

ANALYSIS OF DIFFERENCES IN ORIENTATION BETWEEN YOUNG FEMALE GYMNASTS

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Abstract

The primary objective of this study was to compare and explain the results in the orientation of young gymnasts, team members (competitors, more successful) and those who train recreationally (less successful). In accordance with the objectives, the sample of 69 female gymnasts aged 7-12 years was used and TEOSQ questionnaire was applied. Obtained results primarily indicate high values in both observed orientation dimensions in both groups of young gymnasts. We also observed the existence of significant differences in the dimensions of the observed orientation within the group of more successful gymnasts ($p < 0.001$) and less successful ($p < 0.001$) as well as on the entire sample ($p < 0.001$). Furthermore, significant differences were not found among groups in the task orientation ($p = 0.75$), while young competitors have significantly higher results in ego orientation ($p < 0.05$). These results clearly indicate, due to the further quality education young gymnasts, the need for scientific research of the relationships between task/ego orientations with other specific gymnastic motor skills.

Keywords: task orientation, ego orientation, TEOSQ, gymnastics, differences

1. Introduction

Information about the dominant approach to motor learning represents essential information about every programmed kinesiological treatment within education, elite sport or recreation [8]. There are two basic approaches to physical activity: extrinsic or ego orientation (EO) and intrinsic or task orientation (IO) [5]. The same authors state that a person with a dominant EO is primarily focused on outcomes and generally guided by the desire for superiority and competition with others. Such people, demonstrating that they are better than their competition colleagues assume their successfulness. On the other hand, person with a dominant IO have aims to learn and improve their skills and their personal goal is to refine and improve performance. It is important to point out that these two dimensions are not mutually exclusive, and that same person can have high

scores or low scores in both these dimensions [1]. Furthermore, same authors specify the existence of four possible orientation profiles: high IO/high EO, low IO/low EO, high EO/low IO and low IO/high EO. Although there are four possible orientation profiles possible, studies show how there two are dominant: high IO/low EO and low IO/high EO [12].

Gymnastics is a specific polystructural and acyclic sport activity in which under the term "athletes", even the term "top athletes", children even younger than 10 years are considered. Gymnastics rules are requiring that each element is performed technically perfect and aesthetically acceptable, as defined by strict rules. For children to reach a specified level of motor knowledge, it is crucial that they are highly task oriented [8], [11]. It is therefore important to focus children on themselves, on their mistakes and shortcomings, regardless of the other. Accordingly, coaches and other staff in gymnastic clubs should create a motivational climate in which task orientation or intrinsic motivation would be predominant. Our behavior is the result of complex interactions of a large number of psycho-social dimensions, especially motives which are associated by reciprocal, non-linear relationships [3], [9].

Different motives can be manifest in a similar way and also similar motives can be manifested in various ways [12]. Accordingly, the orientation of athletes will certainly depend on their experience, various social factors (ambitious parents) and the motivational climate. Scientific research suggests that in any collective sports, especially in younger age categories, it is desirable to overcome the ego orientation [2]. In accordance with the above mentioned, task orientation is certainly a prerequisite for a positive motivational climate within the sport club.

In school age, sport is a main segment of socialization, and attitude toward the sport has an important role in developing of self-confidence. Different attitudes towards activities are usually determined by cognitive and motivational factors, and it is appropriate to explore the intrinsic or extrinsic orientation, and their interaction [8]. It is also important to emphasize that under the

assumption that child have a strong need to demonstrate sporting dominance and if same child also have a lack of competence in the performance, there comes frustration and lack of motivation as a consequence [4], [7], [3]. In sports clubs, generating the positive motivational climate can be crucial, because research points to that as a predisposition for athletic success [7], [3].

Therefore, coaches and teachers of various motor activities have to compare the results in orientation of certain groups, such as recreational and competitors, to get a potentially fundamental guidelines for the control of educational and training process of young athletes. Accordingly, the fundamental objective of this study was to determine the existence of statistically significant differences in the level of EO and IO for recreational gymnasts and competitors. Aim is also within each group to analyze differences between EO and IO dimensions. A secondary objective of this study was to obtain referent values for young gymnasts in two observed dimensions. These results should generate important conclusions in terms of methodological and pedagogical guidance of young gymnasts, together with future modes of sport club organization, particularly targeting motivational climate. It should be noted that studies of this type are rare which gives preeminence to this study.

