DETERMINANTS OF WOMEN’S PARTICIPATION IN RECREATIONAL ACTIVITIES IN KIBERA INFORMAL SETTLEMENT, NAIROBI COUNTY, KENYA

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156/CE/11784/2007

A RESEARCH THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR DEGREE OF MASTER OF SCIENCE (LEISURE AND RECREATION MANAGEMENT) IN THE SCHOOL OF APPLIED HUMAN SCIENCES OF KENYATTA UNIVERSITY

JULY 2016
DECLARATION

This thesis is my original work and has not been presented for a degree in any other University or for any other award.

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To my Husband Mureithi, my children Munene, Mutugi, and Kendi, and all the residents of Kibera informal settlement.
ACKNOWLEDGEMENT

It is after many days of research and persistent consultation with the academia in the Department of Recreation Management and Exercise Science that this work has got to this level.

First is to acknowledge the almighty God for his favour and endless grace, strength and wisdom throughout my studies to this far.

Particularly I want to thank Dr. Andanje and Prof. Onywera for their guidance and support during the whole process of research. I further want to acknowledge the support of Dr. Mundia, Ms Jane Wairimu, Dr. Joy Wachira, Dr. Muthomi and the entire staff of department of Recreation Management and Exercise Science and Physical and Health Education of Kenyatta University.

I will forever be grateful to Mr Mutua Kakinyi of Kenya National Bureau of Statistics and all other officers from this department and the chiefs in Kibera division for their assistant during data collection period.

My family and my friends; quality and leisure time were compromised where my husband Mureithi and children were the direct victims, I salute you and sincerely thank you for that. Finally, I acknowledge my research assistants and everyone else who has been of help to me during the research period and time of compiling this report.
ABBREVIATIONS AND ACRONYMS

AbM: Abahlali Base mjondolo
AIDS: Acquired Immune Deficiency Syndrome
CBC: Conference Board of Canada
HIV: Human Immune- Deficiency Virus
SPSS: Statistical Package for Social Sciences
TPB: Theory of Planned Behaviour
TV: Television
UK: United Kingdom
UN: United Nations
OPERATIONAL DEFINITION OF TERMS

**Accessibility of Facilities:** Distances or means of reaching a recreational place by women in Kibera Informal Settlement

**Age category:** This refers to the following age categories of women in Kibera Informal Settlement; 20-25 years, 26-30 years, 31-40 years and 41-50 years.

**Constraints:** Any relative or relevant factor that mitigates between some possible activity and preference or participation in that experience, these include; lack of time, work commitments, lack of opportunity, high price of recreation equipment and facilities, admission and user charges, lack of transport, lack of exposure, lack of education, negative attitude towards recreational activities, lack of role model etc.

**Education Level:** Academic level attained by a women living in Kibera Informal Settlement. These include primary, secondary, college and university levels

**Frequency of Participation:** Number of times in a week that women in Kibera Informal Settlement participates in recreational activities, that is, once, twice, thrice, four times, five times, six times and seven times.
<table>
<thead>
<tr>
<th><strong>Income:</strong></th>
<th>This is the amount of money earned by a Kibera Informal Settlement women from work, after investing money or from other businesses per month; these include below Kenya shillings 10,001 to 20,000, 20,001 to 30,000, 30,001 to 40,000, above 40,000.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Informal Settlement Area:</strong></td>
<td>Very poor residential area characterized by temporary housing structures, limited social amenities, crime prone, crowded, occupied by people of low income and the occupants have no legal claim on the land, this refers to Kibera Informal Settlement area in Nairobi, Kenya.</td>
</tr>
<tr>
<td><strong>Leisure:</strong></td>
<td>This is the time spent away from work, domestic chores, eating, sleeping, businesses and education for relaxation and carrying out enjoyable activities.</td>
</tr>
<tr>
<td><strong>Level of Income:</strong></td>
<td>Rank of the amount of money earned by Kibera Informal Settlement women from work, after investing money or from other businesses.</td>
</tr>
<tr>
<td><strong>Pass:</strong></td>
<td>Permit of migration of citizens from rural to urban areas by the government of Kenya during the colonial period.</td>
</tr>
<tr>
<td><strong>Recreation Facilities:</strong></td>
<td>These are spaces and services that enable a women from Kibera Informal Settlement to participate in recreational activities; these include gymnasium, swimming pool, playgrounds and cinema halls</td>
</tr>
</tbody>
</table>
**Recreation Opportunities:** A chance obtained by a woman from Kibera Informal Settlement to engage in pleasurable and renewing experience to refresh from routine work.

**Recreational Activities:** Voluntary, organized, socially redeeming, fun and self-chosen activities engaged by Kibera Informal Settlement woman during her free time for therapeutic refreshment of body or mind, these include: aerobics, dancing, martial arts, weightlifting, listening to music etc.

**Regular Participation:** Attendance to recreational activities for three to four times a week by women in Kibera Informal Settlement.

