

Flow in marathon runners before, during and after the competition

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Abstract:

Introduction: The flow experience encompasses a combination of subjective phenomena that people may experience when performing exercise, sports or other activities in daily life. **Objective:** To compare flow levels experienced before, during and after a remarkable athletic performance. **Method:** The study involved 153 running athletes aged between 19 and 70 years old. Flow episodes before, during and after their remembered best performance were assessed. **Results:** Significant differences were found for flow episodes experienced before, during and after the competition. The athletes experienced more frequently/deeper flow episodes during their best competition. **Conclusions:** Most of the core features of flow occur during the athletic activity and not before or after it. Most of the dimensions of the flow occur during athletic activity and not before or after such activity. **Key words:** flow, athletics, marathon, optimal experience, competition.

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INTRODUCTION

Flow has been described as a state in which people forget about themselves and their concerns, getting totally absorbed in the task at hand and fully enjoying it. In this state, superlative performance seems like something natural and regular. Csikszentmihalyi (1990) listed nine component states of the flow experience: 1) challenge-skill balance, 2) merging of action and awareness, 3) clear, reachable goals 4) immediate and unambiguous feedback, 5) concentration on the task at hand, 6) paradox of control, 7) loss of self-consciousness, 8) transformation of time and 9) autotelic experience. Consistent evidence has been found for these nine component states (Jackson, 1992). Since these initial studies, numerous works have corroborated the existence of these extraordinary experiences and their positive influences on performance (Jackson and Csikszentmihalyi, 2002).

OBJECTIVE

Our objective was to compare the flow episodes experienced before, during and after a remarkable athletic performance to determine the extent to which each of the nine component states occurred during each of these three periods.

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METHOD

This study examined 153 marathon runners (88 men and 65 women; 57.50% and 42.5%, respectively) ages 19-70 ($M = 39.69$; $DT = 9.93$). On average, the participants practiced 6.76 hours weekly ($DT = 4.83$). The average number of years in the sport was 10.33 years ($DT = 7.59$). All of the participants competed in marathons regularly.

The flow experienced before, during and after remarkable athletic performances was evaluated with the standardized questionnaire *Flow State Scale-2* (Jackson and Eklund, 2004), using one item per component. Each athlete was asked to recall and recreate his or her best competition and then to indicate how frequently he/she had experienced each of the nine component states of flow mentioned above (Annex 1) using a Likert-type scale from 1= never to 5= always.

Participants were asked to collaborate voluntarily in a study that was aimed at understanding the feelings that the athletes had experienced before, during and after their most remarkable athletic performances. The questionnaires were administered the day before the 2009 Seville Marathon. The organizers provided us with a booth at the *Feria del Corredor* where we were able to talk with runners as they passed by to pick up their number.

Table 1: Comparison of the level of flow experienced before, during and after a great athletic performance

Component	Period	M	DT	Rango	Chi-Square (Friedman's Test)	p
Total flow components	During	37,68	5,34	2,37	36,76	0,000**
	Before	34,69	6,02	1,78		
	After	34,67	5,95	1,85		
Comparisons (Wilcoxon test)	Z	Before - During		After - During		After - Before
	p	-6,39		-5,18		-0,10
		0,000**		0,000**		0,918

* p < 0.05; ** p < 0.01

RESULTS

We found significant differences in the total flow experienced *before, during and after* the sports performance remembered (Table 1). The greatest level of flow is experienced during. This was the case for all of the dimensions except for *clear, reachable goals*, where no significant differences were obtained. The *before-during, during-after* and *before-after* comparisons for both total flow and for each of their dimensions (Table 2) showed that total flow scores for *before-during* and *during-after* were significantly different; the highest levels of frequency/deepness of the experience appeared during the sports event. However, no differences were found when comparing the flow experiences *before* and *after* the athletic performance. When analyzing each component individuals, the same trends were generally seen. The one exception was the *clear, reachable goals* component, which showed no differences *before* or *during* the athletic performance. Similarly, no differences were found *during* or *after* athletic performance for *clear, reachable goals, immediate and unambiguous feedback* and *autotelic experience or enjoyment*. On the other hand, *total concentration* is highest in the period before the athletic performance than afterwards. In contrast, *immediate and unambiguous feedback* and *enjoyment* are more prevalent upon completing a race than before it.

