# Players' participation motives as key to team success and achievements in Rwanda Handball league

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### Abstract

**Background:** Motivation to engage in a sport and fully contribute toward team goals has been a basic subject in understanding the ways to success, achievement and sustainability. Motives have been studied long ago, however, the modern way of studying them needs to consider specific areas (Developing countries), level of practice (Amateur or professional), and a specific sport. This study focused on the role of players' participation motives in predicting success and achievements in Rwanda Handball league, a developing league with limited resources.

**Method**: The study participants were 165 players from 10 teams. The study applied a descriptive design of correlational type. A Statistical Package for the Social Sciences (<sup>2</sup>SPSS) software version 26.0 served as the basis for data analysis at 0.05 alpha level of significance. The data collection instruments were the Physical Activity and Leisure Motivation Scale (<sup>3</sup>PALMS), and team success record sheet.

**Results**: Most respondents (47.3%) were between 21 and 25 years old, 90.3% not married and 62.4% from academic institutions. Regression revealed significant results  $F_{(8,164)} = 4.422$ , p(.000) < a(.05) on the prediction of team success by Sports Participation Motives variables, with an adjusted  $R^2 = 0.14$  indicating that about 14% of variance is accounted for by the independent variables of players' sports participation motives. The Cronbach alpha reliability coefficients were 0.856 (PALMS) and 0.677 for team success scale, reflecting good and reliable results.

**Conclusion**: Results confirmed that players' participation motives play a significant role in overall team success and performance prediction. Therefore, sports bodies, especially Rwanda Handball Federation, are encouraged to invest more in understanding various reasons why a player gets interested in Handball, create a motivating environment for players to get the best from them thus ensuring competitivity, professionalism and progress.

**Keywords:** Achievement, Joint prediction, Motivation, Performance, Relative prediction, Team success.

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# I. Introduction

Players' motivation is directly a determinant factor of performance leading to the overall team success. <sup>1</sup> A successful player is a result of a motivated and focused one, with a level of belief in oneself, demonstrating the ability to persist and perform up to expectations while under increasing pressure and changing conditions. This is mental toughness, a non-biological state, not guaranteeing victory, but helping one push past adversity and allowing him or her the opportunity to succeed.<sup>2,3,4</sup> Motivation is key to accomplishment,<sup>5,6,7</sup> be it in academics,<sup>8,9</sup> or physical activities, and sports. It helps people to perform higher than their expected physical and mental capacities and keep them satisfied.<sup>10,11</sup> It is an inspirational process that impels the team members to pull out their weight successfully to provide their dependability to the group, to carry out the accepted tasks properly, and generally to play a useful part.<sup>12</sup>

Players participate in competitive sports for various motives or reasons. Males and females participated in recreational and competitive sports mainly for social engagement and fitness enhancement.<sup>13,14</sup> The social

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<sup>&</sup>lt;sup>2</sup> SPSS: Statistical Package for Social Sciences

<sup>&</sup>lt;sup>3</sup> PALMS: Physical Activity and Leisure Motivation Scale

setting is also a directing agent toward a sport. Parents' and older siblings' qualities were predictive of younger siblings' interests, skills, and sports participation. Sport participation motives are mainly psychological per the self-determination theory, where one engages in a sport to satisfy his or her need to maximize competence, autonomy, and relatedness. Thus, essential psychological needs satisfaction has been proven to have a direct positive effect on players' engagement and, in turn, an indirect effect mediated by players' self-motivation.

#### 1.1. Concept of Players' Motivation

Modern sport is taken as a sector demanding enough reasons supporting the technical potential to get one engaged in. Players' motives were studied using 2 model motivations: Intrinsic, coming and acting within the individual player, and the extrinsic or external boost to participate in sports. Players intrinsically motivated do play for personal gratification while those extrinsically motivated participate in sport to obtain tangible benefits such as material and social rewards.; thus, they do it to get a reward or avoid punishment. Bostan and Dörnyei <sup>21,22</sup> mentioned three types of intrinsic motivation concerning sports involvement, namely the motivation for stimulating experiences, gaining knowledge, and accomplishing things. Players extrinsically motivated may be engaged depending on four extrinsic regulations. They may value the activity (identified regulation) reflecting the possession of a more self-determined motivational orientation, they may also do the activity to avoid feelings of guilt (introjected regulation) or because of some external demand or reward contingency which is external regulation, <sup>23</sup> and via integrated regulation, a self-examination internalizing and assimilating the reasons behind an action. In addition to the obvious affective consequences of intrinsic motivation, being engaged in sports out of enjoyment and fun is an important determinant of sport persistence and performance; this is the drive to have an inner feeling to work hard toward achieving desired goals leading to projected achievement.<sup>24,25</sup>

