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Comparative Evaluation of Male and Female Gymnastics Players' Motivation for Sports Participation

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Abstract:
The study examines gender-based differences in motivational factors influencing sports participation among state-level male and female gymnastics players in Delhi. Using the Sport Motivation Scale-6 (SMS-6), which assesses six subtypes of motivation under Self-Determination Theory, the responses of 46 gymnasts (23 male, 23 female) aged 14–18 were analyzed. The results indicate that male gymnasts exhibit significantly higher levels of intrinsic motivation, integrated regulation, identified regulation, and introjected regulation. No significant difference was found in amotivation, while external regulation approached significance. Findings suggest tailored motivational strategies can enhance athlete development and retention, particularly through gender-sensitive coaching practices.
Keywords: motivation, gymnastics, gender differences, intrinsic motivation, SMS-6, sports psychology

Introduction

Motivation is a cornerstone of athletic performance and long-term participation in sport, especially among youth athletes engaged in physically and mentally demanding disciplines such as gymnastics. Motivation is the term used in sport psychology to describe the internal or external factors that start, guide, and maintain behavior throughout time. (Deci & Ryan, 1985; Weinberg & Gould, 2019). A motivated athlete is more likely to endure rigorous training, remain focused during competition, and overcome challenges such as injury, fatigue, or failure.

Self-Determination Theory (SDT), proposed by Deci and Ryan (1985, 2000), is among the most widely used frameworks to understand motivation in sport. SDT categorizes motivation along a continuum ranging from amotivation (lack of intention to act), through various forms of extrinsic motivation (external, introjected, identified, and integrated regulation), to intrinsic motivation, where actions are driven by inherent satisfaction. This continuum emphasizes that the degree of autonomy behind a behavior directly affects the quality of motivation, which in turn influences performance, persistence, and well-being (Ryan & Deci, 2000).

In gymnastics, a sport that requires years of structured practice, precise technical skills, and high physical capacity—motivation plays a vital role in determining an athlete’s progression and success. The sport's unique aesthetic and physical demands also make it a relevant context for analyzing how different motivational orientations manifest. Importantly, gymnastics exhibits clear gender distinctions: male gymnasts typically focus on strength-based apparatus such as rings and vaults, while female gymnasts emphasize flexibility and artistry in events like balance beam and floor routines (Kerr & Nixon, 2008). These performance demands may influence the motivational profiles of male and female athletes differently.

Research indicates that gender can significantly affect the type and level of motivation in sport. Male athletes are often more influenced by ego-oriented goals and external rewards, whereas female athletes tend to exhibit stronger task orientation and intrinsic motivation (Duda & Nicholls, 1992; Ntoumanis & Biddle, 1999). Additionally, social expectations, coaching styles, and cultural norms surrounding gender may further shape how motivation is internalized and expressed across male and female gymnasts (Robinson & Coffey, 2008).

Purpose of the Study

This study aims to investigate and contrast the types and degrees of motivation among Delhi's 14–18-year-old male and female gymnastics athletes. The study intends to find significant gender-based variations in six motivational dimensions—introjected regulation, external regulation, identified regulation, intrinsic motivation, and amotivation—using the Sport Motivation Scale-6 (SMS-6). The results will assist in developing gender-sensitive coaching and athlete development techniques.

METHODOLOGY

SELECTION OF SUBJECTS

Forty Six (N=46) male and female Gymnastics players from Delhi, all of whom have competed at the state level, were selected for the study using stratified purposive sampling.
The age of the subjects selected were ranging from 14 to 18 years.

SELECTION OF VARIABLES

The study was focus on the mentioned variable and Sub-variables:
Variable: Motivation
Sub-Variables :-

- Amotivation
- External Regulation
- Introjected Regulation
- Identified Regulation
- Integrated Regulation
- Intrinsic Motivation

CRITERION MEASURE

The Sport Motivation Scale-6 (SMS-6) was used for the study at the Delhi State Gymnastics Championship. It has six subscales: intrinsic motivation, integrated regulation, identifiable regulation, introjected regulation, external regulation, and amotivation.

STATISTICAL ANALYSIS

Descriptive statistics and independent samples t-tests were conducted. A significance level of 0.05 was adopted to determine whether observed differences were meaningful.