**User Charge:** Amount used to pay for the recreational facilities by a woman in Kibera Informal Settlement.

**Work Commitments:** Willingness by women in Kibera Informal Settlement to use their time to do something in return for payment.
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ABSTRACT

Both leisure and recreation are crucial components of a balanced and healthy lifestyle. This study assessed the determinants of recreation participation for women in Kibera Informal Settlement. The study adopted the descriptive survey research design to obtain information that describes the existing phenomena about available recreation opportunities and the factors that determine the frequency and level of participation. The study was carried out in Kibera Informal Settlement, Lang’ata Sub-County, Nairobi County where a sample size of 384 female respondents was selected using random sampling technique. Self-administered structured questionnaire with closed-ended questions were administered to sampled women residing in Kibera informal settlement. Data were processed using the Statistical Package for Social Sciences (SPSS) version 20 and the results were organized, tabulated and presented in frequencies and percentages. Chi-square ($\chi^2$) test of independence at a significance level of 0.05 was used to test the null hypotheses. The study showed that most families had family sizes of 1 to 2 children, 223 (58.07%) of the respondents had attained only primary education, 165 (43.0%) of the respondents were not employed, 183 (47.66%) reported as self-employed earning less than Ksh.10,000 per month. The most popular indoor and outdoor activities were listening to music and walking respectively. Majority of the respondents reported availability of time and age as determinants of frequency of participation in both indoor and outdoor recreational activities while education level was reported as determinant of frequency of participation in indoor recreational activities. User charges, family size, income level, awareness, distance and transport to recreation opportunities do not determine frequency of participation in both indoor and outdoor recreational activities. Education level was not a determinant of frequency of participation in the outdoor recreational activities. The study recommends that the county government should set aside land for developing various recreational facilities within the informal settlement areas to be accessed by all residents to mitigate time constraints, for example, construction of swimming pools since swimming is reported as the least popular outdoor activity, the ministries of Health and Sports, Culture and the Arts to educate the members of the public within the informal settlement on the health benefits of recreation and good time management so as to encourage more people including those with higher levels of education to take part in various recreation activities since level of education emerged as one of the demographic factors influencing frequency of participation in indoor recreational activities, the city planning department to give greater emphasis on creation of streetscapes within and outside the informal settlement areas that enhances walking for recreation, Recreation service providers to avail affordable and pleasanter recreational facilities and programme catering for all ages since age arose as one of the demographic factors influencing frequency of participation in recreational activities among women in Kibera informal settlement.
CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Every year, millions of people from different parts of the world leave the countryside for cities, expecting to find an enhanced life (Fabrizio, 2007; Winslow, 2007) but most of them end up living in the slums. People residing in the slums and shanty towns reckon about one-third of the people living in cities (Patel, 2007). In Kenya, the swelling of slums in Nairobi began in the 1950s at the height of the State of Emergency enacted by the British Colonial Government (Patel, 2007). At that time, many young Kenyans migrated to the city to seek for paid wage labour (Parson & Timothy, 1997). The interruption made by the colonial government together with the apparent opportunities in the city affected the rural economic activities and this influenced rural-urban migration (Lewis, 2005 & Ndeti, 2003). Due to inadequate infrastructure and housing facilities, the development of slums was left to be the only solution to the emerging problem of increased population in the city. After Kenya attained independence in 1963, there was a slide of rural-urban migration which brought up the removal of the colonial “pass” which had been used by the colonial government to adjust the flow of migration (Parson & Timothy, 1997). The results of these push and pull factors culminated in the emergence of the earliest slum dwellings in the city, including Korogocho, Mathare Valley and Mukuru Kwa Njenga slums.

The Kibera Informal Settlement in Nairobi originated in 1918 as a Nubian soldiers’ settlement in a forest outside Nairobi, with plots allotted to soldiers as a reward for
service in the First World War and earlier wars (Kamau and Kamau, 2004). She is located approximately 5 kilometres in the south-west part of the city centre of Nairobi. She holds a population of approximately 1.25 million people (Kenya National Bureau of Statistics, 2009). The expansive slum is composed of several villages which include Kianda, Soweto, Kisumu Ndogo, Gatwekera, Lindi, Laini Saba, Seranga/Undugu, Makina and Mashimoni. Kibera is the home to the popular Olympic primary school which is one of the leading government schools in the country (Ndeti, 2003).

In Kibera, like many other Informal Settlements, the living conditions are overwhelmingly pathetic and challenging (Mulcahy & Chu, 2007). People’s daily expenses are less than a dollar a day (Laurice, 2007). Due to limited government services provided to the Kibera informal settlements, the streets, water supply, sewers and electricity supply are haphazardly shaped by the slum dwellers themselves. Therefore, smoking, alcohol, drug and substance abuse, poor sanitation, chronic diseases, malnutrition, night-time insecurity, high levels of unemployment, crime, poor schooling and recreation facilities incorporate their lifestyle (Bialeschki, Henderson, Shaw & Freysinger, 1996; Laurice, 2007).

Kelly and Freysinger (2000) define recreation as intentional activity geared towards accomplishment of self and social gains including refurbishment and collective connectivity. Moreover, partaking in recreation is regarded as a way of meeting communal requirement, a way to meeting financial termination of heavy yield, the self-well-being enhancement, the communal means to establishing interactions, or particular
form of development. Activities such as hiking, walking, jogging, dancing and playing other games which involve physical exertion have been participated for fun (Nolan & Surujlal, 2009).

