

# Character Changes Related to Sports Participation and Contextual Factors Among Secondary School Students

Penninah W. Mwenda, Elijah G. Rintaugu, and Francis M. Mwangi

## ABSTRACT

Sports participation is hailed as one of the effective ways of nurturing positive character among the youth. However, some studies have also indicated that sports may lead to undesirable behavior when conducted under certain uncontrolled conditions. The purpose of this study was to assess the influence of selected contextual factors on character changes related to sports participation among secondary school students. The study focused on level of sports participation, gender, age, type of sport, school category, school status, school type, and class level of students as independent variables with potential to influence character changes related to sports participation. A Quasi-experimental research design was utilized, with the dependent variable of character traits assessed at the pre and post three months competitive games season. Purposive sampling was used to select 336 student-athletes from 24 (9.3%) of secondary schools in Nairobi city county. A close-ended questionnaire on character which was adapted from Individual and Team Character in Sport Questionnaire (ITCSQ) and Arizona Sport Summit Accord (ASSA) was utilized for data collection at the pre-and posttests. Matched Sample Wilcoxon Signed Rank test showed significant negative change in honest /integrity character component scores between pre-test and post-test ( $p=0.006$ ). Multinomial Logistic Regression Analyses showed that boarding status, school category and type of sport can significantly ( $p<0.05$ ) influence character changes among competitive student-athletes. Therefore it is concluded that boarding status, school category and type of sport can influence outcomes of sports experiences leading to positive or negative character change. It is therefore recommended that curriculum developers and implementers should consider contextual factors to optimize sports experiences and outcomes to promote desirable character changes and development.

**Keywords:** character development, school sports, student-athletes.

**Published Online:** February 20, 2023

**ISSN:** 2736-5522

**DOI:** 10.24018/ejsport.2023.2.1.15

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## I. INTRODUCTION

Human society subscribes to the tenets of good character among the citizenry. Josephson (1999) described a person's character as his/her dispositions, values, and habits that determine the way that person responds to desires, fears, challenges, opportunities, failures and successes in life. A positive character comprises practice of acts such as respect, honesty, fairness, reliability and openness (Stoll & Beller, 2000). On the other hand, negative character comprises anti-social and unethical practices such as dishonesty, unhealthy competition and aggression, cheating and doping (Yanklowitz, 2013). David and Miller (2005) and DeRoche (2004) observe that character is neither inherited nor is it about reputation. It is about offering a student the opportunities to clarify, reflect, decide and practice virtues such as respect, responsibility, perseverance, honesty, ethical problem solving and decision making. Good character should therefore be nurtured and bad character corrected (David & Miller, 2005).

CorneliBen and Pfeifer (2007) indicated that sports help in transforming the character of young people through its teaching of behavioral habits such as motivation, confidence and perseverance. Thus, sports can provide for opportunities for students to learn skills that are in line with the six pillars of character namely; trustworthy, respect, responsibility, fairness, caring and good citizenship (Arizona Sports Summit Accord, 1999). Ong'ong'a *et al.* (2010) concurred that participation in secondary school sports is a ground for acquisition of desirable character traits such as fair play and sportsmanship, noting that student-athletes had fewer discipline cases, were responsible and more law-abiding.

Sports are delicately interwoven within the institutions of learning in our society (Fullinwider, 2006). Sports competitions are regularly held at all levels of education, especially in high school, colleges and universities. Besides the enrichment of high school experiences, they aid in fulfillment of the education mission of nurturing positive character traits such as sportsmanship, fair play, teamwork, respect,

citizenship, health and welfare of all students (Fullinwider, 2006). Bredemeier and Shields (2006) assert that sports can empower the youth with the core values of the society which is a major component of the character development outcome. Moreover, participation in sports is important in teaching children a wide range of positive social outcomes including reduced youth crime, reduced truancy, improved physical fitness and being active citizens (Yanklowitz, 2013). It is therefore evident that school sports are powerful agents of socialization that may, under the right circumstances, have positive influence on the youth (President's Council on Physical Fitness and Sports [PCPFS], 2006; Sport England, 1999; Yanklowitz, 2013). However, Bredemeier and Shields (2006) observe that, contrary to the belief that 'sports build character', character is taught and learned in a sports setting thus the setting provides an enabling environment for character development. In some cases, sports teams emphasize on or even allow for development of character vices such as aggressiveness, unhealthy competition, deviance, bullying, violence, fighting, and other unsportsmanlike conduct (Edmudson, 2014; Fullinwider, 2006; Yanklowitz, 2013). Additionally, negative character may be adopted from peer pressure and lack of cooperation skills as well as from modeling bad examples. Camiré and Trudel (2010) found that majority of athletes in high school settings appear to believe that social character best describes the development that occurs in sport and that gamesmanship is employed and legitimized as being part of the game. Furthermore, negative character aspects such as risky substance abuse which are rampant in uncontrolled sports settings (Callender, 2010) can erode the benefits of sports such as building the healthy body, creating a stronger resilient will power, imparting confidence and stimulating bravery (Edmudson, 2014). Fights also happen among fans and spectators (Houlihan, 2008), compounding potential of negative outcome of sports experiences.

