

EFFECT OF YOGIC PRACTICES ON PHYSICAL VARIABLES AMONG RIFLE AND PISTOL SHOOTERS

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ABSTRACT

The study's goal is to determine the "Effect of Yogic Practices on physical variables among rifle and pistol shooters". To accomplish this goal, 90 shooters ranging in age from 18 to 40 years were used. The chosen participants were split into two equal groups of 90, one experimental group 45 and one control group 45. The experimental group received yogic practice training in selected asanas and pranayama, as well as meditation. The training time for the current study were randomly divided into two equal groups of 30 shooters each, dubbed the experimental group and the control group for yoga. 15 weeks, 6 days each week, for 90 minutes. The experimental group were receive yoga instruction. Except for their regular physical education sessions, the control group were barred from participating in any of the training programmes. The research hypothesis suggested that 15 weeks of yoga practice training enhances physical associated fitness performance in rifle and pistol shooter. The study hypothesis's statement accords with the findings, hence the hypothesis was accepted. The study also hypothesis claimed that 15 weeks of yoga practice training enhances agility, balance, speed, and flexibility in rifle and pistol shooters. The statement of the research hypothesis matches with the data, hence the hypothesis was accepted.

Keywords: Yoga, pistol and rifle shooters, agility, flexibility, speed & balance.

INTRODUCTION

Common health measures include life expectancy at birth, infant mortality rate, fertility rate, crude birth rate, & crude death rate. Per capita income, nutrition, housing, sanitation, safe drinking water, social infrastructure, government-provided health & medical care services, geographical climate, work status, poverty incidence, and other factors all have an impact on these health metrics (Reddy & Selvaraju 1994; Dadibhavi and Bagalkoti 1994).

Yoga is a science of good living that works when it is incorporated into our daily lives. It affects physical, mental emotional, psychic, & spiritual components of individual. Yoga derives its name from Sanskrit word yuj, which means "union" or "oneness." Yoga is a spiritual art form that considers the mind, body, and soul of man. To cleanse and strengthen the body, many approaches must be employed. To become a yoga adept, mind must be purified of all impurities, & soul must turn inside. While study cleanses the mind, surrender leads the soul to God. Yoga asanas (postures) and breathing address physical body, but their impact on brain has an impact on mind as well.

Shooting, on the other hand, is a sport that requires tremendous precision, striking control, & close coordination of the eye, brain system, & musculoskeletal system. This sport is mostly concerned with bodily alignment and mental stability (Kapoor S, Paul M. 2008). While

breathing, the shooter must aim at the target; the rifle must move up and down with natural inspiration & expiration motions of chest wall (Makwana K, Khirwadkar N, Gupta HC 1988). Due of the movement induced by breathing, it is difficult to fire an accurate shot while holding your breath. The ability to function eyes is first to go, followed by muscles, which begin to contract. The breath hold should not be prolonged to point of causing an unnatural feeling. If it is too long, body suffers from oxygen deprivation, which causes weariness, muscle spasms, and vision impairment. While a result, there is a natural desire that says, 'I must breathe, I must breathe,' and as body attempts to defend itself, it begins sending out signals to restart breathing. These impulses generate involuntary diaphragmatic movements that disrupt shooter's attention & cause the chest wall to shift. All of these things make it difficult to fire an accurate shot. During the shooting operation, shooters must control their respiration. They must breathe while aligning their eyes and complete aiming & fire while holding their breath. Shooters do this by inhaling & exhaling normally, pausing at point of physiological exhalation, commencing the respiratory hold, firing shot, & then inhaling again. The breath hold should not last too long. If the shooter fails to fire within 7 seconds, he will relax and decline the shot. He will lower the rifle and resume since being in the position for too long may cause the shooter to lose balance and attention needed to take the shot.

In today's environment, the shooting sport in India has garnered international acclaim. Indian shooters have made a name for themselves and achieved victory in prominent international competitions such as the Olympic Games, Commonwealth Games, SAF Games, & Asian Games. Veteran shooters like as Abhinav Bindra, Major Rajyavardhan Singh Rathore, Anjali Bhagwat, Gagan Narang, and others have brought laurels to the country, contributing to the game's advancement. For their achievements in sports, some of India's best shooters have earned the most prestigious prizes, including the Rajiv Gandhi Khel Ratna Award, Dronacharya Award, & Arjuna Award. The accomplishments of these shooters sparked interest in the Indian sports population to participate in shooting competitions. With the growing popularity of the shooting sport in India, aspiring shooters are working hard to excel in the game and gain recognition at both the national and international levels. In India, shooting is often seen as an expensive activity that can only be pursued as a serious vocation by the wealthy, influential, and brilliant with institutional backing. This is why the sport remains a secondary option among Indian sports aficionados. Nonetheless, with the success of Indian shooters in the spotlight, an increasing number of young people are choosing shooting as a career. Today, shooting has shown to be a strong rival to other popular sports such as cricket and badminton.

Rifle shooting, pistol shooting, dart throwing, archery, & clay-pigeon arc shooting are all shooting activities. All of these styles of shooting have one thing in common: the participant directs an object, such as a dart, bullet, shot, or arrow, at a target. The victor in any type of shooting is the one with the highest score, which is usually the average error from a target centre (Mononen 2003b).

Shooting requires a high level of physical fitness, as well as technical proficiency (Antal and Shankar, 1994). Many research have been conducted to study the physical elements that cause the participant's sway or tremor and how it might be reduced to enhance shooting accuracy. The importance of vision for shooting entails depending less on this signal for balance, resulting in compensating through subconscious postural mechanisms based on proprioceptive & vestibular information, such as decreased sweating and more suitable anticipatory brain activity (Tremayne and Barry, 2001).

