reliable. In Table 2, the 10 items constituting the feedback preference are presented, with the loadings per factor. All the five items concerning *Self-Validation* (SV) are loading

on one factor, the same goes for the five items concerning *Self-Improvement* (SI). The Cronbach's alphas for these two new variables SV and SI, both containing five items, were .86 and .72.

Table 3

Factor Loadings for Confirmative Factor Analysis with Oblimin Rotation of Feedback-Seeking Scale

Items	Factors	
	1	2
I like feedback...		
Information for self-validation		
To get compliments so that I feel good	.85	
Because I like to hear that I am doing fine in my performance	.74	
So I can strengthen my self-confidence	.81	
Because I like to hear from others I am doing well	.87	
That reassures everything is going well	.74	
Information for self-improvement		
To help me improve my knowledge and skills		.75
About how I can master a task		.78
About how I can improve my performance		.74
To help me to set more appropriate goals for myself		.56
About how I can solve problems		.65
Eigenvalue	3.45	2.32
Percentage explained variance	34.50	23.21
Cronbach's alpha	.86	.72

Correlation and descriptive statistics

Based on the factor analysis, four new variables were computed and named after the goal orientations 'LAP', 'LAV', 'PAP', and 'PAV'. The next step of the analysis focused on both the personal and athletic characteristics of the participants and their relation with the different goal orientations. As can be seen in Table 4, correlations between various characteristics and the goal orientations can be observed. There are significant correlations between the goal orientations and the types of feedback-information that athletes seek, with moderate ($.5 \leq r \leq .7$) strength (Field, 2009). Other relevant significant correlations were those between performance-avoidance and age, and between performance-avoidance and experience. Some athlete characteristics found to be correlating with the goal orientations and feedback-seeking behavior.

Table 4

Univariate Statistics and Pearson Correlations (r) of Athletes' Characteristics, Goal Orientations and Feedback-Seeking Behavior

	N	M	SD	1	2	3	4	5	6	7	8	9	10
1. Age	222	24.98	10.25										
2. Gender	220	1.94	0.236	-.05									
3. Experience	213	3.32	1.78	.74**	.07								
4. Level of Dressage	218	1.12	0.33	-.02	-.12	-.05							
5. Instructor	201	16.11	8.19	.09	.03	.06	-.05						
6. Learning-Approach	222	6.17	0.70	.01	-.02	-.07	.03	-.14*					
7. Performance-Avoidance	222	3.95	1.51	-.22**	-.01	-.33**	-.04	-.08	.06				
8. Performance-Approach	222	3.56	1.40	-.12	-.02	.04	.08	.04	.08	.65**			
9. Learning-Avoidance	222	4.20	1.05	-.03	-.04	-.12	.09	-.07	.06	.45**	.46**		
10. Self-Validation	222	3.48	0.81	-.12	.03	-.12	-.12	.02	.06	.40**	.26**	.33**	
11. Self-Improvement	222	4.33	0.49	.07	-.15*	.07	-.12	-.16*	.51**	.11	.07	.06	.17**

* $p < .05$ (two-tailed); ** $p < .01$ (two-tailed); *** $p < .001$ (two-tailed).

Goal orientation and feedback-seeking behavior

As predicted by H₂, there might be a relation between athletes' goal orientation and their feedback-seeking behavior. To study the relation between these two aspects, two hierarchical multiple linear regression analyses were executed. For the feedback-seeking behavior 'Self Improvement' a hierarchical multiple linear regression performed to predict scores based on the four goal orientations: LAP, LAV, PAP, and PAV. The first model included all the athletes' characteristics that correlated with SI, SV or one of the goal orientation, complemented with the level of dressage. This model has a significant regression of 7.6%, $F(5, 185) = 3.03, p = .012$. In the second model a significant regression of 28.8% was found, $F(9, 181) = 8.14, p < .001$. Athletes with a LAP goal orientation scored significantly higher on SI.