Several studies have established links between regular physical activity and mental health which may bring forth physical rest, to get rid of tension so as to enjoy nature and escape from daily routine (Gerson & Ibrahim, 1991) and to help one appreciate the wonders of nature (McDonald & Schreyer, 1991) and enjoy pleasure of creativity as one engages in activities like poetry, designing and others (Bialeschki & Henderson, 1993). Irrespective of the benefits of recreational activities, studies show that females participate in physical recreational activities less frequently than their counterparts (Johnson et al., 2001; Mozafari, Kalane, Shaji & Hadari., 2010).

Burnet (2003); Cordes and Ibrahim (1999) and Franklin (1996) had a similar report that work commitments, lack of opportunity and time, price of recreation equipment and facilities, admission and user charges, lack of transport, unawareness of where to participate in the activity (exposure), level of education, gender, lack of role model and attitude are some of the barriers to leisure and recreational participation.

Kibera informal settlement is characterized by women with low income as they are unemployed, single parents and have small business enterprises; they are likely to be constrained by economic factors than middle class women, but they need to take part in recreational activities because recreation is an important aspect of life required by
everyone to help in structuring social relationships, acceptance and self- independence (Csikszentmihalyi & Kleiber, 1991). Thus, the concept of determinants of women’s participation in recreational activities in Kibera informal settlement forms the basis of the present study.

1.2 Statement of the Problem

Everyone including those who reside in the slums need to take part in recreational activities as an important facet of life to sustain social relationships and approval from others. Participating in recreational activities helps one to relieve pressure, therefore, promoting health, joy and healthy social relationships and attain a sense of wellbeing. But studies conducted on constraints to participation in sporting activities, have lack of time, lack of knowledge, overcrowding, long distance to activity areas, family problems and lack of money and companion specified as the most significant recreational constraints (Kara & Demirci, 2010; Scott & Mowen, 2010) while fear of assault, lack of facility, gender, race, high entrance fee, lack of care and broken equipment are among other dynamics affecting preferences and participation level of different categories of people in recreational activities (Mozafari et al., 2010; 2002; Walker, Virden & Jackson, 2005).

A report by Franklin (1996) also indicates that work commitments, lack of opportunity and time, price of recreational equipment and facilities, admission and user charges, lack of transport, unawareness of where to participate in the activity (exposure), level of
education, gender, lack of role model and attitude are classified as some of the barriers to leisure and recreational participation.

Women in the urban slums encounter distinctive challenges in the neighborhood as they grow (Shaw & Henderson, 2005). They are mainly left to carry out all the domestic roles, that is, being in charge of the family affairs: cooking, washing, shopping, child rearing, caring for their husbands and filling the breaches left by their spouses in their children’s lives, this leaves them with very little obligated time to participate in recreation activities (Gerson & Ibrahim, 1991). Structural constraints like low income, poor access to recreational centres are reported to be common barriers to women’s recreational participation.

Studies have been conducted on factors influencing participation in recreational activities, for instance, Murithi (1997) investigated the psychosocial factors affecting Kenyan women’s performance in International track events, Mwisukha and Wanderi (2009) focused on the problem of time famine as a determinant to participation in leisure activities; M’mbaha (2004) focused on social mobility through sports using the members of Mathare Youth Sports Association while Njororai (1996) concentrated on the low involvement of women in competitive and recreational sports, sports management and sport-related academic fields in Kenya.

Asihel (2005) studied views that restrict involvement in recreational sports among the undergraduate female students of Western Cape University whereas Kagwiza, Phillips,
and Struther (2005) focused on the problems of leisure and recreation among the urbanized Rwandese women. On the other hand, Deford (2004) maintains that there is little coverage of women’s sport since women do not support their fellow female athletes closely as men support male counterparts. Henderson and Sheikholeslami (2007) suggest further research to understand women and their leisure in different cultures while Shaw and Henderson (2005) recommend study to focus on a broader definition of structural constraints to include not just immediate individual barriers but social security and cultural dimensions.

Nyaupane and Andereck (2008) and Chung (2005) suggested that leisure constraints research should examine socio-demographic factors such as age and gender, a study by Rintaugu, Mwangi and Bailasha (2013) on Constraints to Sport Participation of University Soccer Players suggested that the future studies to address social-demographic details like age and gender. Despite the various studies conducted on this phenomenon, not much has been done in the context of recreation for women in the slums. Thus, the current study sought to assess the determinants of women’s participation in recreational activities in Kibera slums since they are the most vulnerable population in the slums and they are the ones who are available in the slums taking care of the children as the men go out to earn a living.

