



Effect of Selected Yoga Training Programme on Mental Toughness of State Level Chess Players in Kerala

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Abstract

Researchers consider that Mental toughness is a fairly stable arrangement, although it may change in the face of certain types of experience, this can be named as similarity. When chess players face the state of lack of mental toughness, they feel lack of confidence during the tournaments and a loss of personal control. Research in India on yogic practices and mental toughness were limited. Hence to have a better understanding of Yoga Training Programme and its contribution towards to mental toughness, the scholar will make an attempt to determine the effect of twelve weeks of selected Yoga Training Programme on mental toughness of mental toughness of state level chess players in Kerala. Sports Mental Toughness Questionnaire (SMTQ) was employed to measure the mental toughness of the subjects under the study. To determine the effect of twelve weeks of selected Yoga Training Programme on mental toughness of state level chess players in Kerala, 't' test was applied by using SPSS version 17. The level of significance was set at 0.05 level of confidence. Participation in 12 weeks of Yoga Training programme improved the mental toughness of state level chess players in Kerala. It is concluded that Yoga Training Programme elicited a positive improvements in the selected variable of the study.

Key words: Yoga, Training Programme, Chess & Mental Toughness



Introduction

Mental Toughness is a compilation of values, attitudes, behaviors and emotions that enable you to persevere and overcome any obstacle, adversity, or pressure experienced, but also to maintain concentration and motivation when things are going fine to constantly accomplish your goals. There is considerable number of studies on the psychological parameters that affecting the player's sportive achievement and their sport life, one of them is mental toughness Initially, researchers, who attempted to understand what mental toughness is, collected data that included participant perspectives about this concept and those studies have been conducted across a number of different sports disciplines such as football, rugby, cricket, soccer and basketball etc. The analysis of these qualitative studies highlights an important aspect in relation to mental toughness that is the concept is fairly open to individual interpretation. Mental toughness is being more dependable and better than your opponents in remaining indomitable, resolute, and positive and in control under pressure. Mentally tough individuals tend to be gregarious and sociable; as they are able to remain composed and stress-free, they are spirited in many tough situations and have lower anxiety levels than others. With a high sagacity of self-assurance and an unshakeable reliance that they control their own fortune, these individuals can remain comparatively unaffected by antagonism or hardship. Mental toughness is the capability to attain personal goals in the facade of pressure from a wide variety of different stressors.

Statement of the Problem

Researchers consider that Mental toughness is a fairly stable arrangement, although it may change in the face of certain types of experience, this can be named as similarity. Hence to have a better understanding of yogic practices and its contribution towards to mental toughness of chess players, the scholar will make an attempt to determine the effect of 12weeks of yoga training programme on mental toughness of state level chess players in Kerala.

Objectives of the study

- The findings of the study may be helpful to the Physical Education Teachers and Coaches to implement the psychological training programme according to the specific demands of their respective sport.
- To identify individual strength and weakness and to create positive attitudes towards yoga.



- To analyze the effect of yoga training programme on mental toughness of state level chess players in Kerala.

Review of Literature

Abrahamsen, F.E., Roberts, G.C., & Pensgaard, A.M. (2008) studied the achievement goals and gender effects on multidimensional anxiety in national elite sport. Amorose, A. J., & Horn, T. S. (2000) examined the intrinsic motivation: Relationships with collegiate chess players' gender, scholarship status, and perceptions of their coaches' behavior. Chantal, Y., Guay, F., Dobreva-Martinova, T., & Vallerand, R. J. (1996) investigated the motivation and elite performance: An exploratory investigation with Bulgarian chess players. Sheard, M., Golby, J., & van Wersch, A. (2009) studied the progress toward construct validation of the Sports Mental Toughness Questionnaire (SMTQ). Sheard, M. (2010) investigated the mental toughness: The mindset behind sporting achievement the study concluded that there is a positive relationship between mental toughness and sports achievement which give better results as an outcome. Duda, J.L. (1989) analyzed the relationship between task and ego orientation and the perceived purpose of sport among high school athletes. This study examined the relationship between task and ego orientation and the perceived purpose of sport among high school athletes.

