Apunsm Sports Medicine 60 (2025) 100466

Contents lists available at ScienceDirect

Apunts Sports Medicine

journal homepage: www.elsevier.com/locate/apunsm

Original Article

Analysis of tasks and training load during pre-season training in professional basketball

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ARTICLE INFO

Keywords:
SIATE
Methodology
Team sports
Small-sided games

ABSTRACT

Introduction: In the quest to improve basketball players' performance during the season, the analysis of the training processes during the pre-season is crucial to successfully face the competition period. The aim of this research was to characterize the training tasks of a professional basketball team of the ACB category during the 2022/23 pre-season, as well as to analyze the relationship between the game situation with the pedagogical variables and External Load variables.

Materials and Methods: The sample consisted of 107 tasks during 20 sessions of a Spanish first division professional basketball team. The dependent variables were the pedagogical variables and the external load. The independent variable was the Game Situation, understood as the organization of the players during the tasks. All variables were recorded using the Integral System for the Analysis of Training Tasks (SIATE) tool. A descriptive and inferential analysis was carried out to determine the relationships between the game situation with the pedagogical and external load variables.

Results: All indicators of the pedagogical and external load variables show a statistically significant association with the game situation ($p<.05$).

Conclusions: Therefore, the pedagogical and external load variables are conditioned by the game situation. Positioning itself as a variable of great relevance for the planning of the sessions, as its design facilitates the achievement of the proposed objectives and more effective training sessions.

Introduction

The analysis and control of training processes by studying the sequence of tasks during sessions is relevant for the optimization of training processes and the improvement of the performance of athletes and teams in invasion sports.[1] This requires the diagnosis of the tasks through the study of various variables that generate an integral control and evaluation of the training process, in which the pedagogical, organizational, external load and internal load variables stand out.[2] The study of training load is fundamental for the improvement of training periodisation processes. This information will help coaches to make decisions to optimise training and reduce the risk of injury. To do this, it is necessary to identify training loads according to the context in which they are performed, training or competition or according to the type of tasks.[3]

Nowadays, the high physical demands to which players are exposed due to the multiple competitions they face influence the performance of athletes, which is determined by physical, psychological and biomechanical factors[4] as well as by technical-tactical factors.[5] Therefore, an adequate preparation of the players is necessary through planned and organized training sessions,[6,7] with the purpose of achieving a progressive development with respect to the needs and demands of the players that leads to the achievement of the different objectives set by the coaches and physical trainers.[8] Furthermore, the likelihood of injury is a determining factor in sports performance. A proper physical preparation and training planning can reduce its occurrence and even reduce the physical consequences of injuries,[9,10] making an adaptive, progressive and coherent training program essential.[6]

The technical staff of a team (coaches and physical trainers) is in charge and responsible for the preparation of the players through the application of the training processes,[6] a determining process in the performance and improvement of the athletes,[1] which is why its evaluation and study has reached a great peak within the field of research. This analysis allows to know the training sessions, the types of tasks implemented, the methodology applied, the profile of the trainer, the means used, and the contents developed.[11,12] Therefore, monitoring and

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https://doi.org/10.1016/j.apunsm.2024.100466
Received 22 July 2024; Accepted 30 September 2024
Available online 5 October 2024

evaluation should be approached in a systematic way by studying the tasks in order to optimize training processes, improve the performance of athletes and develop the technical-tactical skills necessary for sports practice.[1,6]

The design of training processes is a particular and personal procedure of each coach, which determines the configuration of sessions and tasks, the methodology used, as well as the consequences, improvements and benefits for the athletes.[13] The tasks developed are made up of different pedagogical, organizational, external load and internal load factors that provide substantive information on the nature of the tasks such as the type of activity, relationship of the athletes, the time of motor commitment, organization, internal and external load.…[2]

Training processes must be different throughout a competitive season. The period of time when the greatest changes occur in athletes is during the pre-season, which is key for the preparation of teams for the competitive season.[14] This stage is relatively shorter, in which the intensity of the activity is greater in order to achieve the maximum level of physical condition at the start of the season, as well as to condition and strengthen the bodies to prevent injuries during the competition period.[15] Therefore, it is considered a fundamental phase in the preparation of players to successfully face the regular season and optimize performance,[16] where both specific skills work and attack and defense training are key to provide a competitive advantage, with great impact and influence on general game dynamics, player decision-making and overall game strategies.[15] The physical and physiological demands for offensive and defensive play in basketball are similar,[17] determining the key metabolic and biomechanical components of basketball performance.

