

## CHAPTER 45

### PHYSICAL EDUCATION & SPORTS SCIENCE

#### Doctoral Theses

01. AKOIJAM RIMA DEVI  
**Role of Traditional Sports for Community Development: An Exploratory Study.**  
Supervisor: Prof. Samiran Chakraborty  
Th 28432

#### *Abstract*

Traditional sports are closely tied to cultural traditions, representing the values, history, and identity of various communities worldwide. These sports serve more than recreational activities; they promote unity, physical health, and cultural continuity, fostering pride and a sense of belonging while bridging generations. The present study aims to assess the role of traditional sports in Manipur on health and wellness, social interaction, community integrity, economic impact, and overall quality of life. Traditional sports such as Sagol Kangjei, Thang-Ta, Yubi Lakpi, Mukna, Kang, and Hiyang Tanaba were considered in the investigation. The study involved 300 participants aged 18 to 45 from six districts of Manipur, selected through snowball sampling. Data was collected using self-made questionnaires and the WHOQOL-BRIEF. Structured interviews were conducted with 18 experienced individuals, including coaches and experts. Data analysis was performed using NVivo 15 (trial) and IBM SPSS 27. Both qualitative and quantitative analysis showed traditional sports have a positive impact on health, social interaction, community integrity, economic benefits, and quality of life. They improve fitness, reduce stress, and promote a balanced lifestyle. Incorporating them into school curricula and tourism events can further broaden their reach, benefiting entire communities. Socially, these sports foster connections, and unity, and bridged the generations. Economically, the rise in popularity of the sports supported local businesses, athletes, and artisans. Culturally, traditional sports preserve heritage, instill values like discipline and fairness and encourage social harmony. Among the sports analyzed, Sagol Kangjei had the most significant impact on the studied variables. The analysis reveals that traditional sports, deeply embedded in cultural heritage, enhance health, social cohesion, economic stability, and overall quality of life. These sports promote social integration and cultural pride, making them a valuable tool for community development.

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1. Introduction 2. Review of literature 3. Procedure and methodology 4. Data analysis and findings of the study 5. Summary, conclusion, and recommendation. References and appendices.

02. Dahiya (Sahil)  
**Development and Validation of Skill Test for Kabaddi Players.**  
Supervisor: Dr. Dharmander Kumar  
Th 28433

*Abstract*

The purpose of the study was to development and validation of skill test for kabaddi players the study is delimited to Indian national who at least represented in state level age group of 16-21 years on 100 male subject. The study was conducted in two stages in 1 stage development of test by identification and selection of test skill and Stage II: testing of reliabilty and validity of the developed test of their normative references to study efficiency the developed tests. For the purpose the study There were a total of 18 skill tests, with three tests created for each of the six factors. The first type of statistical analysis is factor analysis, which selects the most appropriate skill test items. For this factor analysis, we used PCA (Unrotated Factor Loadings with Varimax Rotation). To ensure impartiality and dependability, the Pearson Product Moment was used. Correlation between test retest, Cronbach`s alpha scores, and final test item scores administered by different testers. A correlation analysis was conducted using the Pearson Product Moment Correlation approach to examine the relationship between the performance scores of chosen players and the outcomes of the final test questions. The validity of the Skill Test B was confirmed for both offenders and defenders via the use of Factorial Validity. This demonstrates the scholar`s proficiency Administer the tests The study found a strong relationship between selected kabaddi test items and playing skill scores. The factor analysis identified six factors: bonus, kick, touch, ankle, chain, and block. The skill assessments for kabaddi playing abilities shown great reliability, validity, and objectivity. The test`s reliability is confirmed by the test retest procedure, and the values Back kick: 0.85, circular cyclic touch: 0.86, single blocking: 0.82, alternate running chain: 0.88, running ankle hold: 0.89, and cyclic bonus attempt: 0.82. Concurrent validity and value were used to determine the validity of tests. Back kick is 0.85; circular cyclic touch is 0.86; single blocking is 0.83; alternative running chain is 0.82; running ankle hold is 0.82; and cyclic bonus attempt is 0.80. Factorial validity is a statistical method for characterising the variability among relevant observable variables. By comparing the two sets of results and the averages, we were able to determine that the battery of skills tests was objective values were Back kick equals 0.76. Circular cyclic touch is 0.78 Single Blocking is 0.88 Alternative Running chain is 0.85 Running Ankle Hold is 0.77 Cyclic Bonus attempt is 0.88 Percentile norms were developed to fulfil easy reference. The most loaded factors derived from every part were selected to design the kabaddi playing skill test battery for 17-25 years, with the test items being Back kick Circular, cyclic touch Single-blocking alternative. Running chain Running Ankle Hold & Cyclic Bonus Attempt.