For the feedback-seeking behavior 'Self Validation' a hierarchical multiple linear regression was calculated to predict the score on SV based on scores on the four goal orientations. The first model included the same athletes' characteristics as in the analysis of SI and has a non-significant regression of 2.4%, $F(5, 185) = .93, p = .464$. A significant regression of 22.8 % was found in the second model, adding the four goal orientations to the characteristics of the first model, with $F(9, 181) = 5.94, p < .001$. This outcome shows that athletes with a PAV or LAV goal orientation scored higher on the seeking SV information. An overview of these regression analysis and the significant relations between goal orientation and the feedback-information that is sought, can be found in Table 5.

Table 5

Hierarchical Multiple Regression Analyses Predicting Feedback-Information Sought From Athletes' Characteristics and Goal Orientations

Predictor	Feedback-information sought			
	Self-Improvement		Self-Validation	
	ΔR^2	β	ΔR^2	β
Step 1	.08*		.02	
Age		.00		-.07
Gender		-.16*		-.04
Experience		-.07		-.03
Level of dressage		-.13		-.12
Instructor		-.19**		-.04
Step 2	.21***		.20***	
Age		-.04		-.10
Gender		-.12		-.03
Experience		.12		.10
Level of dressage		-.14*		-.11
Instructor		-.15*		.09
Learning-Approach		.44***		.09
Learning-Avoidance		.03		.27***
Performance-Approach		.01		-.05
Performance-Avoidance		.10		.30**
Total R ²		.30		.21

* $p < .05$ (two-tailed); ** $p < .01$ (two-tailed); *** $p < .001$ (two-tailed).

Athlete characteristics and feedback-seeking behavior

The last steps of the analysis focused on both the personal and athletic characteristics of the participants. At first, the relation between feedback-seeking behavior and athletes' characteristics was analyzed. Based on these findings, a hierarchical multiple regression analysis was executed, showing a significant regression of 7.6% ($F(5, 185) = 3.03, p = .012$). As can be seen in Table 4, there is a relation between the athletes' gender and their feedback-seeking behavior on SI and that training with an instructor also leads to a higher score on SI.

Looking at the relation between SV and athletes' characteristics suggests no correlations. To give a complete image of both types of feedback-information that can be sought, a hierarchical multiple linear regression analysis was performed. This analysis showed no significant relations between self-validation information and athletes' characteristics.

Athlete characteristics and goal orientations

Based on the correlations found in Table 4, a multiple linear regression analysis was performed using the characteristics of the participants that correlated with one of the goal orientations, complemented with the variable 'level of dressage'. As can be seen in Table 6 only one significant relation was found, with 9.8%, between the athletes' characteristics and their goal orientation $F(5, 185) = 4.01, p = .002$. This analysis showed that athletes who are more experienced tend to score lower on the performance-avoidance goal orientation.

Table 6

Hierarchical Multiple Regression Analyses Predicting Goal Orientation from Athlete Characteristics

Variables	Learning- Approach	Learning- Avoidance	Performance- Approach	Performance- Avoidance
	β	β	β	β
Age	.08	.04	-.16	.01
Gender	-.08	-.03	.02	.01
Level of dressage	.02	.04	.06	-.05
Instructor	-.08	-.07	.08	-.06
Experience	-.03	-.09	-.09	-.30**
Total R ²	.02	.05	.14	.31

* $p \leq .05$ (two-tailed); ** $p \leq .01$ (two-tailed); *** $p \leq .001$ (two-tailed).

Sanity check

Finally the relation between the desire for feedback about the questionnaire, the athletes' characteristics and their theory of mind when it comes to goal orientation was analyzed. A multiple regression analysis found that there was a significant relation of 11.2%, $F(11, 179) = 2.06, p = .025$. Athletes that scored high on the learning-avoidance goal orientation wanted their feedback significantly less often than other athletes. Athletes that trained with an instructor wanted their feedback significantly more than the people training without the help of an instructor.