Players were found to experience a reluctant behavior toward a sport; this is amotivation <sup>26</sup>, constituting a mindset in which people lack either a sense of efficacy or a sense of control for attaining the desired outcome; thus, they are not able to regulate themselves for their behavior. Amotivation leads to less motivated players limiting the ability to contribute their potential and their hard work to improve technical competencies and tactical instructions. This decreases intrinsic motivation and increases external attachment to other sports apart from one in practice or any further engagement taken as a substitute of the current. Amotivated individuals experience feelings of incompetence, expectancies of uncontrollability, and perform activities without purpose. <sup>26</sup>

According to Harolle & Klay<sup>27</sup>, players are the foundation of and an integral aspect of the success of sports organizations, as their distinctive skills cannot be reproduced. This is a base for the need to know why individual players participate in sport, their motivation as an indicator for further development and performance assessment. This is founded on the established motivational climate whether mastery task-oriented meant to be positively reinforcing as a result of hard work, progress, peer assistance, and belief in potential complementarity; or competitive ego-oriented, a suing climate, reward on potential and regular teammates hustle for coach's recognition.<sup>28</sup>

# 1.2. Role of Coaches in Players' Motivation and team achievement

The coach's role is explained by two recognized interpersonal coaching styles in sports: the autonomy-supportive coaching style and the controlling coaching style per the self-determination theory. <sup>29,30</sup> The autonomy-supportive style reflects a coach who takes the players' perspective and provides explanatory rationales when prescribing action, providing as much choice as possible in the situation. Besides, the controlling coach assigns tasks and activities without input from players, showing little interest in how the last see things, and assuming a mantle of infallibility and imperviousness to questioning. <sup>30</sup> The autonomy-supportive style is motivating and encouraging players' exploration of their potential, thus satisfying their inner drives to compete. It is more democratic and fostering an open relationship between a coach and his players. <sup>31</sup> It provides chances for improved collaboration leading to the accelerated achievement of set goals. A positive correlation was found between autonomy-supportive behavior with the psychological needs of competence and commitment of players, and the autonomy-supportive behaviors were a predictor of the psychological needs and commitment of players. <sup>32</sup> The controlling coaching style is comparable to authoritarianism, limiting players' expression and pushing them to work under pressure. The controlling coaching behaviors were tipped to potentially contribute to athlete perfectionism, shaping athlete motivational regulations, and possibly increasing athlete burnout. <sup>33</sup>

According to Bhavsar et al,<sup>34</sup> autonomous, competent, recognized, and accepted players will display active engagement and persistence in various activities in training and competition and will report more positive physical and psychological health states. The success of a player can be described as the state of achieving excellence in his career demonstrated through performance on the field, level of play, and wealth maximization

through play.<sup>35</sup> This success is a result of effective use of physical, technical, and psychological potentials of the player, all monitored by the social surrounding, sporting resources, and high-level career aspiration drives; all operating to the successful use of the specific skill set and technique required to be successful in a particular sport. A range of physical and mental components lead to effective execution in sports, <sup>36,37</sup> and each sport and activity obliges a particular set of these abilities, meaning that being effective in one sport does not essentially make one effective in another, as victory requires an entirety run of components to come together and interact in the right way.<sup>38</sup>

This study explored the motives of Rwanda Handball league players, a general view on the effect of such motives on their performance. It focused on:

- The investigation of the occurrence of joint and relative prediction of sports participation motives on team success in Rwanda Handball League.
- The exploration of the difference in participation motives of players playing for schools, government-owned teams, and private bodies' teams in the Rwanda Handball league.

The following null hypotheses were formulated and tested:

 $H_01$ : There is no significant joint prediction of sports participation motives (competition, psychological conditions, enjoyment, affiliation, mastery, others expectation, physical condition, appearance) on team success in Rwanda Handball League.

 $H_02$ : There is no significant relative prediction of competition, psychological conditions, enjoyment, affiliation, mastery, others expectation, physical condition, and appearance on team success in Rwanda Handball League.

 $H_03$ : There is no significant difference in participation motives of players playing for schools, government-owned teams, and private bodies' teams in the Rwanda Handball league.