Research Methodology

Random group design will be used in this study. The subjects numbering sixty state level chess players were divided into an experimental group (N=30) and a control group (N=30). The subjects will be selected at random by drawing lots and assignment of treatment was also at random. The experimental group will be given the selected yoga training programme for a period of 12 weeks. The subjects have to be undergone the training six days in a week from Monday to Saturday and rest will be given on Sunday. Sixteen selected yogic asanas four breathing practices and complete relaxation in shavasana will be included in the training programme and the training programme will be same throughout, the only difference will be in the increase of the holding time at the final position of each yogic asana after every two weeks. Sports Mental Toughness Questionnaire (SMTQ) was used to conduct the pre and post tests to collect the data. The SMTQ is a 14-item instrument was established to ascertain athletes' mental toughness levels. SMTQ items were constituted by using raw data themes and quotes from qualitative studies of mental toughness those were made previously. The participants had to respond to items on a four point Likert-type scale ranging from "not at all true" 1 to "very true" 4. Sample items included



“I interpret threats as positive opportunities” (confidence); “I give up in difficult situations” (constancy); and “I am overcome by self-doubt” (control). SMTQ has three sub-dimensions: 6 items for confidence ($\alpha = .80$), 4 items for constancy ($\alpha = .74$), and 4 items for control ($\alpha = .71$). Items 1, 5, 6, 11, 13, 14 measures Confidence and this sub-dimension assesses athletes’ belief in their own abilities to achieve goals and be better than others. Items 3, 8, 10, 12 measures Constancy and this sub-dimension reflect determination, individual responsibility, an unyielding attitude, and ability to concentrate. Items 2, 4, 7, 9 measures Control and this sub-dimension is concerned with the perception that one is personally influential and can bring about desired outcomes with particular reference to controlling emotions. After reviewing the literature pertaining to yoga and its contribution to the development of various systems in the body, the research scholar selected sixteen yogic asanas and breathing practices like Kapalabhati, Anuloma Viloma, Ujjayi & Bhramari. The techniques of selected yogic asanas will be modified according to the level of physical fitness and health standards of the subjects under study. The selected yogic asanas are: Shavasana (The Corpse Pose), Makarasana (The Crocodile Pose), Sarvangasana (The Shoulder Stand Pose), Matsyasana (The Fish Pose), Halasana (The Plough Pose), Bhujangasana (The Cobra Pose), Salabhasana (The Locust Pose), Ardha-Matsyendrasana (The Half Spinal Twist Pose), Vajrasana (The Diamond Pose), Simhasana (The Lion Pose), Paschimothanasana (The Forward Bend Pose), Supta-Vajrasana (The Supine Diamond Pose), Trikonasana (The Triangle Pose), Talasana (The Palm Tree Pose), Vrikshasana (The Tree Pose), Utkatasana (The Hunkering Pose). The selected Breathing Practices are: Kapalabhati (Quick & Forceful exhalations), Anuloma Viloma (Inhalation through alternate nostrils), Ujjayi (Inhale through nose with frictional sound produced from partial contraction of the glottis), Bhramari (The Bhramari pranayama breathing technique derives its name from the black Indian bee called Bhramari.) The yogic asanas programme was prepared by the investigator with the help of experts. The training programme was carried out by the subjects under the supervision of the investigator with the assistance of other experts in the specialized field. The experimental group will perform the yogic asanas prescribed to them; six days in a week; from Monday to Saturday for a period of twelve weeks. The training session will include prayer, kapalabhati, suryanamaskar, yogic asanas, Pranayamas and complete relaxation for a total duration of sixty minutes. The adaptation period of two weeks will be followed. The training load will be increased gradually, step by step after a definite time interval. The intensity of the training programme will be increased in terms of the duration of the holding time at the final position of each asana. Sports Mental



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Results and Discussion

The data pertaining to mental toughness of the experimental group and control group were analyzed by 't' test with the help of SPSS version 17. The level of significance chosen was 0.05. Findings pertaining to each of the selected variables of experimental group and control group are presented in the table 1.

