
RESEARCH ARTICLE

Participation Constraints of University Student-athletes in Selected Sports in Kenya

DANIEL KIONGO NDIRANGU¹ ✉ ELIJAH GITONGA RINTAUGU² and NKATHA MUTHOMI³

¹²³*Department of Recreation and Sports Management, Kenyatta University, Nairobi, Kenya.*

Corresponding Author: Daniel Kiongo Ndirangu, **E-mail:** danielkiongo2@gmail.com

ABSTRACT

Participation in sports plays an important role in university students' lives, such as the development of a healthy lifestyle and the promotion of education. However, there is low participation in sports in universities which may be due to various constraints experienced or perceived by university students. The purpose of this study was to examine constraints hindering university student-athletes participation in sports activities. The study used a cross-sectional survey design and questionnaires to collect data. Respondents were male (n=198) and female (n=191) student-athletes from public and private universities in Kenya, participating in six selected sports. T-tests and One-way analysis of variance were used to test hypotheses at a 0.05 level of significance. The findings indicated that participation in sports was most affected by structural constraints and least affected by social-cultural constraints. There were significant differences between male and female student-athletes in regard to structural constraints, ($t = -2.21, p=0.03$) and interpersonal constraints $t = 1.14, p = 0.02$). There was a significant difference of private and public institutions with regard to structural ($t = .39, p=0.01$) and intrapersonal constraints ($t = 0.69, p=0.03$). Female students significantly experienced more constraints than male student-athletes. Student-athletes from public universities experienced more constraints than those from private universities. Universities should encourage students to use sports facilities by coming up with more facilities and a favorable environment. Secondly, Kenyan universities should put in place structured sports programs for student-athletes. University students' perceptions about sports should be enhanced in order to reduce the constraints that hinder their participation in sports. A longitudinal study is recommended to investigate sports participation constraints of student-athletes throughout their campus life and thereafter.

KEYWORDS

Inter-personal, Participation, Constraints, Structural, Socio-Cultural, Intrapersonal, Student-athletes

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1. Introduction

Most universities encourage sports participation and provide a variety of sports facilities and programs (Lindsey, 2012). This is attributed to the fact that sports participation by university students has numerous positive benefits that are well documented. For instance, Kampf and Teske (2013) indicated that participation in university recreational sports activities contributes to acquiring skills for learning and preparation for professional life. This is supported by Kim et al. (2016) suggestion that students who participate in university sports are more likely to transfer skills and character traits such as integrity, commitment, and work ethics learned from sports into their career fields. More benefits associated with sports participation by university students include; improved physical fitness, high self-esteem, better academic performance, and enhanced mental and social development (Coenders et al., 2017; Diehl et al., 2018; Forrester, 2015; Henchy, 2013; Kampf & Teske, 2013; Khan et al., 2012; Kim et al., 2016; Makubuya et al., 2020 Vasold, et al., 2019; Yigiter & Bayazit, 2013; Zegre et al., 2020). Additionally, if sports participation is maintained, the benefits lead to good health and well-being of students throughout their life on campus and even after graduation (Henchy, 2013).

Despite all these benefits accrued from regular participation in sports and its capability to improve health, there is little evidence to suggest that the frequency of participation in sports among university students will increase (Awadalla et al., 2014; Ceurvorst et al., 2018; Dhurup & Garnett 2011; Thomas et al., 2019). More alarming is the reality that engagement in physical activity declines with age (Bloemhoff, & Coetzee, 2007; Jones & Barrie, 2011; Van Dyck et al., 2014). At the same time, most university students do not participate in sports in Kenya (Mwisukha et al. 2011), which should be a concern to both sports departments and university administrators. This is because universities have invested heavily in sports infrastructure, employed personnel, and paid a lot of money for affiliation to different regulatory bodies to provide avenues for students to participate and compete in sports. Universities also pay national sports federations such as Kenya Hockey Union, Kenya Rugby Federation Union, and Kenya Basketball Federations in order for their teams to play in different leagues.

