Correlation between goal orientation and attitudes of Brazilian elite swimmers

LETICIA ALVES AMARO¹; PAULO AUGUSTO PRADO²; RONE PAIANO¹; CARLOS EDUARDO LOPES VERARDI³; MARCOS FERNANDO LARIZZATTI¹; VINICIUS BARROSO HIROTA¹

¹Department of Physical Education – Mackenzie Presbyterian University/FNC – São Paulo, BRAZIL.

²Corinthians Sports Club, Swimming Department – São Paulo, BRAZIL.

³Sciences College – Department of Physical Education – UNESP – Baurú, BRAZIL.

Published online: June 30, 2017

(Accepted for publication June 17, 2017)

DOI:10.7752/jpes.2017.02119

Abstract:

The aim of this study was to correlate motivation and attitudes towards sports competition of Brazilian elite swimmers. Through a correlational study we apply a scale of motivation and a scale of attitudes towards sports competition (TEOSQ and EAA) in 29 elite athletes (12 men and 17 women), Brazilian's swimmers aged between 19 and 24 years (average age of the athletes is 21.48 ± 1.42 years, 6.65% coefficient of variation); the statistic treatment included the calculation of Cronbach's alpha coefficient, descriptive statistics instruments, Spearman correlation and Mann-Whitney test ($p \leq 0.05$). The results showed a predominance related motivational orientation task of all swimmers and positive attitudes towards sporting competition, i.e., the extent that negative attitude tends to decrease, the positive increases, showing a negative correlation, strong and significant, and for the motivational orientation as it increases the orientation task also increases to the ego, significantly. We conclude that athletes like and enjoy competing and has characteristics of self-overcome being intrinsically motivated.

Key words: motivation; attitudes; evaluation; swimming; elite athletes.

Introduction

Swimming is an individual sport that arouses interest in studies due to its high profile and its development potential, however for the promotion of athletes possible factors related to motivation and attitudes must be taken into consideration bearing in mind the performance.

According to Vernon (1973), motivation is a kind of inner strength that emerges, regulates and sustains all of our most important actions of human beings; however, motivation is an internal and self-experience.

Therefore, we intend to cover in this study the achieving motive or reward individuals who practice sport have or submitting in their sports practice, it is in training or in competition. Fonseca and Balagué (2001) report that the social cognitive approach, in turn, intends to evaluate the achievement of objectives (reflecting the criteria by which athletes assess their competence and define the success or failure of their participation in a particular mode) assuming the existence of two motivational orientation goals, or achieving goals: ego goal (when a person is fundamentally guides to show more income than the others) and the task goal (when the orientation is related to learning or to perform a task masterfully, Duda, 1993).

Individuals who are oriented toward to ego are focused on the outcome that been from their involvement in the task, and realize that the competence results from the comparison with others. Those who are oriented to task are focused on improving their personal skills, and realize that jurisdiction is governed by self-criteria mentioned (Nicholls 1984, 1989), i.e., orientation task athlete involves guidance for the assessment of whether performance based on achievement and judgment of their abilities through a process of comparison with himself, and ego orientated evaluates his/ her performance based on the result and judgment of their abilities through a process of comparison with others (Cid & Blonde, 2010).

Correlated to this, we may take into consideration that attitudes are connection to the motivational issues, since positive attitudes may cause athletes with a better performance opportunities. Attitude according Brito (1998) can be understood as a personal provision idiosyncratic present on all. Individuals, directed to objects, events or people, who assumes different direction and intensity according to the experiences of the individual, in addition, it has affective domain components, cognitive and motor. Succeeding Prat and Soler (2003) say that attitudes are contingent on the given situation and report on the behavior that the athlete would take against a potential moral conflict.

Thus, attitude is a predisposition, affective and behavioral related to an object, or a particular way of specific objective (Rajechi, 1990). Thus, following the idea proposed by Faria et al. (2008), adapted the profile

of positive attitudes towards mathematics taking into account the sports competitions, so the profile of subjects with positive attitudes are:

- Have good feeling to an object or goal;
- Have conviction that competition and/ or the sport is a constructive as well;
- Willingness to learn and train in the sport;
- Absence of difficulties in relation to compete in the sport;
- Belief in the importance of the knowledge acquired in training;
- Ensuring that sports and sports competition contribute to the development of the thinking of the human being;
- Clarity of the importance of sport as a discipline;
- Belief that a good teacher can change the stigma that sports competition is a difficult activity;
- Confidence in a good performance in exercise and sports training;
- Persistence to overcome;
- Search results;
- Like testing in control or friendly events.