Discussion

This study focused on the relation between goal orientation of equestrian athletes and their feedback-seeking behavior. The existence of this relation was already demonstrated by Janssen and Prins (2007) in an educational setting, but it has never been researched in the context of equestrian

sports. All the findings of this study are combined in Figure 3, giving an overview of the relations between goal orientations, feedback-information and athletes' characteristics, given in the value of β .

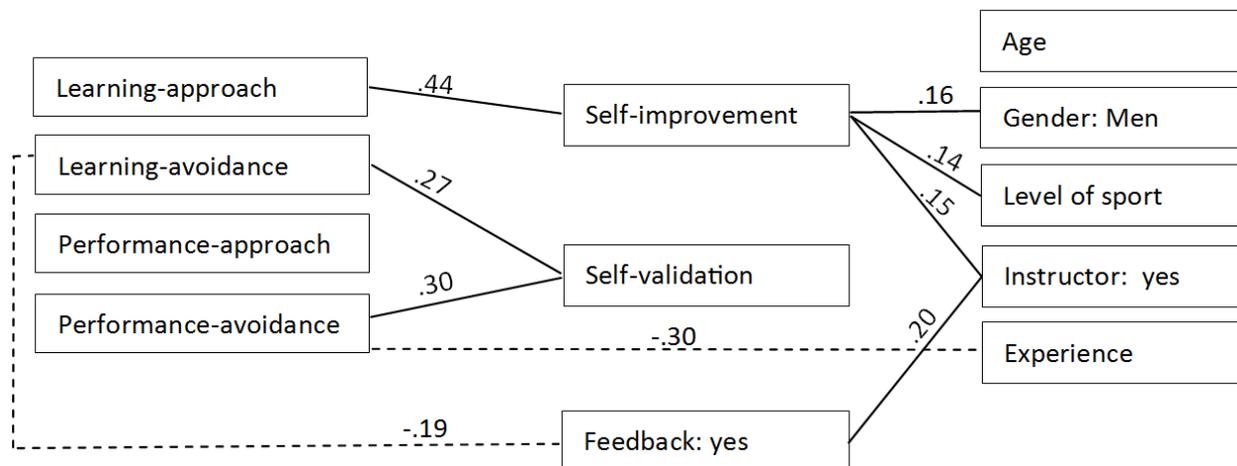


Figure 3. Significant relations between goal orientations, feedback-information and athletes' characteristics, given in the value of β .

The results of this study suggest that Hypothesis 1 (*'The concepts of goal orientation and feedback-seeking behavior are applicable to the equestrian field'*) can be accepted. This means that there is a relation between goal orientation of equestrian athletes and their feedback-seeking behavior. Athletes with a learning approach goal orientation did score significantly higher on the seeking of self-improvement information than the athletes with a lower score on the learning approach goal orientation. This means that the former athletes are more willing to hear how they can improve themselves. These findings were expected, as a learning approach goal orientation is based on a vision that learning can contribute to a better performance. When athletes scored higher on the learning-avoidance or performance-avoidance goal orientation, they also scored significantly higher on the seeking of self-validation information. This suggests that these athletes are looking for information that confirms their knowledge and capacities, as was expected based on their vision that learning is a sign of inability. These findings cohere with the results reported by Janssen and Prins (2007). Notable is that no significant relation between the performance-approach goal orientation and feedback-seeking behavior was established in the present study. Therefore, based on these outcomes, there might be noteworthy differences between the participant in the educational setting and equestrian athletes.

Other relations that were observed in the present study are between the characteristics of the athletes, feedback-seeking information, and goal orientation. The relation between these two topics has never been studied in the equestrian field, so the conclusion that can be made about it is relatively new. The results of this study show that there is a significant relation between athletes' gender and feedback-seeking behavior. When it comes to feedback-seeking behavior, males tend to score significantly higher on self-improvement information, meaning that they are more willing to look for feedback that helps them to learn. The same relation can be seen when athletes train under the supervision of an instructor: this group is significantly more likely to look for information that supports improvement, as compared to the group of athletes training without an instructor. When looking at the relation between athletes' characteristics and goal orientation, it is clear that more experienced athletes have a lower score on the performance-avoidance goal orientation. Interestingly, this relation has not been found with regard to the age of an athlete, so it is purely related to athletes' experience. It can be concluded that more experienced athletes do not avoid situations where performance is required.