DISCUSSION AND CONCLUSION

In general, the results of this study could suggest that it is the sports activity itself which serves as an antecedent to flow, not another type of event that can occur immediately before or after. Thus, most of the flow components occur during the sports event and not before or after it. Only *clear, reachable goals* can also occur before the race begins, while *pleasure-enjoyment* and *immediate and unambiguous feedback* can continue after the race is finished.

The study also corroborated how difficult it is to organize a chronological sequence that integrates the nine flow components in a comprehensive model of this phenomenon.

Table 2: A posteriori comparisons: before-during, during-after and before-after

Component	Comparison	Z	p
Total	Before-During	-6.39	0,000**
	During-After	-5.18	0,000**
	Before-After	-.10	0,918

* p < 0.05; ** p < 0.01

However, studies like this one help us to understand how the different dimensions of flow can be organized in time, forming one or several Markov chains in which different flow episodes are likely to occur.

REFERENCES

- Csikszentmihalyi, M. (1990). *Finding flow: the psychology of optimal experience*. New York: Harrer and Row.
- Jackson, S. A. (1992). Athletes in flow: A qualitative investigation of flow states in elite figure skaters. *Journal of Applied Sport Psychology*, 4, 161-180.
- Jackson, A. S. y Csikszentmihalyi, M. (2002). *Fluir en el deporte*. Barcelona: Editorial Paidotribo. (Original: *Flow in Sport*. Champaign, IL: Human Kinetics, 1999).
- Jackson, A. S. y Eklund, C. R. (2004). *Flow scales manual*. Morgantown, WV: Fitness Information Technologies.

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Analysis of the needs for intervention in parents of young athletes

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Abstract:

The role of parents in sports initiation is essential for proper athletic and personal growth of children and adolescents who venture into the complicated world of sport and physical activity. Parents play an important role in the formation of the child's personal characteristics. Therefore, the objective of this study is to analyze the needs for intervention with parents of young athletes. In the study 131 parents of sons/daughters who play football, basketball and gymnastics have participated. It has been administered a battery of questionnaires to measure cognitive and affective aspects, and those concerning guidelines and actions. The results show that it is necessary to intervene in the formation of parents to optimize the comprehensive sports development of their children. Among the areas for improvement there are included the establishment of goals and objectives, the negative feelings and feelings of indifference, the competition pressure, the transfer of responsibility and autonomy, the respect for significant others (other parents, coaches and referees) and conflict resolution.

Keywords: Parental educational behavior in sports, intervention with parents, intervention in sports.

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INTRODUCTION

One of the main objectives of the youth system is to promote and provide integral development for young athletes. To achieve this, it is important to work with the principal agents involved in the athletic and integral development of young athletes—including parents (Smoll, 1991). The role of parents in sports initiation is essential for the proper athletic and personal growth of children and adolescents who venture into the complicated world of sport and physical activity (Ortín, 2009), as they play a very important role in the formation of the personal characteristics of the young athlete (Cruz, Boixadós, Torregrosa and Mimbreno, 1996; Romero, Garrido and Zagalaz, 2009).

Objective: The objective of this study is to analyze the ideas and educational practices of parents on the sports development of their children and to detect needs for interventions when these practices could be improved.

METHOD

A total of 131 parents of children who play soccer, basketball and gymnastics participated in this study. The COPADE questionnaire was used (Lorenzo, 2012; Lorenzo, Cubero and López, 2012, 2013). This is a set of Likert-type tests (scales of 1 to 5) to measure parents' attitudes towards the athletic activ-

ities of their children. Some of the aspects evaluated include cognitive variables like the reasons for doing sports; competition as a way to do better at the sport or to achieve results; the achievability of the parent's expectations and goals; and satisfaction with the results obtained. There are also emotional variables (feelings associated with practice and competition) and guidelines and action variables (motivation, responsibility, autonomy, respect for significant others, communication and problem resolution).

The data were gathered with informed consent at the sports schools and clubs during training and at competitions. The test was self-taken with the researchers present. Data treatment consisted in a means comparison using the SPSS v.17.0 package.

RESULTS

The analysis of means and standard deviation corresponding to the variables described above are shown on Table 1. Aspects requiring improvement (and therefore, intervention) are those variables with an average score of 3.5 or less. A score of less than 3.5 indicates that in terms of the aspects analyzed, the parents' attitudes are poorly adjusted and could have a negative influence on the integral development of the young athletes.

