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Congruence between Preferred and Perceived Coach Leadership Behavior and Athlete Satisfaction: The Paradigm in Synchronized Swimming

By Ntomali S., Psychountaki M., Kyprianou M. & Chairpoulou C.

National and Kapodistrian University of Athens

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Keywords: *athlete satisfaction, leadership behavior, congruence hypothesis, multidimensional model of leadership, synchronized swimming.*

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Congruence between Preferred and Perceived Coach Leadership Behavior and Athlete Satisfaction: The Paradigm in Synchronized Swimming

Ntomali S. ^α, Psychountaki M. ^σ, Kyprianou M. ^ρ & Chairpoulou C. ^ω

Abstract- Coach Leadership can be perceived as a behavioral process that under favorable conditions increases athlete performance and satisfaction. According to the multidimensional model of leadership, a basic prerequisite for the emergence of this effect is the congruence between preferred and perceived coach leadership behavior from the athletes' vantage point. This hypothesis was tested on a comprehensive sample of 165 Greek synchronized swimming athletes. Athlete satisfaction was measured using the Athletes Satisfaction Scale, while preferred and perceived leadership behavior was assessed with the Leadership Scale for Sports. The present findings provide support for the hypothesis, which states that the congruence between preferred and perceived coach leadership behavior leads to athletes' *satisfaction with leadership* and partly with *personal outcome*. At least three different constructs of leadership behavior (*training and instruction, social support* and *positive feedback*) provide supplementary information for the formulation of the concept of *satisfaction with leadership*.

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I. INTRODUCTION

Support, either in competitive or recreational form, is irrevocably a human activity; therefore the athlete is the pivotal element in any athletic program or activity (Bebetsos & Theodorakis is, 2003; Chelladurai & Riemer, 1997). On the other hand, every sport entails the acquisition and assimilation of its own specific skills, drills and disciplines. These are offered by an expert individual, that is, the coach who will lead the individual athlete and the team toward the achievement of their goals. In this framework, coach leadership is defined as a behavioral process that is used to increase athlete performance and satisfaction (Chelladurai & Riemer, 1998).

Author α: National and Kapodistrian University of Athens, School of Physical Education & Sport Science, Greece.

Author σ: Biostatistician, Athens, Greece.

Author ρ: Coach leadership behavior and athlete satisfaction.

Author ω: M. Kyprianou, Biostatistician, Makrinitsas 18, 11522, Athens, Greece. e-mail: miltosk@gmail.com

The confirmation of the above proposition requires that athlete performance and satisfaction as well as coach leadership behavior, at least from the athlete's vantage point, should methodologically become measurable entities. These prerequisites are fulfilled within the framework of Chelladurai's multidimensional model of leadership (Chelladurai, 1978, 1990; Chelladurai & Carron, 1978).

With regard to the coach leadership behavior, there are two aspects to be taken into considerations from the point of view of the athletes: firstly are the athletes' preferences, i.e. their expectations regarding their coaches' style in different facets of their leadership behavior (*training and instruction, democratic behavior, autocratic behavior, social support* and *positive feedback*) and, secondly are the athletes' perceptions, i.e. the level at which these leadership constructs are recognized in their current coach. These aspects are assessed with the Preferred and Perceived versions of Leadership Scale for Sports (LSS) questionnaire (Chelladurai & Saleh, 1980).

The second element of the model, athlete satisfaction defines "a positive affective state resulting from a complex evaluation of the structures, processes, and outcomes associated with the athletic experience" (Chelladurai & Riemer, 1997, p. 135). There are two aspects of athlete satisfaction: *satisfaction with leadership* and *satisfaction with personal outcome*, measured with the Scale of Athlete Satisfaction (SAS) developed by Chelladurai, Imamura, Yamaguchi, Oinuma, and Miyauchi (1988).