To confirm that this theory is not only present in the athletes' minds, but is also a theory of action, a control question was used. This question asked whether the participants wanted their personal feedback profiles and accompanying information; the respondents' answers revealed that participants' actions aligned with their answers. The results revealed that the athletes who scored higher on learning-avoidance goal orientation were less interested in their personal feedback profiles. By contrast, the group of athletes training with an instructor demonstrated the opposite pattern. They were more willing to receive their personal feedback profiles, probably due to the fact that they are more used to receiving feedback from their instructor.

The last question relates to the applicability of the concepts of goal orientation and feedback-seeking information to the field of equestrian sports, with dressage in particular. Due to the complex interaction between the two species (Pretty & Bridgeman, 2005), the athlete has to be aware of the feedback s/he receives. Despite the complexity of this situation, it appears that the concepts of goal orientation and feedback-seeking information can be applied in the field of equestrian sports. The construct validity of the used questionnaire was high enough to call the measures used for this study

reliable. Compared to Janssen & Prins (2007), some similarities within the results were observed. In both studies, the same factors could be formed from the questionnaire and the relations between goal orientation and feedback-seeking information are strong. Based on these results, it can be concluded that the concepts of goal orientation and feedback-seeking information are applicable to the field of equestrian sports. Therefore, Hypothesis 1 ('*The concepts of goal orientation and feedback-seeking behavior are applicable to the equestrian field*') can be accepted.

There are some limitations to this study that should be considered when interpreting the conclusions made above. The first addresses the questionnaire. Unfortunately, the translated questions did cause some difficulties, since not all words could be exactly translated in the Dutch language, as some equivalents do not exist. Another difference is the education level and the age of the participants. Janssen & Prins (2007) used the questionnaire for a group of solely medical students, all of them being adults. For the present research, the group of participants was more diverse, containing younger and older athletes of various educational levels. This means that, for some people, the questionnaire was difficult to understand, as was also reported by some members of the riding organizations or stated by the respondents on the questionnaire itself via leaving questions blank or writing down question marks. A final remark about the online version of the questionnaire has to be made, as there was one question missing in this version. Due to the survey software it was impossible to edit the questionnaire while it was active. This is what caused the low number of responses on the variable 'professional or amateur athlete'. Due to the large amount of missing data, this variable was not used in the present research (Field, 2009).

Secondly, the collection of the data has to be addressed as one of the points that could use some attention when further research is done. Due to the time constraints, the questionnaires in the present study were sent to different locations, with a short instruction about the process. This means that organizations of the competition were free to collect the data in a way that was the easiest for them, diminishing the control over the data collection. On the other hand led the non-strict way of this process to more responses of the riding organizations, enlarging the sample size. The combination of online and face-to-face data collection might be questioned in terms of consistency. Although there were no great differences between the two groups and the equality of variances was assumed for all

the goal orientations and the two types of feedback-information sought, in further research it might be desirable to choose one of the two methods.

A third limitation is that the context of the data collection a really specific one, namely a competition. This means that athletes with a strong performance-avoidance goal orientation might have been automatically excluded from the sample, as a competition requires performing (Janssen & Prins, 2007; Tuckey, Brewer, & Williamson, 2002). Therefore, in future research, it might be desirable to link the questionnaire to a context that does not obligatorily require a performing element.

Finally there are some limitations related to the subject and the analysis. As the design of this study is not suited to reveal causality between the goal orientations and the feedback-seeking behavior, it might be possible that goal orientations are caused by the feedback-seeking behavior, rather than the other way around. However, it is hard to believe that a concept as goal orientation, that is presented as *a major cause of cognitions, perceptions and behaviors in achievement situations* (Janssen & Prins, 2007) by many authors such as Butler (1993), Duda, (1989), Tuckey, Brewer and Williamson (2002), VandeWalle (2003), and Williams (1994) in the past 20 years, is formed by a context-related variable as the seeking of feedback (VandeWalle, 2003).