2. Hypotheses of the research

In accordance with the objectives of this research, following hypotheses are given: H1-Ego orientation will be significantly higher in gymnasts who train recreationally than competitors. H2-Competitors will have significantly higher task orientation than recreational gymnasts. H3-Competitors will have a significantly greater task orientation ego orientation. H4-Recreational gymnasts will have a significantly greater task orientation than ego orientation H5-Concerning all gymnasts together, there will be significantly higher task orientation than the ego orientation.

3. Methods

For this research, 69 young female gymnasts, aged between 7 and 12 years, members of the club "Salto" from Solin, Croatia were examined. Sample consisted of 43 girls from a group of recreational gymnasts (3 training per week) and 26 competitor gymnasts (4-6 trainings per week). Measuring instrument for assessing intrinsic and extrinsic orientation in sport is TEOSQ (Task and Ego Orientation in Sport Questionnaire) [6], [7]. TEOSQ consists of 13 questions (items), of which 7 of them refer to a task orientation dimension (items 2, 5, 8, 9, 11, 12, 13), and other 6 questions

refer to ego orientation dimension. Furthermore, TEOSQ uses 1 to 5 Likert-type scale (1-strongly disagree, 5-strongly agree). For this research, Croatian version of the TEOSQ was used [1]. Same authors have checked the psychometric properties, factor structure and reliability of the Croatian version of the questionnaire TEOSQ.

For each item within each dimension (IO and EO) and for two subsamples and complete sample average value and standard deviation was calculated. In accordance with hypotheses of the research, one-sided t-test for dependent and independent variables was used.

4. Results and discussion

Table 1 shows average results of all used TEOSQ questionnaire items.

Table 1. Average values of items (N – sample size, M – mean, SD – standard deviation)

IO				EO			
ITEM	N	M	SD	ITEM	N	M	SD
P2	69	4.58	0.67	P1	69	2.97	1.47
P5	69	4.68	0.72	P3	69	3.30	1.34
P8	69	4.58	0.67	P4	69	2.36	1.37
P9	69	4.75	0.58	P6	69	2.39	1.34
P11	69	4.59	0.65	P7	69	2.97	1.38
P12	69	4.68	0.58	P10	69	3.26	1.30
P13	69	4.57	0.81				

If we look at the entire sample as a homogeneous entity, it can be seen that the values of the responses to representatives of the latent dimension IO is very high, over 4.5, while for the ninth item (P9) is even 4.75 (Table 1). Furthermore, the values of all answered question that measure latent dimension EO range from 2.36 to 3.26 and the mean is approximately 2.8. It is remarkable that the ego orientation in all subjects together, in absolute terms is lower than the task orientation, which is the expected result. Within table 2, average results for subsample consisted of gymnasts team members are given, separately for the IO and EO dimensions.

Table 2. Average values of items for team members – more successful gymnasts (N – subsample size, M – mean, SD – standard deviation,)

IO				EO			
ITEM	N	M	SD.	ITEM	N	M	SD
P2	26	4.69	0.62	P1	26	2.00	1.17
P5	26	4.77	0.59	P3	26	3.15	1.32
P8	26	4.54	0.71	P4	26	2.08	1.47
P9	26	4.77	0.71	P6	26	1.96	1.22
P11	26	4.42	0.81	P7	26	2.69	1.49
P12	26	4.85	0.46	P10	26	2.85	1.49
P13	26	4.54	0.95				

From Table 2 can be seen that the average results in the IO dimension is 4.65, which means that observed young competitors are highly oriented to the task. That fact is also verified through results of all subjects together. The calculated values are expected and positive. Furthermore, the values of the responses of team members subsample in dimension EO is ranging from only 1.9 to 3.1, and the average of all particles is 2.45. Thus, we conclude that the contestants are not very focused on the high score what is expected result as also very positive result. Within table 3, average results for subsample consisted of recreational gymnasts are given, separately for the IO and EO dimensions.