Indeed, there is evidence of university student-athletes from the Western world who have participated and attained inspiring performances in global sports competitions. For instance, the University of California, Los Angeles has had at least one representative in every Olympics and has won at least a gold medal in every Olympics since 1932 (Mwisukha & Wanderi, 2014). However, available literature shows that student-athletes from African universities have not made a significant impact in terms of participation and performance at international events (Mwisukha et al., 2011). This shows that most African universities are yet to embrace sporting practices that would allow them to produce top-notch, world-class athletes (Mwisukha et al., 2011). The available studies on Kenyan universities addressing sporting issues have raised concerns that Universities in Kenya need to address sports excellence and performance (Mwisukha et al., 2011; Kaimenyi & Rintaugu, 2011). Hence, there was a need to investigate the constraints that affect sports participation for Kenyan university students.

2. Literature Review

The low participation in sports in universities may be due to various constraints experienced or perceived by student-athletes (Mugwedi & Mulibana, 2014; Stankowski et al., 2017). Constraints are well-defined as aspects that limit or inhibit sports participation (Jackson, 2000). Godbey et al. (2010) assert that there are three forms of constraints; Intrapersonal factors within the individual's mindset, for instance, lacking interest, attitudes, self-efficacy, personality, and moods; interpersonal factors arising from interactions with other people such as friends and family, lack of friends to participate within sports, fear of being blamed by coaches, lack of social encouragements, lack of trained staff and inappropriate behaviour of coaches; and structural constraints which include, demanding academic workloads, availability of resources, facilities, and equipment (Scott & Mowen, 2010; Stankowski et al., 2017). In addition, there are social-cultural constraints which are those factors associated with ethnic backgrounds, beliefs, and religion that limit participation in sports. Such constraints include cultural stereotypes, the ethic of care, parental influence, and body image (Mirsafian, 2014).

The sports participation constraints have been found within the literature on campus recreation, primarily in the context of intramural sport (Stankowski et al., 2017; Shifman et al., 2011; Wood, 2011). However, what remains less clear is how sports participation constraints are related to different forms of university sports. Numerous studies have been conducted on sports participation constraints in universities, but the results have not been consistent (Drakou, Tzetzis&Mamantzi, 2008; Trail, Robinson & Kim, 2008; Masmanidis, Tsigilis& Kosta, 2009; Tekin, 2011; Chung, Liu & Chen, 2013; Spivey, &Hritz, 2013; Mirsafian, Dóczy, &Mohamadinejad, 2014; Ocal, 2014; Halforty, &Radder, 2015).

Ocal (2014) examined the Leisure Time Physical Activity constraints of tertiary students (n=563) from a public university in Turkey. This study targeted only the students residing on campus, and therefore they may not have experienced or perceived all the forms of constraints. The study also only focused on leisure-time physical activity, and it warranted the need to investigate constraints in competitive sports (Ocal, 2014). In a similar study, Gyurcsik et al. (2004) studied barriers to sports participation among American female students (n=132), and the findings revealed lack of time, lack of motivation, lack of partners, weather, social invitations, and seasonal factors, as the major constraints. In a related study, Ehsani (2005) examined Iranian female undergraduates' sports participation constraints. Results showed that facilities, lack of partners, transportation, lack of time, money, awareness, and lack of interest and skill were the greatest constraints.

Beirami (2009) examined constraints toward sports participation among students (n=416) from two cities in Iran. The study found that students perceived intrapersonal, interpersonal, structural, and socio-cultural constraints toward sports participation. Results revealed that female students experienced more constraints than male students. From these studies, it appears that gender impacts constraints, and it raised the interest to investigate whether the same was true in Kenyan universities. Chung et al. (2013) examined recreational sport participation constraints among Chinese university students. Results revealed that students were constrained by various constraints, which included a lack of partners or friends to participate with, lack of skills, lack of skilled coaches, lack of time, social commitments, and study obligations. Female students were significantly constrained by lack of interest, lack of time, knowledge, and lack of partners compared to male students. In a similar study, Spivey and Hritz (2013) investigated constraints to

Campus Recreation Sport (CRS) participation among American students. Findings revealed that lack of time, lack of equipment, and lack of support from friends and family were the greatest constraint to CRS participation. In addition, the results revealed various participation constraint differences based on different CRS activities, which the current study investigated considering selected sports.