As already stated, the two questionnaires regarding the athletes' preferences and perceptions of different constructs with regards to their coaches' leadership behavior together with the questionnaire regarding the athletes' *satisfaction with leadership* and *personal outcome* constitute an integral part of Chelladurai's leadership model in sports. Beyond the valuable independent information that each of the constructs convey, the model is essentially structured upon the interactions and the reciprocity among the constructs. Thus, according to the model, the athletes' *satisfaction with leadership* and *personal outcome* are

expected to be to some degree determined by their perception of their coaches' leadership behavior (Chelladurai, 1990), but most importantly by the congruence between their preferences and perceptions of their coach leadership behavior (Chelladurai, 1984; Riemer & Chelladurai, 1995). Surely, if the athletes' expectations from their coaches are at odds with what they believe they actually receive from them, this will most probably be reflected in their satisfaction, or lack thereof with leadership and perhaps also be reciprocated from their dissatisfaction with personal outcome.

The purpose of the present research was to study, within the framework of Chelladurai's multidimensional leadership model, the association of the congruence between preferred and perceived coach leadership behavior and athlete *satisfaction with leadership* and *personal outcome* in Greek synchronized swimmers.

II. METHODS

a) Participants

The sample consisted of 165 Greek synchronized swimming athletes from 20 teams. The sample size included all athletes participating in national championships and in international events. Inclusion criteria in the study required that the participants were active athletes, had more than two years athletic experience and had competed in at least four national championships. Another important inclusion criterion was that the athletes should be at least 13 years of age. The reason for this was that, apart from the fact that athletes aged 8-12 might not satisfy the first two criteria, in these ages the athletes might not have been able to understand the substance and content of the questions so that they could provide valid and creditable answers. Table 1 summarizes the basic characteristics of the sample.

Table 1: Descriptive statistics of the sample

	Descriptives
Number of athletes	165
Age (years)	16.2±3.8
Athletic experience (years)	8.0±3.7
Number of competitions	23.3±21.3
Training years with the current coach	4.0±2.6

b) Questionnaires

The athletes' preferences and perceptions of their coaches' leadership behavior were assessed with the Preferred and Perceived versions of Leadership Scale for Sports (LSS; Chelladurai & Saleh, 1980) questionnaire. The LSS measures the athletes' preferences and perceptions of their coaches' leadership styles. The synchronized swimmers completed the Greek versions of the LSS Preferred

Edition and Perceived Edition (Aggelonidis, Zervas, Kakkos, & Psychountaki, 1996). The scale consists of 40 items in which answers were given in a Likert type 5-point scale ranging from 1 – never to 5 – always, with the value of 3 – sometimes representing the midpoint. Athletes were instructed to respond to the questionnaires based on how they presently preferred and perceived the leadership behavior of their current coach. Both instruments measure five constructs of leadership behavior: (i) *training and instruction*, (ii) *democratic behavior*, (iii) *autocratic behavior*, (iv) *social support* and (v) *positive feedback*. The scores for these constructs represent the mean values of their constituent items.

The internal consistency estimates, measured by Cronbach's alpha coefficients, for the original validated Greek preferred version were 0.84, 0.76, 0.57, 0.62 and 0.76 for the five factors respectively. In the present study, the internal consistency estimates were 0.65, 0.74, 0.53, 0.58 and 0.65 correspondingly. For the original validated Greek perceived version, the internal consistency estimates were 0.94, 0.83, 0.67, 0.84 and 0.88 for the five factors respectively. In the present study, the internal consistency estimates were 0.84, 0.80, 0.67, 0.75 and 0.80 correspondingly.

The athletes' satisfaction was assessed with the Athletes Satisfaction Scale (SAS; Chelladurai et al., 1988). The SAS measures the satisfaction that athletes feel as a member of a team. Athletes completed the Greek version (Theodorakis & Bebetos, 2003) of the questionnaire. They were instructed to indicate the extent of their satisfaction on a 7-point Likert type scale ranging from 1 - extremely dissatisfied to 7 - extremely satisfied, with the value of 4 – neutral representing the midpoint. The scale consists of 10 items and includes two dimensions: (i) *satisfaction with leadership* and (ii) *satisfaction with personal outcome*. The scores for these dimensions are represented by the mean values of their constituent items.

