

A Research on Influences of Physical Exercises and Yoga Practices on Motor Fitness and Playing Ability

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Abstract – Exercise plays a significant job in day today life, on the grounds that expanded requests and quick life approach needs a fit and sound mental and physical fitness. Keeping in view this significant part of life analyst is extremely quick to discover the; effect of yogic and physical exercises on motor fitness. There is an incredible breadth and requirement for research in assessing the impact of Yogic exercise training on Fitness segments of players. Step by step different research studies are occurring in physical education, games and sports, to know the frame of mind of different exercises. Sportsmen or athletes are the focal point of this examination.

Before assessing the genuine presentation in any sports, it is highly critical to know the familiarity with that specific sport. To discover the relationship of Yogic training for the advancement of fitness and abilities of players, which might be useful to different players just as mentors and physical educationists too. Physical fitness is a condition of prosperity that contains ability and wellbeing related segments. Fitness is a condition wherein an individual has adequate vitality to stay away from weakness and appreciate life. It is important for older people to keep up and improve their physical fitness so as to fulfill solid, high nature of everyday life.

INTRODUCTION

Yogic practices getting well known are viewed. It's methodical for the improvement of physical fitness of a person. However we need the experimental proof about the utility of physical exercise and yogic exercises for advancing physical fitness. In spite of this reality numerous people misconstrue yoga even in India. If we somehow managed to take a cross-segment of society and make a general study of the popular's sentiment about yoga we would discover numerous misinterpretations about yoga.

Yoga is an efficient control started in India, for self-acknowledgment. In any case, presently multi day logical scientists locate its utility for all round advancement of character alongside endless otherworldly just as remedially applications. According to Indian convention Yoga, particularly Hatha yoga, includes diverse yogic exercises viz., asana (body stances), pranayama (controlled guideline of breath), bandha (physiological bolts or holds of the semi-deliberate muscles), kriyas (purifying procedure), and mudras (demeanor which suddenly stirs contemplation). Swami Kavalayananda, the dad of logical research in Yoga and author of Kaivalyadhama (India), has developed

the educational plan of yogic exercises to keep up wellbeing and fitness. Yogic exercises are additionally getting to be prevalent in the territory of games and sports and furthermore in the educational plan of Indian schools, colleges and universities.

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Yoga is a deliberate control begun in India, for self-acknowledgment. Be that as it may, presently multi day logical specialists locate its utility for all round improvement of character alongside countless profound just as restoratively applications. According to Indian custom Yoga, particularly Hathayoga, involves diverse yogic exercises viz., asana (body stances), pranayama (controlled guideline of breath), bandha (physiological bolts or holds of the semi-willful muscles), kriyas (purging procedure), and mudras

(frame of mind which precipitously excites reflection). Swami Kuvalayananda, the dad of logical research in Yoga and author of Kaivalyadhama (India), has built the educational plan of yogic exercises to keep up wellbeing and fitness. Yogic exercises are additionally getting to be famous in the territory of games and sports and furthermore in the educational plan of Indian schools, colleges and universities.

Yogic practices should decrease the high initiation level and psycho physiological disequilibrium and furthermore add to consistent quality, psychomotor coordination and enthusiastic stability. Such state of high enactment level and psycho physiological lopsidedness alongside enthusiastic instability appears to increment different disorder of motor reactions and tremors.

The word „Yoga“ is gotten from the Sanskrit root action word 'Yuj' which means – to discover, join, join together, control and so forth. It is unified to English word „Yoke“, the German 'Joch' and the Latin „Jungo“ (to join). Yoga accordingly artistic methods association and control. It means the association of man with God or a person with the all inclusive reality, or each with the general reality. It implies association of mortal with everlasting that is in fact, the point of Yoga. Yet, yoga likewise means control, in other words, proper selfdiscipline. It is the preparation of the inward assets of character so as to achieve that self incorporation which prompts self acknowledgment and mystician calls quick association with the boundless. In this sense, Yoga is the framework, the program of psycho-physical, good and profound training by following which, one can satisfy a definitive predetermination of life. The word „Yoga“ accordingly suggests both the goal of life and the way prompting that goal.