### II. Methods

# 2.1. Population, Design, and Ethics

This study used the total enumerators sampling technique. Participants were 165 players from 10 teams registered to play Rwanda handball league 2019/2020 season. This study applied a descriptive design of correlation type. Descriptive correlational studies focus on studying the relationship between the predictor variable and the outcome variable. In this study, the researcher employed a descriptive survey to investigate the demography of study participants while the regressions and correlations were used to study the variables predicting the success of handball teams in the Rwanda handball league through the analysis of players' motives to play handball as the considered predictors of team success. This study's proposal passed through an ethical assessment process. The proposal was defended, improved, and approved by the ethical committee of the Department of sports management and policy development of PAULESI. It was later approved by the Institute academic board and the Rwanda Handball federation. The researcher formally, with authorization from the federation, contacted team presidents and provided adequate information about the contribution of possible outcomes to the concerned population to ensure full cooperation. Informed consent was signed by respondents. The authors quoted in this study were adequately recognized through citations and references.

# 2.2. Instruments and Data Collection Procedures

We used a Kinyarwanda translated model of Physical Activity and Leisure Motivation Scale, named Sport Participation Motives Questionnaire (SPMQ) in this study, a tool adopted as used in the study to investigate the participation for physical activity and exercise using physical activity and leisure motivation scale, <sup>39</sup> a forty items tool with eight subscales (Appearance, Psychological conditions, Enjoyment, Affiliation, Mastery, Competition Ego, Physical Condition, Others Expectation). A team success record sheet, a tool designed to record team successes retrieved from team statistics records for the past three seasons of the Rwanda handball league, facilitated the design and completion of team success and achievement scale of the dependent variable.

The validity of instruments was examined by the lecturers of human kinetics and considered after proposal defense. The PALMS was adopted as used and validated in Chowdhury <sup>39</sup>. Reliability entails whether a tool provides stable and consistent results. <sup>40</sup> Cronbach alpha, a measure used to assess the internal consistency of a scale or test items was applied and the reliability coefficient for Sports participation motives (PALMS) was 0.856 and 0.677 for the Team success scale, all reliable.

#### 2.3. Statistical Analysis

A Statistical Package for the Social Sciences software version 26.0 (IBM SPSS, Chicago, USA) served as the data analysis tool. All hypotheses were tested at 0.05 alpha level of significance. Regressions were used to test hypothesis 1 for joint prediction and 2 for relative prediction of team success by participation motives. The analysis of variance was used to determine differences in motives concerning team ownership tested in

hypothesis 3. The correlation was stipulated to determine the interrelationship between participation motives. The results were presented in tables. This study used quantitative data. Descriptive statistics, including frequencies and percentages, were computed.

#### III. Results

## 3.1. Sociodemographic description of the respondents

Table 1 highlights the demographics of respondents. Total participants were N=175 with 165 valid, all were male. 90.3% were single while 9.7% were married. The age of participants ranged from 15 years to 40 years, with 30.3% between 15 to 20 years old, 47.3% ranging between 21 and 25 years old, 13.9% ranging from 26 to 30 years old, 6.7% have between 31 to 40 years old and lastly 1.8% are above 40. Regarding team ownership, 28.5% of all the teams belong to public bodies, 9.1% to private bodies, and 62.5% to schools. About playing experience, 45.4% played handball for less than 3 years, 28.4 played between 4 to 6 years, 13.8% played between 7 to 10 years, 5.4% between 11 to 15 years, and 6% above 15 years.

**Table 1:** Sociodemographic characteristics of respondents

Variable	Frequency	Percent (%)		
Marital status	-			
Married	16	9.7		
Single	149	90.3		
Age Group				
15-20	50	30.3		
21-25	78	47.3		
26-30	23	13.9		
31-40	11	6.7		
40<	3	1.8		
Team Ownership				
Public body	47	28.5		
Academic Institution	103	62.4		
Private Body	15	9.1		
Playing Experience				
Less than 3 years	75	45.4		
4-6	47	28.4		
7-10	24	13.8		
11-15	9	5.4		
Above 15	10	6		
Total	165	100.0		

# 3.2. Results obtained for the first hypothesis

 $H_01$ : There is no significant joint prediction of sports participation motives (competition, psychological conditions, enjoyment, affiliation, mastery, others expectation, physical condition, appearance) on team success in Rwanda Handball League.