Further research

This study was the first to examine the concepts of goal orientation and feedback-seeking information in the field of equestrian sport, so there are many suggestions for further research. Looking only at the dataset used for this study, several questions could be answered, such as if the goal orientation of the athlete influences his/her preference of feedback focus, for example, on their motivation, skills or presentation. More extensive research can also be done, with regard to athletes' characteristics as factors that influence their preferences. Another suggestion is to change the focus on the athletes, concentrating more on the sub-top and top athletes competing on the higher levels.

An observational design applied to an uncontrolled setting is the most valuable way to receive information about the concept of goal orientation (Biddle, Wang, Kavussanu, & Spray, 2003). To get more insight of the practical implications this concept of a longitudinal study might be a valuable addition to this research.

Educational Implications

The educational implications for this study are mostly meant for equestrian athletes and trainers or instructors. For instructors and trainers it is important be aware of the effect a goal orientation has on the process of feedback seeking. Knowledge about the goal orientation is needed to adjust feedback to the needs and preferences of the athlete. When an athlete has an avoidance goal orientation self-validation information is desirable. This does not mean that self-improvement information cannot be given, but it is not the information the athlete is looking for. Therefore it has to be given to the athlete with extra care, as it might be seen as judgmental, but also with extra emphasis, as it might be ignored due to the goal orientation of the athlete. On the other hand, when an athlete is looking for self-improvement information, it does not mean that self-validation information is not desirable. Athletes might tend to overlook complements or confirmative information and for this reason extra emphasis is desirable. Therefore, it is also valuable for the athlete self to know his/her goal orientation, as it can affect the effectiveness of their training and increase performance.

An athlete's goal orientation can be discovered by observations of by simply letting the athlete filling in the questionnaire that is presented in this study. Although athlete characters do explain a part of the concepts of goal orientation and feedback-seeking behavior, it will always remain important to use an individual approach when training an athlete

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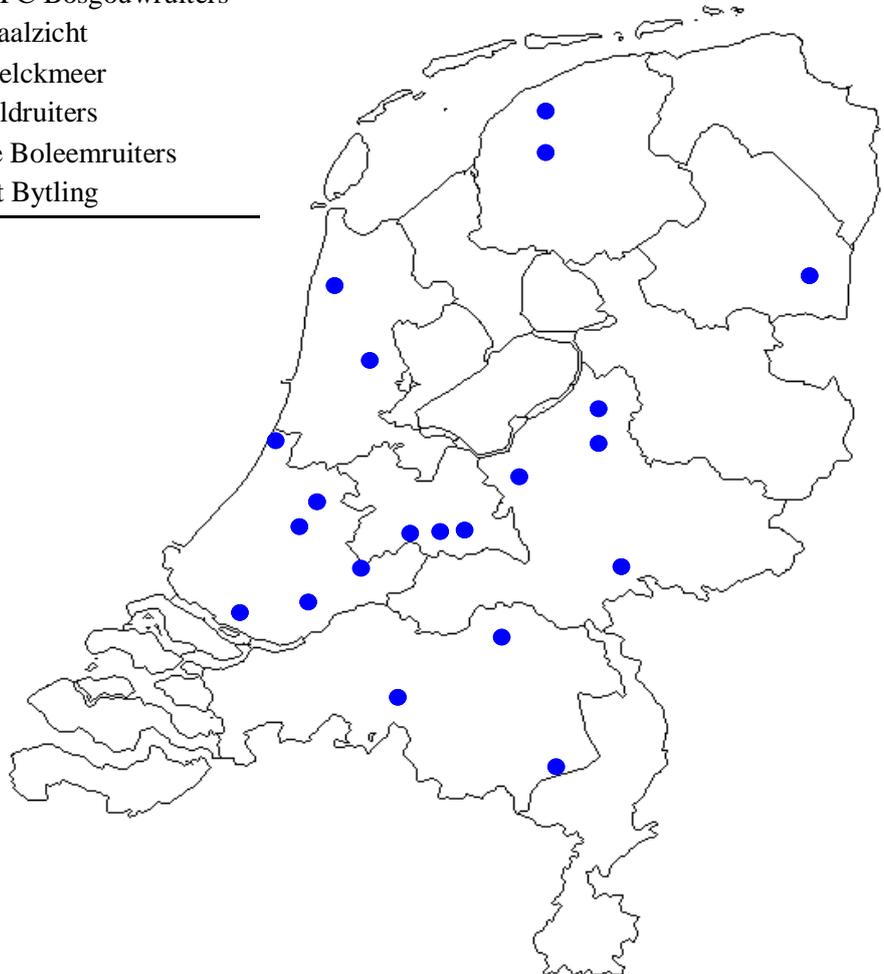
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Appendix A