Maharshi Patanjali, the dad of old style Yoga, characterizes Yoga as a functional strategy or means just as a goal. As per him, Yoga is the finished end of the utilitarian change of “Citta”. The word “citta” can be converted into the word, mind”. In expansive sense, “citta” is dynamic, directly from gross body level, where impression of sense organs is available, straight up to the brain, comprehensive of its sub-conscious and un-conscious levels, and even past psyche to supra-conscious level.

Yoga is an orderly control for self-acknowledgment. In any case, presently a day's Yoga extraordinarily Hathayoga includes distinctive Yogic exercises viz., asana (body stances), pranayama (controlled guideline of breath), bandha (physiological bolts or holds of semi-deliberate muscles), kriyas (purging procedure), and mudras (mentality which immediately excites reflection). Yogic exercises are getting to be well known in the region of games and sports and furthermore in the educational plan of Indian schools, colleges and universities.

Truth be told, Yoga works at the conscious level for arousing mindfulness which, thus, cases to improve fixation. The progression insightful procedure in Yoga, viz., yama, niyama, asana, pranayama, dharana, dhyana and samadhi, creates mindfulness just as focus to the furthest reaches to make progress. The principles of these practices, indeed, deal with the psycho-physio-neurological level that risks the unequilibrium state and give a condition of parity or homeostasis. When a competitor achieves this condition of homeostasis, he can focus superbly on his errand of shooting execution and winds up fruitful.

Yoga is a study of complete wellbeing and is more than physical. It is mental and profound also. It might assist populace with becoming Satchitanand, where Sat signifies "presence" chit signifies "learning" and ananda signifies "ecstasy." Thus, Yoga is by all accounts important for populace. This examination would bring genuine proof of advantages of Yoga particularly for educating experts.

Yoga is the craftsmanship and study of keeping up physical and mental prosperity that has its source in India, is among the most antiquated at this point lively living customs that is getting progressively prominent today. An intense stress buster, yoga is an instrument of self-evolvement and illuminate, through physical and mental prosperity. Math-measurement it upgrades the nature of our lives at such a large number of levels. One part of yoga's advantages is to investigate the bond among wellbeing and excellence.

The word Yoga got from Sanskrit word "YUJ" which means to burden, join or join together. This infers joining or coordinating all parts of the individual body with brain with soul-to accomplish an upbeat, adjusted and helpful life, and profoundly, joining the person with the preeminent, Physical exercise in any sorted out movement that includes consistent support and consequences for entire body. Exercise possesses a main job in keeping an individual fit. It will be very hard to assistant one's life in wording on stress, diet, and rest, etc without legitimate exercise.

Normal practices of asana keep up the physical body in an ideal condition and advance wellbeing even in an unfortunate body. Through asana practice, the lethargic vitality potential is discharged and experienced as expanded trust in all everyday issues, yogasana have a more profound noteworthiness esteem in the advancement of the physical, mental, and otherworldly character, while unadulterated exercise just have physical impact on muscles and bones Physical exercises are performed rapidly and with a great deal of substantial breathing, yogasana are performed slowly with unwinding and focus. The advantages of different yoga techniques have been affirmed to improve body solid quality, execution,

stress decrease, fulfillment of internal harmony and self acknowledgment.

On the off chance that one practices the Asanas and Pranayama consistently and deliberately for extensive stretch, it is certain to find that they go about as curatives of and preventives for different sorts of mental and physical afflictions. The body will turn out to be light, and acumen will turn sharp and clear, memory will develop solid, self control expect immovability and inflexibility, muscle to fat ratio and pulse will be diminished, the tummy will never again extend, the face will look peaceful, the eyes will become brilliant and radiant, the voice will turn sweet, an improve in static motor execution, character advancement, lung limit and respiratory, cerebrum capacities and physical fitness.

Physical fitness is a general condition of wellbeing and prosperity or explicitly the ability to perform parts of sports or occupations. Physical fitness is commonly accomplished through right sustenance, exercise, cleanliness and rest. It is a lot of traits or attributes that people have or accomplish that identifies with the ability to perform physical action.

Prior to the modern unrest, fitness was the ability to complete the day's exercises without undue weariness. Anyway with robotization and changes in lifestyles physical fitness is currently viewed as a proportion of the body's ability to work productively and successfully in work and recreation exercises, to be solid, to oppose hypokinetic illnesses, and to meet crisis circumstances.