1.3 Purpose of the Study

To assess the determinants of women’s participation in recreational activities in Kibera Informal Settlement, Nairobi, County, Kenya
1.4 Objectives of the Study

This study was guided by the following objectives:

i) To determine the most popular recreational activities for women in Kibera Informal Settlement.

ii) To determine if the following demographic factors determine the frequency of participation in recreational activities among women in Kibera Informal Settlement:
   a. Income level
   b. Education level
   c. Family size
   d. Age categories

iii) To determine if the following recreational opportunity factors determine the frequency of participation in recreational activities by women in Kibera Informal Settlement:
   a. Availability of leisure time
   b. User facility charges
   c. Accessibility to recreation facilities/programmes
   d. Awareness of available recreational opportunities

1.5 Research Question

i) Which were the most popular recreational activities for women in Kibera Informal Settlement?
1.6 Hypotheses of the Study

Ho₁ There was no significant relationship between frequency of participation in recreational activities by women in Kibera Informal Settlement and the following demographic factors:

a. Age categories
b. Family size
c. Education level
d. Income level

Ho₂ Participation in recreational activities by women in Kibera Informal Settlement was not significantly influenced by their:

a. Availability of leisure time
b. User facility charges
c. Accessibility to recreation facilities/programmes
d. Awareness of available recreational opportunities

1.7 Significance of the Study

The findings of the study might be useful to discover the available recreational opportunities in Kibera Informal Settlement, this might aid the government and other non-governmental organizations with valuable guidance on the recreational needs of Kibera women and in return they can avail safe, healthy and inexpensive recreational facilities so as to strengthen their social skills and relations for relaxation.
The information provided by this study may encourage women in Kibera Informal Settlement to participate in recreational activities, thereby enhancing originality, expressiveness and can be utilized in obtaining particular services, thereby opening career opportunities and creating revenue. It might also help in sensitizing women in slums on the importance of participating in recreational activities and positive use of their free time (leisure time) in diffusing positive social values. The study may add to the body of knowledge concerning recreational opportunities and factors determining women’s participation in recreational activities and serve as a basis for more research work by future researchers.

1.8 Delimitations of the Study

The study was delimited to the following:

i). Recreational activities of women living in Kibera Informal Settlement

ii). Use of self-reporting questionnaire as the instrument for data collection

iii). Only women between ages 20-50 years participated in the study since most women in this age bracket have completed their basic school in primary and secondary and therefore, the sports programmes in schools would not be of any influence.

1.9 Limitations of the Study

The findings of this study were interpreted in the light of the following limitations:
i. Some respondents found difficult in responding to some questions because they could not understand English, the researcher therefore recruited competent translators to assist the respondents when answering questions.

ii. The researcher encountered difficulties in convincing the respondents to take part in the study owing to the reason that they did not understand the purpose of the study and they wanted some payment so that they could respond to the questionnaire.

1.10 Theoretical Framework

This study was drawn on the Theory of Planned Behavior (TPB) (Ajzen, 1988; Ajzen & Madden, 1986). According to TPB, human behaviour is a function of an individual's intention to perform the behaviour in question. In its turn, intention is determined by a combination of three conceptually independent factors: attitude toward the specific behavior, subjective norms and perceived behavioural control. More specifically, the model proposes that behaviour is a function of beliefs, which are related to the behaviour.

Attitudes are defined as one's positive or negative predisposition towards a specific behaviour, and determined by an individual's behavioural beliefs toward the behaviour (Ajzen, 1988). On the other hand, subjective norm expresses the social pressure that is placed on the individual to perform a specific behaviour. Perceived behavioural control has been introduced to enhance the prediction of behaviours in which volitional control may be incomplete (Ajzen, 1988). Irrespective of a person's intention, there may be some obstacles preventing him / her from carrying out the behaviour. These obstacles
may be internal factors such as skills, abilities, knowledge and adequate planning, as well as, external factors such as time, opportunity and cooperation with other people (Ajzen & Madden, 1986), and expresses individual beliefs about the ease or difficulty in performing a specific behavior. The TPB postulates that perceived behaviour control, influences behaviour both directly and indirectly through an independent effect on behavioural intention (Ajzen & Madden, 1986). The more it is perceived that the behaviour in question is not under control, the more it is expected that a direct link between perceived behavioral control and behaviour, not mediated by intention, will be present.

The current study adopted the Theory of Planned Behavior (TPB) to examine intention to participate in recreational activities and aimed to test the degree to which intention to participate in recreational activities as well as actual participation can be predicted by the elements of the theory. It tested how social influence (pressure) affects one’s intention to participate; here, the study tested the significant role of age to one’s intention to participate in recreational activities. It also tested the perceived behaviour control by exploring whether perceived constraints like lack of time, family size and level of education and real constraints; lack of financial resources, work commitment, poor accessibility and lack of transport determine the intention to participate in recreational activities. The interrelationships amongst these factors are presented in figure 1.1 below.
Figure 1.1: Theory of Planned Behaviour Model in Recreation Participation Adopted from (Ajzen, 1988; Ajzen & Madden, 1986)
CHAPTER TWO
LITERATURE REVIEW

2.0 Lifestyle in an Informal Settlements

An Informal Settlement is a poor residential area characterized by temporary substandard housing structures and shabbiness which vary from simple shacks to temporary and well-developed structures, lacking in tenure security, limited social amenities, poor sanitation, poor garbage disposal systems, crowded and occupied with people of low income (Erulkar & Matheka, 2007); their personal day-to-day lifestyle encompasses smoking, alcohol and drug abuse (Davis & Jason, 2007). There are no proper roads, sewers, water, electricity, or green spaces for recreation and the houses are below minimum standard (mud or cardboard walls and plastic or iron sheet roofs) (Harrison, 2002). Kibera Informal Settlement in Kenya has the same characteristics which is the compelled location for this study.