Table 1

Difference in Means of the Experimental Group and the Control Group in Mental Toughness

Subscales of Mental Toughness	Group	No	Initial Mean	Final Mean	SD	Mean Difference	S.E	't' Value
Confidence	EXP	30	12	15	0.968	3	0.177	14.704*
	CON	30	10	11	0.481	1	0.088	1.140
Consistency	EXP	30	13	16	0.662	3	0.121	14.726*
	CON	30	13	13	0.3051	0	0.056	1.795
Control	EXP	30	10	14	0.662	4	0.189	15.824*
	CON	30	9	10	0.3051	1	0.088	1.140

* Significant at the 0.05 level. 't' value with 29df = 2.045

From the table 1 it is obvious that in the case of experimental group, significant changes were noticed in all subscales of the selected variable following 12 weeks of selected yoga training programme. The obtained 't' values for the Confidence was 14.704; Consistency was 14.726 and Control was 15.824. The obtained 't' values were higher than the required table value.

In the case of control group, there were no changes seen in the selected variable of the study. Mean difference of the experimental and control group for each variable are presented in figures 1, 2 & 3.



Figure 1
Mean Difference in Confidence subscale for Experimental Group and Control Group (Means in Numbers)

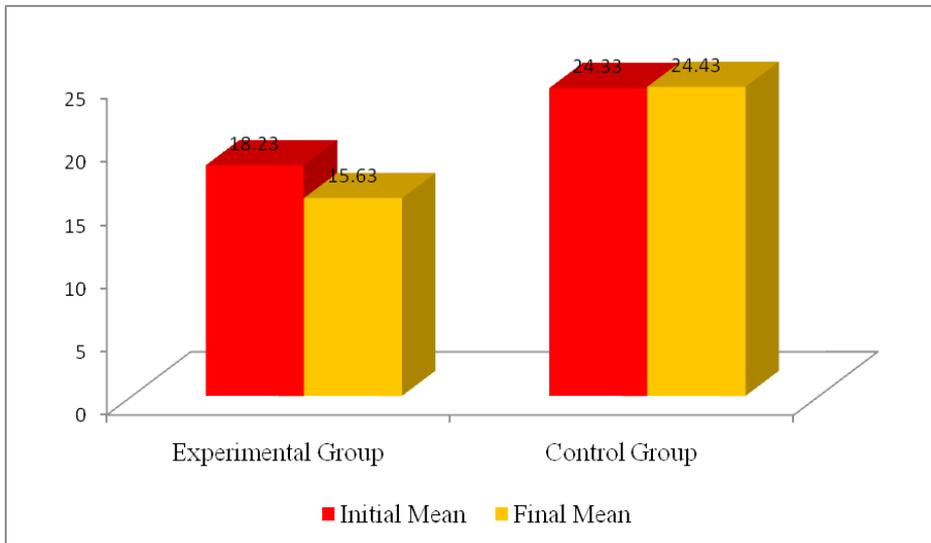


Figure 2
Mean Difference in Consistency subscale for Experimental Group and Control Group (Means in Numbers)