Currently, there is a wide variety of instruments that record and analyze training sessions. The Integrated System for the Analysis of Training Tasks (SIATE) is an ideal tool for the planning, control and quantification of the essential parameters in the training tasks of invasive sports.[18] This instrument is configured as a modular, flexible and adaptable training record sheet. Pedagogical, organizational and subjective external load variables can be recorded in it.

As far as is known, this tool has been used mainly to analyze training processes in formative teams, but it has not been applied to professional teams. Furthermore, there are few studies that examine the training processes and tasks during the pre-season. Therefore, the aim of this research was to characterize the training tasks of a professional basketball team of the ACB league during the pre-season of the year 2022, as well as to analyze the relationship between the game situation and the pedagogical variables and External Load variables.

Materials and methods

Experimental approach to the problem

The current research was framed within the empirical studies with quantitative methodology,[19] in which a descriptive and associative strategy was used through an arbitrary code of observation,[20] with the aim of identifying the relationship between the variables used in the design of tasks of a professional basketball team during the preseason.

Subjects

The participants in this research were twelve professional players from ACB league team (1st Spanish basketball division), chosen with a non-probabilistic convenience sample.[21] The coach had been coaching the team for ten consecutive years, after one year as a physical trainer in another team of the third Spanish basketball division. In his career he has won several lower leagues, keeping the team for three years in the first division, being named best coach of the Spanish third division some years ago. He, together with his technical staff made up of three assistant coaches and a physical trainer, designed the training sessions without any intervention from the research team, remaining on the sidelines to guarantee the non-manipulation of variables and the development of the sessions in the natural context of the sport.[22] The sample consisted of 107 tasks recorded through SIATE distributed in 20 technical-tactical training sessions developed during three weeks of pre-season during the 2022/23 season. Likewise, the training sessions were carried out every day of the week with an average duration of 15.08 min per task performed. Table 1 shows the time used by the coach with respect to the total of the tasks, differentiating between the total time of the task, the explanation time, the useful time and the percentage of use.

Measurements

All study variables were recorded using SIATE.[2] This tool, developed in a spreadsheet, is composed of different sections: contextual data, session data, pedagogical variables, external load variables and organisation variables. The contextual and session data collect generic information about the season, team, number of mesocycle, number of microcycle…

The dependent variables were grouped into two different groups, pedagogical variables and external training load (eTL) variables.

The pedagogical variables (Table 2) were game situation (GS), game phase (GP), content type (CONT-T), training initiation method (TIM) or teaching method (TM) and opposition level (OL) .[2] The pedagogical variables are collected as qualitative scales in the spreadsheet with integers in a range from 1 to n, where n is the last item in the list of each group of categories.

The eTL variables (Table 3) were opposition degree (OD), task density (TD), simultaneous performers percentage (SPP), competition load (CL), game space (GSp) and cognitive involvement (CI) .[2] Each eTL variable was distributed in a categorical/ordinal system consisting of five levels, with the minimum external load rating being 1 and the maximum 5. The scoring for awarding each level of external load intensity is given in the original detailed tool document, so that although the load is collected subjectively, it is standardised to be as objective as possible. The minimum sum of the six load variables would be 6 and the maximum 30, establishing an external load value. This load value is also collected as a function of time, number of players and weighted per minute.

Finally, the organisation variables are calculated, being the total time, explanation time, useful practice time, percentage of use, type of participation, number of athletes and simultaneous players. From this, a participation value is calculated which allows the total load to be contextualised according to the players.

The independent variable used was Game Situation (GS), which determined the grouping of the players during the training tasks. The categories defined were: i) No Opposition (NO), ii) Individual Situation (IS), iii) Small Sided Games in Numerical Equality (SSGE), iv) Small Sided Games in Numerical Inequality (SSGI), v) Full Game (FG).

