

**COMPARISON OF MOTIVATION AND BASIC NEED SATISFACTION  
AMONG THE TOURNAMENT CHESS PLAYERS IN KERALA**

By

Dr.VinuBhaskar

Assistant Professor of Physical Education

Govt T.D.Medical College Alappuzha

**ABSTRACT**

The purpose of investigation was to examine the relationships between FIDE Chess Rating, gender, level of competition, sport motivation and chess player's perceptions of autonomy, competence and relatedness in order to enhance our knowledge of the motivational processes in Chess. Three hundred Tournament Chess Players completed the Sport Motivation Scale and the Basic Psychological Needs in Sport Scale. Results revealed that Female Chess Players felt less competent and demonstrated less external regulation than Male Chess Players, while exhibiting more intrinsic motivation than this group. In addition, the results showed that Unrated Chess Players felt more autonomous and had fewer scores on external regulation than FIDE Rated Chess Players. Differences in the levels of

participation also emerged. Specifically, Chess Players at the district level displayed less intrinsic motivation and less external regulation than Chess Players at the state level. District level Chess Players also exhibited less intrinsic motivation, less introjected regulation, and less external regulation than national level Chess Players.

**Key words:** Motivation, Amotivation, Need, FIDE Rating & Chess

## **INTRODUCTION**

Chess players are intrinsically motivated when they engage in an activity for the pleasure and satisfaction derived from the activity itself, whereas extrinsic motivation describes behaviours performed to attain material or social rewards. The understanding of human behaviour also involves considering amotivation (Deci & Ryan, 1991). When people are amotivated, they do not perceive a relationship between their actions and the resulting outcomes. Consequently, they no longer identify any good reasons for practicing their sport. According to self-determination theory, intrinsically motivated behaviour is associated with satisfaction of three psychological needs. The need for autonomy reflects the need to perceive behaviour as freely chosen. The need for competence refers to the urge

to effectively interact with the social environment. The need for relatedness pertains to the desire to feel connected with other individuals. Vallerand 1997) suggested that three dimensions of intrinsic motivation exist: intrinsic motivation to know, intrinsic motivation to accomplish things, and intrinsic motivation to experience stimulation. Firstly, intrinsic motivation to know involves engaging in sport for pleasure and satisfaction experienced while one is learning and exploring something new. Secondly, intrinsic motivation to accomplish things operates when one is engaged in an activity for the pleasure derived from trying to surpass oneself or to improve skills. Thirdly, intrinsic motivation to experience stimulation refers to engaging in sport in order to experience the pleasant sensations derived from the activity itself. In the sport domain, many studies have corroborated this tripartite conceptualization of intrinsic motivation.

Extrinsic motivation is also considered to be a multidimensional construct. Deci and Ryan (1991) have identified four forms of extrinsic motivation that can be classified on the self-determination continuum from high to low levels of self-determination. These different types of extrinsic motivation (e.g., integrated regulation, identified regulation, introjected regulation, and external regulation) occupy the continuum between intrinsic motivation and amotivation. Research in sport has supported the presence of this continuum. Firstly, integrated regulation

deals with behaviours that are so integrated in one's life that they are part of the individual's self and value system. Secondly, identified regulation reflects participation in an activity because one holds outcomes of the behaviour to be personally significant, although one may not enjoy the activity itself. Thirdly, introjected regulation refers to behaviours that are partly internalized by the individual but that remain non-self-determined because contingencies from external control sources have been internalized without having been endorsed by the person. Finally, external regulation characterizes behaviours that are controlled by external sources such as rewards.

The first purpose of the study was to analyze the relationships between FIDE Chess Rating, perceptions of autonomy, competence and relatedness, and the different forms of motivation in the case of Tournament Chess Players. The second purpose of this study was to identify motivational differences across gender because, it seems important to consider gender differences in motivational regulations in Tournament Chess. Finally, the third purpose of the study was to examine the relationships between levels of participation (i.e., district, state, or national levels), perceptions of autonomy, competence and relatedness, and the different forms of motivation.

**METHOD:****Subjects**

Three hundred tournament chess players from Kerala (95 females and 205 males) participated in this study. The sample was made up of 238 FIDE rated chess players, including 58 females and 180 males, and 62 unrated chess players, including 37 females and 25 males. Seventy FIDE rated chess players were played at the district level, 114 were at the state level, and 54 were at the national level.