Montasser et al. (2011) examined perceived constraints and vigorous physical activity patterns of first-year university students in Egypt (n=500). Results revealed a positive relationship between physical inactivity and constraints. The less active students experienced a higher prevalence of constraints compared to physically active students. In a similar study, Downes (2015) examined physical activity levels and dietary habits among college students. Results showed that there was a significant negative relationship between constraints and physical activity levels. Moreover, specific constraints emerged, which included lack of knowledge, health problems, accessibility, lack of encouragement, and lack of motivation. However, these findings may not be representative of the wider student population since participants were sampled from a community health fair, and constraints were framed in relation to healthy dietary habits and physical activity.

Mirsafian et al. (2014) investigated Iranian female university students' attitudes toward sport and exercise using semi-structured in-depth interviews. Findings revealed that participation in sports was significantly influenced by personal, social, structural, and cultural constraints. In a similar study, Asihel (2005) investigated perceptions of South African female university students (n=50) constraints to recreational sports participation using focus group discussions. Results showed lack of awareness, lack of time, finances, and skills were the greatest constraints. In addition, socio-cultural constraints emerged, which included cultural stereotypes, the ethic of care, parental influence, body image, and others' attitude toward females participating in sports. The shortfall of this study was that it used a very small sample of female students (n=50) in a large University of Western Cape.

According to Asihel (2005), socio-cultural constraints are considered a useful concept adjunct to the existing conceptualization of sports participation constraints. Socio-cultural constraints are seen as the most problematic constraints because they are less visible and therefore not considered to be significant. These include cultural constraints such as expectations, beliefs, code of dress, division of domestic tasks and appropriate behavior, sex stereotypes, concern for personal safety, feelings of not being entitled to recreation, personal and family responsibilities (ethic of care), and lack of motivation. Halforty and Radder (2015) studied constraints among South African undergraduate student-athletes (n=283) participating in sports. The constraints were measured using items from Drakou et al. (2008) instrument, and the findings showed that the greatest constraints to sports participation included time, accessibility, facilities, lack of partners, and activities for both genders. However, the study only assessed the constraints and the relationship between constraints and genders. There was a need to assess the same in relation to other demographic characteristics like the year of study, type of sport, and nature of the university. These factors have been found to influence sports participation constraints in universities in other parts of the world (Asihel, 2005; Masmanidis et al., 2009; Mirsafian, 2014). Therefore, this paper assesses the sports participation constraints of University student-athletes in selected sports in Kenya.

3. Methodology

3.1 Study design

The study used a cross-sectional survey research design. The study was conducted in public and private chartered universities in Kenya accredited by the Commission of University Education (CUE). Universities were selected because they provided a population of student-athletes from diverse backgrounds and different cultures and regions in this country. The target population for the study included student-athletes from 31 public and 18 private universities in Kenya who were participating in the six selected sports in Kenya University Sports Association (KUSA) games.

3.2 Sampling

Respondents who were included in the study had the following characteristics; student-athletes registered in the 2018/2019 academic year, the period when data was collected, and student-athletes registered in the university school teams in the selected KUSA sports. Stratified random sampling was used to select a representative sample of 4 (13%) public and 3 (17%) private universities. The number of respondents was determined using the online sample size calculator at a 95% confidence level and 5% margin of error. This yielded 398 respondents.