Table 3. Average values of items for recreationally training gymnasts- less successful gymnasts (N – subsample size, M – mean, SD – standard deviation,)

IO				EO			
ITEM	N	M	SD	ITEM	N	M	SD
P2	43	4.51	0.70	P1	43	3.56	1.33
P5	43	4.63	0.79	P3	43	3.40	1.37
P8	43	4.60	0.66	P4	43	2.53	1.30
P9	43	4.74	0.49	P6	43	2.65	1.36
P11	43	4.70	0.51	P7	43	3.14	1.30
P12	43	4.58	0.63	P10	43	3.51	1.12
P13	43	4.58	0.73				

Furthermore, from Table 3 can be seen that the 43 gymnasts who are training recreationally highly oriented to the task. The average of the responses ranged from 4.5 to 4.7 and the mean of all responses was 4.62. Comparing the results with a group of team members it can be seen that the results are similar in absolute terms, although it was expected that they will be slightly lower. However, analyzing from the coaches aspect, for the whole sport organization and children themselves, it is better that this group have larger results in IO dimension. Also a group of recreational gymnasts, in terms of absolute values have lower results in EO dimension than in IO dimension (Table 3). But it have to be noted that the average response ranges from 2.5 to 3.5 and on average is 3.13 and that is relatively higher than in the group of competitors in IO dimension. Furthermore, in accordance with goal of this research - to determine and explain are there statistically significant differences between the results in the dimensions of the IO and EO for team members and those who train recreationally, within Table 4 results of one-sided t-test for dependent and independent variables are presented.

Table 4. Results of one-sided t test (t – t value, df – degrees of freedom, p – empirical significance of t-test)

Observed difference	t-test type	t	df	p
R-C in EO	Independent samples	-3.12	67	0.0027
R-C in IO	Independent samples	0.32	67	0.75
C in IO and EO	Dependent samples	11.96	50	0.0000
R in IO and EO	Dependent samples	9.98	84	0.0000
Total sample - IO and EO	Dependent samples	14.42	136	0.0000

Legend: C-team members, R-recreation

T-test results are presented in Table 4 indicate that a statistically significant differences in the task orientation between the contestants and recreational gymnasts. It is obvious that the contestants are much less focused on the result

than recreational gymnasts. This result is in accordance with expectations since the successful gymnasts should be less focused on the result than less successful. We can conclude that hypothesis H1 is confirmed.

On the other hand, hypothesis H2 cannot be approved. Precisely, both groups are highly task oriented and consequently statistically significant differences in the dimension of IO were not found. This fact suggests the existence of positive motivational climate – both contestants, as well as for recreational gymnasts are focused on the task. Furthermore, from Table 4 it can be clearly seen that statistically significant differences exist between the dimensions of the IO and EO inside group of the contestants. Average value of task orientation was 4.65 and the ego orientation was 2.45 (Table 2) and thus hypothesis H3 is confirmed. It is also clear that significant differences exist between the dimensions of EO and IO in a group of recreational gymnasts. Similar to team members, differences are high in absolute terms – the result in the IO dimension is 4.62 and the dimension of EO is 3.13. This proves the hypothesis H4. Finally, looking at the total sample of 69 young female gymnasts, average results in the IO dimension is 4.63 and in the EO dimension 2.87 and statistically significant difference was found between these two orientations. Thus, hypothesis H5 is confirmed. This result was expected and desirable, especially due to the specificity of sport gymnastics. Regardless of group membership, motivational climate is directed same toward all children.

5. Conclusion

The results of this study clearly indicate that the population of young gymnasts is highly task oriented. More precisely, the dimension of the IO is prevalent in the group of contestants and in a group of recreational gymnasts, and of course, in all observed subjects together. This is probably due to the positive motivational climate and coach labor coach and it shows that already implemented coaching strategy should be used in the future. Comparing contenders as successful gymnasts and recreational gymnasts as the less successful it can be seen that the contestants actually had a lower ego orientation, but at the same time task orientation was very high. So, personal progress is important to all observed gymnasts and they invest the effort to achieve it. It is important to underline that selected children are not comparing themselves with others they set realistic goals and have greater confidence. Due to the sample used in this research, the results could probably be generalized to the population of young gymnasts. Future research should be based on the other sports, and more homogeneous samples of

subjects. We assume that it would be of high professional and scientific interest to examine whether the correlation exists between IO/EO orientations dimensions with the overall efficiency and other sport-specific variables in a particular sport. These future studies, together with this research can be of great help to expert coaches in professional educational, pedagogical and kinesiological work especially in creating a positive motivational climate.

6. References

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