The road to the silver medal at 2016 Rio Paralympic Games:

Game related statistics analysis of the Spanish wheelchair basketball male team

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➢ **The silver medal** at the 2016 Paralympic Games in Rio de Janeiro by the male Spanish wheelchair basketball (WB) team is by far the **best result ever** of this team in official competition in its history.

➢ Before get into the Paralympic village, that season the pre selection team had **8 main training activities** including preparation **tournaments in Belgium, Poland, USA, Canada, Bilbao and Madrid (Spain), and Brazil** accounting in a total of **49 days of preparation**.

➢ **Starting in March 2016 with a list of 21** preselected players, **final list of 12 players was provided** by head coach Jose Manuel Artacho at the end of July at the international tournament held in Bilbao.

➢ **16 years away! from the Games!** After being 4° at Atlanta 1996, Spanish male WB team did not attend Paralympic Games again until London 2012
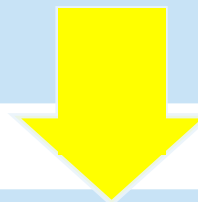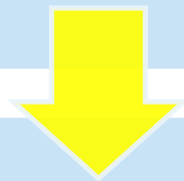
Nazaret 2011, Bronze
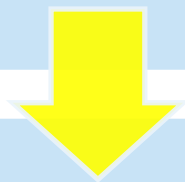
London 2012, 5º place

Frankfurt 2013, Bronze

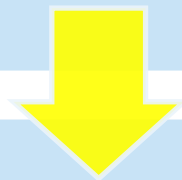**Korea 2014, 4º place**

Worcester 2015, 5º place

Rio 2016, Silver medal

Tenerife 2017, 5º place
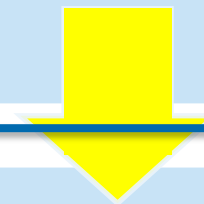
Hambourgh, 2018, 5º place

HONOUR DIVISION - "FUNDACIÓN ONCE" Trophy 18 - 19

¡The strongest league in Europe! (IWBF, 2018)

- 10 teams: Regular double-round league + Final Four.

- Average age: 31.7 years

- 121 players (12 women)

- 21 players participating in Rio 2016 and 12 medalists

- 44 foreign players (in all teams, 34% - 3 teams?)

DIVISIÓN DE HONOR	
Bidaideak Bilbao	Bilbao
BSR ACE Gran Canaria	Las Palmas de Gran Canaria
BSR Amiab Albacete	Albacete
Casa Murcia Getafe BSR	Getafe
CD Ilunion	Madrid
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Fundación Grupo Norte	Valladolid
Fundación Vtital Zuzenak	Vitoria
Mideba Extremadura	Badajoz
Rincón Dental Amivel	Vélez-Málaga

Performance analysis of elite men's and women's wheelchair basketball teams

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78 games from the World Wheelchair Basketball Championship (2010) and 76 games from the Beijing Paralympics (2008) (men, n = 88 games; women, n = 66 games).

Men´s teams: <u>Successful 2-point field-goals, free-throws, unsuccessful 3-point field-goals, assists and fouls</u> received where found as discriminant statistics between winning and losing teams in men's balanced games.

Women´s teams: successful 2-point field-goals.

Linear regression analysis showed that the quality of opposition had great effects in final point differential.

Wheelchair basketball player performance by game statistics

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94 players in 32 games (regular season 12/13) + 10 min: 58 players: Class 1 (n=11), Class 2 (n=12), Class 3 (n=12) y Class 4 (n=23).

Tabla 1. Rendimiento medio por cada clase funcional relativo a 40 minutos de juego durante la fase por el título.

VARIABLES	Clase 1			Clase 2			Clase 3			Clase 4		
	X	DT	df	X	DT	df	X	DT	df	X	DT	df
Minutos jugados	22,93	8,8		25,74	7,7		23,26	8,0		25,10	6,4	
2p lanzados	5,52	5,4	2,3,4	13,62	6,2	1,4	16,53	6,0	1,4	23,77	8,1	1,2,3
Porcentaje 2p	44,0	34,0		31,86	10,3		40,1	21,6		36,3	10,8	
Tiros libres lanzados	0,69	0,7	2,3,4	3,39	3,0	1,4	4,53	2,4	1	6,16	3,4	1,2
Porcentaje tiros libres	47,61	39,0		43,75	14,0	4	52,29	20,4		58,63	16,8	2
Rebotes ofensivos	1,29	0,9	2,3,4	2,05	1,3	1	2,55	1,4	1,4	2,96	1,3	1,3
Rebotes defensivos	2,1	1,5	2,3,4	4,5	2,5	1,4	6,15	3,6	1,4	11,1	4,0	1,2,3
Puntos	5,4	5,2	2,3,4	15,21	8,7	1,4	18,99	7,8	1,4	30,95	12,3	1,2,3