3.3 Data Collection

The study sought ethical review clearance from Kenyatta University Ethical Review Committee (KUREC), Ref. No: PKU/891/1951. Consequently, the researchers sought clearance from National Commission for Science, Technology, and Innovation (NACOSTI) for authorization (NACOSTI/P/18/89280/25459) to conduct the study. Questionnaires were used for data collection. The instrument was adapted from Wood, 2011 and Yerlisu-Lapa, 2014. However, the instrument was modified to capture the socio-cultural constraints in order to suit the study. It consisted of three sections; section A captured demographic information of the

respondents: gender, age, year of study, type of institution, and type of sport. Section B had 30 items on constraints to sports participation and was weighted on a 5-point Likert scale of 1 to 5, where 1 was strongly disagree, and 5 strongly agree. The scale represented nine (9) items for structural constraints, six (6) for interpersonal constraints, eleven (11) for intrapersonal constraints, and four (4) for social-cultural constraints. The instrument had adequate reliability with a coefficient alpha of 0.72 on the participation constraints scale (Wood, 2011).

3.4 Data analysis

The collected data was cleaned, coded, and entered into Statistical Package for Social Sciences (SPSS) version 22 for analysis. Descriptive statistics were used to generate means and standard deviations for the four types of constraints with regard to gender, type of university, and the year of study. They were used to determine the constraints that affect participation in sports. An Independent T-test was used to determine the significant mean differences between gender and type of institution based on the constraints. Independent. One-way Analysis of Variance (ANOVA) was used to determine whether there were significant differences in constraints based on the year of study. Any significant ratios were subjected to a posthoc test of Tukey Honestly Significant Difference (HSD) to trace the source of significant differences at alpha=0.05 level of significance.

4. Results

4.1 Gender and Sports Participation Constraints

Constraints were grouped into four categories of structural, intrapersonal, interpersonal, and socio-cultural, and their responses are presented in Table 1.

Table 1 Gender and Sports Participation Constraints

Constraints	Gender	Mean	SD	T-test	Sig
Structural Constraints	Female	4.50	0.26	-2.21	0.03
	Male	4.24	0.29		
Interpersonal Constraints	Female	4.25	0.27	1.14	0.02
	Male	4.01	0.21		
Intrapersonal Constraints	Female	4.10	0.36	0.52	0.60
	Male	3.87	0.38		
Sociocultural Constraints	Female	2.40	0.84	-0.05	0.95
	Male	2.35	0.86		

Results in Table 1 show that female student-athletes had the highest means in all the constraints in comparison to male student-athletes. However, structural constraints had the highest means, female (M = 4.50, SD = 0.26) and male student-athletes (M = 4.24, SD = 0.29). Interpersonal constraints with female student-athletes (M = 4.25, SD = 0.27) while male student-athletes reported (M = 4.01, SD = 0.21). Socio-cultural constraints had the lowest means female student-athletes (M = 2.40, SD = 0.84) and male student-athletes (M = 2.35, SD = 0.86). Additional t-test results indicated that there was significant difference between male and female student-athletes in regard to structural constraints, (t = -2.21, p=0.03) and interpersonal constraints t = 1.14, p = 0.02). This means that female student-athletes were more constrained than males.

4.2 Type of institution and constraints

The constraints faced by the student-athletes from the various types of the university are presented in Table 2.

Table 2: Type of university and constraints

Constraints	Type of Institution	Mean	SD	T-test	Sig
Structural Constraints	Private university	4.26	0.27	0.39	0.01
	Public university	4.08	0.32		
Interpersonal Constraints	Private university	4.08	0.46	0.60	0.54
	Public university	3.96	0.36		
Intrapersonal Constraints	Private university	4.05	0.35	0.69	0.03
	Public university	4.03	0.37		
Sociocultural Constraints	Private university	3.04	0.83	-0.71	0.47
	Public university	3.12	0.86		