Procedure

First, the managers were informed about the purpose and characteristics of the research, as well as the possible risks and benefits. Subsequently, coaches were informed about the procedure to be followed

Table 1
Temporal organisation characteristics of the tasks included in the study (minutes).

N Tasks	Statistics	Time types			Actual playing time (%)
		Full time	Explanation time	Playing time	
107	$\bar{x}\pm DT$	15.08 ±6.14	4.13±3.58 0.00	10.94 ±4.33	75±18
	Minimum	1.20	16.25	1.20	
	Maximum	32.53		21.87	

Table 2
Synthesis of pedagogical variables.

Pedagogical variables	Description
Game Situation (GS)	Groupings of participants that are set up for each of the tasks.
Game Phase (GP)	Phase of the game in which the objective of the task is oriented.
Content type (CT)	The contents are structured into individual, group and team contents and are further differentiated into tactical behaviour and technical movements.
Teaching method (TM)	Sport motor activities which are used for the development of certain technical and tactical contents.
Opposition level (OL)	Level of opposition established for each task.

Table 3
Synthesis of eTL variables.

eTL variables	Description
Opposition degree (OD)	Degree of opposition in relation to the number of opponents in the task.
Task density (TD)	Subjective indicator of the intensity with which the task is performed.
Simultaneous performers percentage (SPP)	Level of participation of the athletes in the task.
Competition load (CL)	Psychological and emotional load of the participants in the task in order to achieve a result.
Game Space (GSp)	Distribution of the space to perform the tasks set.
Cognitive involvement (CI)	Attention required by the participant in relation to teammates and opponents, known as tactical load.

during the study, as well as the possible risks and benefits of participation. The necessary permissions and informed consents were obtained from the coaching staff and players to voluntarily participate in the research. The research was conducted following the criteria of the Declaration of Helsinki (2013) ,[23] the Ethical Standards in Sport and Exercise Science Research of Harriss et al. (2022)[24] and was approved by the University Bioethics Committee (233/2019). The investigation respected the framework of Organic Law 3/2018 of 5 December on Personal Data Protection and guarantee of digital rights (2018) .[25]

The research was organized in four main phases. In the first phase, the necessary authorizations and permits were obtained. Subsequently, a process of training and familiarization of the observer with the tool to be used (SIATE) was carried out, with the aim of guaranteeing a reliable and adequate record. In the third phase, data collection and coding of each of the study variables was carried out. Finally, the relevant analyses were carried out to examine the design of the coach's tasks during the pre-season.

Data analysis

The use of non-parametric mathematical models was established for hypothesis testing according to the nature of the qualitative data.[19] Firstly, a descriptive analysis (frequency and percentage) of the pedagogical and eTL was carried out.

Next, Adjusted Typed Residuals (ATR) were extracted from the contingency tables,[26] with the intention of finding possible associations between the categories of each pedagogical variable and eTL of the tasks performed, with a confidence level of 95 % (ATR $> |1.96|$). Categories with residual values > 1.96 show that there are more cases than expected, while residual values of < -1.96 show that there are fewer cases than expected.[27]

Subsequently, an inferential study of the pedagogical and eTL variables was undertaken to find the relationships between the Game Situation and the dependent variables (pedagogical and eTL variables). To do this, the relationship and degree of association of each variable was examined. For the analysis of the relationship between pedagogical and external training load variables, Pearson's Chi-Square ($\chi 2$) and Cramer's V (Vc) tests were used.

Finally, the strength of association between variables was studied by applying Cramer's V test (Vc) for pedagogical variables (nominal $\times$ nominal) and external training load variables (nominal $\times$ ordinal) .[27] The strength of association between variables was determined according to the values achieved: <0.100 (small), 0.100–0.299 (low), 0.300–0.499 (moderate) and ≥ 0.500 (high) .[28]

All analyses were conducted using Statistical Package for the Social Sciences (SPSS) version 25 software (IBM Corp. 2012. IBM SPSS Statistics for Windows, NY: IBM Corp., Armonk, USA).