From the foregoing, it is clear that character outcomes of sports participation can be positive or negative. The content and context of sports activities are therefore of crucial importance in maximizing the benefits from the huge investments in the school sports programmes. It is thus not remote to think of contextual factors of gender, age, type of sport, school category, type of school, status of school and class level as potentially influencing or having moderating effects on the sports character outcomes.

Nixon's (1997) reported that male athletes were characterized by higher levels of aggression than non-competitive athletes and attributed this to beliefs in the value of toughness in sports. Conroy *et al.* (2001) reported that male athletes were more aggressive than the female-athletes. Shields (1997) suggested that athletes who were exposed to aggression and violence in training and sport competitions were more likely to engage in verbal intimidation, physical intimidation and physical violence. Staffo (2001) averred that trainers who display overly aggressive behavior encourage this vice. Proios *et al.* (2011) found no significant differences between the genders in moral reasoning, but noted the mediatory role of age in moral development of both men and women, as well as in the effect of athletic experiences. Yanklowitz (2013) stated that violence in sports deteriorated with age, impacting negatively on the character of youth.

From the foregoing, it seems there are mixed results in studies focusing on gender and age differences in character development in general life and in sports experiences. Therefore, more research is needed to enhance our understanding on influence of gender, age and character changes through sports.

Njoroge and Nyabuto (2014) found that day schools in Kenya were characterized by indiscipline and poor academic performance. This was partly blamed on the students' constant interactions and operating in an environment which is devoid of rules and regulations. Other studies indicated that there are disparities in positive effects of participation in competitive sports on secondary school students based on different school categories (National, County and Sub-county), status of school (public vs private), class level and type of sport participated in (Bulinda, 2002; Gitonga, 1998, Gitonga & Akpata 1999; Kamau, 2015). Similarly, Sage (1998) argued that the effect of sports participation on character development of the youth depended on the positive or negative contextual conditions of the sporting experience. The current study thus considered nature of school, class level and type of sport as important factors that may affect sports experience of a student-athlete in diverse ways.

The above few cited cases indicates that there are gains in character derived from sports participation but the mediating factors and their effects are not clearly understood. Therefore there was need to ascertain the influence of sports participation on character changes of secondary school students based on school category, status of school, class level and type of sport. This study's findings are of benefit to the Ministry of Education Science and Technology (MOEST) by getting an insight into the role played by sports on positive character changes of secondary school students. By highlighting the contextual factors that influence character changes, the study's findings informs sports bodies such as the Kenya Secondary School Sports Association (KSSSA) to insist on the need for good character as they hold pre-participation briefs. Additionally, the findings can be utilized by the school administrators to use sports participation as a platform to insist on the desirable character traits expected for all students. Parents can as well use the findings of this study to give wise council to their children to optimize character development through sports participation.

### A. Theoretical Framework

The theory adopted for this study is social learning theory advanced by Bandura (1986) which focuses on the idea of learning behaviors from the environment through the process of observational learning. In this case, children learn and imitate both pro and anti-social behaviors which are modeled by influential members of their society who include parents, friends and teachers. For effective learning and modeling of a behavior to take place, the following are the requirements; attention, retention, reproduction and motivation. In this case, positive character values are modeled by the games teacher and through genuine interaction the student-athlete get constructive feedback and support which leads to positive character change (Bandura, 1986; Doty, 2006).

Within the sports context, it is possible for athletes to learn positive character traits which constitutes basis for the six pillars of character namely; trustworthiness, respect, responsibility, fairness, caring and good citizenship (Arizona Sports Summit Accord [ASSA], 1999; Parker & Stiehl, 2010). However, this can only be achieved if 'winning at any cost' is de-emphasized as it could lead to cheating, aggression and doping (Doty, 2006; Houlihan, 2008). Sports programmes at all levels, could be utilized to equip the youth with life-time life skills (Hellison, 2003; Parker & Stiehl, 2010). This could be achieved through deliberate effort by the coaches (Bredemeier & Shields, 2006; Hellison, 2003). Additionally, adults are called upon to demonstrate a positive character to the athletes in terms of honesty and fairness (Lumpkin, 2011). For a positive outcome, the correct character values should be modeled and deliberate efforts made. This theoretical framework analyzes the process of character development based on the three phases of presage (pre-condition), process and product. During presage, there is the interaction between the athletes of different gender, ages, types of sports, school categories, school statuses, school types, class levels and the coaches/trainers/peers in sport participation settings. During the process phase, character values are modeled by the coaches/ trainers/ peers either intentionally or unintentionally. The outcome is the product of character changes which is portrayed in the form of values such as integrity and responsibility.