RIFLE OR PISTOL SHOOTING


Shooting began as a means of survival, & it was used to hunt wildlife for sustenance. Since mid-1800s, sport shooting has been a competitive activity in many forms. Shooting is a competitive Olympic sport. The National Rifle Association of India (NRAI) was founded on April 17, 1951, with the goal of developing the shooting sport in India and providing people with self-defense training. The NRAI was founded by G.V. Mavlankar, the first Speaker of the Lok Sabha. In India, he was known as the "Father of the Shooting Sport." The goal of sports shooting is to hit a target with a series of properly performed shots within a certain time limit. Pistols are short guns handled with one unsupported hand in a standing stance and are employed in shooting sports. For various contests, air pistols, which utilise compressed air to discharge lead pellets, rapid fire handguns, which shoot 5 pellets in quick succession, & traditional or free pistols, which shoot one pellet at a time, are all used.

Exposure to high-level performance is one of the most enjoyable aspects of sports. Achieving the top level necessitates skill acquisition, mental tenacity, years of focused practice, and perseverance. Training's ultimate goal is to reach peak performance. Serious sportsmen do not need to be reminded of the need of sports fitness. To perform at one's best, one's conditioning regimen must include proper strength, power, and speed characteristics. That is what provides the extra edge required to thrive at one's sport. The highest performance increases will be obtained when essential components of one's training closely resemble what one performs when competing. To compete at one's best in shooting, one must develop the proper posture, holding, breathing, sighting, and specific strategies. Furthermore, the most crucial thing is to keep your temper and equilibrium under intense competitive scenarios.

Shooting began as a means of survival, and it was used to hunt wildlife for sustenance. Since mid-1800s, sport shooting has been a competitive activity in many forms. Shooting is a competitive Olympic sport. The International Sport Shooting Federation, or ISSF, is world's regulatory organization for shooting competitions. There are 19 distinct shooting competition categories recognized at the Olympic Games. Shooting is the third most popular Olympic sport in terms of medals, participants, and nations, as well as the second most popular international sport after track and field. It is also the only sport that is performed in both summer & winter Olympic Games. The organization's headquarters are in Munich, Germany, and it has 154 national member federations. There are 19 distinct shooting competition categories recognized at the Olympic Games.

The National Rifle Association of India (NRAI) was founded on April 17, 1951, to promote the shooting sport in India and to provide people with self-defense training. G.V. Mavlankar, the first Speaker of the Lok Sabha, was the NRAI's first president. In India, he was dubbed the "Father of the Shooting Sport." K.G.Prabhu was the first secretary general of the NRAI. The Lok Sabha approved a resolution in 1953 entrusting the NRAI with training rifle associations throughout India. Shooting is becoming more popular as a competitive activity in India. The goal of sports shooting is to deliver a series of flawlessly completed shots to a target, generally within a set time limit. Pistols are short firearms used in shooting sports that are held with one unsupported hand in a standing position. Air pistols, which use compressed air to discharge lead pellets, rapid fire handguns, which shoot 5 pellets in fast succession, and classic or free pistols, which shoot one pellet at a time, are all used in various competitions.

Exposure to high-level performance is one of the most enjoyable aspects of sports. Achieving the top level necessitates skill acquisition, mental tenacity, years of focused practice, and perseverance. Training's ultimate goal is to reach peak performance. Serious sportsmen do not

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need to be reminded of the need of sports fitness. To perform at one's best, one's conditioning regimen must include proper strength, power, and speed characteristics. That is what provides the extra edge required to thrive at one's sport. The highest performance increases will be obtained when essential components of one's training closely resemble what one performs when competing. The more specialized the training, the bigger the influence on performance. Exposure to high-level performance is one of the greatest joys in sports. There is almost an aesthetic quality to an athlete who goes above and beyond the standard and exhibits great elegance, speed, and control while doing a talent. Achieving the top level necessitates skill acquisition, mental tenacity, years of focused practice, and perseverance. To compete at one's best in shooting, one must develop the proper posture, holding, breathing, sighting, and specific strategies. Furthermore, the most crucial thing is to keep your temper and equilibrium under intense competitive scenarios.

Yoga is an effective approach for improving performance of athletes. The combination of physical training & concentrated concentration is a key characteristic of yoga. Indulging in a yoga program can help you achieve exceptional physical health. Yoga activities focus on key organs of body on which health is dependent. Yoga attempts to improve efficiency of body's important organs, which is a prerequisite for physical health. The multiple chosen asanas'giving various movements to spine, controlled respiration, relaxation technique, & concentration practise combine to provide a perfect routine for maintaining health of body's key organs. Although there haven't been many scientific research, the works of Govindaraju et al., (2003), Johnson Prem kumar, and Marriayyah (2006) have offered enough data on how yoga may be used to improve physical qualities. Although there haven't been many scientific research, the works of Govindaraju et al., (2003), Johnson Prem kumar, and Marriayyah (2006) have offered enough data on how yoga may be used to improve physical qualities. Although there haven't been many scientific research, the works of Govindaraju et al., (2003), Johnson Prem kumar, and Marriayyah (2006) have offered enough data on how yoga may be used to improve physical qualities.

STATEMENT OF THE PROBLEM

The study's goal was to determine "effect of yogic practices on physical variables among rifle and pistol shooters"

OBJECTIVES OF THE STUDY

- To learn about the impact of yoga practice on physical characteristics in rifle and pistol shooters.
- To investigate the link between yoga practice and physical characteristics in rifle and pistol shooters.
- To investigate significance of yogic practice training on the performance of rifle and pistol shooters.

HYPOTHESIS

- It was expected that 15 weeks of yoga practice activities training would improve agility.
- It was expected that 15 weeks of yoga practice and training would result in increased speed.
- Balance was believed to be developed after 15 weeks of yoga practice exercises instruction.
- It was expected that 15 weeks of yoga practice would increase flexibility.