Results

Table 4 shows the results related to the descriptive analysis of the pedagogical variables, and the values of the RTCs according to the Game Situation. The coach applied attack (38.3 %) and defensive (22.4 %) tasks to a greater extent, through the development of simple application drills (62.3 %) and complex application drills (20.6 %). Regarding the level of opposition, it was predominantly unopposed (49.5 %) and with opposition (38.3 %).

Table 5 shows the results of the descriptive analysis of the eTL variables and the CTR values according to the Game Situation. The coach developed mostly unopposed tasks (61.7 %). In addition, 53.3 % were without competition. The highest percentage used was the full court with repetition (39.3 %), with the intervention of 2 players (31.8 %) and without relation (29.9 %).

Table 6 presents the results regarding the associations of the dependent variables (pedagogical and eTL) with the Game Situation. All the variables showed a statistically significant association ($p<.05$) with respect to the Game Situation with a moderate or high level of association. Therefore, a relationship was established between the Game Situation and the dependent variables studied, indicating that these variables were conditioned by the Game Situation.

Discussion

The general objective of this study was to characterise the training tasks of a professional ACB basketball league team during the pre-season period, as well as to analyse the relationship between the game situation and groupings of the players with the pedagogical variables and eTL variables. The results obtained show that both the pedagogical and eTL variables show a statistically significant association with respect to the game situation with a moderate or high level of association. Therefore, it is determined that there is a relationship between the game situation and the dependent variables, visualising that the pedagogical and external load variables were conditioned by the configuration of the game situation. Likewise, it is verified that the progress of the load level during the training sessions is due to the progression of Game Situations towards a higher level of complexity, where the increase in the number of players affects the load level.[29] Being aware that the game situations performed in training sessions favour the work of the coach, who must have knowledge about the different game situations, as it allows him to determine the design of the tasks and to control the training process.[1]

Modifying the constraints that condition a task has a direct impact on the load on players.[30] The grouping of players, the phase of play, the medium of play or the level of opposition can influence the training load.

Different game situations (IS, NO, SSGE, SSGI and FG) are used in relation to the pedagogical variables. The experimentation of different game situations by the athletes generates greater decision-making possibilities and greater experience depending on the game actions, thus enriching their preparation for the competition. The coach uses NO and SSGE situations to a large extent. The majority use of SSGE coincides with the results obtained by Cañadas et al.[31] who recommend its use in training stages, which we can liken to pre-season periods. The use of SO is mainly due to warm-up activities, physical preparation, recovery, as

Table 4
Descriptive results and the CTRs of the Pedagogical Variables and Game Situation.

Variables		n	%	GS				
				IS CTR	NO CTR	SSGE CTR	SSGI CTR	FG CTR
Game Phase	Attack	41	38.3	−1.4	3.4*	−3.3*	1.3	−0.3
	Defense	24	22.4	3,3*	−6.8*	6.3*	−0.5	.0
	Mixed	11	10.3	−0.6	−4.3*	2.8*	−0.3	3.5*
	Warm-up	19	17.8	−0.8	3.9*	−3.0*	−0.5	−1.5
	Physical training	4	3.7	−0.3	1.7	−1.3	−0.2	−0.6
	Recovery	8	7.5	−0.5	2.4*	−1.8	−0.3	−0.9
Content type	CTTID	3	2.8	10.3*	−2.1*	−1.1	−0.2	−0.5
	GTTIA	1	0.9	−0.2	−1.2	1.6	−0.1	−0.3
	GTTID	1	0.9	−0.2	.8	−0.6	−0.1	−0.3
	GTTGA	40	37.4	−1.4	−1.2	.3	1.3	1.9
	CTTGD	21	19.6	−0.9	−5.7*	6.0*	−0.5	1.1
	CTTCA	5	4.7	−0.4	1.9	−1.4	−0.2	−0.7
	Shooting	3	2.8	−0.3	1.4	−1.1	−0.2	−0.5
	Warm-Up	20	18.7	−0.8	4.1*	−3.1*	−0.5	−1.5
	Physical training	5	4.7	−0.4	1.9	−1.4	−0.2	−0.7
	Recovery	8	7.5	−0.5	2.4*	−1.8	−0.3	−0.9
Means	Simple application exercise	67	62.3	1.4	8.1*	−6.6*	−1.3	−4.1*
	Complex application exercise	22	20.6	−0.9	−5.4*	5.8*	−0.5	1.0
	Specific simple game	2	1.9	−0.2	−0.3	−0.9	7.3*	−0.4
	Specific complex game	16	15.0	−0.7	−4.7*	2.7*	−0.4	4.5*
Opposition level	No opposition	53	49.5	−1.7	8.0*	−6.4*	1.0	−3.1*
	Dinamic obstacles	13	12.1	−0.7	2.5*	−1.7	−0.4	−1.2
	Opposition	41	38.3	2.2*	−9.9*	7.7*	−0.8	4.0*

