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ATTRIBUTIONS AND GOAL ORIENTATIONS IN MASTERS ATHLETES: PERFORMANCE VERSUS OUTCOME

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KEY WORDS: Task and Ego Orientation, Attributional Profiles, Performance, Outcome.
ABSTRACT: Swimmers (N = 111) and track and field athletes (N = 77) participating in the Australian Masters Games completed the Task and Ego Orientation in Sport Questionnaire prior to their main event. Within 30 minutes of the event they rated and provided attributions for that performance. At the end of the day, when they were notified of their placing within the event, the athletes rated and provided attributions for their outcome. Participants rated their performances as more successful than their outcomes. Performances were perceived to be due to more internal and intentional causes than were outcomes. Task orientation predicted some of the attribution scores. The responses to the open ended question about the single most likely cause of their performance or outcome were qualitatively analyzed. Athletes high in task orientation and low in ego orientation tended to attribute performance to technique. Individuals who were low in both goal orientations showed signs of apathy, with little attempt made to explain the causes of performances and outcomes. Results support the practice of focusing on performance rather than outcome.

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PALABRAS CLAVE: Motivación a la Tarea y al Ego, perfiles atribucionales, rendimiento, resultados.
RESUMEN: En este estudio, 111 nadadores y 77 atletas que participaban en los *Australian Master Games* se evaluaron mediante el Cuestionario de Orientación a la Tarea y al Ego en el Deporte (TEOSQ) antes de su participación más importante. Dentro de los 30 mintos previos a la prueba, se les administró a los atletas el test y se les evaluaron sus atribuciones acerca de su rendimiento. Los participantes puntuaron su rendimiento más exitoso que los resultados de la prueba. Los atletas percibieron su rendimiento como más debido a causas internas e intencionales que los resultados. La orientación a la tarea predecía algunas de las puntuaciones de las atribuciones. Las respuestas al cuestionario formado por preguntas abiertas acerca de la causa más importante de su rendimiento o de su resultado se analizaron cualitativamente. Los atletas que puntuaban alto en la orientación a la tarea y bajo en la orientación al ego tendían a atribuir el rendimiento a su técnica. En cambio, las personas que puntuaban bajo en ambas orientaciones de meta mostraban signos de apatía, y llevaban a cabo pocos intentos de explicar las causas de su rendimiento o de sus resultados. Los resultados hallados apoyan la estrategia de focalización en el rendimiento más que en los resultados.

Introduction

Masters Games (i.e., competitive sport for older people) provide unique competitive situations in which participants from all eligible age groups can compete at the same time. For example, 30 to 35 year old swimmers in a 50 meter backstroke heat may compete against individuals from any other age group. Immediately after the heat swimmers will have their performance times, but will not find out the outcome in terms of their relative placings until the end of the day. The same is true for all swimming and track and field events.

Perceptions of success, therefore, may change when moving from a performance to an outcome situation. If these perceptions of success change, there may be corresponding differences in attributions. Attributions are the reasons or explanations that people give for success and failure. Early attribution research in sport has compared the attributions of successful performers to unsuccessful performers (e.g., Spink and Roberts, 1980) and between winners and losers (e.g., Bukowski and Moore, 1980). However, many researchers agree that individuals do not always perceive success and failure in terms of winning and losing (e.g., Biddle and Hanrahan, 1998). It is possible for someone to experience success without an objective win or to experience failure without an objective loss. Previous research has never measured attributions for sporting performance when outcome has not been known, and then attributions for the same event but with an outcome focus.

Research has demonstrated that athletes have variable goal perspectives regarding how they define their competence (Duda and Hall, 2001). The two most frequently cited goal orientations are ego and task. A person with a predominantly ego orientation defines success as being better than someone else, whereas a person with a predominantly task orientation defines success as improving one's own personal performance. It has been demonstrated that individuals' goal orientations may be altered by changing the motivational climate or the goals reinforced in the person's social context (cf., Ommundsen, Roberts, and Kavussanu, 1998; Treasure and Roberts, 1994). What is not known is whether people's sporting attributions may also be influenced by the motivational climate. The Masters Games provide an ideal opportunity to test the attributions for the same exact event in a situation that stresses performance or mastery (personal times or distances) and then again in an outcome or social comparison environment.