YOGA

Yoga has turned into the style of the day. Millions everywhere throughout the world have taken to yoga practices. Step by step the comprehension of yoga is getting depended. Through yoga we can preserve and make more vitality, which can be used to create max execution. Yoga shows us how to power over miss driving contemplations, anxiety, tension, tress and angerness.

Yoga with its helpfulness to the cutting edge man to alleviate his stresses and tensions to the patients in anticipation, treatment, restoration and advancement to positive wellbeing, to the expert in expanding their aptitudes and improve the personal satisfaction and so on is drawing in people from all areas of the general public. Yogic exercises are additionally getting to be prominent in the territory of games and sports and furthermore in the educational program of Indian schools, colleges and universities. Yoga the old study of India, is a conscious procedure for picking up dominance over the brain and in this way become quicker from the creature level to wind up typical human creatures and achieve tallness of enormity.

Very human levels and at last achieve eternity or flawlessness itself. This conscious procedure of

picking up authority causes us to show the intrinsic possibilities torpid in every last one of us and bloom into men with the five overlap character improvement.

Yoga exercises delicately tone and shape the body, improve stance, adaptability and add to feeling of prosperity. It keeps the vein versatile, decrease high circulatory strain now and again. Yoga exercises delicately push on the body organs and organs, bringing about beneficial outcomes for the stomach related, endocrine and regenerative frameworks. The way of concentrating the body and mind getting to be in valid with God is known as yoga. Yoga is useful in fortifying the bones, muscles and other natural arrangement of the body. The fundamental point of yoga to accomplish every one of the solaces of life and to make the living soul one with god so that my dispose of the cycle of births demise and resurrections and achieve salvation.

YOGIC PRACTICES: SOME PRINCIPLE

1. Yogic practice isn't exercise as comprehended. The word exercise id by and large connected to lively physical development. Since Yogic practices don't include overwhelming developments, any sort of fierce action ought to be abstained from during Yoga practice.
2. The nature Yogic practices is fluctuated and includes various systems through which the consequences of specific Yogic practices are gotten.
3. Asana, one of the most significant and best know about the Yogic practices is static extending methods. They ought to be performed slowly and easily so as to impact the tonic framework rather that the physical one.
4. The position in a specific Asana ought to be serenely kept up for quite a while with least exertion. Easy execution and unwinding however much as could reasonably be expected during the last position are the main attributes of the techniques of Asanas.
5. Pranayanmic practices are altogether different in reason and method from the "Breathing exercise". They should increment ozygen take-up. In any case, they are considered of little an incentive in the writing of physical education.
6. Yogic practices ought not prompt undue exhaustion. In the event that there is weakness, it ought to be overwhelmed by the act of unwinding in Shavasana.
7. Every Yogic practice ought to be performed by one's very own ability and without rivalry with other.

8. Every Yogic practice should prompt significant serenity.
9. Any Yogic routine ought to be with psycho-physical connection focusing one's consideration as one would in petition or genuine recitation of some supplication.
10. It is smarter to gain proficiency with the Yogic practices while one is having typical wellbeing. An incautious method for rehearsing the Yogic practices is at some point found to prompt disability of the soundness of a person as opposed to checking more beneficial. People who are extremely powerless, or the individuals who have recouped from ailment, ought to be cautious in this regard. The facts demonstrate that numerous afflictions can be restored by pleasantly overseeing the Yoga techniques, yet for that, one needs to take the assistance of a Yoga Therapist.
11. Age and sex don't offer any bar the Yogic practices are concerned. This does not, obviously, imply that each Yoga procedure may suit each person. Kids may begin practices the Yoga techniques at around eight years old. There is no upper age limit as far as the Yogic practices are concerned.
12. The spot for rehearsing the Yogic practices ought to be very much shielded from the threat of creature, rodents and creepy crawlies. In the event that it is done inside, it ought to be very much ventilated and having adequate light. The environment ought not be uproarious. The ground should be plain and level, not inclining in one heading.
13. Morning time is viewed as better from the perspective of normality, while it is the experience of certain people. Particularly the learners, that the Yogic practices should be possible easily and comfortably at night too.
14. Yogic practices ought not be finished with a stacked stomach. After a full supper, almost five hours ought to be allowed to pass and about two hours after bite so the exercise does not meddle at all with the procedure of assimilation and ingestion of nourishment.