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03. DHIMAN (Sagar)  
**Development of Skill-Related Fitness Test for Hockey Players.**  
 Supervisor: Prof. Pardeep Kumar  
Th 28434

*Abstract*

Abstract The dynamic nature of field hockey demands a unique blend of physical fitness and technical skills for optimal performance. Despite the existence of various general fitness assessments, there remains a critical gap in standardized, hockey-specific skill-related fitness evaluations. This study aims to develop a scientifically valid, reliable, and objective test battery to assess the skill-related fitness of male

field hockey players aged 17 to 21 years. A total of 200 players participating at SGFI, inter-college, inter-university, state, and national levels were selected. The test battery focused on essential skill components with core hockey skills such as dribbling, passing, and shooting. Statistical procedures were employed to ensure the validity, reliability, and objectivity of the developed tests. Furthermore, norms were constructed using Sigma and Hull scales to facilitate standardized evaluation and grading of performance. The findings provide valuable tools for coaches, trainers, and selectors to identify talent, guide training, and enhance performance. This research contributes to sports science by addressing the urgent need for sport-specific assessment tools aligned with the evolving demands of modern field hockey. Keywords: Field Hockey, Skill-Related Fitness, Performance Testing, Sports-Specific Assessment, Talent Identification, Norm Construction, Sigma Scale, Hull Scale, Test Battery Development, Physical Education.

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04. GAYEN (Rajarshi)  
**Selected Anthropometric, Bio-Motor Abilities and Physiological Parameters as Predictors to Swimming Performance in Individual Medley Event.**  
 Supervisor: Prof. Sandhya Tiwari  
Th 28435

#### *Abstract*

This study investigated the extent to which selected Anthropometric, Bio-motor, and Physiological parameters can predict performance in the 200m Individual Medley (IM) among competitive swimmers. A total of 150 swimmers (80 males and 70 females), aged 17–25 years, were purposively selected from Madhya Pradesh and West Bengal, all participants had actively competed in the 200m Individual Medley swimming event at various levels like District and Inter University level. The primary aim was to assess how physical traits and physiological characteristics influence swimming performance in this demanding four-stroke event. Key variables measured included sitting and standing height, arm span, arm and leg length, foot length, body weight, grip strength (right and left), flexibility, explosive leg strength, VO<sub>2</sub> max, body fat percentage, and lean body mass. All measurements were conducted by the researcher using standardized protocols and reliable instruments. Swimming performance was assessed following standard World Aquatics protocol. Statistical analyses included descriptive statistics, Pearson's correlation, and stepwise multiple regression. Results indicated significant negative correlations between performance time and most variables, particularly among male swimmers. For males, the final regression model identified left-hand grip strength, lean body mass, leg length, and arm span as key predictors, explaining 77% of the variance in performance. In female swimmers, body fat percentage, body weight, explosive leg strength, and left-hand grip strength formed the most predictive model, accounting for 63% of performance variance. These findings underscore the critical role of specific Anthropometric, Bio-motor and Physiological traits in swimming success. The study offers valuable insights for coaches and sports scientists to tailor training programs, enhance talent identification, and optimize athlete performance. Furthermore, the developed prediction models may serve as practical tools in monitoring and forecasting performance in the 200m IM event.