**TOOLS:****1. Sport Motivation Scale**

Chess Players completed the Sport Motivation Scale (SMS; Brière *et al.*, 1995). This questionnaire measures seven types of motivation, namely intrinsic motivation to know, intrinsic motivation to accomplish things, intrinsic motivation to experience stimulation, identified regulation, introjected regulation, external regulation, and amotivation. Items are scored on a seven-point Likert scale, ranging from 1 (does not correspond at all) to 7 (corresponds exactly). Cronbach alpha coefficients (Cronbach, 1951) for the seven subscales were calculated, and all internal consistencies ranged from 0.68 to 0.89. Because, there were no specific

hypotheses about the intrinsic regulations, the three intrinsic components (i.e., intrinsic motivation to know, intrinsic motivation to accomplish things, and intrinsic motivation to experience stimulation) were combined into a single intrinsic motivation score ( $\alpha = 0.90$ ).

## **2. Basic Need Satisfaction in Sport Scale**

Basic Need Satisfaction in Sport Scale (Gillet *et al.*, under revision 1995) was used to measure chess players' feelings of autonomy, competence, and relatedness. This instrument is composed of three subscales assessing these three perceptions. There are five items per subscale (i.e., a total of fifteen items). The response scale has a Likert format ranging from 1 (not at all true) to 7 (very true). All Cronbach alpha coefficients were above the minimum criterion of 0.70. The internal consistency values were 0.71 for competence, 0.82 for autonomy, and 0.81 for relatedness.

## **PROCEDURE:**

Participation in this investigation was voluntary. After obtaining informed consent, all of the chess players completed a series of questionnaires individually at the beginning of a training session. The chess players were informed that there were no right or wrong replies. They were also assured that their answers would remain

anonymous and confidential.

### **STATISTICAL ANALYSIS OF THE DATA:**

Multivariate analysis of variance (MANOVA) was conducted to determine differences between the different groups in the selected variables under the study.

### **RESULTS:**

Multivariate analysis of variance (MANOVA) was conducted to determine significant differences between FIDE Rated & Unrated Chess Players in eight dependant variables (perceptions of competence, autonomy and relatedness, as well as intrinsic motivation, identified regulation, introjected regulation, external regulation and amotivation). Results revealed significant differences between FIDE Rated & Unrated Chess Players,  $F(8, 292) = 4.30, p < .001$ . Univariate F values indicated that FIDE Rated & Unrated Chess Players differed on external regulation,  $FF(1, 295) = 11.65, p < .001$ , and perceived autonomy,  $F(1, 295) = 17.75, p < .001$ . Specifically, FIDE rated Chess Players felt less autonomous and demonstrated more external regulation than Unrated Chess Players. Means and standard deviations for the different subscales are shown in Table 1.

Table 1

### Motivation and Basic Needs Subscales of FIDE Rated & Unrated Chess Players

Subscales	FIDE Rated Chess Players( N=238)		Unrated Chess Players(N=62)		Total Sample (N=300)	
	Mean	SD	Mean	SD	Mean	SD
Intrinsic Motivation	5.27	0.96	5.46	0.95	5.34	0.96
Identified Regulation	4.37	1.12	4.32	1.11	4.37	1.12
Introjected Regulation	5.23	1.26	4.91	1.18	5.18	1.26
External Regulation	3.26	1.32	2.68	1.21	3.16	1.34
Amotivation	1.44	0.82	1.63	0.79	1.47	0.82
Competence	5.26	0.87	5.13	0.96	5.26	0.89
Autonomy	4.48	1.34	5.42	1.39	4.65	1.38
Relatedness	5.64	0.83	5.74	0.92	5.67	0.84

$P < 0.001$

MANOVA was conducted with the three basic needs (i.e., autonomy, competence and relatedness) and the five types of motivation (i.e., intrinsic motivation, identified regulation, introjected regulation, external regulation and amotivation) as dependent variables, and gender as the independent variable. Results indicated significant differences between male and female chess players,  $F(8, 292) = 4.98$ ,  $p < .001$ . Univariate F values indicated that male and female chess players differed



on intrinsic motivation,  $F(1, 295) = 4.02, p < .05$ , external regulation,  $F(1, 295) = 16.39, p < .001$ , and perceived competence,  $F(1, 295) = 7.19, p < .01$ . Specifically, Male Chess Players felt more competent and exhibited more external regulation than Female Chess Players, while demonstrating less intrinsic motivation than this group. Means and standard deviations for the different subscales are described in Table 2.