## II. METHODS

### A. Study Design, Variables, and Participants

The study used a quasi-experimental research design where character traits were assessed at the pre and post-test three months competitive sports season. Quasi-experimental methods are most often used when it is not possible to use randomized controlled trials (Thyer, 2012; White & Sabarwal, 2014). Randomization was not possible in the current study as the study did not have control in the conduct of the sports activities and allocating to the various independent variables to the diverse sports related experiences. The independent variables were selected contextual factors of gender, age, type of sport, school category (National, Extra-county, County or Sub-county), school type (public or private), school status (boarding, day or day & boarding), student status (boarder or day scholar) and class level which can mediate effects of sports participation and character changes. The dependent variable was the character components and composite scores of honesty, respect, responsibility, fairness, caring and good citizenship at pretest and at posttest. The target population was student-athletes from secondary schools in Nairobi City County, Kenya. The study participants were student-athletes from top ranking in sports in the county. The rationale for choice of the study location is because of the county's metropolitan status which is populated by diverse communities. There is an abundance of secondary schools which are well-equipped with sports infrastructure compared to the other parts of the country. Given the diverse background of the students, this study's findings can be used to give a fair generalization for the whole population of the country's secondary school students concerning the influence of participation in sports on positive character changes.

### B. Sampling Procedure and Sample Size

Multi-stage sampling procedures were done starting with secondary schools, sports teams, and then student participants. Purposive sampling of participants was carried out through the examination of sports participation records which was facilitated by the games masters/ mistresses. From the 258 secondary schools in Nairobi County, a purposive sample of 26 (10.08%) schools which produced the best teams in 2017 were selected to participate in the study. These are the teams that won at the Inter Sub- county level and proceeded to represent their Sub-county at the County level. This was facilitated by ranking the teams in order, starting with the best and others following for all selected sports. The study managed to get complete data for student-athletes from 24 (9.3%) of the target secondary schools. Data from the 3 other sampled schools were not completed due to unforeseen challenges. Selected competitive sports for this study and the number of student participants per sport were: soccer (boys and girls)  $n=72$ , rugby (boys only)  $n=24$ , hockey (boys and girls)  $n=72$ , volleyball (boys and girls)  $n=48$ , basketball (boys and girls)

$n=48$ , handball (boy and girls)  $n=48$  and netball (girls only)  $n=24$ . This amounts to a total of 336 participants.

### C. Study Instruments, Data Collection and Analyses

The study used a close-ended questionnaire on character which was adapted from different sources including Arizona Sport Summit Accord [ASSA] (1999), Doty (2006), Individual and Team Character in Sport Questionnaire [ITCSQ] (Davidson *et al.*, 2006), Dieckman (2009) and Stoner (2004). This comprised of thirty (30) items that sought to measure character changes of honesty, respect, responsibility, fairness, and good citizenship. Against each of the 30 statements, there were 5-point likert scale options to choose from namely, Strongly Agree, Agree, Uncertain, Disagree and Strongly Disagree. The scores were 5, 4, 3, 2 and 1 respectively. During analyses stage, the 5-point likert scale data was transformed to linear Percentage of Maximum Possible (POMP) scores as recommended by Cohen *et al.* (1999). The questionnaire also included items on respondents' demographic details and experience in participation in selected sports, capturing the contextual factors of interest (gender, age, type of sport, school category, school type, school boarding status, student boarding status and class level). The research instrument was critiqued by experts in psycho-sociology of sports and research methods in the departments of Physical and Health Education, and Recreation Management and Exercise Science of Kenyatta University, and the necessary adjustments made as recommended by Gratton and Jones (2004). A pretest was carried out to establish the reliability of the questionnaire involving three secondary schools (a boys' school, a girls' school and a mixed school) with 42 student-athletes taking part as respondents. Test-retest procedures carried out with a period of two weeks' interval showed a tests' Pearson-Product-Moment correlation of 0.80 and this index was considered adequate for the study as expounded by Gratton and Jones (2004) and Mugenda (2008).