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05. HUSAIN (Rabiya)  
**Foot Pressure Distribution of Walking Gait of School Sports and Non-Sports Girls with Six Selected Backpack Loads and Seven Durations.**  
 Supervisor: Prof. Dhananjoy Shaw  
Th 28436

*Abstract*

The research study investigated the experimental effect of selected backpack loads and walking durations on maximum foot pressure among school-going girls. A total of 138 school-going girls aged between 10 to 16 years were selected randomly, including 69 with the background of sports activity and 69 without sports activity background from the government school in NCT of Delhi. Each participant performed walking trials under 42 experimental conditions (6 backpack loads and 7 durations). Maximum pressure at the forefoot, midfoot, and heel of both feet was recorded using Zebris FDM pressure plate and Zebris FDM software. Data were analyzed statistically using multivariate comparison with repeated measures design (mix), paired and independent t-tests, and one-way ANOVA, and the hypothesis was tested at 0.05 level of significance. Findings showed that backpack loads significantly increased pressure across all foot regions, with notable group differences between sports and non-sports girls. Walking duration also produced significant changes, particularly under heavier loads, while load and time interactions revealed progressive increases in foot pressure. At the forefoot, side differences (left and right) were minimal, but load and duration effects were consistent. Midfoot pressure showed strong interaction effects, sports girls exhibiting greater asymmetry than that of non-sports girls. Heel pressure increased linearly with load and time, and group-specific variations were evident. Comparisons between left and right feet indicated that sports girls exhibited greater variability in pressure distribution across regions, particularly at the midfoot, while non-sports girls demonstrated relatively uniform patterns. Sports girls demonstrated higher significant statistics than non-sports girls in regard to midfoot and heel regions. Sports girls generally displaying higher adaptability in their pressure responses. The study concludes that backpack loads and walking durations significantly affect foot pressure distribution, while sports participation influences bilateral adaptations. Sports involvement enhances adaptability in pressure responses, particularly at the midfoot and heel.

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06. MIR AHSAN UL HAQ  
**Effect of Twelve Weeks of Walking Football Programme on Selected Biomarkers and Functional Fitness in Hypertensive Older Males.**  
 Supervisor: Prof. Sandhya Tiwari  
Th 28739

*Abstract*

The present study investigated the Effect of Twelve Weeks of Walking Football Programme on Selected Biomarkers and Functional Fitness in Hypertensive Older Males. Sixty hypertensive men aged 60–70 years from Srinagar, Kashmir, were randomly assigned to an intervention group (n = 30) and a control group (n = 30). The intervention group participated in a structured 12-week walking football programme conducted three times per week, with each session lasting one hour, while the control group maintained their usual sedentary lifestyle. Selected biomarkers—systolic and diastolic blood pressure, resting heart rate, body mass index, body fat percentage, lean body mass, waist-hip ratio, triglycerides, LDL, HDL, blood sugar, and basal metabolic rate—along with functional fitness components such as upper and lower body strength, flexibility, agility, and aerobic endurance were measured at baseline, 4th, 8th, and 12th weeks. Data were analysed using a 4 (Time: Pre-test, 4th, 8th, 12th week) × 2 (Group: Experimental, Control) mixed-design ANOVA at a 0.05 significance level. The results revealed significant improvements in the experimental group across all selected biomarkers and functional fitness variables compared to the control group. Participants showed reductions in blood pressure, resting heart rate, body fat percentage, LDL, triglycerides, and fasting blood glucose, along with increases in lean body mass, HDL, and basal metabolic rate. Functional fitness also improved significantly, indicating enhanced muscular strength, flexibility, agility, and aerobic endurance. These findings demonstrate that a 12-week walking football programme is an effective, low-impact intervention for improving cardiovascular and metabolic health as well as functional fitness in hypertensive older males. The programme can be recommended as a safe and enjoyable form of physical activity for the prevention and management of hypertension and the promotion of overall well-being among elderly populations. Keywords: Walking Football • Hypertension • Functional Fitness • Biomarkers • Older Males • Exercise Intervention.