LITERATURE REVIEW

The contemporary status of research on physical fitness is a result of the immense writing accessible on physical fitness: examination of physical fitness with different viewpoints, factor investigation of factors speaking to physical fitness, various relationships and relapse examination with the created criteria, etc. This examination includes the writing appropriate to the development and institutionalization of explicit physical fitness tests for

soccer players, yet, appropriate writing, and however fringe to physical fitness, esteemed to be important and that which are viable for the significant investigation was additionally fused.

A genuine and comprehensive endeavor has been made by the specialist to exhibit in this examination some important and helpful investigations and references covering various territories in the wake of investigating every single imaginable source and the discoveries and conclusions of those examinations and references have been painstakingly extricated and referred to below so as to make a correlation with the present examination and understanding subsequently.

This examination expects to build up standards of a "determination criteria" for making a standard group. In this examination, the examiner has investigated the writing and discovered that there are restricted reports. The specialist has abridged few of them.

The writing displayed in this segment shows that plentiful research examinations have been done on game. Numerous agents recommended distinctive training timetables of exercises and techniques for upgrading related fitness and different abilities in games. Specialist feels that training methodologies for upgrading such aptitudes must be founded on logical thinking and the composition of such training must be defined relying on players' social legacy.

N. Govindarajuluz, J. Gananadeepam and Bera T.K. (2003) have led the examination of yoga practices on adaptability and cardio-respiratory continuance. They have taken sixty high school young ladies (normal 12 years) who were volunteered in a pre-experimental gathering „A“ (n1=30) for a time of about two months. The control bunch „B“ (n1=30) was not allowed to take an interest in the experimental treatment. The pre and post test were led on adaptability and cardio-respiratory continuance. The aftereffects of ANOVA uncovered that there was an improvement in the adaptability and no critical change was obvious in the cardio-respiratory perseverance. In this way, momentary yoga is helpful in improving adaptability, yet not the cardio-respiratory continuance even at the phase of pubescence in young ladies.

R. K. Bhatia and Premlata (2005) "Impact of Selected Yogic Exercises on Balance and Perception of College Level Players". The significant reactions to make our stance and parity fantastic models on developments dependent on coordinated tangible data. Both vision and sensation give data to adjusting yet during earliest stages and early youth we some of the time depend more on visual data and sensation data. Execution on different equalization undertakings improve all through youth and pre-adulthood in spite of the fact that the planning of these improvement relies upon the sort static or dynamic and the idea of the errand.

B. Donohue, et. al. (2006) directed investigation to analyze the viability of two preliminary intercessions on one mile run execution in 90 high school long separation sprinters. After members had finished a one mile pattern run, they were haphazardly allocated to take an interest in both of two mediations (brief yoga exercises, inspirational yelling exercises) or a no intercession control condition.

Sidiropoulou, M. P., et. al. (2007) put accentuation in screening people with exercise-instigated bronchospasm so as to keep away from ingenuity bronchial hyperactivity and ensuing unending quiet irritation of the respiratory tract. The motivation behind this examination was to assess the impact of interim training on the respiratory capacity and perseverance in youngsters with exercise induced asthma (EIA) taking an interest in the sport of soccer.

Clarke, R. An., et. al. (2008), examined with the reason to look at the pinnacle power and power bend qualities during a customary seat press (BP) and a ballistic seat toss (BT). Eight (age = 21.0 +/- 2.3 years, stature = 182.3 +/- 7.4 cm, weight = 85.9 +/- 5.5 kg) semi-proficient rugby association players with opposition and power training knowledge performed both BP and BT exercises at heaps of 55 and 80% of their anticipated one-reiteration most extreme. The power bends for each test were then isolated into three force levels, set at low to direct (0-75%), high (75-95%), and close maximal power (95-100%). These qualities were acquired by deciding the level of the scope of movement (ROM) in which the power created during each test was inside these limits.

Harrison A. J. and Bourke G. (2009) directed examination with the reason to explore whether a RS (Resisted Sprint) training intercession would improve the running pace and dynamic quality measures in male rugby players. The RS gathering performed two sessions for every seven day stretch of RS training for about a month and a half.

