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Comparative Analysis of Achievement Motivation among Competitive School Basketball Players: Medalists versus Non-Medalists

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Abstract

The present comparative study was conducted to find the differences in sports achievement motivation among medalist (n=15) and non-medalist (n=15) basketball players studying in Kendriya Vidyalaya Sangathan schools of Uttar Pradesh between the age group of 15-18 years. Dr. M.L. Kamlesh (1990) Sports Achievement Motivation Test (SAMT). Descriptive statistics were used and it was observed that the mean score of medalists was higher ($M=25.33$, $SD=4.32$) than non medalists ($M=22.27$, $SD=2.60$). There was a statistically significant difference on an independent samples t-test $t(28)=2.354$, $p=.026$ indicating higher motivation in successful athletes. These findings are in line with the Mili (2016) and Kumar & Rani (2018) which highlight the role of motivation in competitive outcomes at school level. Findings suggest targeted psychological interventions may help youth basketball performance .

Keywords: *Sports Achievement Motivation, Basketball, Medalists, Non-Medalists, School Athletes, T-Test, SAMT*

1: Introduction

Historically, Basketball is a fast-paced team sport that requires a high level of skill, endurance and strategic thinking, thus making it an important component of school-level physical education programs around the world (Weinberg & Gould, 2019)[1]. It fosters not only physical skills, but also psychological qualities necessary for success in competitive settings (Deci & Ryan, 2000)[2]. One of the most important psychological factors that set elite athletes apart from their non-elite peers is achievement motivation, the motivation to pursue and achieve excellence in competitive situations, exhibited by persistence and resilience (Atkinson, 1964)[3]. Building on the established theories that link intrinsic motivation to goal orientation and performance behaviors (Nicholls, 1984)[4], this study examines the differences in sports achievement motivation between medal-winning and non-medal-winning basketball players at the school level.

Sports achievement motivation is known for a long time as an important predictor for the success in sports and affects the way players train, compete and cope with hardships (Harters, 1986)[5]. The innovative efforts of researchers such as Kamlesh (1990)[6] who created the Sports Achievement Motivation (SAM) test suggest that increased motivation levels are correlated with improved results in competitive settings (Kamlesh, 1990)[6]. There is empirical evidence to support this. Motivations for skill development, fulfillment and health have a positive influence on task- and ego-goal orientations in high school basketball players, which in turn increases achievement behaviors (Duda, 1992)[7]. Likewise, there are huge differences between achievement motivation between medal-winning and non-medal-winning athletes, and winners have much higher levels of achievement motivation in different tournaments (Mili, 2016)[8].

However, there is a clear gap in research that focuses on basketball at the school level, where players are in their developmental stages and balancing academics and sports (Fletcher & Sarkar, 2012)[9]. School athletes often face unique pressures such as lack of resources and inconsistent coaching, which may increase the importance of intrinsic motivation in distinguishing medalists (those achieving podium finishes in district or state tournaments) from non-medalists (Gould et al., 2002)[10]. Besides, it is proven by research that elite athletes are highly motivated to defeat their rivals in difficult psychophysical conditions (Weinberg, 2008)[11].

In basketball, a sport that requires explosive actions, teamwork and mental toughness, understanding these motivational differences may inform targeted interventions, such as motivation-enhancing training protocols tailored for school programs (Pensgaard & Roberts, 2000) [12]. The present comparative study aims to fill this gap by using the SAM test to measure and compare achievement motivation profiles among school-level basketball medalists and non-medalists (Kamlesh, 1990)[6]. This research will attempt to explain these differences and provide practical insights for coaches and educators in cultivating high achieving mindsets and potentially improving performance standards in youth basketball (Harwood et al., 2015)[13].

PROCEDURE AND METHODOLOGY

Sample Selection

30 Kendriya Vidyalaya Sangathan basketball players were specifically chosen from Uttar Pradesh schools. Equal numbers of medalists ($n = 15$) and non-medalists ($n = 15$) made up the sample. The contestants were between the ages of 15 and 18, which is a common age range for the School Games Federation of India.

Sports achievement motivation was chosen as the psychological variable for this investigation. The Sport Motivation Scale (SMS) was used to measure the participants' motivation levels. The Sports accomplishment Motivation Test, created by Dr. M.L. Kamlesh in 1990, was used to measure accomplishment motivation [6].