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07. NAWFAL (Kanaan Ibrahim)  
**Assessment of Selected Anthropometric Indices and Health Markers in Adult Men.**  
 Supervisor: Prof. Sandhya Tiwari  
Th 28437

*Abstract*

This study investigates the relationship between various anthropometric indices and health markers in adult males aged 25-50 years in Delhi and the National Capital Region (NCR), employing a cross-sectional research design. A stratified sampling technique was used to recruit 200 participants, divided into five age groups (25-30, 31-35, 36-40, 41-45, and 46-50 years). Anthropometric measurements included height, weight, BMI, neck circumference, waist circumference, hip circumference, waist-hip ratio, neck-hip ratio, and waist-height ratio, while health markers assessed were HbA1c, triglycerides, LDL-C, HDL-C, VLDL-C, body fat percentage, lean body mass, and basal metabolic rate (BMR). Data collection involved standardized procedures, including fasting blood samples analyzed in certified laboratories, and measurements conducted thrice to ensure accuracy. SPSS software was utilized for statistical analysis, applying descriptive

statistics, one-way ANOVA, Tukey post-hoc tests, and Pearson's correlation to identify significant associations between anthropometric indices and health markers. The study highlights that age-related variations in body composition and metabolic health are evident, with central obesity and high BMI being strongly linked to adverse lipid profiles and elevated HbA1c. The findings underscore the predictive value of anthropometric measurements in identifying metabolic and cardiovascular risks, emphasizing the need for age-specific health interventions. The research contributes to public health planning by establishing a foundation for targeted screening and preventive measures, promoting early diagnosis and management of health risks.

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08. NEGI (Shubhang)  
**Sports Personality as a Mediating Factor for Selected Psychological Variables among Sportspersons of Different Levels in Delhi Region.**  
 Supervisor: Prof. Anil K. Vanaik  
Th 28439

*Abstract*

The study aims to assess various personality traits (e.g., sociability, dominance, extraversion) and psychological variables (e.g., aggression, concentration, achievement motivation) among state and national level athletes in Delhi across sports like handball, football, gymnastics, and swimming. It compares these traits and variables between individual and team sports, and across different levels and types of games. The study is delimited to 200 subjects aged 16-25 from Delhi, considering factors like mood state and availability during test administration as limitations. The mediation analysis of different variables shows that personality traits do not mediate the relationship between aggression and motivation, motivation and aggression, aggression and concentration and motivation and concentration directly or indirectly.

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09. NISHA  
**Physical and Mental Health Status of Indian Women Involved in Different Occupations.**  
 Supervisor: Prof. Sarita Tyagi  
Th 28438

*Abstract*

Women in India contribute significantly to the nation's socio-economic development by participating in diverse occupations across both formal and informal sectors. However, occupational engagement has direct implications on their physical and mental health, influenced by workload, work environment, socio-economic status,

and access to healthcare. This study, titled “Physical and Mental Health Status of Indian Women Involved in Different Occupations,” aimed to assess and compare the health status of working women across varied professions in Delhi and NCR. A total of 450 women aged 30–60 years, representing teaching, multinational corporations, banking, fitness/health sectors, and other professions, were selected through convenient sampling. Physical health markers such as body mass index, waist-hip ratio, resting heart rate, and blood pressure were assessed, along with mental health parameters using Jagdish’s Employee Mental Health Inventory and the Occupational Stress Index. Data were analyzed using descriptive statistics, ANOVA, and Pearson correlation at a 0.05 significance level. Findings revealed significant differences in both physical and mental health across occupational categories and age groups. A negative correlation was observed between working hours and mental health, while occupational stress, BMI, resting heart rate, waist-hip ratio, and blood pressure showed significant positive correlations with longer working hours. Sedentary jobs, high workloads, and stress-prone environments were linked to poor health outcomes, whereas active professions exhibited comparatively balanced health profiles. The study highlights the urgent need for gender-sensitive workplace health policies, regular health check-ups, stress management programs, and promotion of physical activity to enhance women’s well-being and productivity. These findings provide a foundation for developing targeted interventions and support systems to address occupation-specific challenges, thereby contributing to health equity among working women in India.