Analysis of the original Greek version supported the internal consistency of the scales (0.95 for *satisfaction with leadership* and 0.83 for *satisfaction with personal outcome*). In the present study, the internal consistency estimates were 0.90 and 0.61 respectively.

c) Procedure

In each team the coach was informed about the purpose of the study and gave his/her initial approval. Written consent for the athletes' participation was received from the athlete herself and when the athlete was a minor under 18 years of age, also from the parent/guardian. The questionnaires were completed on the clubs training grounds in a 45-minute session at the end of the competitive season.

III. STATISTICAL ANALYSIS

The five constructs from the preferred and perceived versions of the LSS were compared within each questionnaire with repeated measures analysis of variance and between questionnaires with the paired samples t-tests. The last test was also applied with regard to the two satisfaction scores of the SAS questionnaire.

For each of the five constructs of the leadership behavior, a new variable was calculated from the difference of the perceived from the preferred score (Horne & Carron, 1985). These five new variables represent the discrepancy scores, since larger values of these scores are indicative of less congruence between preference and perception. Therefore, the mean values of these discrepancy scores were subjected to one sample t-tests with the null hypothesis being that they do not differ significantly from zero.

Finally, for each discrepancy score the correlation coefficient with *satisfaction with leadership and personal outcome* was calculated. Subsequently, for each of the two satisfaction scores hierarchical linear regression models were performed with the five discrepancy scores as the independent predictors. The level of significance was set at 0.05.

IV. RESULTS

As shown in figure 1, in all leadership behavior constructs, with the exception of *autocratic behavior*, the means of the preferred scores are higher than the value of three, which is in the mid-point of the scale. The

repeated measures MANOVA procedure proved that the mean values of the five constructs were not equal ($F_{1, 164}=430, p<0.01, \eta^2=0.724$). In fact, as post-hoc comparisons with Bonferroni adjustments proved, no two constructs had comparable means that did not differ significantly, the descending order of the means being *training and instruction - positive feedback - social support - democratic behavior - autocratic behavior*.

Similar were the findings with regard to the comparisons of the means of the perceived scores ($F_{1, 164}=148, p<0.01, \eta^2=0.474$). One slight differentiation is the mean value of the construct of *democratic behavior* falling below three (Figure 1).

In all leadership behavior constructs, with the exception of *autocratic behavior*, the preferred scores were higher than the corresponding perceived scores, the differences being significant ($p<0.01$), both for the four positive ones and the negative one, as the paired t-tests showed.

Ex facto all five discrepancy scores differ significantly from zero (one sample t-tests, $p<0.01$), signaling the existence of incongruence between preference and perception with regard to leadership behavior, the descending order of the means being *democratic behavior - social support - training and instruction - positive feedback - autocratic behavior* (Figure 1).

With *satisfaction from leadership* being significantly greater than *satisfaction from personal outcome* ($p<0.05$), the mean values of the two scores, considering that the maximum possible would be seven, were close to six, which is quite high.