Research permit was sought from the National Commission for Science, Technology and Innovation (NACOSTI), and then the researcher sought official permission from the principals of the schools to collect data from the schools under their jurisdiction. Cooperating staff were identified and the researcher sought consent from the games master/mistress and the students for participation in the study. The researcher explained the purpose of the study to the respondents and the importance of filling in the questionnaires honestly. The respondents were assured that all information emanating from the research will be strictly confidential and used for academic purposes only. Respondents who were under 18 years of age were required to assent and their parents/guardians to sign informed consent to allow for administration of questionnaires to their daughters/sons. Respondents filled the questionnaires which were collected upon satisfactory completion. This was carried out at the beginning of the playing season and at the end of the three months sports competitions' seasons in 2018.

Data was coded and analyzed using the Statistical Package for Social Sciences (IBM-SPSS) version 20. Character index items were aggregated in descriptive scores of mean and standard deviation. Shapiro-Wilk test was done to assess assumptions of normality to inform choice of statistical tools for inferential analyses. The result showed that the data (the attributes of interest) were not normally distributed across the sample ( $p<0.05$ ), thus non-parametric statistical tools were chosen as recommended by Campbell and Shantikumar (2016). Thus, Mann Whitney U test, Wilcoxon Signed Rank test and Kruskal Wallis test were used to determine the difference on character traits among different population categories (between two independent groups samples, between two dependent/related groups samples, and between three or more groups respectively). To determine the character change indices, the aggregated pre-test composite (Percent of Maximum Possible) score was subtracted from the post-test score. A positive (+) value indicates that the character change was positive whereas a negative (-) value indicates that the character change was negative. Multinomial Logistic Regression Analyses to determine the influence of the various independent and moderating variables on character change (dependent variable). Significance set at  $p < .05$  level.

## III. RESULTS

### A. Descriptive and Comparison Analyses

The character indices in POMP scores for the 336 student-athletes in mean ( $\bar{x}$ ), standard deviation ( $SD$ ) and Median were 84.83, 10.61 and 86.67 respectively at pre-test, and 82.47, 13.85 and 86.25 respectively at post-test. The study questionnaire included items related to different character components. These were; Honesty/integrity, Respect, Good citizenship, Responsibility and Sportsmanship. Descriptive statistics for the different character components POMP scores during pre-test and post-tests and comparison analyses are presented in Table I. Comparing the POMP scores for each component of character between pre-test and post-tests using Wilcoxon Signed Rank test (related sample) showed significant difference (decline) in honesty/integrity component ( $p=0.006$ ;  $n=336$ ). There was non-significant decline in the other components ( $p>0.05$ ).



TABLE I: DESCRIPTIVE STATISTICS AND COMPARISON OF CHARACTER COMPONENTS  
POMP SCORES BETWEEN PRE-TEST AND POST-TESTS

Data set	Descriptive statistics						Wilcoxon Signed
	Pre-Test			Post-Test			Rank test
	Mean	SD.	Median	Mean	SD.	Median	Sig.
Honesty/integrity	83.89	15.41	87.50	79.58	19.72	83.33	0.006
Respect	86.47	13.06	87.50	84.56	16.00	87.50	0.147
Good citizenship	83.39	11.75	83.33	81.78	14.08	83.33	0.113
Responsibility	85.04	12.58	87.50	83.19	14.24	83.33	0.120
Sportsmanship	85.29	13.91	87.50	83.23	15.88	87.50	0.138

### B. Comparison of Character Change Indices across the Various Demographic Categories

Further analyses were done to compare character change indices and status across the various demographic categories. A character change index of  $\geq 0.05$  (5%) in POMP scores in either positive or negative direction was considered significant, while character change indices of less than 5% in any direction was deemed not significant, thus categorized as No Sig Change. These values were adopted from conventional 0.05 significance level / alpha ( $\alpha$ ) value which denotes the probability of rejecting the null hypothesis when it is true, or 95% confidence interval i.e. a 5% risk of concluding that a difference exists when there is no actual difference (Verhagen *et al.*, 2004). It is conventionally assumed that a change/difference of less than 5% can be attributed to random chance or unknown course as opposed to being a result of the factors under consideration (Dahiru, 2008). Comparison of change in character POMP scores across categories of gender (males and females) using Independent Samples Mann Whitney U test are shown in Fig. 1. The results show significant difference ( $p=0.003$ ) among the competitive group ( $n=336$ ) with females recording higher mean ranks.