LITERATURE REVIEW

Martin Lakie (2010) investigates the role of muscular tremor on shooting performance. Involuntary movement impairs shooting skill. Physiological tremor accounts for some of the movement. The magnitude of the tremor has a definite negative link with shooting performance. As a result, the factors that influence tremor size should likewise influence shooting skill. Although both adrenaline & local muscle heat enhance tremor size, local muscle cooling decreases it. The physiological processes behind these alterations are unknown, but they have potential to impact shooting ability in those who exercise often &/or live in harsh locations. The Olympic biathlon is a sport that alternates between rigorous physical exertion and rifle shooting, & it is typically contested in subzero temperatures. The effects of exercise, temperature, and other environmental factors on Olympic biathlete are described in this article.

Chidambara Raja (2010) investigated impact of yoga & physical training on flexibility, anxiety, and physiological blood pressure. Working women in several faculties at Annamalai University between ages of 35 and forty were chosen for 45 topics. They were separated into 3 groups of 15 participants each. Group I practiced yoga, Group II exercised, & Group III served as a control group that did not participate in any particular training. This study's training time was five days per week for eight weeks. The sit and reach test was used to assess flexibility, the Taylor's manifest anxiety scale was used to assess anxiety, and a sphygmomanometer was used to measure blood pressure. Subjects were assessed for flexibility, anxiety, and blood pressure before & after the training period (systolic & diastolic). The dates were calculated statistically using "Covariance Analysis" (ANCOVA). All variables improved much more in experimental group than in control group.

Saroja (2011) investigating effect of yoga practice, physical exercise, and their combination on selected motor ability components & physiological variables in college male students. Sixty college men students were chosen at random from several institutions in Sivagangai District, Tamilnadu, India, and their ages ranged from nineteen (19) to twenty-three (23) years. They were placed into four groups: yoga, physical exercise, physical exercise combination, and the control group. For six weeks, the first three groups practiced yoga asanas, pranayama, Dhayana, and physical exercise. Pre and post tests were administered to all individuals prior to and following training. Motor ability is a dependent variable. This study indicated that selected yogic practises promoted flexibility more than physical exercises, that combined yogic practise training improved endurance more than physical activities, and that selected respiratory endurance improved endurance more than yogic practises. Exercise improved the resting pulse rate more than yoga practise.

By concentrating on data published in review articles, Büssing et al. (2012) synthesise existing research on effects of yoga therapy on many components of mental and physical health. These evaluations reveal a variety of areas where yoga may be useful, but additional study is needed for nearly all of them to be clearly established. The variability of therapies and circumstances evaluated has limited use of meta-analysis as an acceptable technique for synthesising present evidence. Nonetheless, there are several meta-analyses that show therapeutic benefits of yoga therapies, & there are numerous randomised clinical trials (RCTs) of reasonably good quality that show beneficial effects of yoga for pain-related impairment & mental health. Yoga may be beneficial as a supporting adjunct in treatment of a range of medical

issues, but it has not yet been demonstrated to be a curative treatment in and of itself. Yoga has potential to be implemented as a beneficial supportive/adjunct treatment that is relatively cost-effective, can be used as a self-care behavioural treatment in part, provides a life-long behavioural skill, increases self-efficacy & self-confidence, & is frequently associated with additional positive side effects. Larger-scale, more rigorous research is urgently needed, with higher methodological quality & suitable control interventions.

Perumal and Soundarrajan (2014) A study evaluating the impact of yogic practices & physical exercise on academic success in school boys' muscular strength, endurance, and flexibility. The study's purpose was to explore benefits of yogic practises & physical exercise on teenage boys' academic success, muscular strength endurance, & flexibility. Whole bodies of work dealing with various parts of yoga & yoga philosophy, both ancient (pre-Christian) and modern, attest to the discipline's enduring importance (Mira-Mehtra, 1994). Eighty untrained school students (mean age=16+/-1.5yr) were randomised at random to one of four groups: yoga practise group [YPG, N=20 & PEG, N=twenty, CYPPEG, N= twenty, or control group (CG, N=20).

Training was held 3 alternating days each week for 12 weeks. Pre-training (T1) and post-training (exchange sit ups and sit and reach test) assessments of muscular strength endurance & flexibility performance were determined. The study found that muscular strength endurance & flexibility increased at T2 (about 11%) in all training groups, but only in CYPPEG (nearly 3%).

Amte Snehal Shekhar and Hetal Mistry (2014) investigate the effect of pranayama on rifle shooter performance by assessing factors such as breath holding duration, lung functional capacity, & shooting performance. Yoga has been clinically demonstrated to improve both physical & psychological functioning in humans. Pranayama is one of the most important parts of yoga. Various forms of pranayama have a solid scientific foundation & are historically thought to establish balance b/w mental & somatic components of physiological processes. The relationship between body & mind is required for athletes to perform better. As a result, it can be stated that pranayama is effective for improving rifle shooter performance and should be incorporated in their training regimen.

Sanjit Sardar, Kumudlata Singh (2015) The study's purpose was to see how specific yoga practises and physical workouts affected biochemical variables in female university students. The study's subjects were 40 female students from Chhattisgarh's Guru Ghasidas University. The participants were divided into two groups. Group I got instruction in specific yogic practises, whereas Group II received instruction in physical exercises. The individuals ranged in age from 20 to 25 years. A group of University Women Students were picked at random to be the subjects. The study used a pre-test - post-test design. Body cholesterol & triglyceride levels improved significantly in yoga practice group.

Dr. A. Gunalan (2016) investigates the impact of yoga practices and yogic practices mixed with physical workouts on selected psychological variables such as anxiety, anger, & achievement motivation. The investigator chose 60 Kanchipuram schoolboys and put them into three groups: yoga practices, combined physical workouts and yogic practices, and control. The results demonstrated that yogic practices group, combined physical exercises & yogic practices group, & yogic practices group greatly increased the achievement motivation of the school boys. It was determined that yogic practices, in addition to normal physical workouts, can be applied among schoolboys.