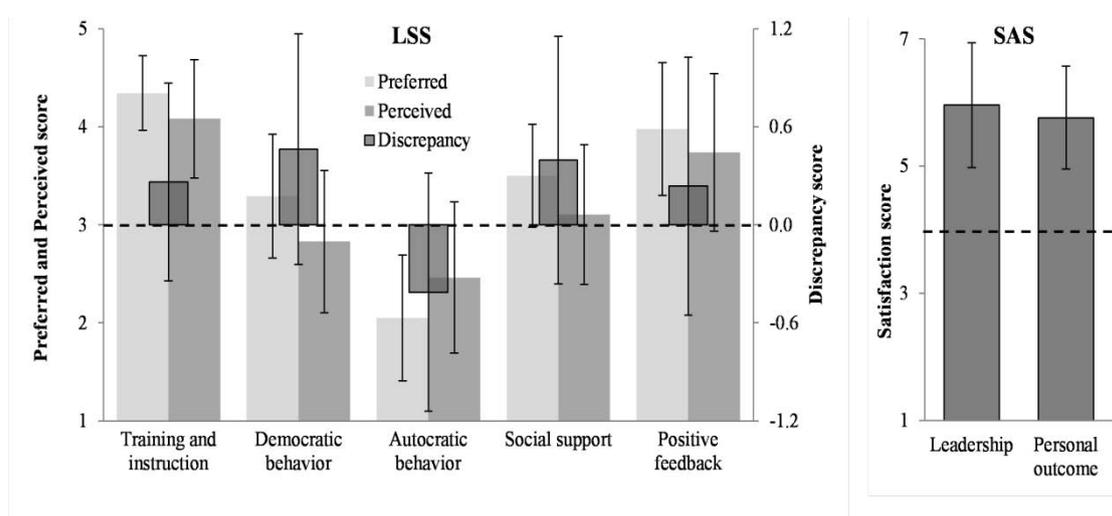


Figure 1: Means of the five constructs of the preferred and perceived leadership behavior scores (primary axis) and the corresponding discrepancy scores (secondary axis) and means of the two constructs of athletes' satisfaction.

- The error bars represent the standard deviations.
- The dotted lines denote the theoretical mean values of 3 in LSS of the preferred and perceived scores on the primary axis and the zero values of the discrepancy scores on the secondary axis and the theoretical mean values of 4 in SAS.

Figure 2 reveals the significant relationships of the discrepancy scores of the four positive constructs of leadership behavior with athlete satisfaction. The corresponding coefficients of determination (R^2) show that a significant proportion of the variability of athlete *satisfaction with leadership* is attributed to the variability of the discrepancy scores of leadership behavior constructs. The negative slopes indicate that the higher the discrepancy scores, the lower the athlete *satisfaction with leadership*, i.e. the lower the congruence between preferences and perceptions of leadership behavior, the less the athlete *satisfaction with leadership*. As it can be inferred by the values of the correlation coefficients, the discrepancy score with the greatest effect on *satisfaction with leadership* was that of *training and instruction*, followed by *social support*, *positive feedback* and *democratic behavior*. Furthermore, as seen by the slopes and corresponding coefficients of the regression equations, an average unit

rise in the discrepancy score of *training and instruction* results in an average reduction in *satisfaction with leadership* by 0.96 units. With regard to the other discrepancy scores, the slopes and corresponding coefficients are reduced. As a result, an average unit increase in the discrepancy score of *democratic behavior* results in an average reduction in *satisfaction with leadership* by only 0.51 units.

Conversely, the only discrepancy score that correlates significantly with *satisfaction with personal outcome* is *social support* ($r=-0.176$). The direction of the effect is again the same, i.e. less congruence between preference and perception of *social support* leads to lower *satisfaction with personal outcome*. However, as the coefficient of determination ($R^2=3.1\%$) and the slope coefficient ($b=-0.19$, Eq. 2) show, the effect on *satisfaction with personal outcome* is not as notable as the effect on *satisfaction with leadership*.