The outline of a participant with negative attitudes contains the following features:

- Bad feelings about the sports competition;
- Aversion to sports learning;
- Frustration in sports competitions;
- Difficulties regarding exercise during sports training;
- Skepticism about the importance of the knowledge acquired in sports training;
- Disappointment about the outcome of sports competitions;
- fear of feeling in relation to sporting events;
- Desire to give up sports competitions;
- Do not have the feeling of self-overcome this;
- Poor performance during sports training;
- Poor performance in control or friendly events;
- Lack of persistence in training or in competition;
- Lack of confidence in a good performance in the exercise or competition.

Thus by reference to analyzes, it is clear that there is a correspondence between the direction of feelings, beliefs and predispositions, in positive or negative direction (Faria et al., 2008). Within this problem, the objective of this study was to correlate motivation with the attitudes towards sports competition of Brazilian elite swimmers, just watching his/ her motivational contour, and in what way athletes like to compete. Within the sporting context, it has raised the hypothesis that age and time of experience could influence the attitudes of elite athletes.

Method

Mode of research

This study is in compliance with in correlational studies, which according to Thomas and Nelson (2002) the proposal of correlational research is to examine the relationship between certain variables, such as the correlation between attitudes and behavior.

Instruments

Instrument 01: TEOSQ (Task and Ego Orientation in Sport Questionnaire) developed by Duda (1992), translated, adapted and validated for Portuguese (Brazil) by Hirota et al. (2006), Hirota and De Marco (2006) and Hirota et al. (2017). The purpose of TEOSQ is to evaluate individual differences in perspectives of the goal, set the practice of school sports, detecting whether the individual is determined to be task-oriented or ego (Duda, 1992). This instrument allows you to identify the motivational orientation of sportsmen against execution of a task, namely, respondents must be seen against the sport training and assess how successful he finds himself in this mode. The TEOSQ consists of 13 Likert questions of 5 points (varying according to the level of agreement with each of them), and 06 issues guidance to ego or fear of failure, and 07 issues of guidance to task, or success of expectation. The unfastened time to answer the instrument is approximately 5 minutes, and this self-report instrument.

Instrument 02: Attitudes Assessment Scale (EAA) was developed for mathematics proposal, adapted and validated by Brito (1998), scale this Likert four points, made up of 20 items (10 negative and 10 positive) whose purpose was to assess attitudes with respect to a common entity, in this case the sports competition. This

instrument was adapted, and had a good performance in reliability for sports competitions Hirota, et al. (2014); this instrument is also self-administered and lasts an average of 7 minutes responses.

Participants

The sample established for convenience, in which we had the total participation of 29 elite athletes, i.e., act in swimming between 6-15 years of practice (average time: 10.86 ± 2.66 , coefficient of variation 24.57%), and has experience in high and elite performance championships. all athletes belong to a single private club of the city of São Paulo, Capital, Brazil. The age of the athletes ranged from 19 to 24 years and the average age of the athletes is 21.48 years (± 1.42 , 6.65% coefficient of variation), showing homogeneity of data in relation to age. Of the 29 athletes were 12 men aged between 19 and 24 years (mean age of 22.25 ± 1.42 years, 6.39% coefficient of variation) and 17 were women swimmers aged 19 to 23 years (mean age 20.94 ± 1.19 years to 5.71% coefficient of variation). The training routine of athletes varies according to the specificity of each swim; however, the athletes enter the water at 6 a.m., swimming up to 11 hours, must be 10 minutes prior to stretching. Monday, Wednesday and Friday, do post-workout bodybuilding. Tuesday and Thursday, swim twice, namely, swim two periods, entering the water at 6 am and leaving at 10 am, lunch and rest at the club, returning to the water at 13 hours and leaving around 16 hours. From the Youth category, the fold happens. The training of the swimmers have runner's volume of 8,000 to 10,000 meters a day and sprinters swimmers are more specific, according to the films swims. The training of sprinters and distance runners are separated by lanes and technicians, however, happen at the same time and are made in the 50 meter pool. At least 2 times a month, our births are filmed and transmitted to us in meetings to improve the swimming and error correction. Training always divided into heating, number of educational series containing arm or leg (or both), release, main series, series, and release. All athletes can treat over the age of 18, signed the consent form Clarified, after having contact with the Team manager, and with the same familiar with the data collection, and researchers committed to providing feedback on regarding the evaluation of athletes. This study included the signing of the term sheet by the director of sport schools of the City hall and signed the consent form and information, or by the parents or guardians of the study participants by paying attention to research ethics September by the Declaration of Helsinki, 19649, Resolution no. 466, 2012 (WHO, 2001)