It is clear that both achievement goal orientations and attributions are related to achievement behaviour and motivation (e.g., Elliot and Church, 1997; Vodanovich, Weddle, and Piotrowski, 1997; Ward, 1997; Young 1997). However, much less is known about how achievement goal orientations (how people define success) are related to attributions (how people explain success and failure). Preliminary investigation into the relationship between attributions and achievement goal orientations found that the level of task orientation is related to the types of attributions athletes make (Hanrahan, 2001). Therefore, in addition to knowing if attributions are different in the two situations, it is also useful to know if attributions are predicted by the individuals' achievement goal orientations. It may be possible, for example, that task orientations predict attributions in a performance environment, but not in an outcome environment.

In addition to the quantitative scores rating attributional dimensions, qualitative responses to open-ended questions about attributions can be analyzed. Multiple respondents may make the same attributional dimension ratings, yet have qualitatively different responses. For example, many athletes may rate their attributions as internal, controllable, and unstable, yet the actual attributions may include effort, activation/arousal, training preparation, or determination. Even if there are no significant differences between achievement goal orientations groups in terms of quantitative dimensions, there may be qualitative differences that could guide future attribution retraining programs.

The purposes of this study were 1) to investigate if athletes make different attributions for performance and outcome for the exact same events, 2) to determine if achievement goal orientations and ratings of performance and outcome predict attributions and, 3) to consider both qualitative and quantitative differences in attributions for those scoring in the extreme ranges of task and ego orientation.

Method

Participants

Swimmers (44 males, 61 females and 6 unspecified) and track and field competitors (35 males, 37 females and 5 unspecified) participating in the Australian Masters Games voluntarily took part in this study. Participants competed in age groups ranging from 25-29 to 80-84. The most represented age group was the 50-54 age group with 33 participants. In track and field there were 32 competitors in distance events, 15 in field events, 14 in middle distance events, 8 in sprint events and 8 multi-eventers. In swimming there were 57 sprinters, 31 middle distance competitors and 11 distance competitors. Of the 188 participants, 91 were competing in their first masters games.

Measures

Task and Ego Orientation in Sport Questionnaire (TEOSQ, Duda, 1989).

The TEOSQ contains two scales, one containing six items measures ego orientation, and the other with seven items measures task orientation. Both scales are measured on 5-point Likert scales and have been found to have reasonable test-retest reliability (Duda, 1992) and inter-item reliability (Duda and Horn, 1993). Factorial, concurrent, and predictive validities have supported the psychometric strength of the scales (Duda and Whitehead, 1998). In a study comparing four scales that have been used to measure achievement goal orientations, the TEOSQ was found to be the better instrument psychometrically (Hanrahan and Biddle, 2002). The wording in the directions of the

TEOSQ reflected the specific sports targeted in the study (e.g., "When do you feel most successful in swimming. In other words, when do you feel a swimming even has gone really good for you?").

Sport Attributional Style Scale-Revised (SASS-R)

The Sport Attributional Style Scale (SASS) (Hanrahan and Grove, 1990) uses 7-point Likert scales to measure the causal dimensions of internality, stability, globality, controllability, and intentionality for positive and negative hypothetical events. The construct validity has been verified through confirmatory factor analyses, and the scale has been shown to have reasonable test-retest reliability and good internal consistency (Hanrahan, Grove, and Hattie, 1989). In this study the dimensions of the SASS were used to have athletes rate the causal dimensions of their attributions for an actual competition. Previous research has found that attributions about actual events correlate significantly with attributions for the hypothetical events of the SASS (Hanrahan and Grove, 1990). In line with the Causal Dimension Scale II (McAuley, Duncan, and Russell, 1992), the control dimension was split into two dimensions: personal control and external control. The Causal Dimension Scale was not used because it does not contain the dimensions of globality or intentionality. The stem at the beginning of the SASS-R was worded, "Please write down what you believe was the single most likely cause of your level of performance (e.g., why did you perform well or poorly today)" for the performance attribution, and "Please write down what you believe was the single most likely cause of your success/failure" for the outcome attribution.

