



Bahir Dar University

Sport Academy

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Theme on:

Unleashing Potential Through Sport and Exercise: Advancing Athletic Performance, Promoting Inclusion and Transforming Community

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Bahir Dar, Ethiopia



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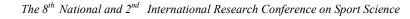
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About U;

The Bahir Dar University Sport Academy was first established as a physical education department. In order to plan and carry out co-curricular activities, the department worked under the supervision of the dean of students from 1974 until 1981 E.C. In 1982 E.C., it was upgraded to a full-fledged unit with the status of an academic and service-providing department under the name of the department of health and physical education.

In 1993 E.C., the department began to award diplomas next to Kotebe College of Education for the first time in Ethiopia's history of professional training in sports science. In 1996 E.C., the department became the third institution after Kotebe and Addis Ababa Universities to provide a bachelor's degree in physical education. The Ethiopian Universities Sport Festival was hosted by the Department of Physical Education and Sport in 2003 E.C., which led the department being promoted to a sport academy.

The sport academy is also quite active in both research and community services. The sport academy has well-equipped sports facilities and is now offering quality instruction to more than 350 project trainees in various athletic disciplines and age categories in order to successfully complete its objective.



By 2030, Bahir Dar University Sport Academy hopes to rank first in Ethiopia and be one of Africa's premier sports hubs.



- Produce graduates with relevant knowledge, skills, and attitudes.
- Enhance research on sport science.
- Deliver relevant and scientific youth development and sport training on the basis of national interest.
- Promote and ensure the community's participation in sport, health, and physical exercise.
- Provide relevant and necessary capacity-building and certification programs in sport coaching.

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Organizational Problems and Organizational Capacities of	of Disal	oility
Sports Participation of Secondary School Students with Sp	oecial N	leed
in Ibadan, Nigeria		

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Abstract

The study examined organizational capacity and organizational problems of disability sports participation in schools of secondary school students with special needs in Ibadan, Nigeria. The tested independent variables were organizational capacity and problems variables of strategic planning, network capacity, logistics, funding sources, and sport infrastructure, interest of coaches and knowledge of organizing personnel while disability sport participation was used as the dependent variable. Strategic planning $(\beta=0.289, t=2.816, p=0.008)$, logistics $(\beta=0.612, t=2.816, p=0.008)$ t=7.103, p=0.000), interest of coaches ($\beta=0.536$, t=7.795, p=0.000) and knowledge of organizing personnel (β =0.500, t=7.836, p=0.000) were independently tested significant on disability sport participation while network capacity (β =0.171, t=1.772, p=0.085), funding sources ($\beta=0.082, t=1.360, p=0.182$) and sport infrastructure (β =0.111, t=1.948, p=0.059) are not independently tested significant on disability sport participation. There is a composite joint contribution of strategic planning, network capacity, infrastructure, funding, logistics, interest of coaches, and knowledge of organizing personnel on disability sports participation in schools of individuals with special needs in Ibadan, Nigeria (F(7,39)=100.210, p=0.00). The result also generated a coefficient multiple regression of R=0.977 and R2=0.955; implying that about 95.5% of variance was accounted for by the independent variable. Strategic planning, logistics, interest of coaches, and knowledge of organizing personnel variables individually and collectively showed a positive contribution to disability sport participation, hence, there is a need to consider them on the subject of disability sport participation in schools of individuals with special needs in Ibadan, Nigeria.

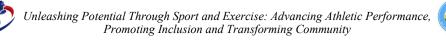
Keywords: Strategic Planning, Network capacity, Funding source, Logistics, Organizing personnel, coaches

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Ethiopia and Kenya at the Summer Olympic Games: Comparisons of Performances

Zerihun Birhanu (Ph.D.)