Statistical data Analysis

We adopted as statistical analysis calculating *Cronbach's Alpha* Coefficient in order to confirm the reliability of the both scales, putting proof the legitimacy of the front instrument to the subjects involved in the study. To assist potential significant differences between the averages of Task goals and Self and positive and negative attitudes, we decided to conduct the Mann Whitney test with significance level of $p \leq 0.05$, separately for each direction, meaning, target orientation task and ego goal orientation, pointing out the existence or not of significant differences between genders. In addition, correlation was calculated using *Spearman (rho)* correlation with $p \leq 0.05$ significance level. All data analysis was made using SPSS, v.20.0 for windows.

Results and Discussion

Alpha's Coefficient of the results concerning the TEOSQ scale were 0.88 for ego orientation and 0.84 for task orientation. Regarding attitudes scale (EAA) *Alpha's* results were 0.88 and 0.79 respectively for the positive attitudes and negative attitudes, thus demonstrating the internal consistency, and reliability of items of the instruments.

Regarding the attitudes and competition in swimming, we found that both men and women have higher average compared to positive attitudes, a difference, significant ($p=0.001$) for both attitudes. Medians of positive attitudes were maximal and negative men showed the minimum result, while women seem to be moderate. Regarding the motivation male athletes has averaged motivational orientation of higher task, but statistically significant different relative orientation to the ego, as well as women. Average maximum guidance to task, reaffirming the results of media and equal in men and women in guidance to ego.

Table 1. Descriptive statistics results regarding TEOSQ and EAA scale.

SCALES		Male			Score	Female			Score
		Aver. ($\pm$)	"p"	med.		Aver. ($\pm$)	"p"	med.	
EAA	Negative	1.51(± 0.15)	0.00	1	15.17	1.56(± 0.22)	0.00	2	15.64
	Positive	3.72(± 0.32)		4	37.25	3.67(± 0.35)		4	36.70
TEOSQ	Task	4.92(± 0.16)	0.00	5	34.50	4.56(± 0.49)	0.00	5	31.94
	Ego	3.94(± 0.50)		4	23.67	3.28(± 1.07)		4	19.71

Comparing the average results with other studies, we showed that the related guidance issues to task resemble the studies of other authors (Duda, 1992; Hirota, 2014; Klain, et al. 2014; Lopez-Walle et al., 2011;

Hirota et al., 2011; Hirota et al., 2017), however differ in relation to the direction of the ego results for demonstrating particularity in swimming.

Observing Figure 01, can be see that men and women have the same level of negative attitudes' ($p=0.44$) compared to sporting event, a result also found in the positive attitudes' ($p=0.40$), Leading us to believe this group of swimmers like to compete.

Fig. 1. Comparison of means in relation to gender and the scale of attitudes and motivation.

Regarding the task orientation, there is a statistically significant difference ($p=0.01$), so men are more motivated in this feature women; the same result was found in the ego orientation ($p=0.03$), which has more men than women self-characteristics, or may be, are more individualistic, risk and are generally more aggressive elements that are often connected the individual sports in which athletes have to make decisions alone. In our study, the prevailing motivational orientation for the task indicates that athletes measure their success in terms of self-referenced criteria (Duda, 1992). Faria (2004) emphasizes that women are less motivated intrinsically man despite all the advances of humanity and positions reached in society, suffering also cultural influences in her feminine behavior and athletes with average experience levels were more intrinsically motivated than most and least experienced, what also happened to the male athletes' who were more intrinsically motivated than female.