The area is always stuffed with smell of garbage in the air with the odd gust of human waste (Mulcahy & Chu, 2007). There are no sewers or clean water, people are condensed together, the spread of diseases is intense and easy, there are no rubbish collection, therefore, rubbish piles up around the slums, or is burnt, causing smog and air pollution. It is the residential and commercial dumping site of solid waste, human waste, medical waste and wastewater, causing perpetual degradation of the environment and water quality. Due to poor sanitation, illness and deaths are prevalent in this area, since a few ramshackle one-stance pit latrines with their use restricted are located inappropriately close to water sources, causing black water to seep into these
sources, while inadequately maintained latrines negatively affect the general environment and community health (Mazige; 2008). Some people share one communal latrine while the rest of the community use polythene bags and the waste is littered all over the place in addition to that of the children who neither go to the toilets nor use polythene bags (Mazige, 2008).

Poverty is the predominant condition in slums since the level of education for a person living in the slums is usually inferior compared to non-slum dwellers where women are mostly affected (Kundu, 2003). Most people may be lacking secondary school education, and with no regular jobs, in fact, majority of the residents spend less than a dollar a day (Schmidt & Courant; 2006; Asudi: 2008), with a family size of 5.05, this gives rise to poor diet or malnutrition and chronic diseases where lack of education and information aggravates the situation since the residents depend on unreliable source for prevention and cure (Laurice, 2007). The disheartened situation calls for alcohol and drug addiction, criminal activities and idleness (Harrison, 2002).

Slums are accidental areas with no basic services like clean running water, electricity, garbage bins, street lights, postal deliveries, roads, recreational parks, playgrounds, schools and healthcare centres. No service rendering body availing and ready to assess the needs of the resident’s basic services that are lacking to identify and fulfill the demand (Mazige, 2008). Therefore, the urban poor slum residents find it pointless to convey their demands to those with the capacity to fulfill them (Mazige, 2008). The mixture of men and women from every part of the country has created a subculture with
its own structures, norms and values. As a consequence, most of the youth who are born in the slums may not be familiar with their cultural background (Schmidt, 2006). It is at this mixture of hopelessness that people living in the slums are confronted with demands for responsibilities and being in charge of their lifestyle.

2.1 Importance of Recreation

Jones (2003) indicates that participation in varied recreational activities can promote continuous participation in arts and culture which can lead to growth in creativity, self-expression which can later be a source of income due to acquisition of new skills. Participation in an interesting sport draws the mind off other undesirable activities and this cultivates positive thoughts. Leisure can provide the global population with opportunities to live a valuable and meaningful life, which can help improve quality of life (Iwasaki, 2006). That is why participation in recreational activities is crucial to everyone for it leads to one living a fuller life.

A survey conducted in Canada by Lemaitre (1995) displayed the likelihood of heart attack by 50% among women who were past menopause and participated in minor physical exercises. Risk of stroke can be reduced by improving the level of participation in physical activities (Hu, Stampfer, Colditz, Ascherio, Rexrode, Willett & Manson, 2000). Higher engagement in physical activity has extremely better impact on the management of diabetes and it seems to give forth prospective value in the primary prevention on Type II diabetes. According to the World Health Organization (WHO)
(2009), inadequate participation in physical activities has triggered many females to suffer from diseases that are associated with inactive lifestyle.

Shannon and Shaw (2005) studied women with breast cancer and reported that importance of leisure was realized and became sufficient after full management of their illness. Studies by Hutchinson, Loy, Kleiber and Dattilo (2003); Iwasaki, Mactavish and Mackay (2005); Kleiber, Hutchinson and Williams (2002) and Klitzing (2004) reported that leisure is a therapy to the people with severe or chronic stress. For adults living with a chronic illness or acquired disability, leisure participation was found to be a source of hope, giving purpose and offering a sense of belonging or recognition, and preserve a sense of competence or independence (Hutchinson et al., 2003). Through recreational activities, a state can minimize expenses on treatment of chronic diseases and this in turn would lead to a healthy nation which translates to an efficient economy.

Constant participation in recreational activities with friends enables participants to improve on their relationship and consequently leading to a peaceful life. Interestingly, Bailey and McLaren (2005) concluded that “simply performing activities with others was not associated with a sense of belonging or mental health”. Kelly and Freysinger (2000) argue that participation in growth enhances personal goals of health and means of building relationships. Autry (2001) pronounced experiential leisure activities to be a source of enhancing teamwork and as a way of offering personal credit and morals for girls who were termed “at risk.” Therefore, leisure can be fulfilled through inclusion of others and working towards oneness to meet everyone’s leisure expectations but it is
important to understand the relevance of the leisure options women undertake as they fulfill their personal leisure thirst. The use of sport in structuring social inclusion is an end product of its use in reducing social segregation (Bailey, 2005). Participation in recreational activities enables the participants to create new friends and spend more time with them, therefore, helping them to let off the catharsis built in bad experiences.