*df (hace referencia a las clases con las que existen diferencias significativas, $p \leq 0,05$)

To analyse the winning games of the Spanish WB male squad performance at the Rio de Janerio 2016 Paralympic Games through game related statistics, to assist the decision-making and guidance of athletes preparation and coaches

Sample and variables

6 games were analysed, participating 7 teams and 84 players. 48 players playing more than 10 min were included in analysis: Class 1-1,5 n=11; Class 2-2,5 n=11; Class 3-3,5 n=11; y Class 4-4,5; n=15.

Data were gathered through FIBA Live Statistics Software by experienced officials who followed the IWBF descriptors of each variable and official result book.

- **Team and player game-related statistics**: 2-point shots successful, unsuccessful and percentage; 3-point shots successful, unsuccessful and percentage; free throws successful, unsuccessful and percentage; offensive rebounds, defensive rebounds, assists, fouls, steals, turnovers, blocks and points scored

- **Team variables** were normalized to 100 ball possessions (Oliver, 2004), **and individual** variables from each game were normalized to 40 minutes played

Statistical analysis

- Descriptive stats was calculated by Spain and opponents

- T-student: To identify differences between Spain and opponents and between classes

- Hedge´s ES was used. Significance was set at $p \leq 0.05$

Wheelchair Basketball
Basquetebol em Cadeira de Rodas

Men
Masculino

Tournament Summary

Group A		ESP	TUR	AUS	NED	JPN	CAN	Games			Points			Class.
Rank								Played	Won	Lost	For	Against	Diff.	Points
1	ESP		65 - 68	75 - 64	66 - 48	55 - 39	80 - 46	5	4	1	341	265	+76	9
2	TUR	68 - 65		60 - 62	67 - 50	65 - 49	67 - 46	5	4	1	327	272	+55	9
3	AUS	64 - 75	62 - 60		70 - 50	68 - 55	78 - 53	5	4	1	342	293	+49	9
4	NED	48 - 66	50 - 67	50 - 70		67 - 59	49 - 32	5	2	3	264	294	-30	7
5	JPN	39 - 55	49 - 65	55 - 68	59 - 67		76 - 45	5	1	4	278	300	-22	6
6	CAN	46 - 80	46 - 67	53 - 78	32 - 49	45 - 76		5	0	5	222	350	-128	5

Group B		USA	GBR	BRA	GER	IRI	ALG	Games			Points			Class.
Rank								Played	Won	Lost	For	Against	Diff.	Points
1	USA		65 - 48	75 - 38	77 - 52	93 - 44	92 - 24	5	5	0	402	206	+196	10
2	GBR	48 - 65		73 - 55	66 - 52	84 - 60	93 - 31	5	4	1	364	263	+101	9
3	BRA	38 - 75	55 - 73		61 - 73	73 - 50	82 - 43	5	2	3	309	314	-5	7
4	GER	52 - 77	52 - 66	73 - 61		63 - 69	97 - 41	5	2	3	337	314	+23	7
5	IRI	44 - 93	60 - 84	50 - 73	69 - 63		72 - 48	5	2	3	295	361	-66	7
6	ALG	24 - 92	31 - 93	43 - 82	41 - 97	48 - 72		5	0	5	187	436	-249	5