Note: GS = Game Situation; IS = Individual Situation; NO = No Opposition; SSGE= Small Sided Games Equality; SSGI= Small Sided Games Inequality; FG= Full Game; CTR = Corrected Typed Residuals; *CTR >|1. 96|, CTTID = Tactical-Technical Individual Defense Conduct, GTTIA = Technical-Tactical Individual Attacking Gesture, GTTID = Technical-Tactical Individual Defense Gesture, GTTGA = Technical-Group Attacking Gesture, CTTGD = Tactical-Group Defense Conduct, CTTCA = Tactical-Collective Attacking Conduct.

Table 5
Descriptive results and RTCs for External Load and Game Situation Variables.

Variables		n	%	GS				
				IS CTR	NO CTR	SSGE CTR	SSGI CTR	FG CTR
Opposition degree	No opposition	66	61.7	−2.2*	9.9*	−7.7*	.8	−4.0*
	Equality	41	38.3	2.2*	−9.9*	7.7*	−0.8	4.0*
	HR-110	22	20.6	−0.9	4.3*	−3.3*	−0.5	−1.6
Density	HR 110–130	9	8.4	−0.5	1.9	−1.2	−0.3	−0.9
	HR 130–150	28	26.2	.3	1.5	−0.9	1.7	−1.9
	HR 150–170	46	43	.8	−5.4*	4.0*	−0.9	2.9*
	HR +170	2	1.9	−0.2	−1.7	.7	−0.1	2.1*
Simultaneous participants percentage	21–35 %	11	10.3	1.3	2.2*	−2.2*	−0.3	−1.1
	36–55 %	21	19.6	−0.9	1.2	.1	−0.5	−1.5
	56–80 %	25	23.3	−1.0	−6.0*	8.1*	−0.6	−1.7
	81–100 %	50	46.7	.7	2.8*	−5.6*	1.1	3.3*
	No competition	57	53.3	−0.7	8.7*	−6.9*	−1.1	−3.3*
Competitive load	Technical movements	7	6.5	−0.5	−2.5*	2.6*	3.8*	−0.8
	Opposition without competition	10	9.3	3.5*	.0	−0.6	−0.3	−1.0
	Reduced opposition	25	23.4	−1.0	−6.5*	7.1*	−0.6	.7
	Match	8	7.5	−0.5	−3.6*	−0.2	−0.3	7.1*
Game Space	Static	26	24.3	−1.0	4.8*	−3.7*	−0.6	−1.8
	Quarter court	4	3.7	−0.3	1.7	−1.3	−0.2	−0.6
	Half court	15	14.0	−0.7	−3.4	3.0	2.5	.7
	Full court	20	18.7	2.2*	−1.5	.2	−0.5	1.2
	Full court with repetition	42	39.3	−0.2	−1.3	1.4	−0.8	.3
	No relationship	32	29.9	−1.1	5.5*	−4.2*	−0.7	−2.0*
Congnitive implication	2 players intervention	34	31.8	2.6*	3.2*	−3.5*	1.5	−2.1*
	3 players intervention	6	5.6	−0.4	−1.4	2.2*	−0.2	−0.8
	4 players intervention	24	22.4	−0.9	−5.8*	7.9*	−0.5	−1.7
	5 players intervention	11	10.3	−0.6	−4.3*	−0.8	−0.3	9.3*