Ratings of performance and outcome.

Participants rated their perceived performance on a 7-point Likert scale with ratings ranging from "very poor performance" to "very good performance" Outcome, or success in terms of win or loss, was rated on a 7-point Likert scale with ratings ranging from "very successful" to "very unsuccessful".

Procedure

The athletes completed the TEOSQ prior to their main event. Within 30 minutes of completing their main event they rated how well they thought they performed in their main event, indicated the single most likely cause of their level of performance, and then rated that cause on six attributional dimensions of the revised SASS. At the end of the day when final results were posted participants rated how successful they were in their main event in terms of win or loss and then stated the single most likely cause of their success/failure and then rated that cause on the same six attributional dimensions. When athletes submitted their completed questionnaires, they received a raffle ticket, the winner of which received a small monetary prize.

Results

MANOVA's indicated that there were no significant main effects or interactions for sex or sport on any of the dependent variables, namely TEOSQ scores, performance and outcome ratings, and attributions for both performance and outcome. As a result of these non-significant MANOVA's, all participants were combined across sport and sex for subsequent analyses.

Inter-item reliability of the TEOSQ was again confirmed with alphas of .74 for the task scale and .80 for the ego scale. The scores for ego orientation ranged from 1 to 5 with a mean of 2.53. The task orientation

scores ranged from 3.14 to 5 with a mean of 4.26. The correlation between the two scales was -.09, confirming their independence.

To determine if athletes rated their performance differently than their outcomes, a within subject T-test was calculated. Participants rated their performances as being significantly more successful than their outcomes ($t(185) = 5.93$, $p < .001$). See Table 1 for mean scores.

A one way repeated measures MANOVA was then calculated to determine if there were differences in the attributions athletes made for performance and outcome. This MANOVA was significant (Wilks' Lambda =-.927, $F(6.179) = 2.33$, $p < .05$). Follow up univariate F tests revealed only one significant effect for intentionality ($F(1, 184) = 7.21$, $p < .01$). Competitors rated the cause of their performance to be significantly more intentional than the cause of their outcome. See Table 1 for means and standard deviations of all attributional dimensions across performance and outcome situations.

	Performance		Outcome	
Dimension	**Mean**	**SD**	**Mean**	**SD**
Internality	5.71	1.64	5.44	1.84
Stability	4.97	1.71	5.11	1.74
Globality	4.42	2.13	4.46	2.11
Personal Control	3.05	2.14	2.92	2.16
External Control	5.10	2.07	5.22	1.90
Intentionality	4.28	2.53	3.85	2.41
Success	4.98	1.44	3.81	1.96

Table 1. Means and Standard Deviations Comparing Attributions and Ratings of Success for Performance and Outcome Situations.

Because of the skewed distributions, we felt it was inappropriate to use a MANOVA to compare attributions of those high and low in task and ego orientations. Although previous studies have used a mean split to divide participants into four groups (i.e., high task/low ego, high task/high ego, low task/low ego, and low task/high ego) (e.g., White, 1998), other authors have stated that this procedure should only be used in exceptional circumstances (e.g., Duda, 2001). To avoid the problems associated with using mean splits on skewed data, we performed two-step hierarchical regressions to explain attributions. For the performance attributions, task and ego orientation scores were entered in the first step, and performance ratings entered on the second step. For the outcome attributions, task and ego orientation scores were entered in the first step and outcome ratings entered in the second step. Task and ego orientation scores were entered first as they were the same for both sets of data, and they are perceived to be characteristics inherent to the individual.