The study by Juliana Costa Shiraiishi and André Bonadias Gadelha (2017) Regular physical activity has been shown to improve overall physical fitness. Long-term commitment to physical exercise is a significant obstacle to maintaining health; as a result, pleasure activities such as Hatha Yoga (yoga) may offer a valuable choice in both individual & public situations. Hamstring flexibility was measured using the sit-and-reach test method. The Cooper test was used to determine cardiorespiratory fitness and lasted 12 minutes. Participants in the study had to attend at least 75% of the total sessions. After the yoga intervention, there was a 1.3 (1.0 - 4.0) cm¹ drop in WC, a 0.7 (0.9 - 1.5) cm decrease in body fat percentage, a 7.8 (2.0 - 5.0) cm increase in hamstring flexibility, & a 3.0 (1.0 - 4.0) cm gain in abdominal endurance (p 0.01). Finally, current study found that a twelve-week yoga programme enhanced physical fitness in young, healthy volunteers.

Young, Sook, Yook, and Soo-Jin Kang (2017) evaluated the psychological features of teenagers after a physical activity intervention integrating a new sport & mindfulness yoga. With a two-group longitudinal design, the study used a pre- & post-test. The eight-week intervention was voluntary for 46 primary school students (25 males and 21 females; Mage = 10.98, 1SD = 0.39). Before and after the session, self-esteem, resilience, & happiness were measured. A new sport & mindful yoga connected to psychological features are part of the solution. New sports featured kin ball and other sports activities, while mindful yoga programme covered adequate breathing & Hatha yoga 1 and 2. During the 8-week intervention, the experimental group's self-esteem (F = 3.47, p = .049), resilience (F = 9.72, p = .003), & happiness (F = 31.61, p = .001) considerably improved. This study found that when it comes to physical activity promotion planning and implementation, both physical activity and mindfulness yoga have an impact on psychological aspects.

Shyam Sundar Rath, M.D. (2017) The psychological impact of a physical activity intervention combining a new sport & mindfulness yoga For years, people have debated whether yoga is a science, an art, or a philosophy. Many experts believe that it is both an art and a science. Yoga is a remarkable blend of science and art, as well as one of six orthodox schools of Indian philosophy, according to a very thorough investigation supported by strong evidence. The name "yoga" is derived from Sanskrit word "Yuj," which means "unity." This is connection of individual soul with supernatural or global soul. Yoga has been practiced as an Indian philosophy for hundreds of years to connect the individual self with the divine, universal soul, or cosmic awareness.

Champak Bhadra (2017) Trataka is a yogic visual concentration technique as well as another way of meditation that includes alternating looking at an item or point without blinking the eyes, then closing eyes & seeing thing in mind's eye. The goal of this study was to see how Trataka affected blood pressure fluctuations after a short duration of practise. Five female college students aged 18 to 22 years old from the Department of Physical Education, Vinaya-Bhavana, Visva-Bharati University, Santiniketan, Bhojpur, West Bengal, India had their systolic and diastolic blood pressures monitored. Trataka was given for 15 minutes, both before and after yogic visual concentration (Trataka) The BP test (Sphygmomanometer) was used to measure systolic and diastolic blood pressure, & the 't'- ratio was utilised to compare blood pressure variations between the before and after testing. After comparing and reviewing the data, it was discovered that systolic blood pressure was lowered with significant differences ('t'= 4.781), while

diastolic blood pressure was not reduced with significant differences ($t= 0.323$). Short-term Trataka practise significantly decreases systolic blood pressure but not diastolic blood pressure.

Malik, Dinkar (2017) The psychological impact of a physical activity intervention combining a new sport & mindfulness yoga Yoga is India's national heritage. Pranayama (breathing exercises) has been performed for ages in India. There is currently insufficient study to give evidence for the structural and functional changes that may occur in central nervous system as a result of pranayama practice. As a result, it is worthwhile to investigate influence of Anulom Vilom Pranayama on human behavior & health. According to our findings, Pranayama regenerates dead cells, allowing us to gain the ability to heal ourselves. It also relaxes the body and mind deeply, enhances the neurological and respiratory systems, increases attention, and decreases stress, depression, and hypertension. Furthermore, combining Anulom Vilom Pranayama with meditation and a restricted diet may aid in heart control. This research will serve to raise public awareness about the value of yoga training.

Vivek Shanu Pawar (2018) investigates the benefits of yoga on anxiety among rifle shooters. The major goal of study was to determine the effects of yoga on anxiety among rifle shooting participants. There were two groups studied: experimental and control. The experimental group consisted of 25 rifle shooters, while the control group consisted of 25 other rifle shooters. Only experimental group received the training program. The individuals varied in age from 14 to 18 years old. Data was gathered through several exams administered to respondents. Athletes' anxiety is assessed with the Sport Competition Anxiety Test (SCAT) According to the study's findings, there were no significant impacts of yoga on health-related physical fitness on Anxiety in either the experimental or control groups.

Charak Singh Ajay et al. (2018) investigate impact of a six-week yoga program on the aggressiveness of state-level air pistol shooters. The goal of this study was to see if a six-week yoga exercises program affected aggressiveness of state level air pistol shooters. Sixty male air pistol shooters aged 14 to 18 years were chosen as the study's subjects, & their pre-test was administered through questionnaire. Then, out of sixty samples, thirty people with a high level of aggressiveness were placed in an experimental group and given six weeks of yoga training, while remaining thirty participants were placed in a control group. Following end of a six-week yoga program, a post-test was administered using same questionnaire. Physical aggressiveness had a computed 't' value of 14.057, Verbal aggression had a value of 7.751, Anger scale had a value of 10.562, Hostility had a value of 8.750, and Indirect aggression had a value of 6.804. At the 0.05 level, all estimated values for corresponding aggressiveness components were determined to be statistically significant ($p=0.001$). Based on the findings, a six-week yoga practice was successful in reducing the hostility of state level air pistol shooters.