Table and map with locations where data collection took place.

Place	Organization
Apeldoorn	PSV De Loenermarkruiters
Asten-Heusden	RJV de Witte Vallei
Bergum	Stichting Hippische Sport Burgum
Bodgraven	RSV Les Chevaliers
Emmen	PSV HCE Ruiters
Emst	PC & RV WET
Geffen	RV Zilverhoef
Houten	HC Groenraven
Loon op zand	RV Duijksehoef
Meerkerk	PSV de Waddesteijnruiters
Middenbeemster	LR & PC De Beemsterruiters
Montfoort	LR & PC West Stichtse Ruiters
Nijkerkerveen	RSC Kraaij
Noordwijk	RV Rijnland
Oud Bijerland	RV Oud-Bijerland
Reeuwijk	LR & PC Bosgouwruiters
Ridderkerk	LR Waalzicht
Sint Maarten	RV Belckmeer
Werkhoven	De Veldruiters
Zevenaar	PV De Boleemruiters
Zwaagwesteinde	HSF It Bytling



Appendix B

Athlete Characteristics

The translated items on athlete characteristics as they were represented in the questionnaire.

Characteristic	Options
Age	
Gender	Male/female
Level of dressage riding today	B/L1/L2/M1/M2/Z1/Z2
Highest level of education	
I did ride my competition today	Yes/not yet
I have already started horses on this level	Yes/no
The number of horses I can start at the moment	1/2/3/more
I ride as a	Hobby/profession
I train..... instructor	With/without
Years of experience	

Appendix C

Goal Orientation Scale

The items of the goal orientation scale sorted per goal orientation and avoidance or approach strategy.

When I practice my sport, it is important to me that...

Goal orientation	Statement
Performance-approach	I achieve at higher levels than other athletes
	I perform better than other athletes do
	I am more competent compared to other athletes
	I receive better performance appraisals than other athletes do
	I am the best
Performance-avoidance	I do not make a bad impression on other people
	I do not lose my face in front of other people
	I do not look incompetent towards others
	Others will not think I am performing badly
	Others will not think I achieve at lower levels than they do
Learning-approach	I am able to develop myself
	I do tasks from which I learn a lot
	I can establish competence
	I can feel that I am improving
	I can learn as much as possible
Learning-avoidance	I perform tasks with little risk of failure
	I perform task I can control entirely
	I perform a task I am certainly able to manage
	I have to do tasks that are easy to perform
	I make no mistakes

Appendix D

Feedback-seeking information scale and feedback preferences

The items of feedback preferences and the feedback-information scale sorted per topic.

I like feedback...

Information for	Statements
Self-improvement	About how I can master a task
	About how I can improve my performance
	About how I can solve problems
	Helping me to improve my knowledge and skills
	Helping me to set more appropriate goals for myself
Self-validation	Because I like to hear that I am doing fine in my performance
	Because I like to hear from others I am doing well
	To get compliments so that I feel good
	That reassures everything is going well
	So I can strengthen my self-confidence
Timing	During skill performance
	Directly after the failed skill performance
	After the total performance
Focus	About my skills
	About the goals I have set
	About my own performance
	About my attitude
	About my motivation
	About my horse's performance