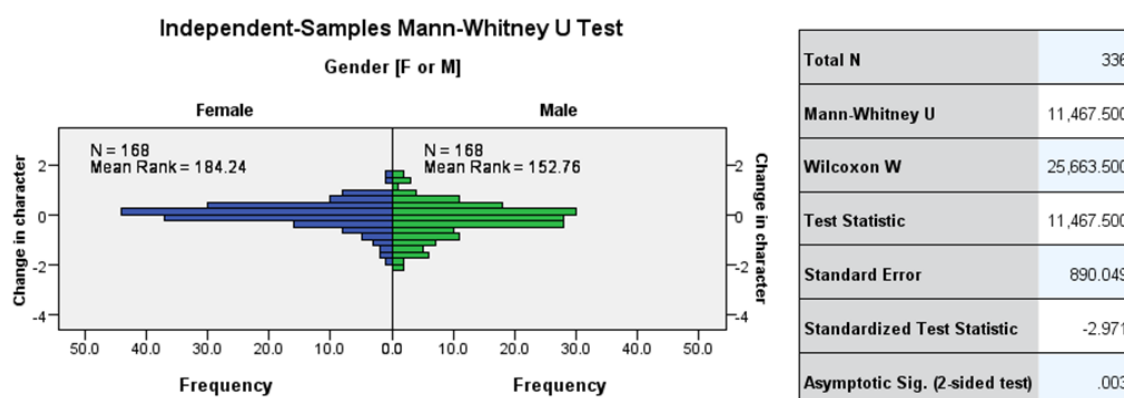


Fig. 1. Comparison of character change indices across gender (males and females) using Independent Samples Mann Whitney U test ( $p=0.003$ ;  $n=336$ ).

Comparisons of change in character POMP scores across categories of sport (soccer, rugby, hockey, volleyball, basketball, handball and netball) were done using Independent Samples Kruskal-Wallis test and the results showed significant difference ( $p<0.001$ ). Further comparison with Dunn's post hoc pairwise test revealed that soccer (which had the highest mean rank score i.e. 205.23) had significantly higher ( $p<0.001$ ) character change mean rank than hockey (which had the lowest mean rank score i.e. 125.04). Comparison of character change scores within the other studied categories showed no significant difference ( $p>0.05$ ); Class Level-Forms 2, 3 and 4 ( $p=0.833$ ), Category of school -national, extra-county, county and sub-county ( $p=0.191$ ), Type of school -public and private ( $p=0.531$ ), Boarding status of the school - boarding, day-and-boarding, and day ( $p=0.457$ ).

### C. Regression Analyses

Regression analyses was done to determine the influence of the independent variables i.e. gender, age, type of sport, school category, type of school, status of school and class level on character change among secondary school student-athletes. Multinomial Logistic Regression analyses was used to determine the comparative influences of independent variables on character changes using SPSS software as described by Chan (2005). It was suitable for the current study data since the statistical analyses allows assessing for the probability of category membership (predictive analysis) of a dependent variable with more than two levels, based on multiple independent variables. In the case of the current study, the dependent variable (change in character) had three levels i.e. negative change, no significant change, and positive change. The independent variables can be either dichotomous (i.e., binary) or continuous (i.e., interval or ratio in scale). The study data met the assumptions of this statistical procedure (independence of observations, no multicollinearity and no outliers -it does not assume normality in the data distribution) (Lund Research Ltd., 2018). The results are shown in Tables IIa and IIb.

TABLE IIA: MULTINOMIAL REGRESSION ANALYSES ON CHARACTER CHANGES AMONG STUDENT-ATHLETES; LIKELIHOOD RATIO TESTS

Effect	Model Fitting Criteria	Likelihood Ratio Tests		
	-2 Log Likelihood of Reduced Model	Chi-Square	df	Sig.
Intercept	410.195	.000	0	.
Gender	415.144	4.949	2	0.084
AgeCategory	419.135	8.940	6	0.177
Class	413.640	3.445	4	0.486
SchType	427.657	17.462	2	0.000
SchBoardingStatus	420.944	10.749	4	0.030
StdBoardingStatus	415.036	4.841	2	0.089
Sport	435.637	25.442	12	0.013