Z. Peljha, M. Michaelides, and D. Collins (2018) assess the present status of empirical research, theoretical explanations, & practical application of chosen physical fitness metrics in Olympic clay target & allied shooting disciplines. The study used four web databases as data sources. To discover relevant literature in English that fit pre-specified search parameters, many key phrases (for example, shooting sport, skeet, & trap) were employed. The content analysis method was used to find 41 publications on the application of fitness metrics in shooting sports. Previous studies has mostly concentrated on stationary shooting disciplines,

according to major conclusion. Only 3 studies on clay target shooting have been identified. One study looked at the role of Quiet Eye (QE) duration, while another looked at gun kinematics and another at postural stability. Postural stability, upper body strength, QE duration, & VO₂ max were all studied in various shooting sports.

Ayşegül Yapıcı et al. (2018) look at the link between competitive shooter performance and physical capacity. For the Turkish Championship youth division, 19 shooters volunteered. Anthropometric measures as well as shooting scores were taken. Hand grip strength, flexibility, response time, dynamic balance, maximum oxygen consumption, and respiratory function were all evaluated. Pearson correlation analysis was used to explore the relationship b/w shooting performance, pulmonary function measures, and motoric features. The link b/w flexibility and shooting ability was shown to be statistically significant ($p > 0.05$). Right-left hand grip strength & shooting performance had a statistically significant connection ($p > 0.05$). Shooting performance had no statistically significant connection ($p > 0.05$) with response time, respiratory function parameters, endurance, or balance parameters. Shooting requires both motor control and breathing control. By assessing motor features over the season, findings of this study can help trainers determine the development and limits of various age groups of shooters when establishing a training plan.

Dr. Franklin Shaju and Jeganathan Arumugam (2019) determine relationship b/w anxiety & core muscle stability in the performance of rifle shooters. Target shooting is a sport that requires both fine muscular control & endurance. Although target shooting does not engage the heart and lungs as much as running, the muscles utilised by a shooter can become as depleted of oxygen as the muscles of a runner, therefore the shooter must be physically fit in all aspects. Anxiety, according to medical definition, is a state characterised by psychological & bodily symptoms caused by concern over a perceived threat. The trunk area, which comprises the abdomen and back extensors, is referred to as the core. A cross-sectional research of 60 rifle shooters was conducted to assess anxiety, core muscle strength, and association with performance score. There is no correlation between anxiety & core muscle stability in rifle shooter performance. There is no association b/w anxiety and core stability in rifle shooter performance, according to findings of this study.

The study reported by Mon-López D et al. (2019) in this publication tackles two research issues: (1) Has performance of female shooters altered as a result of the increase in shot count? (2) Do women & men perform differently when the quantity of shots is equalised? This research comprised 292 shooters who finished in the top 50 at the 2016 and/or 2018 European Championships. Our sample had balanced quotas for sports (50% pistol, 50 percent rifle) & gender (50% women, 50 percent men). Both championships were conducted at the same facilities & in the same month of season, although ladies had 40 shots in 2016 and 60 shots in 2018. We discovered that increasing number of shots for women did not affect their performance in either the pistol or rifle categories. Men & women shot equally well with rifles, however men performed better with handguns than women. In goal of increasing gender equality in sports, we decided that activities in which physical strength is a small element, such as shooting, should alter their laws.

Dorota Sadowska et al. (2019) investigate the influence of maximal specific physical effort on biathletes' standing shooting postural balance and rifle stability. Ten junior elite biathletes participated in research. The post-exercise adjustments lasted more than five minutes. The vertical

direction had higher post-effort rifle wobbling than across firing line direction. The impairment in post-effort postural balance was much greater along shooting line than across shooting line. Furthermore, there was a significant link b/w postural balance & rifle stability. Maximum physical effort influenced postural balance & rifle stability during aiming. The biathlete's postural sway appears to be synchronised with rifle sway when aiming in a status shooting posture. As a result, increasing postural sway exacerbates instability and reduces weapon stability.

The anthropometric & physical fitness parameters on archery shooting performance are compared and correlated by Lau et al (2020). According to the Mann-Whitney test, there were significant differences in height, arm span, handgrip strength, and projected VO₂max across groups (p<0.05). Height, arm span, projected VO₂max, and right-hand grip all demonstrated a significant connection with scores (r=0.80, 0.82, 0.61, and 0.68, respectively). Archers with a bigger height and a wider arm spread had an advantage in archery, according to the data. In terms of fitness, the archer must have muscular strength and aerobic ability to excel in this sport. This discovery aids coaches and team management in their efforts to identify talent & train athletes.

Nur INDRI Rahayu et al. (2020) investigate impact of yoga physical exercise on self-control & quality of life. The experimental approach is The One-Group Pretest-Posttest Design research design. The active female students of UPI Sport Science comprise the sample for this study, with a total of 28 persons. Purposive sampling is used in this approach. An adaptation of the Self-Control Scale questionnaire was used to measure self-control, while the WHOQOL-hundred was used to assess quality of life. The data was analysed using the Paired Sample t-Examine method to see how yoga physical activity affected self-control and quality of life. Data analysis demonstrated that yoga physical activity had an influence on self-control (Z = -3.343, p = 0.001) & quality of life (t = -3.663, p = 0.001). As a consequence, it is feasible to conclude that yoga physical exercise improves self-control & quality of life.

METHODOLOGY

The study's goal is to determine the "Effect of Yogic Practice on Rifle and Pistol Shooters' Performance." To accomplish this goal, 90 shooters ranging in age from 18 to 40 years were used. The chosen participants will be split into two equal groups of 90, one experimental group 45 and one control group 45. The experimental group received yogic practise training in selected asanas and pranayama, as well as meditation. The training time for the current study will be randomly divided into two equal groups of 30 shooters each, dubbed the experimental group and the control group for yoga. 15 weeks, 6 days each week, for 90 minutes. The experimental group will receive yoga instruction. Except for their regular physical education sessions, the control group will be barred from participating in any of the training programmes. The variables used for the study are-

INDEPENDENT VARIABLES: different types of Yoga

DEPENDENT VARIABLES- Physical fitness Variables (Agility, Balance, Speed, Flexibility)

The data were collected from two groups on physical variable to determine the improvement in physical performance after 15 weeks of yogic practise training. The statistical procedures were used to determine the significant development in physical performance between the two groups. by doing an analysis of covariance (ANCOVA). The statistical technique was conducted out using the SPSS 21.0 software packages.