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10. PATEL (Sachin)

**Assessment and Significance of Psychological Intervention for Athletics Excellence.**

Supervisor: Prof. Pardeep Kumar

Th 28440

#### *Abstract*

The present study, titled “Assessment and Significance of Psychological Intervention for Athletics Excellence”, explores the role and effectiveness of psychological interventions in enhancing the performance and mental preparedness of elite athletes in track and field. Recognizing the growing importance of mental skills in competitive sports, the research aims to provide a comprehensive summary of psychological interventions employed globally from 2011 to 2021 through a meta-analytical review. It also includes a primary data analysis using a structured questionnaire administered to fifty elite athletes currently undergoing psychological training under their coaches or psychologists. The study focuses on five key dimensions of psychological intervention: core effectiveness, ease of understanding, engagement and experience, practicality in practice, and perceived value. Techniques such as goal setting, imagery, self-talk, relaxation strategies, and concentration training were found to have significant positive impacts on performance, motivation, stress management, emotional regulation, and resilience. Athletes reported improved focus, increased self-confidence, and better coping mechanisms under pressure. The study also underscores the benefits of integrating psychological training with physical coaching, with a special emphasis on individualized and multimodal approaches. Limitations include geographic and sample-size constraints and the absence of direct intervention by the researcher.

Despite these, the findings emphasize the significance of psychological skills training not only in improving performance but also in contributing to athletes' long-term well-being and career sustainability. The study highlights the necessity for coaches, sports psychologists, and training institutions to incorporate structured mental skills programs into regular athletic development. It concludes with a call for further longitudinal research and widespread implementation of psychological interventions to support holistic athlete growth and sports excellence.

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11. PRAMOD KUMAR  
**Effect of Different Methods of Motor Fitness Training on Selected Physical, Anthropometric, and Physiological Variables of Football Players of School Level.**

Supervisor: Prof. Sonia Shalini

Th 28441

#### *Abstract*

This study investigates the comparative effect of High-Intensity Interval Training (HIIT) and Circuit Training on selected physical, physiological, and anthropometric variables among school-level football players aged 15 to 17 years. A total of 90 participants from 10 reputed schools in the Gurugram district were randomly divided into three equal groups: the HIIT group, the Circuit Training group, and the Control group. Both experimental groups followed their respective training schedules three times a week for a period of twelve weeks, while the control group continued their usual football activities without any specific fitness intervention. The variables studied included speed (50-metre sprint), agility (4×10-meter shuttle run), power (standing broad jump), heart rate, blood pressure, cardiorespiratory endurance (measured by Cooper test), weight, thigh girth, and calf girth. The Shapiro-Wilk Test assessed normality, and Levene's Test evaluated variance equality. Descriptive statistics summarized central tendency and variability. ANOVA was used for variables meeting normality and homogeneity assumptions. Pre- and post-test data were analyzed for within- and between-group differences. Post-hoc analyses were conducted to identify specific group differences following significant ANOVA results. The results showed significant improvements ( $p < 0.05$ ) in physical performance for both HIIT and Circuit Training groups compared to the control group. The HIIT group demonstrated greater gains in speed (mean reduction in sprint time), agility, and lower resting heart rate, indicating enhanced anaerobic capacity and cardiovascular efficiency. Circuit Training participants showed better improvements in cardio-respiratory endurance and muscular strength, with notable increases in standing broad jump scores and reduced blood pressure levels. In terms of anthropometric changes, the HIIT group experienced increases in weight, thigh, and calf girth, indicating lean muscle development & hypertrophy of muscle. The control group did not show any meaningful changes across the variables. This study suggests that Structured fitness programs like HIIT and Circuit Training effectively enhance athletic performance in adolescent football players. HIIT particularly improves speed and agility, while Circuit Training promotes aerobic capacity and muscular development. These research findings support goal-specific training design and contribute to talent identification and long-term athlete development strategies.