Andrade et al. (2006) reported in their study that swimmers practice mode primarily to learn, improved their skills and get in touch with others and conclude that Brazilian swimmers of different age groups want to develop new motor skills and improve health, and needs cooperation and socialization, also demonstrated in this study.

Smith et al. (2006) reported that a moderate/ high orientation to the ego, when complemented with a high task orientation, does not necessarily lead to poorly adaptive strategies of behavior, since it also produces feelings of enjoyment and satisfaction with the sport practicing, the same finding in our study was found. Cid and Blonde (2010) conclude that there is a correlation between harmonious passion for what they do and the motivational orientation task.

The correlations between positive and negative attitudes, overall, have been established, that is, without distinction of gender, and separately between the genders, and the results found were that as positive attitudes rise negative decline, therefore, negative and strong correlation ($\rho = -0.720$) and significant ($p=0.001$); in males the outcome measured was the same, negative, strong and significant ($\rho = -0.752$; $p=0.005$) and in females the correlation was strong, negative and significant ($\rho = -0.719$; $p=0.001$), thus demonstrating that as more athletes like to compete more positive attitudes they will be affirmed and the negative attitudes must decrease.

Regarding motivation to task orientation and ego, the correlation of the group was positive, strong and significant ($\rho = 0.841$, $p=0.001$). In the female the result was the same, that is, strong, positive and significant ($\rho = 0.888$, $p=0.001$) and the same trend was observed in males with moderate, positive and significant correlation ($\rho = 0.621$, $p=0.031$), and thus, as the task orientation of ego rises issues increase significantly.

To end with established the correlation between attitudes (positive and negative) and motivation (task and ego) we observe the following results: the correlation between positive attitudes and task orientation and ego orientation were weak and nonsignificant ($\rho = 0.132$, $p=0.496$, $\rho = 0.196$, $p=0.309$, respectively). Negative attitudes and ego motivation was seen a moderate negative correlation ($\rho = -0.317$), and not significant ($p=0.09$) and negative attitudes correlated with task orientation was weak, negative and not significant ($\rho = -0.275$; $p=0.149$).

In men correlating ego and negative attitudes the result was moderate, positive and not significant ($\rho = 0.301$, $p=0.342$); negative, weak and not significant ($\rho = -0.116$, $p=0.719$) when correlated ego and positive attitudes. Correlating orientation task and positive attitudes the result was weak, positive and not significant ($\rho = 0.043$, $p=0.917$), similar result when correlated orientation task and negative attitudes, or weak,

positive and not significant ($\rho=0.236$, $p=0.460$), so no correlation was found in males between both applied scales.

In female, the correlation between ego orientation and positive attitudes the result was negative, moderate and significant ($\rho= -0.537$, $p=0.026$), i.e., as the ego characteristics decrease increase positive attitudes. When correlated ego and negative attitudes the result is positive, weak and not significant ($\rho=0.226$, $p=0.384$), and for the correlation of task motivation with negative attitudes, the result was weak, positive and not significant ($\rho=0.123$, $p=0.639$) and to task orientation with positive attitudes was found the result negative, moderate and significant ($\rho= -0.493$, $p=0.044$), so when you increase the orientation characteristics paw task decreases the positive attitude, as well.

If we consider that the correlation between task and ego orientation was positive and significant both in the total group and in women, we believe that in both attitudes the result coincides demonstrating true correlations for positive attitudes and both directions.

Trying to answer one of the hypotheses of the study, by identifying the age could influence, thus increasing the level of positive attitudes to competition due to greater experience of the athletes, we find that there is a positive, moderate and significant correlation in the total group for age of the athletes and negative attitudes ($\rho=0.510$, $p=0.005$) and a negative, moderate and significant correlation in terms of age and positive attitudes ($\rho= -0.532$, $p=0.003$), so the athletes as they mature, getting older, positive attitudes tend to fall, and negative attitudes tend to increase.