As indicated in table 2, it was found that the linear combination of sports participation motives (competition, psychological conditions, enjoyment, affiliation, mastery, others expectation, physical condition, appearance) tested significant,  $F_{(8,164)} = 4.422$ , p (.000) < a (0.05), on team success in Rwanda Handball League. The result yielded a coefficient of multiple regression of R=0.43, multiple R-square of 0.19, and an adjusted  $R^2$ =0.14 indicating that about 14% of the variance was accounted for by the independent variables. This implied that sports participation motives of competition, psychological conditions, enjoyment, affiliation, mastery, others expectation, physical condition, appearance predicted team success in Rwanda Handball League. Hence, the null hypothesis was rejected.

Table 2:
Summary of regression of joint prediction of sports participation motives on team success in Rwanda Handball League
Sports participation motives

Sports participation	mouves				
Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	466.658	8	58.332	4.422	.000
Residual	2057.790	156	13.191		
Total	2524.448	164			
Multiple R: 0.43	$R^2:0.19$	Adjusted R <sup>2</sup> : 0.14			

The inter-correlation matrix of the relationship between sports participation motives variables in table 3 demonstrated that many correlation coefficients are weak. Only two variables, enjoyment & mastery  $(0.53^{**})$  and enjoyment and affiliation  $(0.56^{**})$  have a moderate correlation.

Table 3:

Correlation matrix of the relationship among players' sports participation motives variables										
<sup>4</sup> Sub-scales	Mean	<sup>5</sup> SD	CT	PSC	EJ	AF	MA	OE	PHC	AP
CT	14.31	3.68	1							
PSC	15.26	5.49	$0.29^{**}$	1						
EJ	17.02	2.88	$0.47^{**}$	0.41**	1					
AF	16.18	4.93	0.43**	0.21**	0.56**	1				
MA	16.61	2.48	0.50**	0.30**	0.53**	0.45**	1			
OE	11.22	3.24	0.41**	0.24**	0.32**	$0.17^{**}$	0.38**	1		
PHC	16.55	3.29	0.30**	0.29**	$0.44^{**}$	0.36**	0.48**	$0.28^{**}$	1	
AP	20.21	4.10	0.46**	0.41**	0.36**	0.27**	0.41**	0.55**	0.41**	1

<sup>\*\*</sup>Correlation is significant at 0.01 (2-tailed); \*Correlation is significant at 0.05 (2-tailed)

# 3.3. Results obtained for the second hypothesis

**H<sub>0</sub>2:** There is no significant relative prediction of competition, psychological conditions, enjoyment, affiliation, mastery, others expectation, physical condition and appearance on team success in Rwanda Handball League. As indicated in the table 4, mastery tested significant ( $\beta$ =0.305, t=3.128, p<0.05), contrary to competition ( $\beta$ =0.081, t=0.852, p>0.05), psychological conditions ( $\beta$ =0.086, t=1.015, p>0.05), enjoyment ( $\beta$ =0.105, t=1.012, p>0.05), affiliation ( $\beta$ =0.102, t=1.099, p>0.05), others expectation ( $\beta$ =0.003, t=0.031, p>0.05), physical condition ( $\beta$ =0.010, t=0.104, p>0.05) and appearance ( $\beta$ =0.086, t=0.863, p>0.05) all being not significant. Hence, the null hypothesis that there is no significant relative prediction of mastery on team success in Rwanda Handball League was rejected.

**Table 4:**Summary of regression of relative prediction of sports participation motives on team success in Rwanda Handball League

Variables (sub-scales)	Unstandardized coefficients		Standardized coefficients			
	B Std.		Beta (β)	t	(p value)	Remark
		Error				
(Constant)	17.929	2.166		8.276	.000	_
Competition	.086	.101	.081	.852	.396	Not Sig.
Psychological conditions	.061	.060	.086	1.015	.312	Not Sig.
Enjoyment	.144	.142	.105	1.012	.313	Not Sig.
Affiliation	.081	.074	.102	1.099	.274	Not Sig.
Mastery	.483	.155	.305	3.128	.002	Sig.
Others expectation	.003	.109	.003	.031	.976	Not Sig.
Physical condition	.012	.117	.010	.104	.917	Not Sig.
Appearance	.071	.082	.086	.863	.389	Not Sig.

<sup>\*</sup>Significant at p<0.05

# 3.4. Results obtained for the third hypothesis

 $H_03$ : There is no significant difference in participation motives of players playing for schools, government-owned teams, and private bodies' teams in the Rwanda Handball league.