Wheelchair Basketball
Basquetebol em Cadeira de Rodas

Men
Masculino

Tournament Summary

Quarterfinals	Semifinals	Gold Medal Game

ESP - 70

Game 58
14 SEP

GER - 66

ESP - 69

GBR - 74

Game 59
14 SEP

AUS - 51

Game 64
15 SEP

GBR - 63

ESP - 52

TUR - 65

Game 60
14 SEP

BRA - 49

TUR - 54

Game 73
17 SEP

USA - Gold
ESP - Silver

USA - 70

Game 61
14 SEP

NED - 37

USA - 74

Game 65
15 SEP

USA - 68
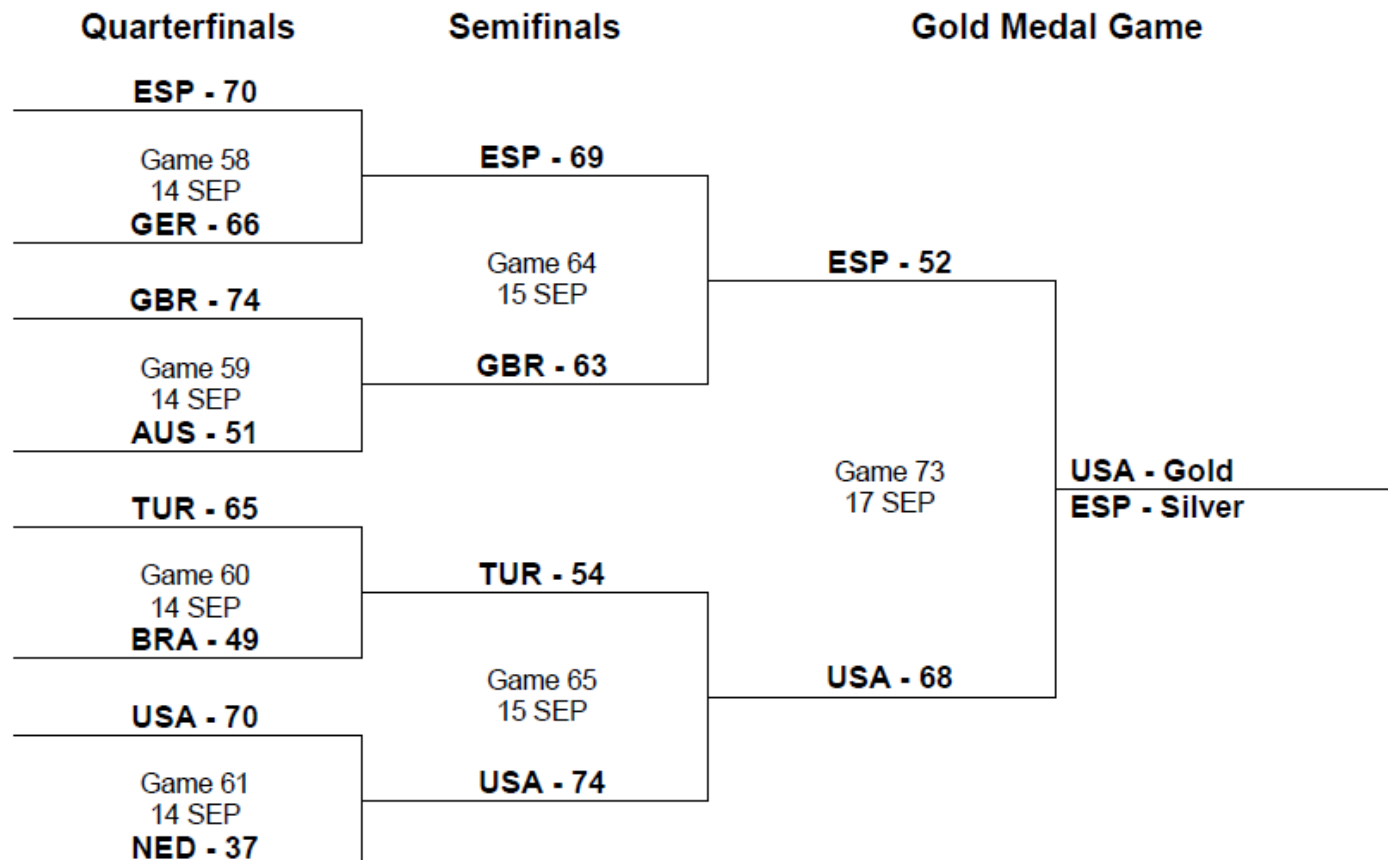
Final Standings				
Medal	Rank	Team	GP	W/L
Gold	1	USA	8	8/0
Silver	2	ESP	8	6/2
Bronze	3	GBR	8	6/2
	4	TUR	8	5/3
	5	BRA	7	3/4
	6	AUS	7	4/3
	7	NED	7	3/4
	8	GER	7	2/5
	9	JPN	6	2/4
	10	IRI	6	2/4
	11	CAN	6	1/5
	12	ALG	6	0/6

Table 1. Descriptive game-related statistics normalized to 100 ball possessions and differences between the Spanish team and its opponents

Variable	Spain	Opponents	Sig. p<0.05	ES Hedges' g
Possessions	57.4 (7.9)	60.4 (3.5)		
2-pt successful	50.3 (10.6)	30.1 (6.9)	*	2.26
2-pt unsuccessful	47.4 (10.9)	51.6 (9.1)		
2-pt percentage	51.6 (6.0)	36.7 (8.5)	*	2.03
3-pt successful	2.2 (1.5)	6.5 (4.4)		
3-pt unsuccessful	10.5 (3.6)	14.1 (3.9)		
3-pt percentage	18.1 (10.6)	28.3 (15.0)		
FT successful	16.1 (11.2)	10.4 (6.9)		
FT unsuccessful	11.5 (9.8)	8.9 (2.9)		
FT percentage	59.1 (9.8)	48.6 (18.2)		
Off. Reb.	18.3 (8.0)	13.5 (1.9)		
Def. Reb.	53.5 (6.9)	37.5 (7.9)	*	2.16
Assists	42.2 (9.7)	27.3 (10.9)	*	1.44
Fouls	26.6 (7.6)	29.2 (7.0)		
Steals	9.5 (5.4)	5.8 (3.0)		
Turnovers	18.9 (5.1)	19.0 (6.9)		
Blocks	3.2 (1.5)	2.8 (2.9)		