Molacek Z. D., et. al. (2010) led the examination with the reason to decide the impacts of intense low-and high-volume static and proprioceptive neuromuscular assistance (PNF) extending on 1-reiteration most extreme (1RM) seat press. Two and 5 sets of extending were finished for the low-and high-volume conventions, separately. There were no noteworthy contrasts in 1RM seat press execution ($p > 0.05$) among any of the extending conventions NS (129.7 +/- 3.3 kg), LVPNFS (128.9 +/- 3.8 kg), HVPNFS (128.3 +/- 3.7 kg), LVSS (129.7 +/- 3.7 kg), and HVSS (128.2 +/- 3.7 kg). We infer that low-and high-volume PNF and static extending have no huge intense impact on 1RM seat press in obstruction prepared university football players.

Carling C. and DuPont G. D. (2011) directed the investigation to decide if decreases in physical execution in an expert soccer crew during match-play were related with decreases in expertise related execution. Neither physical nor expertise related

execution was influenced crosswise over three successive games inside a time of ≤ 7 days. The outcomes recommend that the players were commonly ready to keep up aptitude related execution all through games and when contending in progressive matches inside a brief span.

Schache, A. G., et. al. (2012) exhibited the potential for a basic clinical test of hamstring muscle solidarity to distinguish vulnerability to muscle strain damage. A solitary case design was utilized; explicitly, a tip top level male Australian Rules football player performed respective isometric most extreme intentional contractions of the hamstring muscles on a week by week reason for a time of 5 weeks going before a correct hamstring muscle strain damage.

Austin, D., et.al (2013), with the reason to portray the match-play requests of expert rugby association players contending in Super 14 matches during the 2008 and 2009 seasons. The developments of 20 players from Super 14 rugby association group during the 2008 and 2009 seasons were video recorded. Techniques utilizing time-movement investigation (TMA), five players from four positional gatherings (frontrow advances, back-push advances, inside backs and outside backs) were evaluated. Results Players secured somewhere in the range of 4218m and 6389m during the games.

METHODOLOGY

Sample -

Sixty (N=60) male subjects, age group ranging from 14 to 16 years, will be pooled randomly as sample. The criteria for inclusion and exclusion of the subjects will be as follows:

- The players who are the regular practitioners will be included in the experiment.
- The subjects who are expected to remain present till the experimental trials are finished will be incorporated in this study.
- The subjects irrespective any community, willing to participate in this study, will be incorporated.
- The players suffering from known serious health problems are to be excluded. Moreover, players having incapacitating physical illness as ruled out by clinical investigation will be excluded prior to the study.

Experimental Design –

The subjects will be divided into two equal group's viz., Gr. A and Gr. B. Group-A will participate in the "Yoga Exercise Schedule" and Group-B will be acted as "Control Group." There will be daily 45 minutes practice considering the above schedules except Sundays and holidays. During daily experimental

period while all the subjects of selected groups will be involved with their respective training schedules, the subjects of control group will be kept busy with some recreational activities in Physical Education. Moreover, after completion of daily training schedule for 45 minutes there will be a regular practice of game for 30 minutes. All the experimental as well as control groups will combine participate in the same. The total duration of the experimentation will be at least for three months (including testing dates, Sundays and holidays) which include the one experiment, one follow-up programmes to record the long term effects of the experiment and one detraining programme of 6 weeks each.

CONCLUSION

Yoga is a study of complete wellbeing and is more than physical. It is mental and otherworldly also. It might assist populace with becoming Satchitanand, where Sat signifies "presence" chit signifies "information" and ananda signifies "joy." Thus, Yoga is by all accounts important for populace. This examination would bring genuine proof of advantages of Yoga particularly for educating experts.

The act of physical exercises and yoga asana were assumed noteworthy job in creating and improving the speed factors among the players, henceforth was prescribed to that the educational plan and yoga and Physical exercises program prospectus must instruct and practice adequately to see the amicable advancement of exemplify of players. Chosen yogic exercises were helpful to improve speed estimated by 50 yards dash and juggling expertise. To discover the essentialness of different factors comparable trial can be directed with change in set of yogic exercises. Additionally by expanding the term of training other variable can be tested and investigated for their noteworthy, which is conceivable in further research.