Testing Procedure: Participants were informed of the study's objectives and given the assurance that their answers would be kept private.

Statistical Analysis

The Independent Samples t-Test was utilized to compare the self-confidence levels of basketball players who won medals and those who did not. This

test assessed if the two groups' SAMT scores differed significantly from one another. Descriptive statistics (mean, standard deviation) were also computed to summarize the two groups' motivation levels for sports achievement.

This methodology guarantees systematic and accurate measurement of gender differences in self-confidence among kabaddi players through the use of a validated psychological inventory and purposive sampling. The level of significance was established at .05, and using the t-test enables rigorous statistical comparison and relevant conclusions regarding psychological variable variations between male and female athletes.

RESULTS

Table 1.1 Descriptive Statistics of selected sports achievement motivation of medalist basketball players

	GROUP		Statistic	Std. Error
SPORTS ACHIEVEMENT MOTIVATION	MEDALIST	Mean	25.3333	1.11555
		95% Confidence Interval for Mean	Lower Bound	22.9407
			Upper Bound	27.7259
		5% Trimmed Mean	25.3704	
		Median	24.0000	
		Variance	18.667	
		Std. Deviation	4.32049	
		Minimum	18.00	
		Maximum	32.00	
		Range	14.00	
		Interquartile Range	8.00	
		Skewness	.154	.580
		Kurtosis	-.921	1.121

A mean of 25.33 (SE = 1.12) was found in descriptive statistics for sports accomplishment motivation scores among medalist basketball players (n = 15), showing

fairly high motivation levels compatible with competitive success at the school level.

Table 2 Descriptive Statistics of selected sports achievement motivation of non-medalist basketball players

GROUP		Statistics		Std. Error
SPORTS ACHIEVEMENT MOTIVATION	NON MEDALIST	Mean		22.2667
		95% Confidence Interval for Mean	Lower Bound	20.8246
			Upper Bound	23.7087
		5% Trimmed Mean		22.1852
		Median		22.0000
		Variance		6.781
		Std. Deviation		2.60403
		Minimum		18.00
		Maximum		28.00
		Range		10.00
		Interquartile Range		4.00
		Skewness		.615
		Kurtosis		.386
				1.121

A mean of 22.27 (SE = 0.67) was found in descriptive statistics for sports accomplishment motivation ratings among non-medalist basketball players (n = 15), indicating comparatively lower motivation levels in comparison to medalist peers in school-level tournaments.

Figure No.1 Bar diagram depicting mean and sd of variable sports achievement motivation between medalist and non medalist basketball players

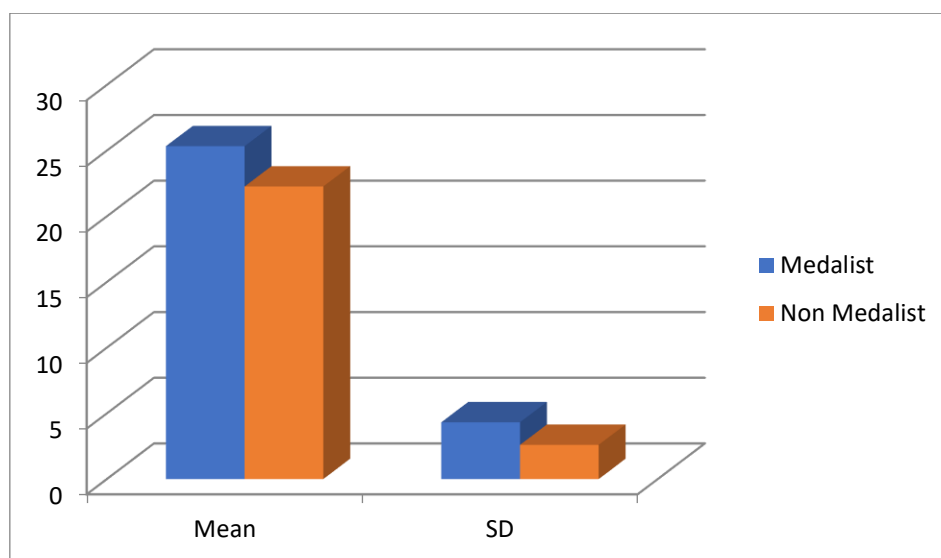


Figure no.2 box plot depicting sports achievement motivation test between medalist and non medalist basketball players