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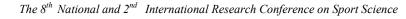
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Abstract

The purpose of this study was to compare the performances of Ethiopian and Kenyan at the summer Olympic Games held so far. The study has employed an empirical research design. The two countries were selected purposively due to the historical competition that exists between them and their over dominance of the rest world in endurance races. The data was collected through the internet from several sites. The number of sites for data collection depends on the number of times each country has been participated at the Summer Olympic Games. 14 and 15 sites were visited for Ethiopia and Kenya respectively. The data collected was sorted into men and women. Percentage, mean and standard deviation were used to describe the performances of athletes from the two countries. The independent sample t-test served as the statistical instrument for testing the hypotheses set out at .05 alpha levels. The result revealed, out of 113 total medals won by Kenya 84 (74.34%) came through the men athletes and the women athletes contributed 29 (25.66%) medals. Ethiopia has a total of 58 medals won by men and women athletes. As a result, 32 medals (55.17%) were won by men athletes while the women contributed 26 medals (44.83%). On the other hand, the t-test result revealed a statistically significant difference in the total medal count between Kenya (M=4.19, SD=3.45) and Ethiopia (M=2.64, SD=1.53) conditions t(37)=-2.09 p=.04. The result for across country comparison of the performance of men athletes in terms of total medal count revealed Kenyan ($M=\hat{5}.60$, SD=3.25) significantly outperformed Ethiopian (M=2.29, SD=1.38) conditions t(19)=-3.62 p=.00. Whereas, statistically non -significant differences were observed at the women side between the two countries. Based on the result obtained it was suggested that particular attention should be paid at the Ethiopian side to work on the athlete development programmes in varied events broadly in order to perform better for the future.

Keywords: Summer Olympic Games, Performance







A New Mathematical Formula to Determine the Number of the Games in Sports Tournaments

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Abstract

Sports are games that goals to use, maintain, or improve physical ability and skills while providing enjoyment to participants. The words "game" and "match" are synonymous and can be used interchangeably. In sports competition format, there is single round-robin and double round-robin schedule. But many sports committees' they are determine the total numbers of the games in group and each team by using the sequences formulas which is not understandable for participants, supporters and others. In this study, we develop the two mathematical formulas that would easy understandable to determine the total number of the games in leagues (group) and total number of the games in each team within the leagues (group) for single round-robin, double round-robin or any system round-robin tournament in sports competition. The researcher was used the secondary data from Africa cup of nation and FIFA World cup websites, Ethiopia football federation and English premiere league websites, and America national basketball association website to analysis and determine the single round-robin, double round-robin and fourth round-robin competition games respectively. We was used the descriptive statistics method to analysis the data. In the results, the new mathematical formulas are working well to analysis the number of the games for every sports competition. We recommend that, these tools will be helpful for every sector in sports areas.

Keywords: Sports; Game; Match; Round-robin; Mathematical formulas

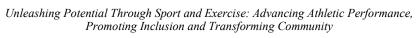
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Prevalence of sport betting and its relationship with young and adults' psychosocial behavior in Hawassa City and nearby towns of Hawassa university technology villages.

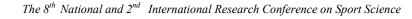
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Abstract

Recently sport betting has become a way of life in most major cities and towns of the world including Ethiopia which resulted in a high rate of gambling among adolescents and young adults. Adolescents and young adults have been identified as a risk group for the problem of gambling due to their frequent internet use for the purpose of sport betting. This study was aimed to examine the prevalence of sport betting and its relationship with adolescent and young adults' psychosocial behavior. The study subjects were selected using convenience (availability) sampling. Thus a total of 146 adolescent and young adults involved in sport betting practices from Hawassa city and nearby towns of Hawassa University Technology villages namely Yirgalem, Aleta Wondo and Dilla were the study participants. In doing so, descriptive cross-sectional research design was employed. Data was produced Questionnaire and key informant interview protocols were utilized as a data gathering tools. Descriptive and inferential statistics were used to analyze quantitative data; whereas the qualitative data was analyzed thematically and using narrative mode. The findings show that betting market is engulfing in different city shores with having different modalities, Hulu and Harif sport bet are among favorite sport betting companies in the study area. Money, enjoyment and avoiding boredom were the three major reasons that trigger youths and young adults to be engaged in sport betting. Statistically significant, positive correlation was identified between frequency of betting and the social and psychological behavior of respondents. Based on the findings, it is recommended that planning and designing clear policy and capacity building programs, enhancing youth's awareness about the negative repercussions of sport betting(gambling), community monitoring, multi actor participation, strict gambling advertisement modality and moral education as a means of tackling the negative effect of sport betting (gambling).