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12. RAWAT (Sukanya)  
**Evaluation of Body Composition of Female Sportsperson of Selected Games and Sports.**  
 Supervisor: Prof. Dhananjoy Shaw  
Th 28442

*Abstract*

The study was conducted for the evaluation of body composition of female sportsperson of selected games and sports. The sample were: female sportsperson (N1=300), 30 from each ten selected games and sports and female non-sportsperson (N2=200), age ranging from 18 to 25 years. The statistics used were descriptive statistics, Pearson's coefficient of correlation (r), regression analysis (stepwise), One-way ANOVA with LSD post hoc comparison, T-scale, hull scale (seven-point) and percentile scale. Major findings and conclusions: 1) Determined composite score of the selected skinfold measurements with validation as criterion measure of right and left side for female sportsperson and non-sportsperson independently. 2) Selected independent skinfold measurements were validated with composite score of skinfold measurements as criterion measure (dependent variable) of right and left side of above populations. 3) Determined predictability of selected composite scores of skinfold measurements as criterion measure (dependent variable) and selected skinfold measurements (independent variable) of right and left side of above populations which were found valid as well as the most appropriate predictive equations and most predictive skinfold measurements for each group. 4) Determined concurrent validity between composite score of skinfold measurements as criterion measure (dependent variable) and body fat percentage based on equations (independent variable) of right and left side for each group. 5) Compared selected games and sports in regards to selected skinfold variables and body fat percentage (based on equations) of right and left side for female sportsperson and significant differences were found. 6) Developed the norms of selected most appropriate variables related to skinfold measurements, composite score of skinfold measurements and body fat percentage using selected equations as well as width and circumference measurements of right and left side for female sportsperson and non-sportsperson independently using T-Scale, Hull Scale (Seven-Point) and Percentile Scale independently. The hypotheses were tested at 0.05 level.

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13. ROHIT  
**Psychological Profile of Indian Shuttlers: A Descriptive Research.**  
 Supervisor: Prof. Anil K. Vanaik  
Th 28443

*Abstract*

This study explored key psychological variables among male and female badminton players across four competitive levels—national, inter-university, state, and inter-collegiate— to understand how mental attributes relate to performance. A purposive sample of 250 shuttlers (125 males and 125 females), aged 18–25 years, was selected from diverse regions, all with experience representing their institutions at major championships. Five constructs were assessed using standardised instruments: mental toughness (Loehr’s Psychological Performance Inventory), sports competition anxiety (Martens’ SCAT), sports aggression (Kumar & Shukla’s Sports Aggression Inventory), personality (Goldberg’s Big Five Inventory), and attention awareness (Carlson & Brown’s Mindfulness Attention Awareness Scale). Data normality was confirmed via the Shapiro–Wilk test; descriptive statistics and oneway ANOVA with Bonferroni post-hoc tests were employed separately for each gender. Results showed that national players scored highest in mental toughness, personality traits, and attention awareness, indicating superior psychological readiness, while intercollegiate players scored lowest. Conversely, national players recorded the lowest levels of sports competition anxiety and sports aggression, reflecting stronger emotional regulation. Significant differences ( $p < 0.05$ ) emerged across competitive levels for all variables in both genders, with clear gaps between national and inter-university players and between interuniversity and state players, but comparable profiles between state and inter-collegiate players. The findings confirm that mental skills and emotional control develop alongside athletic achievement. High-level players exhibit marked advantages in resilience, adaptive personality traits, and mindful attention while maintaining lower anxiety and aggression. These results underscore the importance of integrating sports psychology—especially mental toughness and mindfulness training—into coaching and talent development programmes to enhance performance, resilience, and overall well-being of badminton players across all competitive levels. Keywords: Mental Toughness; Sports Competition Anxiety; Sports Aggression; Personality Traits; Mindful Attention Awareness; Badminton Players.