Table 2

### Motivation and Basic Needs Subscales by Gender

Subscales	Male Chess Players (N=205)		Female Chess Players (N=95)	
	Mean	SD	Mean	SD
Intrinsic Motivation	5.25	0.98	5.51	0.90
Identified Regulation	4.36	1.14	4.35	1.06
Introjected Regulation	5.14	1.23	5.25	1.31
External Regulation	3.32	1.29	2.64	1.30
Amotivation	1.49	0.85	1.41	0.74
Competence	5.30	0.86	4.98	0.96
Autonomy	4.56	1.40	4.84	1.32

Relatedness	5.63	0.86	5.66	0.82
-------------	------	------	------	------

$P < 0.001$

MANOVA was conducted with the three needs (i.e., autonomy, competence and relatedness) and the five types of motivation (i.e., intrinsic motivation, identified regulation, introjected regulation, external regulation and amotivation) as dependent variables, and the level of competition (e.g., District, State, or National levels) as the independent variable. Results indicated significant differences between the chess players at district, state and national levels,  $F(16, 445) = 2.16, p < .01$ . Univariate  $F$  values indicated that chess players differed on intrinsic motivation,  $F(2, 232) = 5.90, p < .01$ , introjected regulation,  $F(2, 232) = 5.13, p < .01$ , and external regulation,  $F(2, 232) = 3.87, p < .05$ . Chess Players at state level displayed more intrinsic motivation and more external regulation than the ones at district level. Finally, chess players at district level exhibited less intrinsic motivation, less introjected regulation, and less external regulation than the ones at national level.

Table 3

### Motivation and Basic Needs Subscales by Level of Participation

Subscales	District Level Chess Players( N=70)		State Level Chess Players(N=114)		National Level Chess Players(N=54)	
	Mean	SD	Mean	SD	Mean	SD
Intrinsic Motivation	5.01	0.97	5.41	0.93	5.51	0.85
Identified Regulation	4.22	1.05	4.43	1.20	4.50	1.03
Introjected Regulation	4.90	1.37	5.24	1.21	5.63	1.14
External Regulation	2.91	1.12	3.34	1.38	3.55	1.37
Amotivation	1.45	0.86	1.41	0.81	1.52	0.84
Competence	5.24	0.81	5.34	0.86	5.07	0.96
Autonomy	4.28	1.20	4.45	1.32	4.79	1.54
Relatedness	5.61	0.81	5.61	0.82	5.77	0.87

$P < 0.001$

Three factorial MANOVAs were conducted to test chess structure (i.e., FIDE Rated versus Unrated) x gender, nature of activities x gender, nature of activities x level of participation and gender x level of participation interactions on eight dependant variables (i.e., perceived autonomy, perceived competence, perceived relatedness, intrinsic motivation, identified regulation, introjected regulation, external regulation, and amotivation). No significant differences emerged.

**DISCUSSION:**

The first purpose of this investigation was to examine the relationships between FIDE rated and Unrated chess players' perceptions of autonomy, competence and relatedness, as well as motivation. Results revealed that unrated chess players felt more autonomous and exhibited less external regulation than FIDE rated chess players. The results showed that FIDE rated chess players' behaviours were regulated by external factors such as material or financial rewards. Results of the study suggest that it is highly possible that competitive structures lead to a change in competitors' perceived locus of causality from internal to external. Results revealed that male chess players perceived themselves as being more competent than female chess players. This is not surprising given male chess players typically display higher self-confidence than female chess players. One explanation suggested for gender differences in perceived competence may be that males are boastful and think they will do better than they do. The results also showed that male chess players exhibited more external regulation and less intrinsic motivation than female chess players. In other words, females appeared to take part in chess tournaments for the pleasure derived from the activity itself more than for extrinsic motives. The results showed that chess players at state and national levels displayed more external regulation than the ones at district level, while chess players at national

level exhibited more introjected regulation than the ones at district level. The present results also revealed that chess players at district level displayed less intrinsic motivation than those at state and national levels. More generally, results from the present study showed that the best chess players (i.e., those played at national level) displayed both high levels of intrinsic motivation and external regulation. Firstly, they suggested that high-level sport performers' behaviours were not solely intrinsically motivated.

In sum, results from the present investigation showed that FIDE rated chess players exhibited lower level of perceived autonomy and higher level of external regulation than unrated chess players. They also revealed that female chess players displayed a higher self-determined profile than male chess players, and, chess players at the district level had lower scores on intrinsic motivation and external regulation than the chess players participated at state and national levels. The present findings underscore the importance of considering motivational differences in tournament chess domain as a function of FIDE Chess ratings, gender, and level of participation. They also offer several directions for future research to expand our knowledge of the motivational processes in other sports.