Key words: Gambling, Psychological behavior, Social behavior, Sport Betting, Youth, Young Adult





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Event Data, Formation and Match Out-come in Ethiopian Football

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Abstract

Soccer is a dynamic sport where tactical formations play a pivotal role in determining match outcomes. While tactical formations serve as a blueprint for on-field organization, the effectiveness of these formations is heavily influenced by players' technical-tactical abilities and how they are executed within the context of a match. Despite the growing interest in understanding these relationships, comprehensive studies examining the complex relationships between tactical formation, technical-tactical performance, and match outcome at the national club level remain scarce, particularly in the sub-Saharan soccer context. This study seeks to close this gap by conducting a comprehensive analysis using a correlational study design and collecting data within the framework of the Ethiopian Bet King Premier League. A conceptual model guided the study process and how the study variables relate to one another, illuminating the dynamics that affect success in competitive soccer situations. The study results showed that in the Ethiopian Bet King Premier League, formation does not correlate with either technical-tactical performances such as ball possession and shots or with match outcomes. The study has the implication that investigation of key performance indicators (KPIs) in today's soccer must go far beyond identifying advanced performance indicators that can reflect the outcome of the game. Thus, for coaching, it implies that what matters the most is not the position we give to each player and the number of players in each position; instead, the complex intricacies of players' movement, decisions, and positional change among the players could be potential factors for winning/match outcome.

Keywords: Formation, technical-tactical, performance indicator, match outcome

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Unleashing Potential Through Sport and Exercise: Advancing Athletic Performance, Promoting Inclusion and Transforming Community

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Associations of Physical Literacy, Physical Activity Behavior, and Physical Wellbeing among Primary School Children: In the Application of Structural Equation Modeling

Getu Teferi Hailu (Ph.D.)

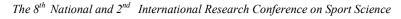
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Abstract

Introduction: Physical literacy (PL) is seen as a predictor of physical health and well-being, and it is assumed to provide the foundation for an individual's participation in physical activities. However, there is limited data linking PL to children's health and physical activity habits. The purpose of this study was to describe the PL level of children, determine grade and gender differences, the association between PL, physical activity behavior (PAB), and physical well-being (PW) and whether the relationships are mediating by PAB. Methods: The research design of this study is a crosssectional study design, data from elementary schoolchildren aged 7–12 years were collected from January to May 2022. PL was computed from measures of PlayFun, PlaySelf and CAPL-2-KU, PAB from the YAP (Youth activity profile) and PW from the KIDSCREEN questionnaire. Descriptive statistics, independent t-tests, Pearson's inter-correlations, one way ANOVA were done in SPSS version 24 and structural equation model (SEM) with AMOS software for the association of PL, PAB and PW. Results: The psychomotor domain of schoolchildren's physical literacy was rated at a competent level (66.1%). In the psychomotor and affective domains, there was a significant mean difference between boys and girls p = .00) as well as grade level (P = .00), but not in the cognitive, PW, or PAB domains. PL was significantly associated (p = .000) with PW and mediated by PAB (β =0.34) and a moderate direct association with PW (β =0.46). **Conclusions:** The PL of school children was at competent level. Higher PL was linked to boys and increasing with grade levels. The study adds to the body of evidence that PL, physical activity, and PW are linked; further PAB has the mediating role in the association of physical literacy and physical wellbeing. Recommendation: School leaders, physical education teachers, coaches, and families should all play an important role in encouraging and fostering PL in children.

Keywords: Play tools, children, physical well-being, physical activity, health and physical literacy





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Porromal Note

Why do fans attend football games? Investigating motivational factors in Ethiopian Premier League competition in 2024