Table 2. Individual differences in game-related statistics per class between the Spanish Players and its opponents

Variable	Class 1.0				Class 2.0				Class 4.0			
	Spain	Opponents	Sig.	ES	Spain	Opponents	Sig.	ES	Spain	Opponents	Sig.	ES
2-pt successful	1.6(2.0)	0.8(2.0)			6.3(3.1)	3.1(2.9)	*	1.1	5.8 (2.6)	4.2 (3.3)		
2-pt unsuccessful	0.6(1.0)	3.0(3.8)			8.0(5.9)	4.2(3.9)			7.6(2.0)	7.4(4.9)		
2-pt percentage	40.9(45.2)	8.0(14.7)			48.1(20.1)	40.7(29.1)			41.9 (14.4)	30.0 (20.1)		
3-pt successful	0	0.1(0.5)			0.9(1.4)	0.5(1.5)			0.2(0.5)	1.3(2.3)		
3-pt unsuccessful	0	0			3.4(2.0)	0.2(0.5)	*	2.6	2.7(2.0)	2.6(3.3)		
3-pt percentage	0	8.3(28.9)			13.0(20.0)	6.8(22.6)			5.9(12.2)	13.4(23.2)		
FT successful	1.2(1.9)	0.2(0.6)			1.0(1.2)	0.3(1.1)			1.7(2.4)	2.2(3.5)		
FT unsuccessful	0.1(0.4)	0.4(1.0)			0.8(1.2)	0.6(2.1)			1.4(2.0)	2.2(2.5)		
FT percentage	29.2(45.0)	12.5(31.1)			27.8(36.3)	9.1(30.2)			31.6(40.0)	28.5(35.7)		
Off. Reb.	0.8(1.6)	0.9(1.3)			0.9(1.5)	2.4(2.7)			2.5(1.3)	1.5(1.7)		
Def. Reb.	2.8(3.3)	1.6(1.4)			2.7(2.4)	2.2(3.3)			9.5(1.6)	6.8(4.9)		
Assists	1.4(2.7)	1.6(4.7)			4.3(3.2)	1.4(2.2)	*	1.1	10.9(5.0)	3.1(3.2)	*	1.99
Fouls	3.4(3.2)	2.8(1.7)			2.7(2.0)	4.0(2.2)			4.2(2.6)	3.6(2.9)		
Steals	0.3(0.9)	0.3(0.6)			2.7(4.6)	0.6(1.2)			1.0(2.7)	1.2(1.3)		
Turnovers	1.7(1.9)	1.0(1.6)			2.3(2.2)	1.7(2.3)			4.1(2.8)	2.4(2.4)		
Blocks	0.3(0.9)	0			0	0.2(0.6)			0	0.3(0.8)		
Points	4.3(4.5)	2.4(4.1)			16.1(9.2)	8.0(6.6)	*	1.1	14.0(6.8)	14.4(10.4)		

* $p < 0.05$

- ➢ Spanish players where better than opponents for some of the key performance variables in WB along tournament…like 3 point unsuccessful (?).

- ➢ As team, Spain was dominant in shooting performance, rebounds and assists…until the final.

- ➢ In the final, difficulties to built offense (2x1 on 4 point player playmaker) and adequate shooting position were key in USA winning.

- ➢ Change of paradigm in Spanish five on court: it seems that 3 and 4 point players need to be more versatile (ej., 4 point players acting as playmaker, 3 point players as center).

- ➢ Relation of functional classification and playing role / specific position on court has changed: the association between the classical assignation of 1-2,5 point players as forwards, 2-3,5 players playmakers and 4 point players centers (Vanlandewijck et al., 2001; Pérez-Tejero, 2011) is difficult to find in last podium teams at international competition.

➢ Game related statistics are a key tool for performance analysis of WB.

➢ This piece of research is very valuable by team staff and players in order to maintain playing philosophy and competition preparation.

➢ Live stats during real competition can be used to enjoy competition (like today!!) but also to help coach and staff to adequate provide live feedback.

➢ …hope to see also the Spanish male team qualified for Tokyo, as well as the female team, qualified one month ago for first time ever for a Paralympic Games!

Thank you for your attention

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