TABLE NO 1 ANALYSIS OF COVARIANCE PERFORMANCE OF AGILITY RIFLE AND PISTOL SHOOTERS

VARIABLE	TEST		EXPERIMENTAL GROUP	CONTROL GROUP	SUM OF THE SQUARE	DF	MEAN SQUARE	F - RATIO
Agility	Pretest	Mean	11.44	11.37	.13	1	.13	.32
		SD	.69	.57	47.62	89	.40	
	Posttest	Mean	9.23	9.02	1.33	1	1.33	17.61*
		SD	.39	.013	8.89	89	.07	
	Adjusted post test	Mean	11.40	9.13	1.32	1	1.32	17.46*
		SD	.03	.06	8.89	88	.08	

*Indicates significance, $\alpha=.05$, Table value =3.92

The pre-test mean Agility values for the experimental and control groups are 11.44 and 11.37, respectively. The F ratio equals 0.32. This demonstrates that there is no statistical difference in Agility between the Experimental and Control groups prior to the start of yoga practice instruction. It may be concluded that the random selection of subjects for the two groups was successful. The post-test mean Agility values for the experimental and control groups are 9.23 and 9.02, respectively. 17.61 is the F ratio. The corrected post test averages for the experimental and control groups are 11.40 and 9.13, respectively. 17.46 is the F ratio. The study's findings show that computed values are higher than table values in post-test and adjusted post-test. The Agility performance after the test is greater than the Agility performance before the test. On Agility, there is a substantial difference between the Experimental and Control groups. Figure 1 displays the Agility performance.

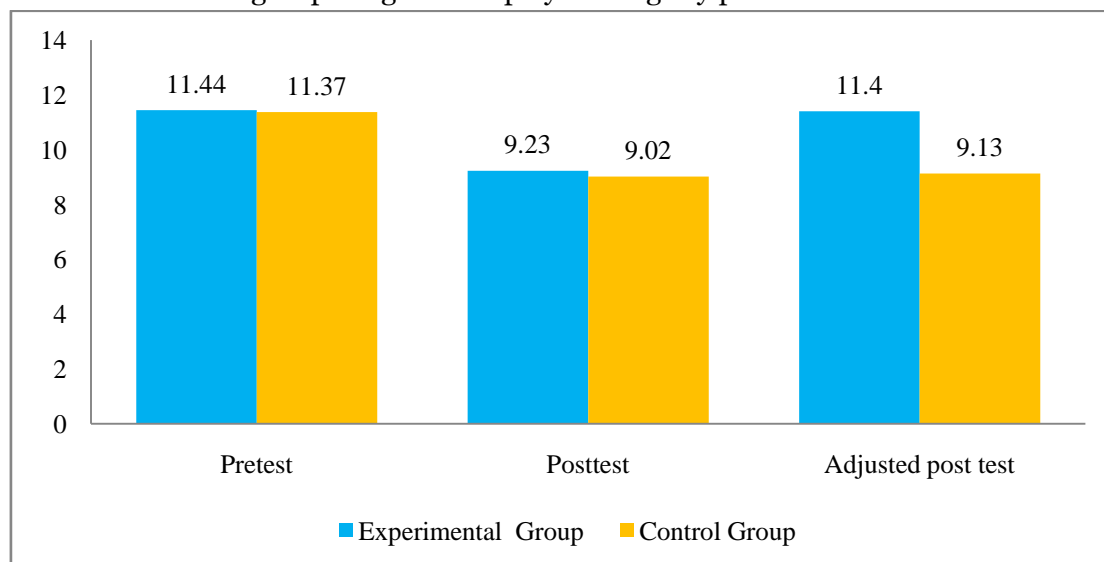


FIGURE 1 PRE TEST, POST TEST AND ADJUSTED POST TEST PERFORMANCE OF AGILITY

Figure 1 shows that the post test values of the Experimental group and the adjusted post test considerably increased Agility performance, and that the post test values of Agility

were greater than the pre test values as a result of 15 weeks of yogic Practice instruction. The before and post test performance Agility of the control group showed no change. Because regular involvement in yoga activities and Physical Practice develops agility in muscle and joints, the hypothesis was formulated on the reasoning that practices of yoga leads to increased elasticity and agility ability among practitioners. To test the hypothesis, a 15 week training was imparted and data was collected pre and post session, the 't' test proved significant difference between sample group, thus the null hypothesis was rejected, and alternative hypothesis was developed.

TABLE NO 2 ANALYSIS OF COVARIANCE PERFORMANCE SPEED OF RIFLE AND PISTOL SHOOTERS

VARIABLE	TEST	EXPERIMENTAL GROUP	CONTROL GROUP	SUM OF THE SQUARE	DF	MEAN SQUARE	F - RATIO	
Speed	Pretest	Mean	6.03	5.92	.35	1	.35	
		SD	.45	.29	16.97	89	.14	2.46
	Posttest	Mean	5.03	4.94	.21	1	.21	4.40*
		SD	.02	.31	5.61	89	.05	
	Adjusted post test	Mean	5.98	4.98	.24	1	.24	5.02*
		SD	2.48	3.45	5.55	88	.05	

*Indicates significance $\alpha=.05$, Table value = 3.92

Speed pre-test mean values for the experimental and control groups are 6.03 and 5.92, respectively. 2.46 is the F ratio. This demonstrates that there is no statistical difference in speed between the experimental and control groups prior to the start of yoga practice instruction. It may be concluded that the random selection of subjects for the two groups was successful. The post-test mean speed values for the experimental and control groups are 5.02 and 4.94, respectively. 4.40 is the F ratio. The corrected post test mean values for the experimental and control groups are 5.98 and 4.98, respectively. 15.02 is the F ratio. The study's findings show that computed values are higher than table values in post-test and adjusted post-test. The speed performance after the test is greater than the speed performance before the test. On Speed, there is a considerable difference between the Experimental and Control groups. Figure 4.2 depicts the performance of speed.