Female swimmers have shown a negative correlation, moderate and significant when we correlate positive attitudes and age ($\rho= -0.542$, $p=0.025$), and the same trend was found in male swimmers, a moderate negative correlation, but not significant ($\rho= -0.536$, $p=0.072$), so the if age increases, decreases positive attitudes. When we correlated age and negative attitudes, women had a moderate, positive and no significant correlation ($\rho=0.453$, $p=0.068$), the same result found in men ($\rho=0.594$, $p=0.004$), but significant, that is, men as they get older tend to increase negative attitudes.

Separately correlating data sprinters, for task and ego, the result was positive, strong and significant ($\rho=0.793$, $p=0.001$), then as the orientation task rises the ego tends to increase; the same happened to the long distance swimmers ($\rho=0.882$, $p=0.001$). Regarding the ego and task orientation there was no significant difference between long distance swimmers and sprinters ($p= 0.771$; $p=0.425$). The average orientation sprinters ego is 3.43 and long distance swimmers 3.33, while the orientation for the task long distance swimmers average is 4.58 and sprinters 4.72. The correlation between positive and negative attitudes of sprinters proved negative, strong and significant ($\rho= -0.816$, $p=0.001$), and long distance swimmers the correlation was negative, moderate and significant ($\rho= -0.589$, $p=0.044$).

Sprinters, correlated with negative attitudes with task and ego orientation, have not shown significant results, but positive and moderate to ego and positive and weak to task ($\rho=0.428$ and $\rho=0.236$). For positive attitudes correlations were not significant, however for orientation ego was moderate and negative ($\rho= -0.345$, $p=0.176$) and for the orientation task was negative and weak ($\rho= -0.082$, $p=0.754$).

According to Hirota et al. (2014) a sports environment has the possibility to encourage different experiences and learning, so in sporting competitions could reveal new possibilities, since we do not know what the opponents have to offer us; the authors also complement that athletes with positive attitudes invariably tend to have greater control their stress. Aparicio et al. (2004) said that the relationship between attitudes and performance is bidirectional and complex. It is understandable, then, that students with good performance in a particular subject tend to have extra positive attitudes towards it, as well as those with more positive attitudes tend to perform better, and vice versa. Therefore Huffman et al. (2003), makes clear that our attitudes are learned in this way can be change with time, not being permanent; for this to occur the effort of persuasion is necessary, or cognitive dissonance, which explains that it is a discrepancy between perceived an attitude and a behavior or between an attitude and new information. Besides, as showed Ay et al. (2013) a positive self-talk enhanced learning to a new swimming skill and Improved self-efficacy.

Conclusion

It is evident in the study that swimming elite athletes have unique characteristics compared to other sports, since the show high orientation to the ego and task and undoubtedly have positive attitudes and respect sporting competition, and as positive attitudes rise the negative has a significant tendency to decrease.

References

- Andrade, A., Salguero, A., Marquez, S. (2006). Reasons for sports participation of Brazilian swimmers. *Fitness & performance Journal*, 5(6), 363-369.
- Aparicio, A., Bazán, J.L., Abdounur, O. (2014). A review of research on attitudes and performance evaluation in relation to statistics in Peru. VII Paulista Meeting of Mathematics. June, 9-12.
- Ay, K. M., Halaweh, R., Al-Taieb, M. A. (2013). Positive self-talk and its effect on learning the grab start skill in swimming and self-efficacy improvement. *Journal of Physical Education and Sport*, 13(4), 578. Doi: <http://dx.doi.org/10.7752/jpes.2017.01054>.