Results in Table 2 show that student-athletes from private universities reported the highest means in all the constraints except socio-cultural constraints, where the student-athletes from public universities had a higher mean ($M = 4.26 + 0.27$) limiting factors towards sports participation, with private universities having a mean and standard deviation ($M = 4.26$, $SD = 0.27$), while public universities ($M = 4.08$, $SD = 0.32$). The structural constraints were followed by intrapersonal constraints where student-athletes from public universities were more constrained ($M = 4.05$, $SD = 0.35$) compared to their fellow student-athletes from private universities ($M = 4.03$, $SD = 0.37$). Respondents from private universities were more constrained by interpersonal constraints ($M = 4.08$, $SD = 0.46$) compared to those in public universities ($M = 3.96$, $SD = 0.36$). Lastly, had the lowest means and standard deviations as reported by student-athletes from both public universities ($M = 3.12$, $SD = 0.86$) and private universities ($M = 3.04$, $SD = 0.83$). More results from table 2. showed that there was a significant difference between respondents in public and private universities in terms of structural constraints ($t=0.39$, $p=0.01$) and intrapersonal constraints ($t = 0.69$, $p = 0.03$). This, therefore, indicates that student-athletes from public universities were more constrained than student-athletes from private universities.

4.3 Year of study and sports participation constraints

One-way ANOVA was conducted to assess whether there were significant mean differences of respondents between the year of study and sports participation constraints, and the results are shown in Table 3.

Table 3: One-way ANOVA Year of study and constraints

Year of study	Structural constraints		Interpersonal constraints		Intrapersonal constraints		Sociocultural constraints	
	F = 0.43		F = 0.94		F = 0.77		F = 0.52	
	M	SD	M	SD	M	SD	M	SD
1 st year	4.39	0.30	4.00	0.44	4.01	0.33	3.08	0.84
2 nd year	4.23	0.27	4.01	0.52	4.30	0.36	3.16	0.93
3 rd year	4.12	0.29	4.04	0.46	4.08	0.40	3.03	0.79
4 th year	4.26	0.25	4.11	0.42	4.04	0.35	3.09	0.84
Average	4.25	0.28	4.06	0.47	4.04	0.37	3.09	0.85

The results indicated that there was a statistically significant difference between constraints and year of study ($F = 0.43$ $P = < 0.05$). Tukey's (HSD) post hoc test revealed that structural constraints were statistically significant difference between first year ($M = 4.39$, $SD = 0.30$) and third years ($M = 4.12$, $SD = 0.29$) The findings on intrapersonal constraints indicated that there was a significant difference ($F = 0.77$ $P = < 0.05$) between means of second years ($M = 4.30$, $SD = 0.36$) and that of first years ($M = 4.01$, $SD = 0.33$). This, therefore, indicates that there was a significant difference between constraints and year of study.

4.4 Type of sport and constraints

Results on mean differences between the type of sport and constraints are shown in Table 4.

Table 4: One-way ANOVA on type of sport and constraints

Type of sport	Structural constraints		Interpersonal constraints		Intrapersonal constraints		Sociocultural constraints	
	F = 4.38		F = 60.12		F= 49.74		F = 91.11	
	M	SD	M	SD	M	SD	M	SD
Soccer	4.30	0.20	4.31	0.28	4.26	0.20	3.86	0.62
Volleyball	4.18	0.32	3.76	0.49	3.86	0.36	2.56	0.51
Hockey	4.29	1.90	4.30	0.25	4.19	0.18	2.48	0.59
Basketball	4.38	0.27	4.37	0.24	4.27	0.26	3.91	0.60
Tennis/ Badminton	4.30	0.33	3.66	0.41	3.75	0.37	2.57	0.60
Swimming / Athletics	4.18	0.32	3.63	0.38	3.68	0.33	2.86	0.51
Average	4.27	0.56	4.01	0.34	4.00	0.28	3.04	0.57

One-way ANOVA was conducted to investigate the mean differences among the constraints based on the type. The findings indicate that there were statistically significant mean differences ($F=4.38, p<0.05$) among the different types of sport and structural constraints. Tukey Honestly Significant Difference (HSD) Post Hoc analysis indicated that basketballers were the most constrained while volleyballers were the least constrained.