RESULTS

Table 1: Independent Sample 't' test

Variables	Gender	N	Mean	S.D.	Std. Error Mean	Mean Difference	t	Sig. (2-tailed)
Amotivation	female	23	17.87	5.87	1.22	1.48	0.79	0.434
	male	23	16.39	6.78	1.41		0.79	
External Regulation	female	23	20.70	5.03	1.05	-2.78	-1.75	0.087
	male	23	23.48	5.71	1.19		-1.75	
Introjected Regulation	female	23	22.30	4.25	0.89	-2.87	-2.13	0.039
	male	23	25.17	4.89	1.02		-2.13	
Identified Regulation	female	23	21.57	2.91	0.61	-3.35	-3.76	0.001
	male	23	24.91	3.13	0.65		-3.76	
Integrated Regulation	female	23	22	3.87	0.81	-2.96	-2.57	0.014
	male	23	24.96	3.93	0.82		-2.57	
Intrinsic Motivation	female	23	23.17	3.86	0.80	-3.30	-3.19	0.003
	male	23	26.48	3.13	0.65		-3.19	

Table 1, Independent sample t-test results reveal noteworthy gender-based differences in various dimensions of motivational regulation among gymnasts. Specifically, Amotivation showed no significant gender difference ($p = 0.434$), indicating that male and female gymnasts experienced comparable levels of disengagement or lack of motivation. However, significant gender differences emerged across several internally regulated forms of motivation. Male gymnasts demonstrated significantly higher scores than females in Introjected Regulation ($M = 25.17$, $SD = 4.89$; $t = -2.13$, $p = 0.039$), Identified Regulation ($M= 24.91$, $SD = 3.13$; $t = -3.76$, $p = 0.001$), Integrated Regulation ($M = 24.96$, $SD = 3.93$; $t = - 2.57$, $p = 0.014$), and Intrinsic Motivation ($M = 26.48$, $SD = 3.13$; $t = -3.19$, $p = 0.003$), suggesting that male gymnasts tend to be more self-driven and internally motivated compared to their female counterparts. Although External Regulation approached significance ($p = 0.087$), it did not surpass the conventional alpha level, yet it suggests a potential trend of males being more susceptible to external motivators. Collectively, these results underscore a gender disparity favouring male gymnasts in terms of autonomous and internalized motivation, emphasizing their stronger inclination toward personal goals, internal values, and self-determined engagement in gymnastics.

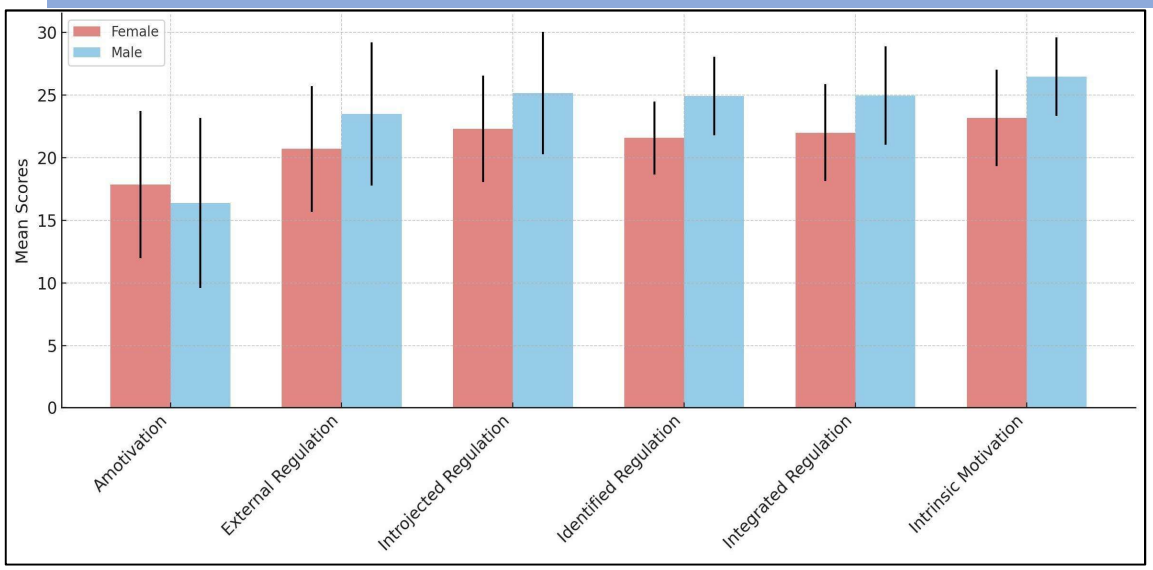

Fig 1: Graphical Representation of Mean scores of both male & female gymnasts.