Nota: GS = Game Situation; IS= Individual Situation; NO= No opposition; SSGE= Small Sided Games Equality; SSGI= Small Sided Games Inequality; FG= Full Game; HR= Heart Rate; CTR = Corrected Typed Residuals; *CTR >|1.96|.

well as working on technical and biomechanical aspects decontextualized from the game and skill development.[32] These contents acquire relevance as they are in the pre-season stage, where care and preparation of the athlete's body is required, and time must be dedicated to this.[14,15] Numerical inequality is a powerful preparation tool.[33] However, numerical equality is predominant to enhance aspects of attack and defense contextualized in the game, as well as technical skills and physical load.[34]

Regarding the phase of play, the coach gives greater importance to situations in attack (38.3 %) and in defense (22.4 %) and focuses his

Table 6
Results of the relationship and association between the Dependent Variables and the Game Situation.

Variables		GS					
		X^2	gl	p	V_c	P	Association
Pedagogical variables	Game Phase	98.03	20	.000*	.48	.000*	Moderate
	Medio	139.74	12	.000*	.66	.000*	High
	Content type	172.79	36	.000*	.63	.000*	High
	Opposition level	103.59	8	.000*	.69	.000*	High
eTL variables	Opposition degree	102.91	4	.000*	.98	.000*	High
	Density	47.65	16	.000*	.33	.000*	Moderate
	Simultaneous participants %	81.31	12	.000*	.50	.000*	High
	Competitive load	158.13	16	.000*	.61	.000*	High
	Game space	43.15	16	.000*	.32	.000*	Moderate
	Cognitive implication	169.73	16	.000*	.63	.000*	High

Note: GS = Game Situation, X2= Chi Squared; gl= Degree of freedom; Vc= Cramer's V; * $p<.05$.

work on group technical-tactical behaviours in attack (37.4 %) and group technical-tactical behaviours in defense (19.6 %). Greater use is shown of NO or SSGI for the attack phase, SSGE in defensive phases and FG for mixed phases, which encourage the work of technical-tactical skills simultaneously for attack and defense.[31,35] It is necessary for coaches to design attack and defensive tasks taking as a reference the capabilities and needs of the players in order to achieve maximum sporting development,[36] and they are also conditioned by each stage of the competitive period, as different objectives are determined in each period. Therefore, different types of tasks are defined according to the purposes. Coaches shape the training tasks to adjust them to the proposed objectives that vary in relation to the players and the period of the competition; in this pre-season stage, attacking and defensive situations are fundamental to improve game dynamics, players' decision-making and general game strategies.[15]

On the other hand, the prevalence of simple application exercises (62.3 %) for NO and complex application exercises (20.6 %) through SSGE is recorded. As has been previously pointed out, individual work is decisive for the improvement of technical skills through the design of unopposed situations.[37] While SSGEs favour the practice of tactical behaviours more akin to the real game, favouring decision-making in front of opponents,[38] as well as technical skills and physical load.[34] In short, it is advisable for coaches to know and apply a wide repertoire of training tasks, to adapt them according to the needs and objectives at each moment of the competitive period, and to achieve the maximum performance of their players and the team.

In relation to the external load variables analyzed with respect to the game situation, it is specified that 61.7 % are performed without opposition, being technical development activities, compared to 38.3 % that are implemented in numerical equality, being fundamentally SSGE (2×2, 3×3 or 4×4), reduced games produce improvements in sports performance through optimization in the execution of skills.[39,40] Employing individual, unopposed or SSGE game situations increases the load during the task, due to higher intensity.[41] The pre-season period is key to understanding this task design, as it is a preparatory stage, where the improvement of the players' technique and conditioning determines the approach to the tasks. The load can be increased by modifying its indicators such as the playing space, cognitive involvement, percentage of simultaneous players and competitive load.[2] On the one hand, increasing the number of players affects the level of participation and decreases the intensity of execution.[29] Furthermore, the number of players affects physical and technical demands.[34] The dimensions of the playing space influence the physical demands required on the players.[17,34] In the team analyzed, the most used means are the full field with repetition (39.3 %), which are focused on greater physical requirements of the athletes. Likewise, the predominance of the maximum percentage of simultaneous performers 81 %−100 % (46.7 %) is also verified. In this sense, a greater number of simultaneous performers will lead to experimentation and internalization of the objective of the task, favouring the intensity of the load in the task,[41] increasing the total number of technical actions,[42] favouring the team's decision making.