TABLE IIB: MULTINOMIAL REGRESSION ANALYSES ON CHARACTER CHANGES AMONG STUDENT-ATHLETES; SIGNIFICANT PARAMETER ESTIMATES

Character POMP change STATUS <sup>a</sup>		B	Std. Error	Wald	df	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
								Lower Bound	Upper Bound
Negative	Intercept	3.113	1.535	4.116	1	0.042			
	[Gender=0]	-1.274	0.589	4.679	1	0.031	0.280	0.088	0.887
	[Gender=1]	0 <sup>b</sup>	.	.	0	.	.	.	.
	[StdBoardingStatus=0]	-1.515	0.750	4.082	1	0.043	0.220	0.051	0.956
	[StdBoardingStatus=1]	0 <sup>b</sup>	.	.	0	.	.	.	.
	[Sport=1]	.498	1.299	0.147	1	0.701	1.646	0.129	20.978
	[Sport=2]	.926	1.230	0.567	1	0.451	2.524	0.227	28.110
	[Sport=3]	2.059	1.037	3.941	1	0.047	7.837	1.026	59.838
	[Sport=4]	.788	.909	0.750	1	0.386	2.198	0.370	13.064
	[Sport=6]	1.618	1.288	1.578	1	0.209	5.043	0.404	62.991
Positive	[Sport=7]	-.266	1.177	0.051	1	0.821	0.767	0.076	7.703
	[Sport=9]	0 <sup>b</sup>	.	.	0	.	.	.	.
	Intercept	-1.492	2.351	0.403	1	0.526			
	[SchType=0]	-3.048	0.906	11.326	1	0.001	0.047	0.008	0.280
	[SchType=1]	0 <sup>b</sup>	.	.	0	.	.	.	.
	[SchBoardingStatus=1]	1.026	1.305	0.618	1	0.432	2.791	0.216	36.046
	[SchBoardingStatus=3]	2.419	0.949	6.502	1	0.011	11.234	1.750	72.107
	[SchBoardingStatus=5]	0 <sup>b</sup>	.	.	0	.	.	.	.

The results of Multinomial Logistic Regression analyses showed that the overall model of the entered variables fitted adequately (Likelihood Ratio Tests;  $p < 0.001$ , Goodness-of-Fit;  $p > 0.05$ ) to prediction the dependent variable (Character Change) effectively. Individual variables that recorded significant contribution to character change are School type ( $p < 0.001$ ), School boarding status ( $p = 0.030$ ) and Sport type ( $p = 0.013$ ) as shown in Table Ila. Variables that registered significant positive influence are 'female' gender (Wald  $\chi^2 = 4.679$ ,  $p = 0.031$ ) and 'boarder' student boarding status (Wald  $\chi^2 = 4.082$ ,  $p = 0.043$ ) compared to 'male' gender and 'day-scholar' student boarding status respectively. Variables that registered significant negative influence are 'private' school type (Wald  $\chi^2 = -3.048$ ,  $p = 0.001$ ) and 'day and boarding' school boarding status (Wald  $\chi^2 = 2.419$ ,  $p = 0.011$ ) compared to 'public' school type and 'boarding' school boarding status respectively.

Further evaluation on the nature of influence/contribution of the contextual factors through parameter estimates in the regression analyses (Table Iib) showed the following factors had a positive influence on character change; female [gender] compared to male [gender] ( $p = 0.031$ ), boarding student status compared to day scholar ( $p = 0.043$ ), and hockey sport compared to netball ( $p = 0.047$ ). Table Iib also shows that private school type and day & boarding [school boarding status] had negative influence on character change compared to public [school type] ( $p = 0.001$ ) and boarding [school boarding status] ( $p = 0.011$ ) respectively.

#### IV. DISCUSSION

The study sought to find out the influence of participation in sports on character changes and mediating contextual factors among student-athletes in secondary schools in Nairobi City County. The need to address the increasing deviant behavior among secondary students in and out of the field, with the associated negative impact on education, politics and economics aspects (Bredemeier & Shields, 2006; Njoroge, 2005; Stoll & Beller, 2000) informed the study. Moreover, there was mixed reports on the role of sports in shaping positive social behavior and personal responsibility, empathy and discipline (Center for Disease Control and Prevention [CDCP], 2009; Houlihan, 2008; Stead & Nevill, 2010; Yanklowitz,

2013), with alarming levels of harmful acts involving direct acts of physical violence having been witnessed in sports settings (Houlihan, 2008; Walton, 2005). Houlihan (2008) indicated that the social value of sports participation is undermined by sports-related violence which is deeply rooted in the sports process, attributing this to over-emphasis on 'winning at all costs' at the expense of sportsmanship. The current study sought to assess the influence of sports participation on character changes among student athletes and demographic characteristics of respondents by gender, age, type of sport participated in, school category, school type, status of school, status of student and class level as possible factors moderating influence of sports participation and competition on character change. Character attributes considered were honesty/integrity, respect, good citizenship, responsibility and sportsmanship, being components of character as considered in many similar studies (Dieckman, 2009; Doty, 2006; Stoner, 2004). The demographic contextual factors considered are pertinent parameters that have been shown to influence participation in sports and or mediate the outcomes of the same (Kamau *et al.*, 2015). BBC (2020) observe that participation in physical activity is influenced by social factors such as social groupings, family and friends as well as personal factors such as age, gender, disability and ethnicity. Kamau *et al.* (2015) found that age, school type and school status are significant factors that affect relationship between participation in competitive sports and students' connectedness to school among secondary school students. There was need to explore the influence of these factors on character change related to participation in sports.