## REFERENCES

1. Amorose, A. J., & Horn, T. S. (2000). Intrinsic motivation: Relationships with collegiate chess players' gender, scholarship status, and perceptions of their coaches' behavior. *Journal of Sport and Exercise Psychology*, 22, 63-84.
2. Blais, M. R., & Vallerand, R. J. (1991). *Échelle de perception d'autodétermination dans les domaines de vie (ÉPADV-16)*. Manuscript non publié, Université du Québec à Montréal, Montréal, Canada.
3. Chantal, Y., Guay, F., Dobрева-Martinova, T., & Vallerand, R. J. (1996). Motivation and elite performance: An exploratory investigation with Bulgarian chess players. *International Journal of Sport Psychology*, 27, 173–182.
4. Chatzisarantis, N. L. D., Hagger, M. S., Biddle, S. J. H., Smith, B., & Wang, J. C. K. (2003). A meta-analysis of perceived locus of causality in exercise, sport, and physical education contexts. *Journal of Sport & Exercise Psychology*, 25, 284-306.
5. Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16, 297-334.
6. Deci, E. L., & Ryan, R. M. (1991). A motivational approach to self: Integration in personality. In R. Dienstbier (Ed.), *Nebraska symposium on motivation : Vol. 38. Perspectives on motivation* (pp. 237-288). Lincoln, NE: University of Nebraska

Press.

7. Gillet, N., Rosnet, E., & Vallerand, R. J. Développement d'une échelle de satisfaction des besoins fondamentaux en contexte sportif. *Revue Canadienne des Sciences du Comportement*.

8. Keselman, H. J., & Rogan J. C. (1977). The Tukey multiple comparison test: 1953-1976. *Psychological Bulletin*, 84, 1050-1056.

9. Losier, G. F., Vallerand, R. J., & Blais, M. R. (1993). Construction et validation de l'Échelle des Perceptions de Compétence dans les Domaines de Vie (EPCDV). *Science et Comportement*, 23, 1-16.

10. Pelletier, L. G., Fortier, M. S., Vallerand, R. J., Tuson, K. M., Brière, N. M., & Blais, M. R. (1995). Toward a new measure of intrinsic motivation, extrinsic motivation, and amotivation in sports: The Sport Motivation Scale (SMS). *Journal of Sport & Exercise Psychology*, 17, 35-53.

11. Reeve J., & Deci E. (1996). Elements of the competitive situation that affect intrinsic motivation. *Personality and Social Psychology Bulletin*, 22, 24-33.

12. Ryan, R. M., & Deci, E. L. (2002). An overview of self-determination theory. In E. L. Deci, & R. M. Ryan (Eds.), *Handbook of self-determination research* (pp.

3-33). Rochester, NY: University of Rochester Press.

13. Sarrazin, P., Vallerand, R. J., Guillet, E., Pelletier, L. G., & Cury, F. (2002). Motivation and dropout in female handballers: A 21-month prospective study. *European Journal of Social Psychology*, 57, 749-761.

14. Tauer, J. M., & Harackiewicz, J. M. (2004). The effects of cooperation and competition on intrinsic motivation and performance. *Journal of Personality and Social Psychology*, 86, 849-861.

15. Vallerand, R. J. (1997). Toward a hierarchical model of intrinsic and extrinsic motivation. In M. P. Zanna (Ed.), *Advances in Experimental Social Psychology* (pp. 271-360). New York: Academic Press.

16. Vinu, Bhaskar, (2005) Effect of Selected Yogic Asanas on Some Selected Physiological and Psychological Variables of Elderly Men. *An Unpublished PhD Thesis submitted to the University of Kerala, Thiruvananthapuram*.

17. Vinu, Bhaskar. (2012). Analysis of the Relationship between Self -Efficacy and Defense Styles among Youth Yoga Practitioners, *Yoga Mimamsa*, Vol.XLIV No.3:216-227.



18. Vinu Bhaskar (2020). Comparison of the Self -Esteem among Different Classes of Tournament chess players in Kerala, *Juni Khyat* ISSN: 2278-4632; *Impact Factor:6.625,UGC CARE Approved Group I Listed Journal*, Vol-10, No-8, Pages: 1 – 6.