Discussion

The findings of this study revealed significant gender-based differences in the motivational orientations of adolescent gymnastics players. Male gymnasts scored higher in intrinsic motivation, integrated regulation, identified regulation, and introjected regulation, suggesting a stronger internalization of motivation compared to their female counterparts. These results align with previous studies indicating that male athletes often exhibit higher levels of autonomous motivation when engaged in performance-oriented environments that foster personal growth, mastery, and internalized goals (Mallett & Jackson, 2007; Standage & Ryan, 2020). Intrinsic motivation, in particular, was the highest among both genders, highlighting that enjoyment and satisfaction derived from the sport remain central drivers of participation in gymnastics.

Interestingly, while previous literature has sometimes suggested that female athletes are more task-oriented and intrinsically motivated (Duda & Nicholls, 1992), the current findings showed that male gymnasts in this sample scored significantly higher across nearly all internal motivational subtypes. This discrepancy may be attributed to sport-specific expectations and social contexts. In Indian gymnastics, male athletes may receive more performance-based reinforcement and structured encouragement from coaches, which could foster higher self-determined motivation. Moreover, male gymnasts may perceive a stronger sense of identity and career pathway through sport, thus showing greater alignment with integrated and identified regulation (Ryan & Deci, 2000; Robinson & Coffey, 2008).

The absence of significant gender differences in amotivation suggests that both male and female gymnasts were equally engaged with their sport, and that lack of motivation is not a widespread concern in this age group. However, the moderate scores in external and introjected regulation among females may reflect a greater influence of social approval, perceived obligation, or pressure, which, if not addressed, could lead to reduced long-term engagement (Pelletier et al., 2004). These insights reinforce the importance of fostering autonomy-supportive environments, especially for female gymnasts, to encourage internalized motivation and reduce reliance on external pressures (Deci & Ryan, 2000). Coaches and sport psychologists should consider gender-sensitive motivational strategies that emphasize personal mastery, self-reflection, and emotional support to enhance motivation sustainably across both groups.

Conclusion

The study highlights gender-based distinctions in motivational drivers among adolescent gymnasts. Male athletes show stronger internal and self-regulated motivation. Coaches and sport psychologists should consider these differences to optimize training environments and athlete well-being.

References

1. Deci, E. L., & Ryan, R. M. (1985). Intrinsic motivation and self-determination in human behavior. Springer.
2. Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. Psychological Inquiry, 11(4), 227–268.
3. Duda, J. L., & Nicholls, J. G. (1992). Dimensions of achievement motivation in schoolwork and sport. Journal of Educational Psychology, 84(3), 290–299.
4. Kerr, R., & Nixon, C. (2008). Gendered sporting practices: Physicality and the cultural significance of gymnastics. International Review for the Sociology of Sport, 43(2), 111–123.
5. Mallett, C. J., & Jackson, S. A. (2007). Understanding sport motivation: Self-determination theory in sport and exercise. In G. Tenenbaum & R. C. Eklund (Eds.), Handbook of sport psychology (3rd ed., pp. 471–488). Wiley.
6. Ntoumanis, N., & Biddle, S. J. H. (1999). A review of motivational climate in physical activity. Journal of Sports Sciences, 17(8), 643–665.
7. Pelletier, L. G., Fortier, M. S., Vallerand, R. J., & Brière, N. M. (2004). Associations among perceived autonomy support, forms of self-regulation, and persistence: A prospective study. Motivation and Emotion, 28(3), 255–286.
8. Robinson, L., & Coffey, J. (2008). Fitness and the postmodern female: Gender, motivation and fitness culture. Journal of Gender Studies, 17(1), 1–12.
9. Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. American Psychologist, 55(1), 68–78.
10. Standage, M., & Ryan, R. M. (2020). Self-determination theory and exercise motivation: Integrating theory and practice. International Review of Sport and Exercise Psychology, 13(1), 138–160.
11. Weinberg, R. S., & Gould, D. (2019). Foundations of sport and exercise psychology (7th ed.). Human Kinetics.