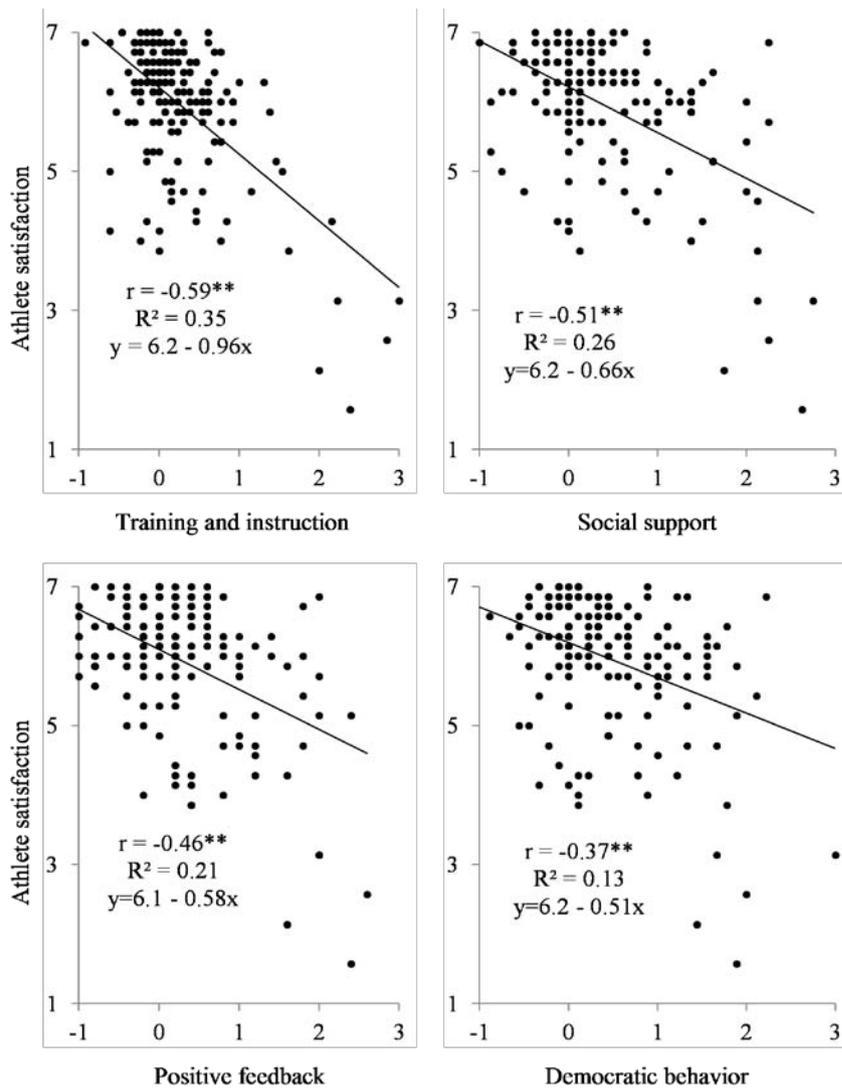


Figure 2: Scatter plots of the relationships of the discrepancy scores for the four positive constructs of leadership behavior with athlete satisfaction. Asterisks denote that the correlation coefficient is significant.

As Table 2 shows, three discrepancy scores enter the hierarchical linear regression model as predictors of the *satisfaction with leadership* construct, with an overall $R=0.632$ and $R^2=39.9\%$ ($F_{3, 161}=35.7$, $p<0.001$). Thus, the regression equation is the following:

$$\text{Satisfaction with leadership} = 6.267 - 0.628 \times \text{Training and instruction} - 0.250 \times \text{Social Support} - 0.196 \times \text{Positive feedback} \text{ (Eq. 1).}$$

The above denote the corresponding discrepancy scores of the constructs.

As expected, in the same model with *satisfaction with personal outcome* as the dependent variable, only the discrepancy score of *social support* entered the regression equation with $R=-0.176$ and $R^2=3.1\%$ as reported above ($F_{1, 163}=5.2$, $p=0.023$). In this case, the regression equation is:

$$\text{Satisfaction with personal outcome} = 5.836 - 0.189 \times \text{Social Support} \text{ (Eq. 2).}$$

Table 2: Results from the hierarchical linear regression model with satisfaction with leadership as the dependent variable and the five discrepancy scores as the independent predictors.