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Abstract

This study aimed to fill a gap in the existing literature by examining the crucial relationship between motivating factors for fans and their dedication to attending Ethiopian Premier League football games. A correlation study was used. Data was collected using a 16-point linker Amharic version questionnaire, known for its validity and reliability, from a sample of 524 participants selected through a specific sampling method. Frequency, percentage, correlation, factorial analysis, and multiple linear regression analysis (with a significance level of P < 0.05) were employed to analyze the data, with each method selected for its relevance to the research objectives. There was a positive correlation between the fan motivation factors (SPEED) and commitment of game attendance socialization (r = 524,.669, p<.001); performance (r = 524,.763, p < .001); excitement (r = 524,.676, p < .001); esteem (r = 524,.619, p < .001); and diversion (r = 524,.630, p < .001), respectively. Furthermore, the analysis revealed that 69.3% of the variance in game attendance commitment is explained by the five predictors collectively, with an F-value of 237.287 and a significance level of p < .001. Individual predictor analysis indicates that performance ($\beta = .631$, t = 15.200, p < .001), excitement ($\beta = .588$, t = 12.660, p < .001), and diversion ($\beta = .333$, t = 7.749, p < .001) all have a positive impact on game attendance commitment, aligning with the research objectives. Furthermore, results also revealed that those who have committed to game attendance are also more likely to report socialization ($\beta = -.382$, t = -4.836, p < .001) and esteem $(\beta = -.222, t = -3.534, p < .001)$ negatively. In conclusion, a notable positive correlation exists between fan motivation and game attendance, highlighting the importance of understanding fan motivations in boosting attendance at sporting events.

Keywords: motivation, premier league, game attendance, factors

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Organizational and Management Factors as Determinants of Effective Sport Service Delivery in Ethiopian Sport Governing Bodies

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Abstract

There is an observed general low performance of Ethiopian Sport Governing Bodies (SGBs) in service delivery. Evidence shows that the trend can be corrected with proper understanding and insight into the process of organisational and management factors of these SGBs. This study aimed to investigate the contribution of organisational and management factors as determinants in effective service delivery in SGBs. For this study, a cross-sectional research design was employed. Purposive sampling was used to choose 350 samples from 154 internal and 196 external stakeholders. The instruments used for the study were the key informant interview and the questionnaire. Pearson Product Moment Correlation Coefficient and multiple regression were used to analyse the data at the 0.05 significant level while qualitative data were content analysed. The findings confirmed that organisational and management factor variables had a significant positive relationship with sport service delivery (organisational structure (r=0.515), organisational capabilities (r=0.701), communication (r=0.549), management practice (r=0.571), materials & resources (r=0.527) and stakeholders satisfaction (r=0.742). Management factors jointly predicted effective sport service delivery $(F_{3.329}=165.868, R^2=0.612)$; organisational factors had a joint significant contribution to effective sport service delivery ($F_{3,329} = 148.743$, $R^2 = 0.576$). Further, organisational and management factor variables had a joint relative significant influence on effective sport service delivery in Ethiopian SGBs ($F_{6.326}=130.81$, $R^2=0.707$). Interviews revealed that there are weak relations with stakeholders, an unaligned structure of regional sport bodies with federal bodies, and managers with improper experience and knowledge in sport which influences effective sport service delivery in Ethiopian SGBs. Therefore, working together with stakeholders, structural advancement, designing rules and regulations that can serve a longer time, taking correction based on feedback from stakeholders, networked structures and collaborations with local sports organisations as means of improving service delivery employing shared burden and coordinated effort are recommended.

Keywords: Management, Organisation, Service delivery, Sport governing bodies

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Examining Primary and middle School Physical Education Teachers' Professional Practice Competence: Amhara Region, Ethiopia

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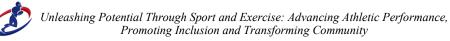
Debire Birhan University

Abstract

In this study, the professional practice competency (PPC) of primary school physical education (PE) teachers in the Amhara Region, in Ethiopia was examined. For this a mixed method, explanatory sequential design, data were gathered from 405 randomly selected PE teachers. Results revealed that, with the exception of their lesson planning (LP), PE teachers' instructional assessment (IA), creating and maintaining a safe and supportive learning environment (CMSSLE), and overall PPC were judged to be low. However, female PE teachers were more competent in LP than their counterparts. On the other hand, females, degree-holders, novice teachers, and rural PE teachers performed IA with reduced proficiency. Yet, there was no discernible difference between male and female teachers in CMSSLE. As a result, the concerned education actors have to pay due attention and precaution when hiring, training, and deploying PE teachers in different areas of the nation.

Key words: Lesson planning, safe and support learning environment, instructional assessment, professional practice competence, physical education





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Metabolic Impact of Exercise Modalities in Inactive Obese Adults: A Randomized Controlled Trial

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Abstract

Background: Data on the impact of Aerobic, resistance or concurrent training on glucose tolerance and lipid profile while controlling dietary practice in obese adults are inconclusive.