Similar findings were evident in interpersonal constraints showing statistically significant differences ($F=4.38, p<0.05$) among the different types of sports. For instance, Tukey (HSD) Post Hoc analysis shows that there was a statistically significant difference between tennis/badminton, and in such a case, the findings in this section illustrate that tennis/badminton players were the most constrained while basketball players were the least. The results on intrapersonal constraints show that there were statistically significant differences ($F=49.74, p<0.05$) in the mean of the student-athletes according to the type of sport they participated in. The most constrained sport was Tennis/Badminton, while basketball was the least constrained. In relation to socio-cultural constraints, the results indicate that Hockey players were the most constrained ($F=91.11, p<0.05$), whereas basketball was the least. There was a statistically significant mean difference ($F=91.11, p<0.05$) among hockey, volleyball, tennis/badminton, and swimming/athletics. This, therefore, indicates that there was a significant difference between constraints and the different types of sports student-athletes were participating in. this can be due to the fact that different sports require different equipment and facilities.

5. Discussion

5.1 Sports participation constraints

The constraints were divided into four categories of interpersonal, intrapersonal, structural, and socio-cultural constraints. These constraints limited the ability of the students to participate in different kinds of sports necessitating the adoption of negotiation strategies to increase the level of participation. The structural constraints were the greatest constraints to sports participation to sport participation among the student-athletes. They included the high cost of sports equipment, poor management of sports facilities and equipment; the inadequacy of sports facilities, and overcrowding in the facilities. The findings resonate with those of (Dhurup, & Garnett, 2011; Gómez-López et al., 2010; Nelson, et al. 2009; Salami et al., 2002). Findings on socio-cultural constraints indicated that they were the least form of constraints affecting sports participation in Kenya. These findings contradict those of (Balaska et al., 2012; Chick & Dong, 2005; Mirsafian, 2016; Naghdi et al., 2011) from other parts of the world where socio-cultural constraints are seen as the most problematic constraints because they are less visible and therefore not considered to be significant.

5.2 Gender differences in sports participation constraints

Findings from mean differences across gender in the four constraints categories indicate that female student-athletes were more constrained intensively than male student-athletes in all the four categories of the constraints. This is well illustrated in (Table 1) where females scored higher in all four categories of constraints compared to men. These findings corroborate with those of (Asihel, 2005; Beirami, 2009; Ehsani, 2005; Mirsafian, 2014; Fatahi et al., 2012; Mrakovic et al., 2011). The findings revealed that socio-cultural constraints and parental pressure negatively impacted sports participation among female student-athletes more than male student-athletes which was also reported by Tekin (2011). However, the results contrast those of Trail et al. (2008), where male student-athletes perceived structural constraints to a greater extent than female students.

Sports facilities and equipment for participation in sports not being inadequate constrained female respondents significantly more than males. Similar findings apply to crowding in sports facilities where the number of student-athletes surpasses the available capacity, some student-athletes lacking the means to travel to sports grounds, particularly those living outside the institution, and some universities with poor logistical planning causing the student-athletes to lack a means of transports. Sports participation is an expensive venture for students, particularly because they do not have formal income sources and have study obligations that limit their participation in meaningful income-generating activities. Therefore, universities can play a bigger role in addressing most of the constraints that impede student athletes' participation in sports in Kenya. These findings are supported by these previous studies (Dhurup, & Garnett, 2011; Hoden et al., 2010; Mohammed et al., 2014; Mugwedi & Mulibana, 2014). However, the results contrast the findings from (Drakou et al., 2008), whereby their results indicated that there was no significant difference with respect to gender.