Predictor (Discrepancy score)	B	SE	t-value	p-value
(Constant)	6.267	.068	92.062	.000
<i>Training and Instruction</i>	-.628	.135	-4.662	.000
<i>Social Support</i>	-.250	.103	-2.431	.016
<i>Positive Feedback</i>	-.196	.093	-2.102	.037

V. DISCUSSION

The present article, based on the paradigm of synchronized swimming athletes, provides support to one of the cornerstones of Chelladurai's multidimensional leadership model. That is that the congruence between the athletes' preferences and perceptions of their coaches' leadership behavior is effectively associated with their *satisfaction with leadership* and partly with their *satisfaction with personal outcome*. At the same time, there are a number of interesting findings providing insight into the nature of the structure of the constructs of leadership behavior and satisfaction and their relative importance in the manner the athletes perceive, qualify and quantify them. The significant differences in the mean values of the five constructs of the preferred version of the LSS suggest a hierarchy in what athletes deem as important to expect from their coaches. At the same time, it should not be forgotten that all four positive leadership behavioral constructs (*training and instruction*, *positive feedback*, *social support* and *democratic behavior*) are quite desirable while the negative construct of *autocratic behavior* is duly expected to be absent or minimal.

Training and instruction is the first priority among the athletes' expectations from their coaches followed by *positive feedback*. According to Chelladurai (1989), *training and instruction* describes coaching behavior "aimed at improving the athletes' performance by emphasizing and facilitating hard and strenuous training; instructing them in the skills, techniques and tactics of the sport; clarifying the relationship among the members; and by structuring and coordinating the members' activities" (p. 333), while *positive feedback* describes coaching behavior "which reinforces an athlete by recognizing and rewarding good performance" (p. 333). The above qualifications sum up every athlete's expectations from an ideal coach. The importance of the factors of *training and instruction* and

positive feedback was also found to be even higher from the perspective of the coaches (Horne & Carron, 1985).

Turning to the mean values of the five constructs of the perceived version of the LSS in conjunction with the derived discrepancy scores, it seems that, although *democratic behavior* and *social support* are not the first priorities in the athletes' expectations from their coaches, it is in these two conceptions that the athletes suffer the greatest disillusionment, collateral to their disenchantment in the coaches' unexpectedly increased *autocratic behavior*. According to Chelladurai (1989), *social support* describes coaching behavior "characterized by a concern for the welfare of individual athletes, positive group atmosphere and warm interpersonal relations with members" (p. 333), while *democratic behavior* describes coaching behavior "which allows greater participation by the athletes in decisions pertaining to group goals, practice methods and game tactics and strategies" (p. 333). Conversely, *autocratic behavior* describes coaching behavior "which involves independent decision making and stresses personal authority" (p. 333). However, Chelladurai & Saleh (1980) and Chelladurai et al. (1988) advise that caution must be taken when looking at the *autocratic behavior* results.

An interesting nuance that may bear influence on the subsequent discussion is the fact that, alongside with the overall positive perception of their coaches' leadership behavior, the athletes are also quite satisfied primarily with their leadership, but also with their personal outcome.

The primary finding of the current study is the corroboration of one of the cornerstones of the multidimensional leadership model, namely the existence of a strong relationship of the congruence between preferred and perceived leadership behavior

with athlete *satisfaction with leadership*. Each of the four discrepancy scores derived from positive leadership behavior concepts was strongly and negatively correlated with *satisfaction with leadership*. Furthermore, the fact that three of them (*training and instruction*, *social support* and *positive feedback*) enter the regression equation as predictors of *satisfaction with leadership* implies that each of these congruence structures conveys independent and additional information for the formulation of the concept of *satisfaction with leadership*.

The finding that congruence between preferred and perceived leadership behavior is a stronger determinant of athlete *satisfaction with leadership* than of *personal outcome* can also be explained by the nature of synchronized swimming as a sport. Although synchronized swimming athletes do take part in competitions, the competitive character of the outcome, in terms of winning or losing, is not as straightforward as, say, the outcome of a basketball match.

It is important to note, as one of the limitations of the study, that the inferences arrived herein are derived from a sample, albeit comprehensive, of relatively young female athletes committed to an attractive but demanding sport.

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