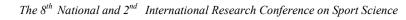
Methods: Twenty healthy physically inactive men $(49.15 \pm 2.581 \text{ years})$ participated in an 8-month training programme involving concurrent exercise, resistance training, and aerobic training program to determine the effects on glucose tolerance and plasma lipids in obese adult persons. This study adopts a mixed-methods design, combining a repeated measures component to capture within-subject changes over time with a three-arm parallel-group randomized controlled trial (RCT) to assess between-group differences.

Results: Pre to-post mean values of body fat percentage, area under the curve, low -density lipoprotein, high-density lipoprotein and total cholesterol decreased. The main effect of exercise modality on the AUC was significant, Post hoc analyses revealed that RT (-30.653 \pm 6.766, p= 0.001) and CT (M=-0.896, SE= 3.347, P = 0.015) had greater effects than AT. LDL was significantly lower in the AT and CT (MD= 4.783, SE = 1.563, P = 0.002) and (M = 4.57, SE = 1.284, P = 0.008) than in the RT, respectively. There was a significant difference in TC between training modalities; AT significantly reduced TC on RT (MD= -17.716, SE = 5.705, P = 0.02).

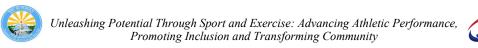
Conclusion: The type of exercise that is used has become important in glycaemic management and chronic lipid profile optimization. Notably, resistance training and concurrent training were more successful in lowering the AUC, and both aerobic and concurrent training showed a superior ability to modify the lipid profile. As a result, it was discovered that the best method for enhancing an obese person's lipid profile and glucose tolerance control was concurrent exercise training.

Keywords: glucose tolerance, lipid profile, resistance training, aerobic training and concurrent training





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The Examining Ethiopian Youth Athletes Development: Contextual Factors and Olympic Games Performance

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Abstract

This study examines the relationship between Ethiopian youth athletes participating in the Youth Olympic Games (YOG) and furthermore, examining the influence of gender, medal status, and competitive venue, in the performance of athletes in the senior Olympic Games (OG), focusing on middle- and long-distance events between 2010 and 2020. Historical data obtained from official website of international Olympic committee, and Analyzed using descriptive and linear regression analyses of 118 athletes. The outcome indicates that only 23.8% of youth athletes transitioned to the senior level, suggesting a limited talent pipeline. Gender significantly influenced performance, particularly in the 5000m event, with men athletes outperforming females by an average of 87.70 seconds in this even. These findings highlight the need for the researchers to investigate factors influencing the transition from youth to senior success and address potential gender disparities in training and support systems. Examining both successes and failures could provide valuable insights to improve the athlete's development program and boost the conversion rate.

Keywords: Athletics, Ethiopia, Olympics, Performance, Senior, You	, rouu
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Unveiling Physical Activity Patterns: Exploring Behavioral Drivers through a Comprehensive Framework

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Abstract

Background: This study investigates the behavioral determinants affecting physical activity levels among civil servants in Northeast Ethiopia. It aims to identify factors influencing their engagement in physical activity, contributing valuable insights for designing targeted interventions to promote a healthier lifestyle among this demographic group.

Methods: A cross-sectional study was carried out within institutions from February 28 to March 13, 2020. 408 civil servants participated, responding to a selfadministered questionnaire selected through systematic random sampling. Predictors of civil servants' physical activity status and the proportion of physical activity status were determined using a multivariable logistic regression model and descriptive statistics, respectively.

Result: The study found that Perceived self-efficacy (AOR = 1.98, 95% CI: 1.15– 4.12), and cues to action (AOR = 2.12, 95% CI: 1.04–3.22) emerged as significant behavioral predictors of physical activity in the multivariable logistic regression analysis. However, behavioral factors such as perceived barriers (AOR = 0.97, 95% CI: 0.91–1.04), and perceived benefits (AÔR = 1.02, 95% CI: 0.95– 1.09) did not significantly affect physical activity levels.