With regards to the cognitive contents, the variables requiring improvement proved to be encouraging success and prioritizing results in sports competition over the process. In terms of the emotional variables, the intervention needs were negative feelings and indifference. Finally, the guideline and action variables that need improvement are pressure during competition, excessive control, disrespect for significant others and the authoritarian and permissive problem resolution styles.

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Table 1. Intervention needs for parents of athletes. Analysis of scales.

		M	DT
Cognitive	Encouraging success	3.08*	0.94
	Results-oriented	3.07*	0.80
	Process-oriented	4.12	0.71
	Achievability of goals	3.75	0.82
	Satisfaction with goals	3.88	0.81
Emotional	Pleasant feelings	4.85	0.39
	Unpleasant feelings	3.46*	1.20
	Feelings of indifference	3.44*	0.83
Guidelines	Motivation to practice	4.12	1.12
	Motivation to compete	3.15*	0.74
	Autonomy	3.80	0.85
	Control	3.15*	0.89
	Supervision	3.59	0.98
	Respect	3.41*	0.58
	Communication	3.65	0.98
	Democratic	3.96	0.85
	Authoritarian	3.08*	0.62
	Permissive	2.61*	0.94

DISCUSSION AND CONCLUSIONS

The results show that parents require interventions in order to optimize the integral development and sports progress of athlete sons and daughters.

The results associated with encouraging success indicate that parents expect their children to be professionally successful at their sport, setting goals and objectives that turn out to be unattainable by their children. Similarly, they prioritize results in a competition as opposed to valuing the positive elements of the sports process itself or the integral development of the young athletes. It would thus be necessary to work on the negative feelings that parents experience about the suffering or lack of enthusiasm that often appear in sports in order to analyze how these feelings arise and give them effective coping strategies.

On the other hand, the aspects that were highlighted when parents were asked about specific guidelines or actions include excessive pressure to win and disrespect for referees, judges, trainers and even for other parents. These attitudes mean not respecting the actions and decisions of those responsible for the sport and they are often accompanied by critical comments, offensive gestures, insults and arguments with the other agents involved in the sports development of the young athletes. These parental behaviors on the sports field are generally associated with actions at home such as

excessive parental control over the children's preparation of their sports gear and parental planning of sports schedules, norms and healthy living habits. These behaviors, in turn, can lead to a lack of autonomy and responsibility among their children. Finally, this behavior is also reflected in authoritarian and/or permissive parenting styles that complicate healthy conflict resolution and the learning of effective strategies among children.

REFERENCES

- Cruz, J., Boixadós, M., Torregrosa, M. y Mimbrero, J. (1996). ¿Existe un deporte educativo?: Papel de las competiciones deportivas en el proceso de socialización del niño. *Revista de Psicología del Deporte*, 9-10, 111-132.
- Lorenzo, M., Cubero, R. y López, A.M. (2013). *COPADE: Instrumento para evaluar las expectativas y objetivos de padres y madres acerca de la práctica deportiva de sus hijos e hijas*. I Congreso Ibérico de Psicología Clínica, de la Salud y el Deporte. Sevilla.
- Lorenzo, M., Cubero, R. y López, A.M. (2012). Cuestionario COPADE: *La influencia de los padres/madres en el desarrollo deportivo de sus hijos/as*. VII Congreso Internacional de Ciencias del Deporte. Granada.

- Lorenzo, M. y Cubero, R. (2012). *Elaboración de un cuestionario de concepciones y percepción de padres y madres sobre su papel en el desarrollo integral de sus hijos e hijas deportistas: COPADE*. XIII Congreso Nacional y I Foro Mediterráneo de Psicología de Psicología de la Actividad Física y el Deporte. Murcia.
- Ortín, F.J. (2009). *Los padres y el deporte de sus hijos*. Madrid: Pirámide.
- Romero, S., Garrido, M.E. y Zagalaz, M.L. (2009). El comportamiento de los padres en el deporte. *Retos. Nuevas tendencias en Educación Física, Deporte y Recreación*, 15, 29-34.
- Smoll, F.L. (1991). Relaciones padres-entrenador: Mejorar la calidad de la experiencia deportiva, en Williams, J.M. (ed.), *Psicología aplicada al deporte*, Madrid: Biblioteca Nueva.