Table 5 shows test results for sport participation motives not being significantly different for at least one of the different team ownerships. With  $F_{(33,162)}$ =0.031, p(0.969) > 0.05, indicating a non-significant difference between team ownership thus no significant difference was observed.

<sup>&</sup>lt;sup>4</sup>Abbreviations: Competition (CT), Psychological conditions (PSC), Enjoyment (EJ), Affiliation (AF), Mastery (MA), Others Expectation (OE), Physical Condition (PHC), Appearance (AP).

<sup>&</sup>lt;sup>5</sup> SD: Standard Deviation

 Table 5:

 ANOVA for the significant difference in sports participation motives concerning team ownership

Sports participation motives	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.018	3	.009	.031	.969
Within Groups	46.287	162	.286	i	
Total	46.305	164			

#### IV. Discussion

This study provided oversight of the role of motivation in team success in the Rwandan setting. It also provided the usefulness of the Physical activity and leisure motivation scale in Rwanda. Our results from hypothesis 1 confirmed the significant joint predicting ability of motives variables to team success. It corroborates with the finding of Cerasoli et al,<sup>41</sup> where intrinsic motivation predicted more unique variance in quality of performance, while incentives were a better predictor of the quantity of performance. It is in line with results where highly achievement-motivated athletes gained more from competence satisfaction in terms of flow than athletes with a low achievement motive did, also highly affiliation-motivated with satisfied social relatedness reported higher positive affect and lower exercise addiction scores than those with a low motive<sup>42</sup>. Also, Garcia-Mas et. al,<sup>43</sup> revealed a significant influence of motivation in sport enjoyment and commitment, outlining the positive contribution of intrinsic and extrinsic motivation to enjoyment and commitment where the role of intrinsic motivation to a higher contribution to commitment was mentioned.

Significant relative prediction ability concerning mastery predicting team success was found from the test of hypothesis 2. This corroborates with the demonstration that mastery goals were positive predictors of deliberate practice, which was a direct positive predictor of performance, whereas performance-avoidance goals were direct negative predictors of performance. This is supported by the role of mastery climate on task-oriented coaching where task orientation showed a propensity to be higher in training than in competition, whereas perceived mastery climate appeared to be more stable across the two contexts. 46,47

Hypothesis 3 was revealed no differences in motives considering team ownership. Refereeing to studies demonstrating differences in motives, a significant contrast between sports interest inspiration of players in a group and individual sports as well as between male and female competitors were observed and shown that sports discipline and the player's gender is effective in motivating athletes' continuation and commitment to physical activity. This is compared to the indication of positive effects between the expenses on football players' salaries and the clubs' sports achievements with non-significant effects between player transfer fees and sports performance implying concern for team ability to invest.

Concerning other studies about motivation role in team success and differences in motives <sup>5,7,8,27,43</sup>, motives of participation were identified with some settings considered in motives variation <sup>50</sup> Technical Competence together with factors of intermediate utility such as competition, group activity, and physical fitness were found as key motives. Low-income families tagged greater importance to the motivation factors associated with social recognition and group activity. Athletes with limited training time conceded less relevance to group activity and affiliation, while those with a nationally competitive level demonstrated greater importance to all motivation factors, except competition. Young athletes have been boosted to practice sports, especially for reasons related to self-realization, improvement of technical skills, and surpassing challenges. Motives differences were also identified between family economic class groups, practice time, and competitive level in the motivation factors for sports practice.<sup>51</sup>

#### V. Conclusion

Overall team success undoubtedly depends on various factors, particularly, the state of the mind among players. Based on the findings of this study, it is confirmed that players' participation motives play a big role in the success and achievements of their teams as well as themselves. This study's findings serve as an asset to the development and future practice of Handball in Rwanda. It is expected to mainly benefit team owners, the Rwanda handball federation, individual teams, coaches as well as players. It will also be taken as a reference to Rwanda sports sector as it provides a piece of empirical evidence to rely on while designing various sports development programs.

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#### **Authors' contributions**

FU designed the study, collected, analyzed, and interpreted data, worked on discussion and related literature, and drafted the manuscript; AOF and WFI contributed to study design, data analysis and interpretation, and manuscript development and critical review. All authors have read and approved the final version of the manuscript and agreed with the order of presentation of the authors.

# **Competing Interests**

The authors declare that there are no competing interests.

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