Conclusion: The study highlights the significance of perceived self-efficacy and cues to action as key behavioral predictors of physical activity among civil servants in Northeast Ethiopia. While perceived barriers and benefits did not notably affect physical activity levels, interventions focusing on enhancing self-efficacy and providing effective cues for physical activity promotion are recommended. Strategies should include education on the benefits of physical activity, skillbuilding opportunities, and the creation of supportive environments. By addressing these findings, stakeholders can develop targeted interventions to improve the health and well-being of civil servants in the region.

Keywords: Behavioral factors, physical activity status, civil servants, Northeast Ethiopia

Validity and Reliability of the Sport Motivation Scale—II for Ethiopian athletes

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Abstract

This study attempted to establish the reliability and validity of the sport motivation scale II (SMS-II) by anchoring it to self-determination theory in an Ethiopian context. In spite of the applicability of the scale to measure athletes' motivation within the sports game, no study has established the validity of the scale in an Ethiopian sports context. Thus, the study aimed to validate the SMS-II scale using confirmatory factor analysis. The English version of the SMS-II questionnaire has 18 items categorized into six dimensions: intrinsic regulation, integrated regulation, identified regulation, interjected regulation, extrinsic regulation and amotivation. The SMS-II questionnaire was translated into Amharic by senior language experts. The Amharic version of the instrument was used to collect data from a total of 321 athletes (men = 174 and women = 147; mean age = 23.48; SD = 5.07) and athletes participation in years of M=5.90; SD=3.696 from team sports. The result showed an acceptable model fit with the data and internal consistency, with a Cronbach's alpha values of all subscales are satisfactorily that exceeded 0.865 intrinsic regulations, 0.857 integrated regulations, 0.816 identified regulations, 0.821 interojected regulations, 0.857 extrinsic regulations and 0.848 amotivation, which supports its usage for the assessment of motivation of Ethiopian athletes. The Cronbach's alpha values of all the factors were satisfactory. Therefore, the Amharic version of the instrument was reliable and valid for assessing the level of motivation for athletes in Ethiopia.

Keywords: Confirmatory factor analysis · Self-determination theory

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Unleashing Potential Through Sport and Exercise: Advancing Athletic Performance, Promoting Inclusion and Transforming Community

Personal Note	Dale://2024

Examining the Impact of Physical Fitness Program on the Reduction of Anxiety, Stress, and Depression Levels among Freshmen University Students

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Abstract

University freshmen face increased vulnerability to mental health issues compared to the general population due to the multitude of stressors encountered during this transition period, including academic pressures, social adjustments, and the complexities of university life. This study investigates the impact of a physical fitness program on the mental well-being of freshmen university students during the crucial transition from high school. With a focus on addressing the alarming prevalence of depression, stress, and anxiety in this demographic, the research, grounded in the biopsychosocial model, explores the specific effects of participation in physical fitness activities on depression, stress, and anxiety levels. The study employed rigorous assessments to measure mental health. Anxiety was assessed with the Generalized Anxiety Disorder scale (GAD-7), stress with Perceived Stress Scale (PSS), and depression with the Beck Depression Inventory II (BDI-II). Utilizing a sample of 240 first-year students and employing various statistical analyses, including MANOVA and correlation, the study reveals that participants in the fitness program exhibit lower levels of anxiety, depression, and stress. The findings highlight the bidirectional relationship between physical activity and mental health, acknowledging the nuanced landscape of research in this area. Overall, this research contributes significant insights into the potential of structured fitness initiatives to promote mental well-being among university students, emphasizing the need for customized interventions and ongoing exploration in this critical field.