Sport adds to Canada’s economy and society by skills advancing, improving citizen’s health and also by building social interconnection (Conference Board of Canada, 2005). This agrees with Canadians opinions that sport leads to groups’ cohesiveness, like families and which later results to family relations (CBC, 2005). Dance and traditional games are also considered as ways or means of fighting hindrances and barricades to interaction between groups (Keim, 2003 & Keim and Werker, 2006). Leisure activities is an opening to link with friends, family and others undergoing similar life experiences (Hutchinson et al., 2003).

Coalter’s (2005) reviews the part played by sport in structuring and aiding collective, public inclusion and encompassing nationality. This is similar to Putnam’s (2000) idea of ‘societal assets’. Societies with healthy communal investment have strong public links, natural belonging and oneness, reliance on one another and backing from the others. This implies that sports aid in community development (Coalter, 2005). Donnelly and Coakley, (2002) note that sport programme contribute to progress of both children and youth and their social fitness. Coakley (2002) asserts that in model platforms those involved should feel harmless to their physical bodies, feel appreciated,
have communal link, getting moral and economic support, have self and political power and optimistic about their tomorrow. A recreational programme that meets people’s social, economic, political, spiritual, physical and moral fitness give rise to a total person who can fit well in the community and this would mean a full-grown and promising economy that guarantees its people bright future.

2.2 Influence of Gender on Recreation Participation

Gender roles have been considered in many studies and it is reported that female’s participation in physical recreation is less as compared to the male counterparts (Johnson et al., 2001; Mozafari et al., 2010). Alberta (2004) notes that constraints such as being obliged by family are considered to be important by most of the respondents while Nolan and Surujal (2009) in their study in South Africa report that female’s duty were traditionally termed as the home-maker and the family’s wellbeing was left to her to manage. There is also evidence of social stigma to those women in competitive sport by regarding/labeling them as non-feminine (Okonkwor, 1993 & Overhart & Pemberton, 2001). Ethic of care is surrounded within the family structure and this is seen in family commitments which undergo (Henderson & Allen, 1990) and their role as primary caregivers (Henderson & Bialeschki, 1993) while Kelly and Freysinger, (2000) claim that the communal production work of females makes them obliged in the care of other family members.

The issue of lack of funds to pay for recreational facilities hinders females from participating in physical recreational activities, they rely mostly on their spouse as a
housewife, and this makes it more difficult for females to find enough money to spend on recreational activities (Jackson & Henderson, 1995). Also, socio-cultural constraints provided an umbrella under which, other constraints are experienced (Little, 2002). As Roberts (1999) states, women seem not to get the freedom for recreation and sport activities like men who are engaged in paid work and this makes sports to be regarded as men’s interaction arena, physical growth and competition.

Kelly and Freysinger (2000) argue out that women act as buddies for men to offer joy for their physical outlook by the manner they have dressed or behave, they are regarded ornaments to men or a measure of status and power and therefore, they also become a mode of refreshment for men. Female reach out to acquire higher physical and sporty opportunity has always been constrained; they have been burdened in every culture in existence in the universe even within the most developed countries (Overhart & pemberton, 2001).

According to Cohen (1993), knowledge is determined by the moral dogmas on sexual category, that is, what distinguishes the role of male and female, why parents view their children contrarily and understand from the beginning how to differentiate male and female. Girls have always been anticipated to take the traditional female roles of domestic chores instead of being involved in sporting activities, therefore, this has given rise to gender stereotyping which is a major hindrance, for example, netball has always been regarded a female game but majority of females may be unwilling to play it. Most people associate men with competence while they associate femininity with
warmth, expressiveness, and nurturance (Cohen, 1993). Vigorous sport has been viewed as health threat to female’s societal roles such as childcare and household tasks, communal values of male-female gender characters and this has led to women being discouraged from participating in sport and recreation (Overhart & Pemberton, 2001). Similarly, Jones (2001) notes that, female traditionalists could not engage in the same recreational activities with men since they were perceived harmful to their bodies.

Expectations coming from the society for females to acquire the ideal body image may hamper one from participating (Shaw, 1994). Lack of this expected figure that is dependable with communal pressure can cause female retiring from participating at all (Dattilo, Samdahl & Kleiber, 1994). The pleasure of participation in a certain recreational activity can diminish due to this body image hopes (Fredrick & Shaw, 1995). The societal views the ideal body image for men as one of muscularity and strength while the one for women is regarded one of thinness (Martz, Handly & Eisler, 1995). This results to having the masculine females regarding themselves and or been seen as unladylike and or even lesbians causing decline sport-recreation participation.

Henderson (1993) claims that lack of sense of entitlement makes female feel uncomfortable when they pampers themselves in their own recreation making them feel like they have no right to recreate. This leads to have them limited to only the recreational activities near their homes especially the family woman who organizes her recreational activities near her residence or have one of the family members accompanying her which may hinder total enjoyment, so, social constraints are still
hurdles as far as women’s participation in sports and particularly in the performing sports (Popović & Kocić 2002).