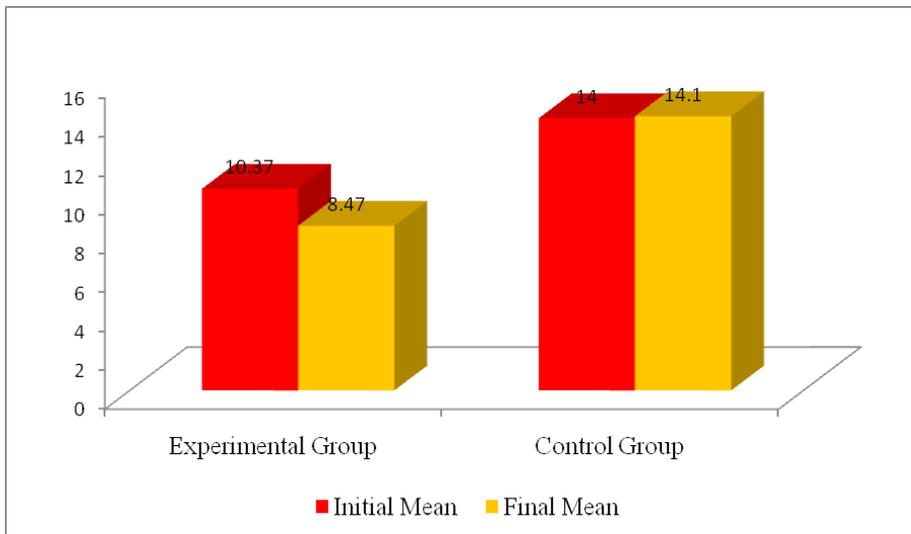
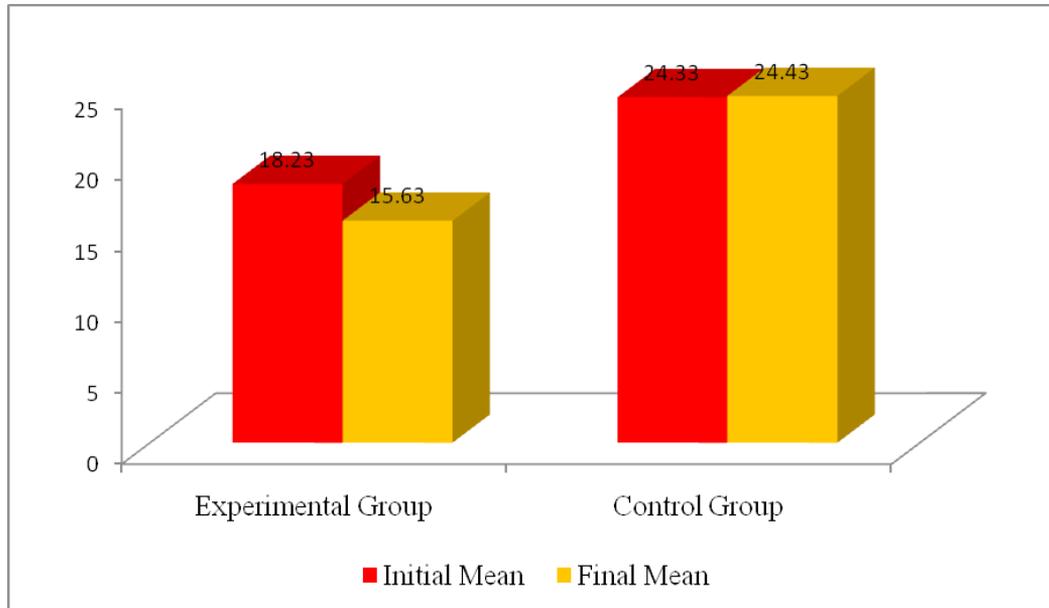




Figure 3
Mean Difference in Control subscale for Experimental Group and Control Group (Means in Numbers)



The analysis of the results of the study reveal that in the case of the experimental group, all the subscales of mental toughness such as confidence, consistency and control improved as a result of the 12weeks training of selected yoga programme. In the case of the control group, no changes were noticed in any of the selected variables during the same period. Mental toughness is the capability to attain personal goals in the facade of pressure from a wide variety of different stressors. After participating in the yoga training programme, the experimental group may see a tangible achievement in their goals, they feel better physically and they develop a sense of competence. In addition, they also develop other health habits, such as better nutrition and sleep habits which in turn make them feel better about themselves and improve their self-confidence. Finally they gain new social experiences with their colleagues in the training programme. It has been found from various researches that the practice of yogic asanas cause a shift



towards parasympathetic function of autonomous nervous system (ANS). It results in internal wakefulness, introspection, harmony and an internal fulfillment. Asanas are known to tone up autonomous nervous system, respiratory system, endocrine glands and visceral organs and they might have resulted in an overall physical and emotional stability among the practitioners. The asanas like Trikonasana, Talasana and vrikshasana might help to improve the power of concentration, single mindedness and focussing ability among the practitioners. All of these factors may contribute to enhance mental toughness. Other aspects such as the social support that generally accompanies the yoga training programme and the improved feelings of personal worthiness and self-esteem may also contribute substantially to the therapeutic outcome for some individuals. The yogic asanas especially Shavasana and Makarasana retrain the muscles to act in a relaxed manner and help to gain a parasympathetic dominance which reflected in one's capacity to voluntarily control the rate of heart beats, rate of breathing, maintenance of body temperature all fostering a state of economical self preservation and conservation of energy. The process of relaxation through asanas like Shavasana and Makarasana might give rest to the body and mind. With intense yoga training, it is possible to have a normal state of transcendence or mind expansion which not only is physiological and stable, and a yogic practitioner can invariably reflect in his every day behaviour, a higher state of joyous being. The longer duration of practice in the calm, peaceful and serene environment, the collective prayer, regulation of breathing during yogic practices and the observance of Yamas and Niyamas might help in inculcating feelings of brotherhood among the practitioners. Yamas and Niyamas are known as attitude forming yogic practices. They provide a moral foundation for a healthy and harmonious inter personal relationship. Thus, significant changes were seen in mental toughness of the experimental group following 12 weeks of selected yoga training programme.