Key words: Anxiety, Depression, Freshmen, Physical fitness, Stress



Porsonal Note

Assessment of Macronutrients Intake and Energy Balance of Football Players

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Abstract

Proper nutrition is an important consideration for athletes, who seek to maximize their performance. Macro nutrients provide the necessary energy to maintain body function during rest and various forms of physical activity. The purpose of this study was to assess macronutrients intake and energy balance of football players of Dire Dawa Kenema FC. The study design was descriptive survey method. The source of population consisted of 25 football players of Dire Dawa Kenema FC. Then 20 players (80%) were taken through stratified random sampling method. The data were collected through dietary assessment. The food composition table for use in Ethiopia, complete South African guide to sports Nutrition and Harris-Benedict equation were used to calculate total energy intake and expenditure of players. According to major findings of the study, the average daily energy intake of players was 3705.1 kcal whereas the average energy expenditure consumed to support basal activities, regular physical exercise and thermic effect of food was a total of 3357.6 kcal per a day. The daily amount of players calorie input and calorie output was positively balanced i.e. calorie input was greater than calorie output due to this players were not energy deficient. The percent distribution of each macronutrient in the daily meal was 13.2 % for protein, 22.8 % for fat and 64 % for carbohydrate of the total daily calorie intake. The daily intake of protein, fat and carbohydrate was 1.8, 1.3 and 8.5 gram per kilogram of body weight per day respectively.

Keywords: Nutrition, Macronutrients, Calorie, Energy Balance

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Acute response and chronic biomechanical adaptations to hill training: A systematic review

Yehualaw Alemu

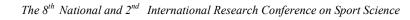
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Abstract

Most running studies consider level running, but understanding the effect of positive or negative slopes on stride parameters of running performance is important. Whilst there was good evidence that hill training improves running performance, this was not consistent finding across all works that were reviewed because of methodological differences that should be considered in future studies. Therefore, the purpose of this article was to review the existing literature regarding the acute and chronic biomechanical response to hill running training. As a result, Lower step length and similar step frequency, contact time, flight time and ground reaction forces are the main features of acute uphill running compared with level and downhill running. However, higher step frequency and lower contact time as well as similar step length, flight time and step time are the features of long term adaptations to uphill running compared with level and downhill running. Adding considerable training sessions of hill running training has considerable benefits for running performance.

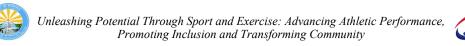
Keywords: acute response, chronic response, biomechanical adaptation, hill training





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Effect of continuous, interval, and combined training methods on distance running performance

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Abstract

Introduction: Running performance is largely influenced by training methods, including Continuous, Interval, and combined training methods. However, which training method that best improves the performance has not been identified.

Aim This study was to investigate how training methods continuous, interval, and combined training affect distance running performance.

Methods A total of thirty (n=30) athletes from the Ethiopia Hotel Athletics Club were selected as subjects. The studies included trained runners without previous injuries. Interventions lasted at least 12 weeks, with participants allocated to Interval, Continuous or combined training groups. The athletes' performance was assessed through cooper 12 min run test, wall squat test and multiple sprint test using pre- and posttest interventions. MANOVA was performed using SPSS to determine the mean difference with 95% confidence intervals (CIS) between continuous, interval (CIS), and combined training, and the effect sizes were calculated.

Results All training methods significantly improved VO2max, strength endurance, and speed. Moreover, there was no significant difference between the interval and combined training during the VO2max test (MD = 0.2, P > 0.1). There was no significant difference between continuous and interval training during the posttests VO2max test. During the wall squat test, there was no significant difference between the training methods (p > 0.1). Moreover, there were no significant differences between the continuous and combined, training groups or between the interval and combined training groups at the level of the multiple sprint test (p = 1, MD = 0.53). However, there was a significant difference between the continuous and interval training groups on the multiple sprint test (P = 0.024, MD = -1.75), with an effect size was 0.356.

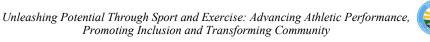
Conclusion: Interval and combined training are better strategies than continuous training for improving athlete performance.

Key words: continuous, interval, combined training methods, performance

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Unleashing Potential Through Sport and Exercise: Advancing Athletic Performance, Promoting Inclusion and Transforming Community

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Exploring relationship between team cohesiveness and team building activities in Amhara National League Football Clubs, Ethiopia

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Abstract

Background: Many coaches remain unclear regarding the concept and appropriate use of team building and related activities. Therefore, it is important to investigate the relationship between cohesion, and team building. Thus, the main objective of this study is to investigate the relationship between team building activities and team cohesion in the Amhara National League Men's Football Clubs.

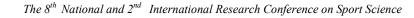
Methods: The study consisted mainly quantitative approaches through questionnaires. The target population of this study is the national league football clubs' players and coaches, Amhara, Ethiopia. A sample of 151 players and coaches, using a stratified random sampling method, was used. Descriptive statistics, intraclass correlations, reliability analysis, Factor analysis, and multiple linear regression model were conducted.