In structural constraints, opportunities to participate in sports are not adequately affected more females than males. However, male respondents were more constrained in aspects such as inadequate coaching services at the university that limit their participation in sports. Males were more constrained regarding the issues of sports programs and services, which are poorly organized and managed, than female respondents. This is the factor that had the highest impact among the structural constraints. These results were also reported by (Ledford, 2013; Minkel, 2010; Spivey & Hritz 2013)

Findings from intrapersonal constraints indicated that female respondents were more constrained than males where they didn't like an interruption of their routine with sports, fatigue, lack of skills, and competitive sports being stressful. On the other hand, Male student-athletes were more constrained by lack of enough time to participate in sports due to study commitment than females. On interpersonal constraints, females were the most constrained by fear of failure or coaches' blame limits participation, their friends not having time to participate in sports, and lack of encouragement from friends and family. The above results are supported by the results from (Downes 2015; Ehsani, 2005; Fatahi et al., 2012; Masmanidis et al., 2009; Spivey & Hritz 2013; Mrakovic et al., 2011).

Similarly, women more often face a number of constraints to leisure compared to men, particularly those related to gender norms (e.g., family caregivers, body image, perceived lack of skills which is supported by findings from Selvaratnam et al., (2021) and Wood & Danylchuk, (2012). In a campus recreation context specifically, research has found that women were more likely to be constrained by not knowing how to use fitness equipment, a lack of time, and an unwelcoming facility environment which were in line with results (Hoang et al., 2016; Stankowski et al., 2017).

Females were most constrained by cultural limitations and lack of time to participate in sports due to family obligations and other leisure activities. Male student-athletes have been shown to have significantly higher participation rates than female student-athletes. These findings suggest that male student-athletes perceive themselves as at least as constrained as females, and they are supported by findings from (Evans & Gagnon, 2019 & McDowell et al., 2016). The findings are also in agreement with those of Shifman et al. (2012) and Stankowski et al. (2017), where females registered higher constraint scores than males.

5.3 Year of study, type of university, and sports participation constraints

Findings on the differences between the year of study and constraints indicated that student-athletes in the first year of the study appeared most constrained on the intrapersonal constraints, while those in their third year of study were the least constrained. Fourth years student-athletes were most constrained to fear sustaining injuries from participating in sports, with those in the second year of study being the least constrained. Participant friends did not have time to participate in sports only in the interpersonal constraints where student-athletes in their first year of study were most constrained while those in their third year were the least constrained. In conclusion, the year of study has been found to influence sports participation constraints which is also supported by other scholars (Salami et al., 2002; Ehsani, 2005; Mirsafian, 2014). Similar findings were seen in the structural constraint category where the item on Sports facilities and equipment for my sport is inadequate was statistically significant. The

most constrained student-athletes were those in their first year of study, while those in their fourth year of study were the least constrained.

Findings on differences between the type of institution and constraints indicated that sports programs and services for sport are poorly organized and managed, inadequate opportunities for participation in sport, crowding, transport, and related expenses in public universities more than in private universities; this is supported by findings of (Ceuvorst et al., 2018). On the other hand, respondents in private universities were more affected by putting excessive attention to studies and neglected sports activities than in public universities, which concur with (Yamashita, 2016).

In terms of intrapersonal skills, student-athletes in public universities were more constrained by the lack of required skills and lack of required fitness levels to participate in university sports than those in private universities. These findings corroborate with those of (Yamashita, 2016). On the other hand, student-athletes in private universities were more constrained to fear of sustaining injuries, interrupting their routine with sports, putting excessive attention on studies, and neglecting sports participation in sports than in public universities, as also reported (Henchy, 2013).

Public university respondents were more constrained by parental /guardian pressure on studies and interruption of their routine with sports, putting excessive attention on studies and neglecting sports activities that limited their participation in sports than those in public universities, as was also highlighted by (Rocha & Fleury, 2017). The item was lack of time to participate in sports due to family obligations and other leisure activities where public universities were more constrained than respondents in private universities. Besides, student-athletes in private universities were the most constrained by structural constraints since their institutions of learning lack a wide variety of facilities to support different sports. Besides, the findings signify that the challenges that university students face are common among most institutions of higher learning, particularly in developing countries with strong ties to their traditional values.