For the performance attributions the regression analyses were significant for the dimensions of stability (F (3, 183) = 4.36, p < .01, Adjusted R^2 = .051), globality (F (2,184) = 3.70, p < .05, Adjusted R^2 = .028), and intentionality (F (3, 183) = 17.24, p < .001, Adjusted R^2 = .210). For stability, standardised Beta coefficients indicated that performance ratings were the only significant contributor to the regression (B = .23, t = 3.01, p < .01). More stable attributions were predicted by higher ratings of performance. Task, but not ego, orientation scores significantly predicted globality ratings (B = .17, t = 2.30, p < .05). Higher task scores predicted higher globality ratings. When performance ratings were added to the model, the model remained significant (F (3, 183) = 3.37, p < .05), but none of the variables contributed individual significance. For intentionality ratings, performance ratings were the only significant contributor to the regression (B = -.50, t = -6.73, p < .001). More intentional attributions were predicted by higher ratings of performance.

For the outcome attributions the regression analyses were significant for the same dimensions as for performance attributions: stability (F (2, 184) = 3.26, p < .05, Adjusted R^2 = .024), globality (F (3, 182) = 2.73, p < .05, Adjusted R^2 = .020), and intentionality (F (3, 183) = 5.76, p = .001, Adjusted R^2 = .071). For stability, standardised Beta coefficients indicated that task orientation scores were the only significant contributor to the regression (B = .18, t = 2.44, p < .05). More stable attributions were predicted by higher scores in task orientation. The same was true for globality ratings, with task orientation being the only significant individual predictor (B = .17, t = 2.37, p < .05). Higher task scores predicted higher globality ratings. For intentionality, standardised Beta coefficients indicated that outcome ratings were the only significant contributor to the regression (B = .27, t = 3.84, p < .001). More intentional attributions were predicted by higher ratings of outcome.

Qualitative Analyses

The attributional measures requested respondents to write down the single most likely cause of their level of performance and their success/failure. These qualitative responses were analysed not only to determine the types of attributions masters athletes make, but also to determine if the same attributions were made for performance and outcome. Two inductive content analyses were performed separately for the performance and outcome attributions. The original responses were divided if they conveyed more than one idea in the single response. Both researchers examined all of the resulting data themes and then grouped them together under suitable headings when they had common meaning. These groupings became the higher order themes. An additional inductive analysis was done to link the higher order themes into general dimensions. The two researchers independently used this process for the performance and outcome attributions separately. The trustworthiness of the data was created by these independent analyses. The researchers then met together and compared their results. The majority of raw data themes had been classified in the same way by both researchers. The small differences in the wording of the names of higher order themes, as well as the different allocation of a few raw data themes were resolved through clarifications and the discussion of biases. See Table 2 for the resulting higher order themes and general dimensions.

General Dimension	Higher Order Theme	Performance[1]	Outcome[1]
Psychological factors	Activation/arousal	10	6
	Tried to do my best	11	13
	Mental approach	13	14
	Determination	7	23
	Performance strategy	3	3
	(Total)	44	59
Preparation	Training	53	61
	Race preparation	9	4
	(Total)	62	65
Situational	Travel	3	1
	Different conditions (e.g., 50m vs 25 m pool)	2	0
	Weather/temperature	5	0
	Effect of other events	19	7
	Encouragement from others	6	2
	Equipment failure	2	0
	Coach	0	2
	(Total)	37	12
Competition	Opposition	6	24
	Stimulus of competition	5	2
	(Total)	11	26
Physical factors	Illness/injury	23	11
	Ability	2	6
	Technique	15	6
	(Total)	40	23
Luck	Luck	1	4
Personal performance	Personal performance	0	3
No comment	No comment	21	20

[1] Total number of responses. The responses from some athletes included more than one attribution for performance or outcome, so there were more attributions than there were participants.

Table 2. Themes and General Dimensions for the Attributions for Performance and Outcome.

The qualitative responses for performance and outcome were not dramatically different. "Different conditions", "weather/temperature", and "equipment failure" were cited as attributions for performance, but not outcome. "Coach" and "personal performance" were listed as attributions for outcome, but not performance. Athletes made more attributions of "determination" and "opposition" for outcome than they did for performance. On the other hand, they made more attributions of "effect of other events" and "illness/injury" for performance than they did for outcome.