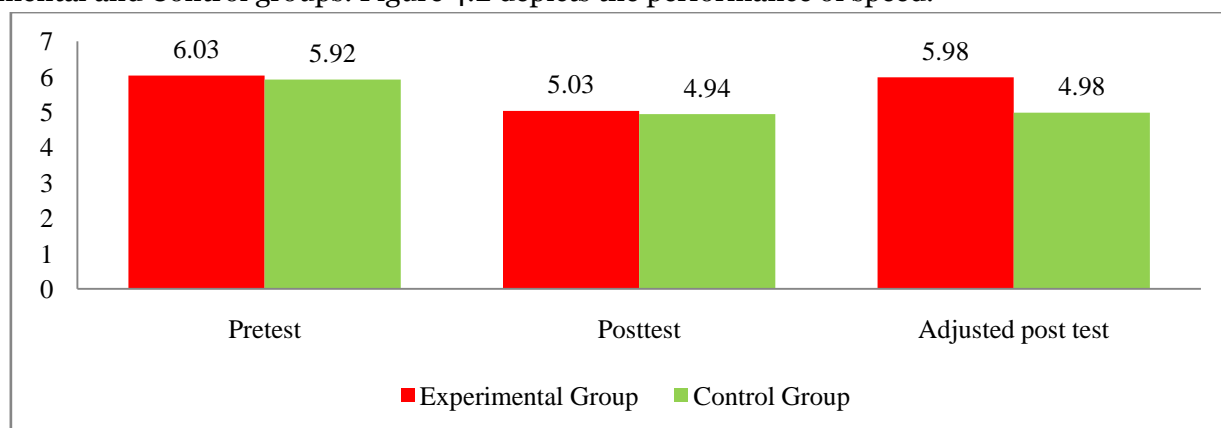


FIGURE 2 PRE TEST, POST TEST AND ADJUSTED POST TEST PERFORMANCE OF SPEED

The post test values of the Experimental group and the modified post test considerably increased the performance of Speed, and the post test values of Speed were greater than the pre test values as a result of 15 weeks of yogic Practice training. Speed reveals no improvement in the control group's before and post test performance. The hypothesis was developed on the basis of the reasoning that yoga practices lead to increased leg strength, elasticity, and speed ability among practitioners, because regular involvement in yoga activities and Physical Practice develops Speed in muscle and joints. To test the hypothesis, a 15-week training was provided, and data was collected pre and post session. The 't' test revealed a significant difference between sample groups, so the null hypothesis was rejected.

TABLE 3 ANALYSIS OF COVARIANCE PERFORMANCE BALANCE OF RIFLE AND PISTOL SHOOTERS

VARIABLE	TEST		EXPERIMENTAL GROUP	CONTROL GROUP	SUM OF THE SQUARE	DF	MEAN SQUARE	F – RATIO
Balance	Pretest	Mean	16.22	15.38	20.83	1	20.83	2.62
		SD	2.86	2.77	938.37	89	7.95	
	Posttest	Mean	21.62	18.85	229.63	1	229.63	42.89*
		SD	2.87	1.56	631.83	89	5.35	
	Adjusted post test	Mean	20.23	15.80	208.31	1	208.31	39.46*
		SD	3.21	2.56	617.63	88	5.28	

*Indicates significance $\alpha=.05$ Table value =3.92

The experimental and control groups' pre-test mean values on Balance are 16.22 and 15.38, respectively. 2.62 is the F ratio. This demonstrates that there is no statistical difference in Balance before beginning yoga practice instruction between the experimental and control groups. It may be concluded that the random selection of subjects for the two groups was successful. Balance post-test mean values for the experimental and control groups are 21.62 and 18.85, respectively. The F ratio is 42.89, and the corrected post test means for the experimental and control groups are 20.23 and 15.80, respectively. 39.46 is the F ratio. The study's findings show that computed values are higher than table values in post-test and adjusted post-test. The post-test Balance performance outperforms the baseline Balance performance. On Balance, there is a substantial difference between the experimental and control groups. Figure 4.3 depicts the performance of the Balance.

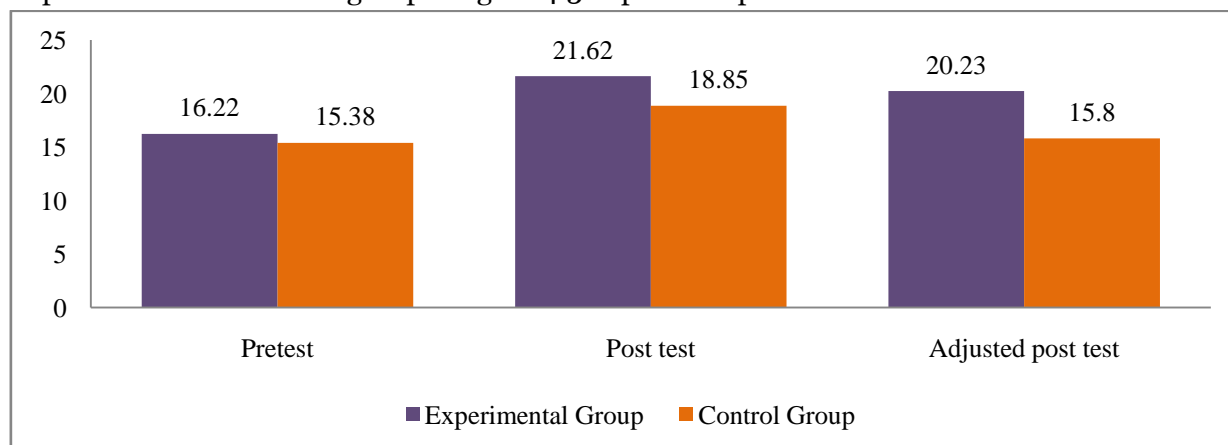


FIGURE 3 PRE TEST, POST TEST AND ADJUSTED POST TEST PERFORMANCE OF BALANCE

According to Figure 3, the post test values of the Experimental group and the adjusted post test considerably improved the performance of Balance, and the post test values of Balance were higher than the pre test values owing to 15 weeks of yogic Practice training. Balance's pre- and post-test performance in the control group shows no change. The hypothesis was formulated on the reasoning that yoga practices lead to increased leg strength, elasticity, and balance ability among practitioners, because regular involvement in yoga activities and Physical Practice develops Balance in muscle and joints. To test the hypothesis, a 15 week training was imparted and data was collected pre and post session, and the 't' test revealed a significant difference between sample groups, thus rejecting the null hypothesis.