In the current world, girls and women have variety of recreational options than men as it was in previous generations. Fresh areas of interest for women and girls’ recreation have been discovered where studies done describe some women opinions on leisure as means for fighting back dominant gendered customs (Henderson, Kaczynski & Park, 2007). Bryce and Rutter (2003) in their study on technology as a recreational choice indicates that computer gaming is still regarded a masculine activity, even if more girls seek for this activity as it is geared less gendered activity.

Schneider, Allison, Berg and Trost (2001) indicates that joint leisure for married couples has no significant influence on their association and the individual leisure satisfaction of both men and women was not linked to partner’s contentment. A similar study by Herridge, Shaw and Mannell (2003) that looked at women’s leisure within romantic relationships reports that trying to fulfill couple relationships in leisure disputed individual interests of women. This shows that leisure satisfaction can also be constraints.

2.3 Influence of Income Level on Recreation Participation

In modern Western Society, leisure activities participation among the seniors is determined by a number of constraints that are brought forth by the drop in income that
follows due to retirement (Braham, Critcher & Tomlinson, 1995). Level of income is one among the most significant recreational constraints that plays a crucial role on people’s participation in recreational activities as compared to gender, age, race and educational level (Johnson et al., 2001; Shores, Scott & Floyd (2007).

As Kara and Demirci (2010) and Scott and Munson (1994) noted in their studies that people with high income participated in natural sports frequently related to those with low income, similarly, those with higher-income have higher participation rates in a variety of recreational activities and the choice of activities and the user charge spent on entrance fees, travel and so on, while those with low incomes like the case in slums have minimized right of entry to the recreation facilities/programmes and abilities required to participate in a variety of recreation activities (Scott & Munson, 1994; Kraus, 1997).

A study by Tierney, Chavez and Absher (2000) on constraints to leisure travel and visitation to natural areas reports that financial situation and lack of transport were featured as the major determinants while Kouhkamari and Moghaddam (2015) notes that there was an effective relationship between the degree of the facilitating factors of the staff participation in sports activities and economic and financial constraints.
2.4 Influence of Education Level on Recreation Participation

A leisure choice and higher participation rate is dependent on the type of education, the length of education and educational attainment, whether with qualification or not, the rate of participation in recreational activities is directly proportional to the level of education (Scott & Munson, 1994). A study by Hayes (2004) showed that education level is significantly related to the motivation for participating in recreational activities. This is in accordance to a study by Lucas (1990) that reported education level dictates the type of visitors in the wilderness where 60-85% of the visitors were reported to have attended college while 20-30% to have graduate degree. A study by Tierney, Chavez and Absher (2000) on constraints to leisure travel and visitation to natural areas reported that the advanced the education level, the higher the likelihood of visiting the natural areas.

Younger (1998) noted that high levels of education seem to stimulate participation in different leisure activities; and this gives way to higher opportunity to participate in leisure activities which cultivate awareness and desire. In Szabó (2006) study using students derived from different educational levels and fields of study in a study on the students’ consumption to recreational sports in Hungarian universities reported that student’s frequency of participation differed from one study fields to another, she further reported that majority of the active students were studied economy while the fewer active students came from the field of art.
A research conducted in France shows that the level of education is the most selective determinant as far as participation in sports is concerned, the study reviews that participation rates increase alongside the period of study and also the level attained (Louveau, 2004 and Tallen, 2011). The study reviews that in France, the parental level of education is a determinant of the young girls’ participation in sports and also their level of participation, the parents with no education, their daughters participate (57%) that is, at least once a week compared to those whose parents have a higher education qualification who participate 87%. Muiruri (1990) observes that interest in recreational activities fostered in academic institutions has an effect on future life.

### 2.5 Influence of Family Size on Recreation Participation

Stavropoulou (2008) study on constraints and motives related with women’s physical activity participation, with an incidental sample of N=181 women aged between 30-65 years old indicates; about 10% of the sample had children below seven years old, between the ages 7–14 years old, 22% between 15–18 years old while the rest 48% had older children or they had no children at all. Eighty two per cent of the respondents were married. The study further indicated that lack of time was a constraint in relation to family obligations, work obligations and distance from the activity, with family obligations and work obligation taking the highest percentage.

A study in Iran by Henderson and Sheikhoslami (2007) on an exploration of the leisure activities and constraints to leisure that Iranian women encounter divided the family
size into three categories; no children, 1-2 children and 3 or more children. The study found that those with no children had more constraints related to community structure while those with 3 or more children had constraints related to household expectations, personal health and safety. Alberta (2004) found that constraints such as being obliged by family and overcrowded facilities were considered to be important or very important by between 40% and 50% of respondents.

2.6 Influence of Age on Recreation Participation

The National Health and Lifestyle surveys (Friel et al., 1999) which measured health-related behaviours among adults and school-going young people indicated that overall, 42 per cent of adults respondents engaged in some form of regular physical exercise, while a quarter reported participating in mild exercise three times per week and less than one in ten people engaged in strenuous exercise three times per week. However, the study indicates that these rates declined noticeably with age. It has been found that people are more active early in life and this leads frequent return to sport and recreation later in life (Health Education Authority, 1997).