Extreme TEOSQ Scores

As mentioned earlier, there were no true low task individuals who participated in this study (lowest score = 3.14/5). Only two people were higher in ego than in task, so a high ego/low task group did not really exist. Nevertheless we were interested in investigating differences between athletes who were low and high in task and ego orientations. Following the advice of Duda (2001), we categorised participants into the four groups of low ego/low task, low ego/high task, high ego/high task, and high ego/low task using the individuals who rated at the extreme ends of the range. From the initial sample of 187 athletes, this process resulted in a subsample of 45 individuals. The responses for low ego ranged from 1 to 2.17, compared to the high ego range of 3.5 to 5. The variance in the distribution of task scores was restricted resulting in low task responses ranging from 3.14 to 3.86 and high task responses ranging from 4.71 to 5. This process resulted in 13 low ego/low task, 16 low ego/high task, 9 high ego/high task, and 7 high ego/low task athletes. We have termed this variable Extreme Motivational Orientation.

Using the data from the individuals in these extreme groups, A Split Plot (4 X 2) repeated measure ANOVA with one between subjects factor and one within subjects factor was conducted to assess the possible impact of Extreme Motivational Orientation upon success following performance and outcome situations. There was a main effect for the within subjects factor of success $F(1, 42) = 15.45$, $p < .001$, where all groups reported higher success ratings for performance ($M = 4.94$, $SD = 1.36$) than for outcome ($M = 3.41$, $SD = 1.85$). There was no significant interaction for Extreme Motivational Orientation or Success $F(3, 42) = 1.09$, $p > .05$. Nonetheless, the main effect for Extreme Motivational Orientation approached significance $F(3, 42) = 2.66$, $p = .06$. One might predict that individuals with extreme scores high in task orientation, the high task/high ego, and high task/low ego groups should manifest higher performance ratings than the low task/high ego and low task/low ego groups. The opposite effect should hold for outcome ratings where the participants ranked as high ego should report higher success ratings than their low ego counterparts. Therefore two separate follow up F tests using planned comparisons were conducted, first for the two high task groups versus the two low task groups on performance success ratings, and then, second for the two high ego groups versus the two low ego groups on outcome success ratings. Indeed the first analysis for performance success showed a significant contrast ($t(43) = -2.08$, $p < .05$) whereby the combined means for the high task/high ego and high task/low ego group ($M = 5.42$, $SD = 1.10$), was greater than that for the low task/low ego and low task/high ego groups ($M = 4.43$, $SD = 1.50$). No such difference was found for outcome success ($t(43) = -0.10$, $p > .05$).

Using the qualitative data from the same subsample, an additional inductive analysis

was completed. To be able to use a chi square analysis, only the first raw data theme for individuals was used if their response contained more than one idea. Their responses for performance and outcome were combined in the analysis. As roughly only one quarter of the original sample was retained, we felt it was inappropriate to use the original higher order themes. This final inductive analysis resulted in the higher order themes of "training", "technique", "psychological", "medical/physical", "competition/-external", "personal performance" and "no comment". The first author conducted this analysis, but another researcher served as an external checker to independently classify the raw data themes into the higher order themes. There was 100% agreement between the two researchers. The chi square analyses (Likelihood Ratio) on the performance attributions (χ^2 (15) = 27.76, p < .05) and the outcome attributions (χ^2 (18) = 34.13, p < .05) were significant (See Tables 3 and 4). Athletes in the low ego/high task group made more attributions of technique for performance than expected, and fewer "no comment" responses for outcome attributions than expected. Individuals low in both task and ego made more "no comment" responses than expected regarding the attributions for both performance and outcome. Athletes high in both task and ego made more competition/external attributions for outcome than expected.