TABLE 4 ANALYSIS OF COVARIANCE PERFORMANCE FLEXIBILITY OF RIFLE AND PISTOL SHOOTERS

VARIABLE	TEST		EXPERIMENTAL GROUP	CONTROL GROUP	SUM OF THE SQUARE	DF	MEAN SQUARE	F - RATIO
Flexibility	Pretest	Mean	17.03	16.03	30.50	1	30.50	2.82
		SD	3.98	2.40	1275.15	89	10.81	
	Posttest	Mean	22.25	19.15	288.30	1	288.30	32.49*
		SD	3.09	2.86	1046.90	89	8.87	
	Adjusted post test	Mean	20.70	16.53	205.61	1	205.61	30.38*
		SD	3.13	2.36	791.86	88	6.77	

*Indicates significance $\alpha = .05$ Table value = 3.92

The experimental and control groups' pre-test mean values for Flexibility are 17.03 and 16.03, respectively. 2.82 is the F ratio. This demonstrates that there is no statistical difference in Flexibility before beginning yoga practice instruction between the experimental and control groups. It may be concluded that the random selection of subjects for the two groups was successful. The experimental and control groups' post-test mean scores for Flexibility are 22.25 and 19.15, respectively. 32.49 is the F ratio. The corrected post test mean values for the experimental and control groups are 20.70 and 16.53, respectively. 30.38 is the F ratio. The study's findings show that computed values are higher than table values in post-test and adjusted post-test. The Flexibility performance after the exam is greater than the Flexibility performance before the test. On Flexibility, there is a substantial difference between the Experimental and Control groups. Figure 4 depicts the Flexibility performance.

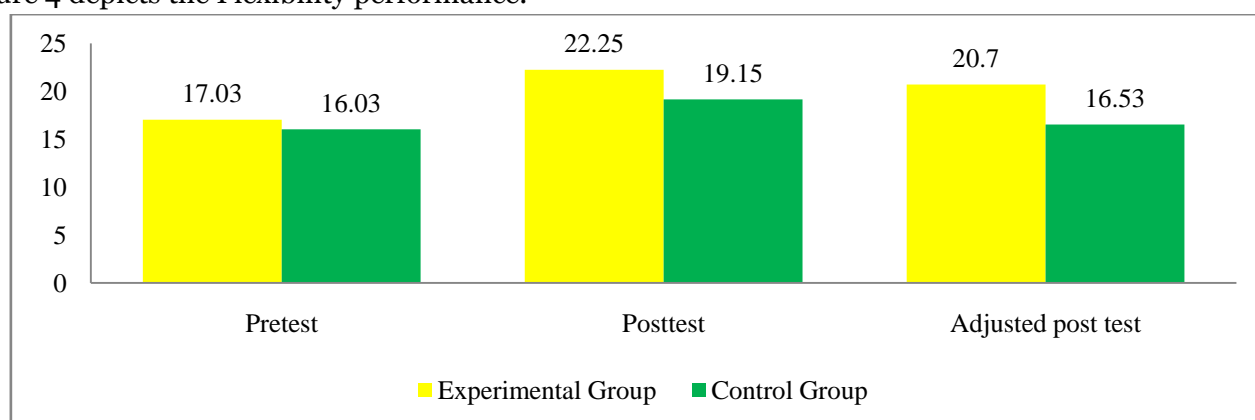


FIGURE 4 PRE TEST, POST TEST AND ADJUSTED POST TEST PERFORMANCE OF FLEXIBILITY

According to Figure 4, the post test values of the Experimental group and the adjusted post test considerably improved the performance of Flexibility, and the post test values of Flexibility were higher than the pre test values as a result of 15 weeks of yogic Practice training. Flexibility performance in the control group does not increase between pre and post tests. The hypothesis was formulated on the reasoning that yoga practices lead to increased back and hamstring muscle elasticity and Flexibility ability among practitioners, because regular involvement in yoga activities and Physical Practice develops Flexibility in muscle and joints, to test the hypothesis the 15 week training was imparted and data was collected pre and post session, the 't' test proved significant difference between sample group, thus the null hypothesis.

CONCLUSION

The following conclusions were reached based on the study conducted with certain limitations imposed by experimental conditions.

1. The 15 weeks of yoga Practice training had a strong and good impact on the development of agility performance among the yogic exercises group of shooters.
2. When compared to its counterpart, yogic practice has a good influence on improving speed ability among physical variables.
3. Yogic practice has a beneficial and substantial influence on building balancing power in the experimental group when compared to their counterpart.
4. The yogic Practice group of shooters has had a favorable and considerable impact on building flexibility performance.

The research hypothesis suggested that 15 weeks of yoga practice training enhances physical associated fitness performance in women. The study hypothesis's statement accords with the findings, hence the hypothesis was accepted. The research hypothesis stated that 15 weeks of yogic Practice training improves social maturity, self-confidence, stress, anxiety, and depression performance. The statement of the research hypothesis for women agrees with the results, so the hypothesis was accepted. The study hypothesis claimed that 15 weeks of yoga practice training enhances agility, balance, speed, and flexibility in women. The statement of the research hypothesis matches with the data, hence the hypothesis was accepted.

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