REFERENCES

1. Anjali Joglekar (1999). "A Study of the Effect of Yogic Exercises for the promotion of Physical Fitness and Badminton skills of College Girls of Age between 18 to 20 Years." Masters' Dissertation in Physical Education, BPCA's College of Physical Education, University of Mumbai, pp.1-138.
2. Aughey, R. J. (2010). Australian football player work rate: evidence of fatigue and pacing. *International Journal of Sports Physiology and Performance*. 5(3): pp. 394-405.
3. Austin D., et. al. (2013). The physical demands of Super 14 rugby union. *Journal of Science and Medicine in Sport*: 14, pp. 70-79.
4. B. K. Acharya, et. al. (2010). "Effect of *Pranayama* (voluntary regulated breathing) and *Yogasana* (yoga postures) on lipid profile in normal healthy junior footballers *International Journal of Yoga*, 3(2): pp. 70.
5. B. Donohue, et. al. (2006). "Effects of brief yoga exercises and motivational preparatory interventions in distance runners: results of a controlled trial" *British Journal of Sports Medicine*. January; 40(1): pp. 60-63.
6. Bhatia, R. K. and Premlata (2005). Effect of Selected Yogic Exercises on Balance and Perception of College Level Players. *Journal of Sports and Sports Sciences* Vol. 28.
7. Brechue, W. F. and Mayhew, J. L. (2009). Upper-body work capacity and 1RM prediction are unaltered by increasing muscular strength in college football players. *Journal of Strength and Conditioning Research*; 23(9): pp. 2477-86.
8. Carling C. and DuPont G. (2011). "Are declines in physical performance associated with a reduction in skill-related performance during professional soccer match-play *Journal of Sports Sciences*; 29(1): pp. 63-71.
9. Chen T. L. (2009). The Effect of Yoga Exercise Intervention on Health Related Physical Fitness in School-Age Asthmatic Children, *International journal of sports sciences*, Taipei County, 2009.
10. Ghosh, S. K. (2003). The effect of physical exercise, yogic practices and their combined training on selected physiological variables among high school Boys age ranged from 13-15. *Yoga Mimansa- VOL XXXV No. 1 & 2*, pp. 88-90.
11. Govindarajulu, N., Gananadeepam, J. and Bera, T.K. (2003). The Effect of Yoga Practices on Flexibility and Cardio-respiratory Endurance on High School Girls. *Yoga-Mimasa*, XXXV, No-1 & 2; pp. 64 - 70.
12. Harrison A. J. and Bourke G. (2009). "The effect of resisted sprint training on speed and strength performance in male rugby players." *Journal of Strength and Conditioning Research* Jan; 23(1): pp. 275-83.
13. Molacek Z. D., et. al. (2010). "Effects of low- and high-volume stretching on bench press performance in collegiate football players." *Journal of Strength and Conditioning Research*. Mar; 24(3): pp. 711-6.
14. Pradhan P. K. (2008). *Yogic Practices for Health and Sports Performance*. *Indian Journal of Yoga Exercises & Sports Science and Physical Education*, II, 12.

15. R. K. Bhatia, Premlata (2005). "Effect of Selected Yogic Exercises on Balance and Perception of College Level Players", *Journal of Sports and Sports Sciences* Vol. 28.
16. Schache, A. G., et. al. (2012). Can a clinical test of hamstring strength identify football players at risk of hamstring strain, *Knee Surgery. Sports Traumatology Arthroscopy: Journal of ESSKA.*; 19(1): pp. 38-41.
17. Sidiropoulou, M. P., et. al. (2007). The effect of interval training in children with exercise-induced asthma competing in soccer. *Journal of Strength and Conditioning Research*; 21(2): pp. 446-50.
18. Singh, Ajmer (2003). *Essentials of Physical Education*, New Delhi: Kalyani Publishers, pp. 517.
19. Sivaraman P. (2012). Effect of resistance training programme on performance related fitness variables among cricket players, *International journal of Physical Education U.P.*; 5(1): pp. 62.
20. Stodden, D. F. and Galitski, H. M. (2010). Longitudinal effects of a collegiate strength and conditioning program in American football. *Journal of Strength and Conditioning Research*; 24(9): pp. 2300-8.

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