Group		Training	Technique	Psych	Medical/ Physical	Comp/ External	No Comment
Low ego/	Actual	2	0	0	3	2	6
Low task	Expected	3.6	0.8	2.2	1.9	1.9	2.5
	Adj residual	-1.2	-1.1	-1.9	1.0	0.1	2.9*
Low ego/	Actual	5	3	5	1	3	1
High task	Expected	5	1.1	3.1	2.7	2.7	3.4
	Adj residual	0	2.3*	1.5	-1.4	0.3	-1.9
High ego/	Actual	4	0	1	2	2	0
High task	Expected	2.5	0.6	1.5	1.3	1.3	1.7
	Adj residual	1.3	-0.9	-0.5	0.7	0.7	-1.6
High ego/	Actual	2	0	2	1	0	2
Low task	Expected	1.9	0.4	1.2	1	1	1.3
	Adj Residual	0.1	-0.7	0.9	0	-1.2	0.7
Total	**Actual**	**13**	**3**	**8**	7	7	**9**

* $p < .05$

Table 3. Chi Square Results for Attributions for Performance Using Responses from Extreme Groups.

Group		Train	Technique	Psych	Physical	Medical/ External	Comp/ Performance	No Comment
Low ego/	Actual	3	0	1	1	2	0	6
Low task	Expected	3.6	1.7	1.9	1.1	2.8	0.3	1.7
	Adj residual	-0.4	-1.6	-0.9	-0.1	-0.6	-0.6	4.2*
Low ego/	Actual	6	4	3	2	2	1	0
High task	Expected	5.0	2.3	2.7	1.5	3.8	0.4	2.3
	Adj residual	0.7	1.5	0.3	0.5	-1.3	1.3	-2.1*
High ego/	Actual	1	2	1	0	5	0	0
High task	Expected	2.5	1.1	1.3	0.8	1.9	0.2	1.1
	Adj residual	-1.2	0.9	-0.4	-1.0	2.8*	-0.5	-1.3
High ego/	Actual	3	0	2	1	1	0	0
Low task	Expected	1.9	0.9	1.0	0.6	1.5	0.1	0.9
	Adj Residual	1.0	-1.1	1.1	0.6	-0.5	-0.4	-1.1
Total	Actual	13	6	7	4	10	1	6

* $p < .05$

Table 4. Chi Square Results for Attributions for Outcome Using Responses from Extreme Groups.

Discussion

Performance versus Outcome

Participants rated their performances as being significantly more successful than their outcomes. Generally people strive to demonstrate competence in achievement situations (Duda, Fox, Biddle, and Armstrong, 1992). Perceived competence is a powerful influence on motivation (Deci and Ryan, 1985). If people perceive their performances to be more successful than their outcomes, and perceived competence has a positive effect on motivation, then the logical conclusion is to encourage athletes to focus on performance rather than outcome.

Rather than comparing attributions for success versus failure, or winning versus losing, this study investigated if there were differences in attributions for performance versus outcome. Their performances were perceived to be due to significantly more internal and intentional causes than were their outcomes. In individual sports such as those used in this study, it is not surprising that the athletes perceived their performances (i.e., times or distances) to be due to more internal causes than their outcomes, which by definition are dependent on the performances of others. The intentionality finding is a bit more difficult to explain. Very few athletes go into a competition

intending to perform poorly, but neither do they usually intend to lose. As the athletes' perceived their performances to be more successful than their outcomes, this difference in intentionality may be a result of the self-serving attributional bias (Biddle, Hanrahan, and Sellars, 2001). People intend to perform well, so when they do, they attribute that performance to an intentional cause.

Some of the qualitative results support the quantitative findings. It easily can be argued that the opposition is an external factor. The opposition was cited four times more frequently as an attribution for outcome than for performance, supporting that outcomes were attributed to more external factors than performances. Similarly, technique, most likely an internal and intentional attribution, was provided as an attribution almost three times more frequently for performance than for outcome.

Some of the qualitative findings, however, appear to contradict the quantitative findings. Psychological factors, arguably internal attributions, were cited slightly more frequently for outcome than for performance, and situational factors (arguably external) were cited approximately three times more frequently for performance than outcome. This apparent inconstancy supports the need for athletes to be able to place their attributions along the various dimensions themselves, rather than assuming that researchers can interpret the perceived dimensions of a particular attribution (Russell, 1982). For example, determination was an attribution for outcome for 23 respondents, but was an attribution for performance for only seven participants. Although determination was included in the general dimension of psychological factors, and intuitively is something internal to the individual, some athletes may perceive that their determination is generated by the presence of other competitors in head to head competition, giving it an external rather than an internal source.