Results: The results of the Principal Component Analysis for the athlete's cohesiveness scale yielded four factors. The items that loaded on to factor one was athlete's cohesiveness reflecting how the group integration to social characteristics. Factor two reflected individual attractions to group-task. Factor three reflected individual attractions to group-social. While factor four reflected a group integration-task. The Cronbach's Alpha for first, second, third and fourth factors are 0.70, 0.61, 0.70 and 0.79, respectively. The inter-item reliability coefficient of the overall scale was α =0.71. Moreover, team cohesion within sports teams, such as social group integration (β =0.103, p-value=0.026) and task group integrations (β =0.453, pvalue=0.046), significantly increased team building activities.

Conclusion: Our study investigated a significant relationship were found between team building activities and team cohesion. All of these findings point to the idea that a cohesive team has strong correlation amongst team building activities and shares coach's leadership duties.

Keywords: football club; team building; team cohesion; leadership; perceptions





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The effect of Aerobic and Combined Aerobic-Anaerobic Exercise on **Obese Diabetic patients**

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Abstract

Background Physical exercise is has been recommended as an important nonpharmacological therapeutic strategy for managing diabetes type2 mellitus (T2DM) and obesity. The purpose of this study was to compare the effects of 17 weeks aerobic, and combined, both aerobic plus resistance training on HbAlc, bodyweight, body composition and others cardiorespiratory fitness (CRF) components among T2DM and obese patients. **METHODS**: positivism style of research paradigms and quantitative method of true randomize experimental design was used. 30 T2DM and obese male patients; aged 40-65 years (M=54.4, SD=6.96593), their $BMI \ge 30 \text{ kg/m}^2 - 39.9 \text{ kg/m}^2$, were randomized to one of the two exercise interventions or a control group. All two exercise groups had an equal total exercise time lasting 60min aerobic or combined training (50-70% of MHR & 1RM). HbAlc, body mass index (BMI) Total cholesterol (TC), Triglycerides (TG), High-density lipoprotein (HDL-C), Low density lipoprotein (LDL) and Waist circumference (WC) were measured. Paired sample T-test, Analysis of Variance (ANOVA) and post Hock was used.

RESULTS: aerobic and combined groups showed significance improvement during pre and posttest in weights t(9) = 12.208, P < .001 and t(9) = 17.238, p < .001, BMI t(9) = 11.005, p > .001 and t(9) = 16.896, P < .001, HbAlc(9) = 18.557, P < .001 and t(9) = 26.465, p < .001, TC t(9) = 14.853, P < .001 and t(9) = 23.401, P < .001, TG t(9) = 32.955, P < .001and t(9) = 45.258, P < .001, LDL t(9) = 41.887, P < .001 and t(9) = 6.683, P < .001, HDL t(9)= -7.364, p<.001 and t (9) = -4.708, p<.001) and WC t(9) = 17.333, P<.001 and t(9) = -4.70826.047, P < .001, than the control group. From the ANOVA (Post Hock) result: Aerobic training and combined group was revealing a greater statistical difference more than the Control group in weight ($MD = -9^*$, and $MD = -7^*p < 0.05$), $BMI (MD = -3.68^*)$ and -2.99^* , P < .001), HbAlc ($MD = -8.17^*$, and $MD = -8.61^*$, P < 0.001), TC ($MD = -34.4^*$ and MD = -4.001). 40.6° , P < 0.001), LDL (MD = -47.3° , and MD = -43.2° , P < 0.001), WC (MD = -12.1° , and $MD = -15.4^*$, P < 0.001), $TG (MD = 73.2^*$ and $MD = -82.4^*$, P < 0.001). But in HDL the aerobic group didn't shown significance difference (MD= -.2, p = .969 that is P > 0.05) than the control group. But the combined group was shown great statistical difference than the aerobic and control group with (MD= 6.4^* , P< .001) and (MD= 6.2^* , p < .001) respectively.

Conclusion: Compared to aerobic exercise, a 17-week of combined aerobic-anaerobic exercise intervention was more successful in altering these parameters.

Keywords: DiabetesT2 Mellitus, body mass index, aerobic exercise, combined exercise,



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