

# APPLICATION OF A TOKEN ECONOMY PROGRAM AND PREFERENCES FOR BASKETBALL PLAYERS

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ABSTRACT: The aim of this work is to analyze the differences between players of a group following a token economy program and another who does not follow it. The results indicate that young players perceive that their trainers have a preference for attacking actions during the match; this unanimity in preferences disappears during training. Significant differences were found significant differences in the preferences of coach during training; which means that belonging to one group of study implies different choices. There have been found significant differences between groups in specific skills related to defense and ball reception.

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## Introduction

Coach's behaviour plays an important role in sports context and influences performance, learning, enjoyment, group processes and psychological development of sportsmen (Cumming, Smith & Smoll, 2006). In Spain, the number of participants in out-of-school sport activities is about 4 million, with approximately 100,000 adults and teenagers supervising them. (Smoll & Smith, 2009). The application of a token economy in a basketball club allows, among other aspects, the constitution of a group of practice which betters different types of learning (Lorenzo & Jiménez, 2007).

## Method

The aim of this work is exploratory. After obtaining a sample of subjects (N=192, with an age range from 7 to 14 year olds,  $\mu=12.12$  years and S.D.= 1.84), all of them belonging to different teams. Categories were under 12 and under 14.

We try to know the differences between the individuals who were using a token economy program (studied group) and those who were not following any program (control group).

Participants completed the questionnaire for young basketball players by (Ortega, Jiménez, Palao & Sáinz, 2008), during May and June, 2009. Consent forms were signed by parents or tutors; and confidentiality was guaranteed.

The token economy programs have diverse phases that Labrador (2008) details: 1. To delimit and define the conducts to be modified; 2. To establish the contingencies in the cards; 3. To select and to indicate support indicators; 4. To determine where

and when to deliver the of cards; 5. To establish exchange value of the cards for reinforcements; 6. Where and when to exchange reinforcement cards; 7. Who is going to deliver and change cards for reinforcement; 8. Record of conduct, cards and reinforcements obtained by every person; 9. Group and individual contingencies.

The applied program had two aims: one, the modification of conducts as referred to the attitude of players during trainings and in the games, to their punctuality and to the development of hygienic and healthy habits, related to the sport; and two, to educate and to facilitate decisions for the coaches, on the basis of the club's sport philosophy. The used reinforcements were club's sport materials and the possibility of taking photos with the senior players.

The comparison between the studied and control group has been established in relation to the coaches preferences for attacking or defence and the players of both groups, also to the specific individual skills of the above mentioned groups, depending on the categories of the players.

## Results

Table 1 shows the percentage of the studied and control group according to player's preference or to what they perceive from their coaches regarding the different game skills.

Our results highlight two aspects: one, all players perceived their coaches had a preference for attack during games; unanimity that disappears during trainings; and two, coach preferences depending on which study group they belong to.

On the other hand, player's preferred

game skills are shown in table 2, should anyone reach significance (p: 0, 05), further analysis assessing differences between ages were performed (<12 years and <14 years)

In the first part, training and attacking differences are shown with regard to their coaches and, in the second one, those related to the defence.

	Coach Game		Player Game		Coach Practice		Player Practice	
	Treated	Control	Treated	Control	Treated	Control	Treated	Control
Offense (%)	100	100	81	87,8	27,8	48,3	74	79,3
Defence (%)	0	0	17	9,5	49,5	39,3	23	18,4
Everything (offense and defence) %	0	0	2	2,7	14,4	6,7	2	2,3
Others (%)	0	0	0	0	8,2	5,6	1	0
	Value	Sig.	Value	Sig.	Value	Sig.	Value	Sig.
C. of Contingencies	*	*	=	=	0,21	0,026	=	=
V of Cramer	*	*	=	=	0,223	0,026	=	=

\* Tables of contingency cannot be realized. \*\* The variables are related.

Table 1. Description and association of coaches' and players' preferences depending on treatment

Variable	Global	<12	<14	Average range
	Sig. Asintotic bilateral (< 0,05)			
Players' preference for defence	,055**	*	*	Treated: 97,24 Control: 95,89
Coaches preference to practice	0,036	*	,081**	Treated: 104,98 Control: 89,47
Coaches preference to offense	0,001	*	0,002	Treated: 89,37 Control: 102,41
Assistance	,063**	*	*	Treated: 99,31 Control: 90,53
To provoke offensive fouls	0,039	0,034	,081**	Treated: 98,13 Control: 90,49
Good defence of dribbling	0,027	0,004	*	Treated: 104,46 Control: 86,28
Give fouls on defence	0,022	*	*	Treated: 101,84 Control: 89,29
Good defence of shooting	0,011	0,017	*	Treated: 101,60 Control: 89,49
To receive a pass	0,002	*	*	Treated: 91,26 Control: 98,05

\* They have not found significant differences between the treated group and the control.