Character scores was generated from self-reported responses on thirty questionnaire items on character traits before and after three months' participation in competitive secondary school sports programmes. Results of comparison analyses of specific character components/attributes (Honesty/integrity, Respect, Good citizenship, Responsibility and Sportsmanship) showed significant difference (decline) in Honesty/integrity component between pre-test and post-tests ( $p=0.006$ ) ( $n=336$ ) (Table I). Honesty/integrity is a key attribute in sports which is manifestation of ethics and values which promote community confidence in sports (Canning, 2015; Stankovich, 2020). This include fair performances and outcomes, unaffected by illegitimate enhancements or external interests; and positive conduct by athletes, administrators, officials, supporters and other stakeholders, on and off the sports field. Lack of Honesty/Integrity in sports settings has unfortunately been witnessed in form of practices such as match-fixing: irregularly influencing the course or result of a sports event in order to obtain advantage for oneself or for others (Stankovich, 2020), and/or doping. These are unfortunate occurrence and erode social value of sports. The decline in honesty/integrity component between pre-test and post-tests among the competitive group in the current study indicates that competitive aspect of sports is associated with the negative change of this character attribute among the study population. This indicate that some of the sports competition stakeholders in this population may have condoned, encouraged and / or engaged in unfair practices during the sports season. According to Canning (2015), dishonest behavior in sports results from a combination of personality traits particular to high-achievers and external pressures. The author observed that a person might be law-abiding, but view sports as games where cheating would have little impact. Perceiving sport as a game or as challenge to outsmart, rather than as a true measure of ability, such a person will take cheating as a smart, winning tactic. Temptations to cheat when high-profile reputations are at stake, and a 'winning is everything' mentality are other causes of dishonesty identified by the author. Even though monetary prizes are not high in Kenyan secondary school sports, high stakes can be in form of anticipated sports scholarships from local and international scouts. Also, some may justify cheating as a matter of fairness because of 'everybody else is doing it' mentality (false consensus effect). By cheating, they're thus simply leveling the playing field because they believe the other person/team might cheat or is cheating. Cheating is also linked to higher extrinsic motivation. Intrinsically motivated people would be less likely to cheat, since their sense of accomplishment comes from attaining their personal goal (Murdock, & Anderman, 2006). Taking the short-term view and ignoring the long-term consequences of their actions is typical of cheaters. The short-term benefits may thus blind their long-term considerations of the potential humiliation and consequences of being caught (Canning, 2015; Stankovich, 2020). The exhaustion factor has also been cited as a likely cause of dishonesty. Canning (2015) observed that there's constant tension between what we want to do and what we ought to do. During competition one might think of winning with lower effort and if one is depleted at the same time, he/she is more likely to cheat. This is in addition to the pressure to perform from variety of entities such as peers, and significant others. The pressure to perform among the youth is especially more pronounced even in recreational sports in the modern age of social media. Sports competitions are likely to be posted and fantasized about in the social media. Here, broadcasting ones success makes the psychological benefits of winning even greater (Canning, 2015), as well as the anxiety of losing. This may heighten the pressure to perform and the likelihood of cheating.

Dishonesty in sports has also been linked to the concept of achievement goals. Studies have reported significant relationships between task and ego orientations with sportsmanship and moral functioning, with ego orientation predicting lower moral functioning (Mwangi *et al.*, 2019; Roberts *et al.*, 2007).

Compared to high task-oriented athletes, empirical data points to high association between ego-oriented athletes and lower sportsmanship, more self-reported cheating, endorsement of cheating (Roberts *et al.*, 2007) and doping attitude (Mwangi *et al.*, 2019). The decline in honesty/integrity component between pre-test and post-tests among the competitive group in the current study calls for sports stakeholders to work towards cultivating task-oriented sporting environments during sports competitions. The current study results on significant decline in integrity/honesty with sports participation are in line with Camiré and Trudel (2010) who found that majority of athletes believe that gamesmanship is employed and legitimized as being part of the game. Similarly, Bredemeier & Shields (2006) reported male players scored lower on moral judgment than do most college students. The authors recommended that school administrators and coaches be proactive and include character development initiatives in their programming in order to promote moral development and reduce incidences of gamesmanship in high school sports.