5.4 Type of sport and sports participation constraints

Findings on the differences between the type of sports the student-athletes participated in and constraints revealed three significant mean differences in the structural constraints. Student-athletes that played hockey were the most constrained with the sports equipment for the sport that was too expensive, while those who played soccer were the least constrained. The sports programs and services for sport are poorly organized and managed and had statistically significant mean scores where student-athletes participating in swimming were the most constrained while soccer players were the least constrained. These findings corroborate with those reported by (Casper et al., 2011), while at the same time, they are in contrast with those from Lupo et al. (2017), which found that people are more motivated to participate in individual sports than a team sport. Furthermore, the previously conducted studies indicate that the number of constraints increases with the types of sport an individual participates in (Alexandris et al., 2008).

Within this domain, the item; lack of modern equipment for participant sports at the university had a statistically significant influence on participation, where findings indicated that student-athletes participating in basketball were the most constrained while those in volleyball were the least constrained.

Under the interpersonal constraint, lack of encouragement from friends and family to enable student-athletes to participate more significantly influenced sports participation among university student-athletes which is similar to the findings of a study by Marwat et al. (2016). Results also indicated that Tennis/Badminton players were the most constrained, whereas basketballers were the least constrained, as also reported by (Stanek et al., 2015). Similar findings were also evident where friends did not have time to participate in sports with participants where the volleyball players had the highest mean difference while tennis/badminton players were the least constrained, volleyball players were also the most constrained by which respondent did not have anyone to participate in sports which were also observed by (Jr et al., 2017).

Basketball student-athletes were the most affected by intrapersonal constraints, while their counterparts in volleyball were the least, which was similar to a study conducted by Thomas et al. (2019). The constraints in this category include the unwillingness to interrupt their routine. Some felt that they lacked the required skills. Conversely, soccer student-athlete players were the most constrained with lack of time since their studies took up most of their time in a sport characterized by a longer duration of play and substantial time requirements for training, as also observed by (Choi et al., 2020). Lack of participation because competitive sports at times are too stressful; students participating in basketball were the most constrained while their counterparts in hockey were the least. The last statistically significant item in the intrapersonal constraints category is putting excessive attention to studies and neglected sports activities where the most constrained student-athlete was those participating in swimming/athletics, whereas those in soccer were the least, which was also observed by (Choi et al., 2020).

There were only two statistically significant items in the socio-cultural constraints category out of the four. Lack of participation in sport due to cultural limitations, swimming/athletics student-athletes were the most constrained while those in Hockey were the least, which concur with Abou Elmagd et al. (2018) studies. Similar findings were evident in the lack of time to participate in sports due to family obligations and other leisure activities, where student-athletes participating in soccer were the most constrained while their counterparts in volleyball were the least constrained, which contrasts those results (Ito & Hikoji, 2018).

6. Conclusion

This paper was set to find out the constraints to sports participation among university student-athletes and also to determine if there was a significant difference in sports participation constraints based on gender, year of study, type of university, and type of sport among university student-athletes in Kenya. Based on the findings, this paper concludes that student-athletes in Kenya are faced with more structural constraints than any of the three other kinds of constraints (social-cultural, intrapersonal and interpersonal). Female student-athletes were more constrained than male student-athletes in all the constraints. There was also a significant difference in sports participation constraints based on the gender of the student-athletes on structural constraints and interpersonal constraints. Further, student-athletes in the first year of study were most constrained. There was a significant difference between student-athletes in public and private universities in terms of structural constraints and intrapersonal constraints. Student-athletes from private universities experienced more constraints than their counterparts from public universities. The limitation of this study is that bias was possible to arise due to the use of self-report data by student-athletes. The study recommends that University management in both public and private should find alternative strategies to enable students to participate actively in sports. Institutions should pay attention to intrapersonal constraints. They can have feedback forms for students to give their suggestions, complaints, or compliments. Further studies using qualitative methods involving student-athletes with disabilities since this study only focused on the abled student-athletes are recommended. A longitudinal study should be carried out to investigate the sports participation constraints of student-athletes throughout their campus life. This will give a clear understanding of the factors limiting sports participation in universities in Kenya.

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