The results obtained show that there is a relationship between the game situation and the external load, so that the external load of the training tasks is conditioned by the game situation variable. It was found that the progress of the load level during the training sessions is due to the progression of game situations towards a higher level of complexity. The design of the tasks has a direct impact on the load that the player bears during the activity.[30] The period of the season in which the study is carried out, pre-season, largely determines the data obtained, since a large number of individual and unopposed tasks, simple exercises and even static activities are used in order to prepare the athletes for the new competition season, as well as to consolidate technical aspects. The combination with complex exercises favours the development and consolidation of collective game strategies. Therefore, this stage is considered a particular period in the design of tasks. Aspects related to the configuration of the team such as the physical condition of the players after the holiday period, the newly incorporated athletes, etc., affect the definition of the objectives, needs and capabilities of the players, directly affecting the nature and design of the tasks.

The main limitation of the present research is the absence of in-season data to establish comparisons on the tasks carried out in pre-season and during the season. As a future prospective, it would be useful to establish comparisons between the pre-season and the season, as well as to carry out studies with the intervention of the researcher manipulating the dependent variables to see how they modulate in the professional context and what variation in load is produced.

Practical applications

The game situation conditions the pedagogical variables and eTL variables of the tasks measured through the indicators of each of these variables. All the dimensions of the variables analysed are significantly influenced by the way the athletes are organised (game situation), thereby determining the nature and load of the training. Therefore, the game situation is a variable of great relevance for the planning of the sessions, which must be taken into account significantly by the coaches, as it influences the configuration of the pedagogical and external load variables.

For the most part, the coach uses unopposed situations and SSG in numerical inequality during the attack phase, SSG in numerical equality with respect to the defensive phases and FG for mixed phases. On the one hand, unopposed situations and SSG with numerical inequality are aimed at perfecting technical skills. On the other hand, the SSG situations in numerical equality and FG focus on improving tactical behaviour and decision-making in front of opponents. Coaches are required to design tasks according to the objectives, abilities and needs of the players in order to achieve maximum sporting development. Likewise, both the objectives and the capacities and needs are conditioned by the period in which they are in a competition season.

Training control is a fundamental tool for the preparation of

professional basketball teams in pre-season, allowing coaches to adapt their training process and introduce improvements in the way they intervene. The manipulation of the game situation will allow the achievement of the objectives set, facilitating more effective training sessions, as well as increasing the load of the tasks progressively.

The selection of the type of task to be used by the coach will depend on the intention and objective of the session - by modulating the different constraints that make up the structural and functional elements of the sport, different tactical and physical objectives will be achieved with the same task design. Modulating the opposition can help or hinder success in a task depending on the phase of play (attack or defence). The implementation of individual, unopposed or SSG situations in equal numbers increases the load during the task, due to a higher intensity. To this end, the coach can modify the playing space, competitive load, simultaneous participation, etc., in such a way as to reinforce the increased task load so that the training is as representative as possible of the real situation, both in task design and in physical load and intensity of the movements.

Funding

The author Olga Calle received a grant from the Spanish Ministry of Science, Innovation and Universities (FPU20/02939). The author Pablo López-Sierra is a grantee of the "Plan Propio de Iniciación a la Investigación, Desarrollo Tecnológico e Innovación" of the University of Extremadura. This research has been partially funded by the Spanish National Research Agency through the project "Scientific and technological support for the analysis of the training workload of basketball teams according to gender, players' level and season period" (PID2019-106614GBI00) MCIN/AEI/ 10.13039/501100011033.

Authors' contribution

OC participated in the design of the study, data collection, data reduction/analysis, interpretation of results and manuscript writing; PL-S contributed in data collection and manuscript writing; SF contributed in data reduction and interpretation of results, SJI participated in the design of the study, data reduction/analysis and interpretation of results. All authors have read and approved the final version of the manuscript.

Conflicts of interest

The authors declare no conflicts of interest.

Data availability

The data are not available as they are confidential due to their sensitivity and public interest.

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