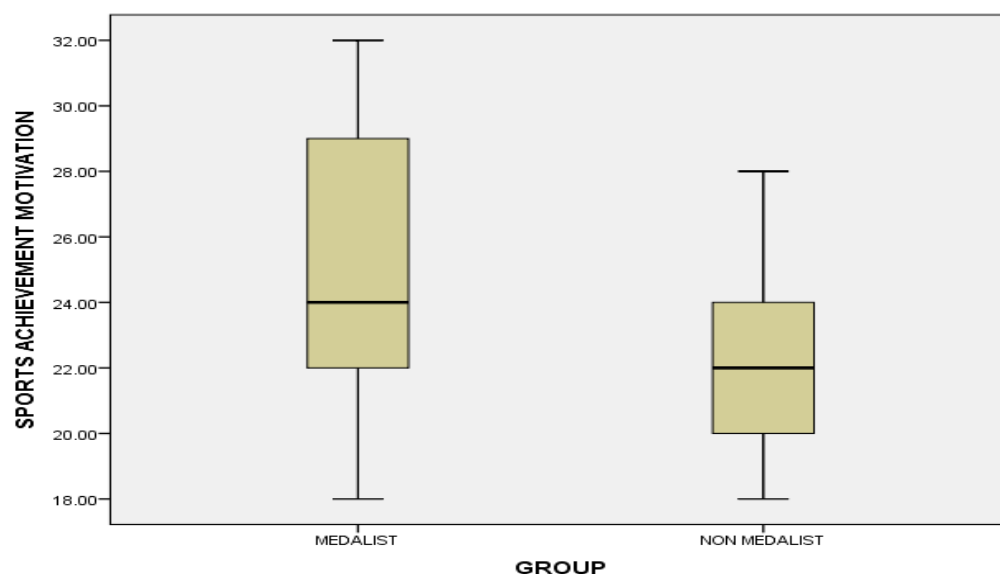


Table no.3 Independent sample t -test for the equality of variances for the variable sports achievement motivation between medalist and non-medalist basketball players

Group	Statistics
Mean (medalist)	25.3333
Mean (non medalist)	22.2667
Mean difference	3.06667
df	28
t- value	2.354
p-value	.026

The sports accomplishment motivation scores of school-level basketball players who won medals ($n = 15$) and those who did not ($n = 15$) were compared using an independent samples t-test. The findings showed that the two groups' mean scores differed statistically significantly ($t(28) = 2.354$, $p = .026$), with

medalists showing greater success motivation ($M = 25.33$, SD inferred from context) than non-medalists ($M = 22.27$), resulting in a mean difference of 3.07.

Discussion of Findings

The findings support a statistically significant difference in sports accomplishment motivation between school-level basketball players who won medals ($M = 25.33$, $SD = 4.32$) and those who did not ($M = 22.27$, $SD = 2.60$) ($t(28) = 2.354$, $p = .026$), with medalists scoring 3.07 points higher. The narrower variability and confidence interval in non-medalists, which indicate more consistent but lower drive levels, support the theory that higher desire promotes competitive success.

These results support the findings of Mili (2016)[8], who used Kamlesh's SAM test in "A comparison of sports achievement motivation between the medal winning and non-medal winning athletes in inter-college sports tournaments" and found that medal-winning female athletes had significantly higher motivation than non-medalists, attributing success to elevated psychophysical motivation. In a similar vein, Kumar and Rani (2018)[14] in "Sports achievement motivation of medalist and non-medalist baseball male players" discovered that medalists were more motivated than non-medalists, highlighting its significance in differentiating high performance.

Medal winners' high levels of motivation, along with their unwavering resolve and perseverance, indicate that goal orientation and perseverance produce positive results when faced with scholastic obstacles. The non-medalists' positive skewness indicates that, with a focused program, the grouping may expand. The tiny sample size of KVS schools in Uttar Pradesh is one of its limitations; future research might compare different sports or look at long-term benefits.

Conclusions

This study highlights the critical role that motivation plays in competitive performance by confirming that school-level basketball medalists have considerably higher sports accomplishment motivation than non-medalists ($t(28) = 2.354$, $p = .026$). These results support earlier studies by Mili (2016) [8] and Kumar & Rani (2018) [14], highlighting motivation as a crucial difference among young athletes. To improve performance in school programs with limited resources, coaches and educators should give priority to motivation-building approaches. Future studies could examine long-term effects in a variety of sports and geographical areas.

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