Studies have indicated that there are disparities in positive effects of participation in competitive sports on secondary school students based on different demographic aspects such as gender, school categories (National/County/Sub-county), status of school (public/private), class level, type of sport participated in, as well as boarding status (Bulinda, 2002; Gitonga, 1998, 1999; Kamau, 2015; Njoroge & Nyabuto, 2014). These demographics form contextual factors that may influence, moderate or mediate the relationship between sports participation and character changes and therefore were treated as independent variables in the current study. Results of Multinomial Logistic Regression analyses showed significant influence by female gender, boarding student status, type of sport, and school type (tables IIa and IIb). The results are in agreement with Sage (1998) who argued that the effect of sports participation on character development of the youth depended on the positive or negative contextual conditions of the sporting experience. Boarding status of school may affect discipline of the students with day schools in Kenya reported to be characterized by indiscipline and poor academic performance (Njoroge & Nyabuto, 2014) partly because of the students' constant interaction with people in their homes and the outside society. However, the current study results indicate that participation in sports is more likely to bring positive character changes among day-school student athletes compared to boarding school status which may contribute to either positive or negative character change. While student-athletes in boarding school may enjoy some advantages related to more time to spend in training and use of facilities, student in day school may have their own benefits too-especially more parental guidance and monitoring / supervision (Our Kids, 2020). The students from day schools may also develop more resilience as a result of the hustles that they have to undergo going to and from school every day, which may be compounded when one is at the same time an athlete attending training in the evenings and some weekend days.

Comparison of change in character across categories of gender (between males and females) showed significant difference ( $p=0.003$ ) with girls /female recording higher mean ranks (as shown in Fig. 1). Warner & Dixon (2013) posits that different genders tend not only to view competition differently but also to have different physiological, psychological and social reactions to it. The authors observe that in general, most men like competition and thrive in competitive environments, whereas most women dislike competition and flounder in highly competitive environments. The male athletes perceived competition as less personal, and there was an understanding that competition created and fostered a mutual respect among competitors. The male participants viewed internal competition as a way to improve one-self and the team (Warner & Dixon, 2013). Higher character change in female athletes in the current study may therefore be attributed to the inter play of the reported women dislike of competition and the inevitability competitive environment at higher levels of sports participation, compared to male athletes whom reportedly are more at ease in such situations.

The current study was limited in terms of follow-up time needed to evaluate more long term character change (development). However, the study ascertained that sports participation at both competitive and non-competitive level led to character change. It is worth noting that character development is a result of cumulative character changes that happen over a relatively long period of time. It would be necessary therefore to carry out longitudinal studies to have a longer follow up on the variables of the current study. This notwithstanding, the current study established that sports participation provide opportunities for character change thus can aid in character development. This is in line with CDCP (2009) and Stead and Nevill (2006) who stated that sports are valuable in aiding acquisition of various personal, social and social-moral skills which are necessary for the young people to act successfully and acceptably in a wide range of social institutions. The athletes will learn through the processes of observation, imitation and reinforcement of acceptable social behaviors, learning behaviors, motor behaviors and champion behaviors. However, it is not obvious that desirable change will always ensue in sporting situations. Bredemeier & Shields (2006) observed that sport might build character, but only under the right conditions. Noting that children and adolescents need to talk about their values; to discuss their views of right and wrong, both with their peers and with respectful adults, the authors recommended that coaches make time and space in team meetings for discussion of moral issues relevant to sports in general and to



the life of the team in particular. This agrees with PCPFS (2006) who asserts that character development through sports is achieved through deliberate efforts.

The current study showed significant influence of some demographic factors (gender, school boarding status, school type and type of sport) as important contextual factors that mediate the relationship between sports participation and character change. This is in agreement with Vierimaa *et al.* (2018) who affirmed the critical role that coaches play in the developmental experiences of young athletes, highlighting the importance of consideration for contextual factors of the youth sport environment - the particular setting in which youth sport takes place. It informs curriculum development in training of personnel involved in sports instruction and management, as well as implementation and practice to optimize sporting experience and outcomes in secondary schools.

## V. CONCLUSIONS

From the findings of the study the researchers concludes that various demographic contextual factors influence and mediate outcomes of sports experiences in diverse ways, leading to positive or negative character change. The study recommends development of character-based education curriculum for training of sports leaders (school administrators/managers, teachers, coaches), as well as formally integrating character education in athletes training programs and sports competition events in secondary schools. There is need to formulate policy on appraisal of sports programmes with a focus to promote positive character change among students. The study also calls for regular formal evaluation of the sports programs outcomes in relation to character change and development by school administrators and sports managers. Considerations for the various demographical and contextual factors in sports programming should be done to achieve desired character changes and development by all sports practitioners.

Further research is recommended to explore the possible reasons for the differences in change of character across gender, school type, boarding status and type of sport, as well as the implications to sports coaching and management. There is need to explore further the possible reasons for the confounding negative change of character in some student-athletes in secondary schools and potential remedies. Longitudinal studies over a prolonged period of time are needed in the area to track the character change and development attributable to sports participation among student-athletes and the role of the different contextual factors. It is also necessary to find out the effects of the character change on sports performance and academic outcomes.

## ACKNOWLEDGMENT

The authors express their gratitude to the research assistants for the roles they played in data collection, the student participants for volunteering to take part in the study, and their teachers for their cooperation.

## CONFLICT OF INTEREST

Authors declare that they do not have any conflict of interest.

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