Using Task, Ego, and Ratings of Success to Predict Attributions

The attributional dimensions of stability, globality and intentionality were predicted for both performance attributions and outcome attributions. Higher ratings of performance predicted more stable and more intentional attributions. Higher task scores predicted more global attributions for both performance and outcome. Higher task scores also predicted more stable outcome attributions.

The higher ratings of performance predicting more stable and intentional attributions may be explained partially by the self-serving attributional bias discussed above. If attributional bias was the only contributing factor, however, one would expect similar findings for outcome attributions. It may be that athletes who make stable and intentional attributions are actually producing more consistent performances, meaning that attributions are influencing performances, rather than performances affecting attributions. This proposal only can be tested with longitudinal research.

No obvious explanation of task scores predicting the globality of attributions comes to mind. It may be that people who are high in task tend to be more analytical than those low in task. They may reflect more about the factors that influence a number of areas of their lives, not just in sport. If this is the case, they may be more likely to perceive that a factor that influences them in sport may also influence other areas of their lives. People who are low in task may tend not to

engage in self-reflection (supported by the finding that 14 of the 15 blank responses to attributions as described in the next section were low in task orientation). When asked if the cause of their sporting performance or outcome is something that also influences other areas of their lives, those low in task may immediately tend to respond that it does not, not because the cause does not influence other areas of their lives, but because they have not thought about it. This supposition is partially supported by previous findings that those high in task orientation are more likely to engage in cognitive and self-regulatory strategies (Riveiro, Cabanach, and Arias, 2001).

Extreme TEOSQ Scores

When limiting the analyses to the extreme scoring groups, those high in task orientation made significantly higher performance ratings than those low in task orientation. Previous research has indicated that a task orientation is positively associated with motivationally adaptive responses (Standage and Treasure, 2002) and students' satisfaction with learning (Zandvliet and Straker, 2001). Again, the present study cannot infer causation, so the results do not indicate whether having a task orientation leads to higher performance ratings, whether higher performance ratings promote a task orientation, or whether some other factors cause both high performance ratings and a task orientation.

Athletes who were low in ego and high in task were the only athletes from the extreme groups to make attributions of technique for performance. This finding is not surprising because if they tended to be focused almost entirely on task, then technique would be a logical cause of performance success. Two thirds of "no comment" responses for performance attributions and all of the "no comment" responses for outcome attributions were made by those who were low in both task and ego. This finding suggests that being low in both achievement goal orientations leads to apathy or at least a decrease in trying to explain the causes of performances and outcomes. A lack of intentionality or desire to improve performance by understanding previous performances is an example of amotivation (Vallerand and Rousseau, 2001). In other words, being low in both task and ego orientations may be indicative of amotivation which is likely related to drop-out behaviour. This supposition is supported by the inability of most researchers to find samples of athletes who are low in both orientations (Duda and Whitehead, 1998). Even in this study, those with a low task orientation still had scores of 3.14 to 3.86 out of a possible 5.

Limitations

Aside from small sample sizes of the extreme TEOSQ groups, and the lack of respondents who were truly low in task orientation, the main limitation of this study is that time may have confounded the results comparing the attributions for performance and outcome. As it was not possible to first inform athletes of their outcome placings before their performance results, all of the participants made their attributions for performance before their attributions for outcome. It may be that any differences in attributions were due to having had relatively more time to think about the outcome attributions. Future research could control for this by retesting attributions for the same performances or outcomes.

The results of this study also are limited in that only athletes from individual, close-skilled sports competing in the Masters Games were included. Findings may be different for team-based sports, open-skilled sports, or younger athletes.

Conclusion

Athletes do make different attributions for performance and outcome for the exact same events, suggesting that their focus within the situation may influence attributions. Task orientation also predicated some of the attributional dimension scores, suggesting that how people define success may influence how they explain success and failure. This quantitative finding was supported by some of the qualitative data. Overall the results reinforce that focusing on performance rather than outcome is beneficial for athletes.

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