Conclusion

The results of the study seem to permit the following conclusion. Significant changes were seen in mental toughness of the experimental group following 12 weeks of selected yoga training programme. In the light of the conclusion drawn; similar studies may be undertaken with players of different sports mentioned in this study. Similar studies may be undertaken to compare the effect of different psychological variables on chess players.



References

1. Abrahamsen, F.E., Roberts, G.C., & Pensgaard, A.M. (2008). Achievement goals and gender effects on multidimensional anxiety in national elite sport. *Psychology of Sport & Exercise*, 9(4), 449-464.
2. Almagro, B.J., Sáenz-López, P., & Moreno, J.A. (2010). Prediction of sport adherence through the influence of autonomy-supportive coaching among Spanish adolescent athletes. *Journal of Sports Science and Medicine*, 9(1), 8-14.
3. 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.
4. 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.
5. 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.
6. Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16, 297-334.
7. 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.
8. Duda, J.L. (1989). Relationship between task and ego orientation and the perceived purpose of sport among high school athletes. *Journal of Sport & Exercise Psychology*, 11(3), 318-335.
9. Duda, J.L., & Whitehead, J. (1998). Measurement of goal perspectives in the physical domain. In J.L. Duda (Ed.), *Advances in sport and exercise psychology measurement* (pp. 21-48). Morgantown, WV: FIT.
10. 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.
11. Petlichkoff, L.M. (1993a). Group differences on achievement goal orientations, perceived ability, and level of satisfaction during an athletic season. *Pediatric Exercise Science*, 5(1), 12-24.
12. Petlichkoff, L.M. (1993b). Relationship of player status and time of season to achievement goals and perceived ability in interscholastic athletes. *Pediatric Exercise Science*, 5(3), 242-252.
13. Rochester, NY: The University of Rochester Press. 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.
14. Rotella, R.J. & Newburg, D.S. (1989). The social psychology of the benchwarmer. *The Sport Psychologist*, 3(1), 48- 62.



15. Ruiz-Juan, F. & Sancho, A.Z. (2012). Predictor variables of motivation on master athletes. *Journal of Human Sport & Exercise*, 7(3), 617-628.
16. Ryan, E.D. (1980). Attribution, intrinsic motivation, and athletics: A replication and extension. In C.H. Nadeau, W.R. Halliwell, K.M. Newell, & G.C. Roberts (Eds.), *Psychology of motor behavior and sport- 1979* (pp. 19-26). Champaign, IL: Human Kinetics.
17. Ryan, R.M. &Deci, E.L. (2002). An overview of self-determination theory: An organismic-dialectical perspective. In E.L. Deci& R.M. Ryan (Eds.), *Handbook of self-determination research* (pp.3-33).
18. Sheard, M., &Golby, J. (2006a). Effect of a psychological skills training program on swimming performance and positive psychological development. *International Journal of Sport and Exercise Psychology*, 4, 149–169.
19. Sheard, M., Golby, J., & van Wersch, A. (2009). Progress toward construct validation of the Sports Mental Toughness Questionnaire (SMTQ). *European Journal of Psychological Assessment*, 25(3), 186–193.
20. Sheard, M. (2010). *Mental toughness: The mindset behind sporting achievement*. Hove, East Sussex.
21. Routledge. Thelwell, R., Weston, N., &Greenlees, I. (2005).Defining and understanding mental toughness in soccer. *Journal of Applied Sport Psychology*, 17, 326–332.
22. 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. Academic Press.