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14. SHARMA (Mayank)  
**Identifying Correlates and its Influence on Physical Activity among School Going Children: The Role of Correlates, Mediators and Moderators.**  
 Supervisor: Prof. Lalit Sharma  
Th 28444

*Abstract*

The rise in sedentary lifestyles among children is a major health concern, linked to obesity, heart disease, and mental health issues. However, the impact of environmental, social, and personal factors on their activity levels remains unclear. The objective of the study was to Identify Correlates and its influences on physical activity among school going children and the role of correlates, mediators and moderators for the same. A sample of 487 students (295 female, 192 male) was studied, examining Personality, Attitude, Motivation, Well-being, Self-esteem, and Self-confidence. Data analysis included descriptive statistics, Two-way ANOVA, and Correlation using SPSS 22, with mediation and moderation analyzed via AMOS 21.

The combined influence of gender and age affects Agreeableness and Physical Education Attitude but does not impact other personality traits, motivation types, or well-being domains. Physical Activity levels, whether combined with age or gender, generally do not influence Agreeableness, Conscientiousness, Neuroticism, Openness, Extraversion, or motivation types such as Integrated Regulation, Identified Regulation, and Amotivation. Self-esteem is affected by gender and age but not by Physical Activity and age. Attitude influences psychological well-being through motivation, while personality shapes attitude via motivation. General attitude negatively interacts with extraversion regarding physical activity, though other personality-attitude interactions do not significantly predict physical activity. Additionally, personality traits' interaction with Physical Education and scientific basis attitudes does not predict physical activity. In conclusion, Gender and age influence Agreeableness, Physical Education Attitude, and Self-Esteem, while Physical Activity levels have minimal impact on personality, motivation, or well-being. Attitude and personality shape motivation, but their interaction with physical activity is limited.

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15. VARUN KUMAR

**Study on Sensory Processing Among 11 to 18 years old Children with Special Needs.**

Supervisor: Dr. Meenakshi

Th 28445

### *Abstract*

Background: Children with special needs, or impairments, require additional assistance due to physical, emotional, behavioural, or cognitive limitations. These disabilities have an impact on people's daily lives, social relationships, and learning capacities. This study was conducted to encourage understanding and acceptance, and inclusivity can help them grow and reach their full potential. Objectives: The study aims to compare sensory processing, modification, behavioral and emotional responses among different disabilities aged 11-18, and to understand the association between disabilities and age, as well as the range of sensory processing, modification, and behavioral and emotional responses. Method : A study involving 187 children with special needs aged 11-18 from Delhi government schools used purposive sampling. Variables included intellectual disability, physical disability, hearing impairment, and visual impairment. The Pearson Sensory Profile Caregiver Questionnaire was used to assess sensory processing abilities and impact on daily functional performance. Descriptive statistics were used for statistical analysis, including Two-Way ANOVA and Chi-Square Test of Independence. Result: The results of the Two-Way ANOVA point out that the Sensory Profile does not differentiate very well between children with Intellectual Disabilities, Physical Disabilities, Hearing Impairment and Visual Impairment. Conclusion: The study found no significant differences in auditory, visual, vestibular, touch, multisensory, oral, endurance/tone, body position and movement, emotional response, visual input, and behavioral outcomes among different disabilities and age groups. However, there were definite differences in performance in these areas regardless of disability. However, there was a probable difference in performance in movement affecting activity level. The study highlights the importance of understanding and addressing sensory processing in diverse settings. Recommendations: The study

emphasizes the importance of examining auditory, vestibular, touch, multisensory, oral, and emotional processing in individuals with intellectual, physical, hearing, and visual disabilities to develop remedial or corrective treatments.

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