- Brito, M.R.F. (1998). Adaptation and Validation of a Scale of Attitudes in Mathematics. *Zetetiké*, 6(9).
- Cid, L., Louro, H. (2010). Is swimming a passion or a sacrifice? Study of the relationship between the type of passion that the athlete feels by the modality and its motivational orientation. *Iberoamericana de Psicología del Ejercicio y el Deporte Journal*, 5(1)99-114.
- Duda, J.L. (1992). Motivation in Sport Settings: A Goal Perspective Approach. In ROBERTS, G. C. *Motivation in Sport and exercise*. Illinois: Human Kinetics Books.
- Duda, J.L. (1993). Goals: a social cognitive approach to the study of achievement motivation in sport. In: Singer, R.N., Murphy, M., Tennant, L.K. (Eds.). *Handbook on research in sport psychology*. New York: MacMillan.
- Faria, T.G. (2004). Comparative analysis of the level of intrinsic motivation of athletes of both sexes, participants of individual and collective sports, with different levels of experience. Master study, Universidade Federal do Paraná.
- Faria, P.C., Moro, M.L.F., Brito, M.R.F. (2008). Attitudes of teachers and future teachers regarding Mathematics. *Estudos de Psicologia*, 13(3), 257-265.
- Fonseca, A., Balagué, G. (2001). Avaliação dos Objectivos de realização no futebol juvenil de competição: comparação entre TEOSQp e POSQp. In: Fonseca, A.M. (ed.) *Estudos sobre motivação*. Faculdade de Ciências do desporto.
- Hirota, V.B., Schindler, P., Villar, V. (2006). Motivation in university female athletes field soccer practitioners: a pilot study. *Mackenzie Journal of Physical Education and Sport*, 5, 135-142.
- Hirota, V.B., De Marco, A. (2006). Identification of the motivational climate in public and private schools in sports learning in field soccer: a pilot study. *Brazilian Journal of Physical Education and Sport*, 20 (5), 415.
- Hirota, V.B., Hayashi, D.H., De Marco, A., Verardi, C.E.L. (2011). The influence of motivational orientation during training of novice athletes in tennis field. *Mackenzie Journal of Physical Education and Sports*, 6(3), 11-20.
- Hirota, V.B., Diniz, D.V., Silva, M.R., Lima, R.O., Verardi, C.E.L., De Marco, A. (2014). Initial stages of attitude's instrument adaptation to Brazilian sports competitions. *International Journal of Physical Education, Sports and Health*, 1(1), 10-13.
- Hirota, V.B. (2014). Goal's orientation of Brazilians skateboarders. *Journal of Physical Education and Sport Management*, 5(1), 1-4. Doi: <http://dx.doi.org/10.5897/JPEM2012.015>.
- Hirota, V.B., Verardi, C.E.L., De Marco, A. (2017). TEOSQ factorial exploration of youth Brazilian soccer player's. *Journal of Physical Education and Sport*, 17(1), 355-360. Doi: <http://dx.doi.org/10.7752/jpes.2017.01052>.
- Huffman, K., Vernoy, M., Vernoy, J. (2003). *Psychology*. São Paulo: Atlas.
- Klain, I.P., Cid, L., Matos, D.G., Hickner, R.C., Moutão, J. (2014). Motivational climate, goal orientation and exercise adherence in fitness centers and personal training contexts. *Motriz*, 20(3), 249-256.
- Lopez-Walle, J., Tristan, J., Tomas, I., Castillo, I., Balaguer, I. (2011). Invarianza factorial del teosq en jóvenes deportistas mexicanos y españoles. *Mexican Psychology Journal*, 28(1).
- Nicholls, J.G. (1984). Achievement motivation: conceptions of ability, subjective experience, task choice, and performance. *Psychological Review*, 91.
- Nicholls, J.G. (1989). Conceptions of ability and achievement motivation. In: Ames, R., Ames, C. (Eds.). *Research on Motivation in education: Student Motivation*, v. 01. New York: Academic Press.
- Prat, M., Soler, S. (2003). *Actitudes, Valores y Normas en la Educación Física y el Deporte*. Barcelona: INDE.
- Rajechi, D.W. (1990). *Attitudes: themes and advances*. 2. Ed. Sunderland. MA: Sineaur Associates.
- Smith, A., Balaguer, I., Duda, J. (2006). Goal orientation profile differences on perceived motivational climate, perceived peer relationships, and motivation-related responses of youth athletes. *Journal of Sports Sciences*, 24(12), 1315-1327.
- Thomas, J.R., Nelson, J.K. (2002). *Research Methods in Physical Activity*. Porto Alegre: Artmed.
- Vernon, M.D. (1973). *Human Motivation*. Petrópolis: Vozes.