\*\*Difficult decision since the p-value is among 5 and 10 %.

Table 2. Effect of treatment (U-Mann Whithney) pooled and split by categories.

## Discussion

The lack of studies including the application of conduct modification programs in "ecological" environments represents a difficulty for the discussion of the results. In spite of this, we can appreciate differences in the coaches' taste for training and for attack. These differences can be explained, at least in part, in the application of conduct modification programs which involve the coaches of the studied group. These coaches insisted on the defensive work as a way of "construction of the team" made easier by proximity, common aims, instructions to be present at other club group training sessions, categories meetings and other learning activities done during the season (Lorenzo & Jiménez, 2007).

Nevertheless, these differences were only registered in practices sessions, since during the games, all the players answered that their coaches' preference is attack.

The preferred skills in training and game are linked to attack, both for players and coaches. The information to this respect has a structure similar to Palao, Ortega & Olmedilla's work (2004); though, on the other hand, the coaches prefer defence during training sessions.

Intergroup analysis on specific skills shows differences between players. The skills related to ball recovery, and offensive fouling, but on the other hand coaches are distinguished by their preference to attack and training sessions.

In brief, players show differences in their preferences and in those that they perceive from their coaches depending on several

variables: game versus practice; players versus coaches; studied group versus control group; under 12 versus under 14 year olds; therefore it seems to be necessary to study each of them in order to confirm the hypothesis about the above mentioned preferences.

The pointed differences partially confirm statements by Jones, Potrac, Brewer, Armour & Hoff (2000) about the need that the coaches/coaches express "expert power" to win and to preserve the respect and, probably, the admiration of their players. One of the factors to consider in these studies is the degree of compatibility between players and coaches, which might serve as indicator to anticipate the possibility of reaching the educational and sports aims of clubs and sports associations (Kenow and Williams, 1999).

The application of a token economy program modifies the preferences of the players to certain specific skills either during the basketball games and training sessions in under 12 and under 14 year olds.

In this work we have found significant differences between player's preferences for defence, the receipt of a pass from their teammates and in their own perception about what their coaches' preferences for training and attack are.

Competition increases the preference for attack in both groups: players and coaches. New studies seem to be necessary to determine in what way certain aspects of the applied program have effect on the players and coaches preferences.

## References

- Cumming, S., Smith, R., & Smoll, F. (2006). Athlete-Perceived Coaching Behaviors: Relating Two Measurement Traditions. *Journal of Sport & Exercise Psychology*, 28, 205-213.
- Kenow, L. & Williams, J. (1999). Coach-Athlete Compatibility and Athlete's Perception of Coaching Behaviors. *Journal of Sport Behavior*, 22 (2), 251-259.
- Labrador, F.J. (2008). *Técnicas operantes III: Sistemas de organización de contingencias*. In Francisco Javier Labrador Encinas (Coord.) *Técnicas de modificación de conducta*. (pp.339-360). Madrid: Pirámide.
- Lorenzo, A. & Jiménez, S. (2007). Coaches' Development Through Interaction: Basketball Coaches Communities of Practice. *Iberian Congress on Basketball Research*, 4, 21-23.
- Ortega, E., Jiménez, J.M., Palao, J.M., & Sáinz, P. (2008). Diseño y validación de un cuestionario para valorar las preferencias y satisfacción en jóvenes jugadores de baloncesto. *Cuadernos de Psicología del Deporte*, 8 (2), 39-58.
- Palao, J.M., Ortega, E., & Olmedilla, A. (2004). Technical and tactical preferences among basketball players in formative years. *Iberian Congress on Basketball Research*, 4, 38-41.
- Potrac, P., Brewer, C., Jones, R.L., Armour, K.M., & Hoff, J. (2000). Toward an holistic understanding of the coaching process. *Quest*, 52, 186-199.
- Smoll, F.L. & Smith, R.E. (2009). *Claves para ser un entrenador excelente*. Barcelona: INDE.