A study by Cordes and Ibrahim’s (1999) reported availability of time to have great influence on recreational participation where most time, this is evident as one retires as well as with adolescents as compared to those in their mid-age and they are constrained by time factor. This disagrees with a study conducted by Delaney (2013) that found participation in sport and recreational activity to be high during the early
teenage years but drop afterwards. Australian Bureau of Statistics (2006) reviews that participation in recreation for those with physical disabilities decreases with age, this finding is consisted with findings of a study by Bolen, Rhodes, Powell-Griner, Bland and Hohznan (2000) which compared participation by age and concluded that as one ages, there is a decrease in participation in outdoor and physical activities. Aging comes with more constraints to participation in recreational activities (Shores et al., 2007). A study by Australian Sports Commission (2012) on Participation of Australians and Tasmanians in Exercise, Recreation and Sport of 2010 reported that ages 25-34 had lowest regular participation while ages 35-44 had highest regular participation.

Currie (2004) found that the young mothers who took part in physical activity had superior feelings of wellbeing although they are constrained by some of their views of body image, but adolescence is viewed as an important milestone in terms of personal development and this is the critical period that advanced approaches toward life are made.

Csikzentmihalyi, Rathunde & Whalen(1993) reports that majority of an adolescents working time is engaged in recreational activities since to them recreational activities and leisure experiences are means of registering development just like Kelly and Freysinger (2000) report that there is need to meet leisure and recreational activities needs for psychological health development during adolescence but Gibson, Ashton, Green and Autry (2003) indicates that older women feel privileged to engage in leisure
as they enter retirement but their choices and opportunities are both empowered and inhibited by leisure companions, health and finances.

Older women are also reported to be constrained by poor-health, lack of companion and age related norms which ultimately hinders positive outcome on their leisure and recreation participation (Ullman, 2011). Asihel’s (2005) indicates that people older than 56 years of age prefer to walk in their free time, which is also the case with American recreation research. Kelly and Warnick (1999) argue that walking is the primary recreational activity for Americans over the age of 45. There is, therefore, need for active lifestyle even as one retires for it seems retirement in other duties is not directly proportional to retirement in recreational activities, conversely, it can be a detriment to one’s health.

2.7 Influence of Availability of Time on Recreation Participation

Kraus (2001) maintains that leisure time is a product remaining time after other obliged duties have been accomplished. The social meaning of activity, experience gained and leisure time available shape leisure prospects. Jensen and Naylor (1990) regard use free time wisely and successfully to be the source of achievement; people’s participation in recreation experiences is determined mostly by the available time (Jackson, 2000). Leisure time has declined over time due to people’s commitment to meet sustenance needs which cause some people to work beyond their official working hours to earn extra income as well as shifting offices to their homes by carrying the official work to be completed at home (Mandi, 2009; Mwisukha & Wanderi, 2009).
Women seem more disadvantaged as far as time for recreation is concerned due to household chores and family commitments compared to males (Shaw, 1994). Time-budget studies have reported that whether employed or unemployed, married women recreation time is minimal as compared to their husbands (Shaw, 1992) just as Cortis, Swarikar and Muir (2007) indicate time to be a major barrier to participating in sport and recreation, given the women's family and work commitments. Many people wish to participate in recreational activities but time has been reported as the greatest hindering factor (Jackson, 1994). A study by Franklin (1996) on the impact of leisure attitude and motivation on physical recreation/leisure participation time of college students found that many individuals argue that there is restraint on time for more physical or active recreational activities due to work, family obligations, school schedules and social organization.

Studies have reported that most people spend approximately two or three hours everyday watching television or other sedentary or passive recreation. Similarly, a study by Ravenscroft and Curry (2013) on the constraints to participation in countryside recreation in England describes relative lack of time as a constraint to recreation participation.

Chang (2006), in his study on Korean citizens on analysis of men and women’s time use, the regression models estimated total hours of household labour time, free time and attitude to time. His objective was to scrutinize the meanings of free time for women and men and his analysis of gender equity, where he studied the impact of family size,
gender, age and presence of youngsters under age 8, marital status, paid labour time, income level, education level as well as the interaction of gender, age and marital status. The study that was guided by a number of research questions like, women perform more of the household errands like childcare and housekeeping chores, the study found out the presence of children, marital status, income level, level of education and paid labour time affect the pattern of time used for household tasks and leisure. The research also sought to find out if the effect was the same or different for women and men, the findings revealed that men had more active leisure time than women, nearly 10.2 more minutes on workdays and 53.4 more minutes on Saturday in paid labour than women that contribute to approximately 114.9% of women’s on ordinary day and 113.2% of women’s on Saturday.

Nielsen and Hansen (2007) indicate that Americans have an average of 35 to 40 hours of free time per week but majority of this time comes in bits during weekdays, rather than in big blocks on weekends where TV viewing consumes half of all free time whereas 27 hours per month are spent on internet (for both work and leisure). This translates that staring at screens is a major use of Americans’ time. This shows that leisure time or free time forms a valuable facet of daily life and one need to balance use of leisure time for recreation purposes and other daily duties that are vital for one’s sustenance.

A study by Alexandris and Carroll (2010) on demographic differences in the perception of constraints on recreational sport participation shows that married individuals have
less time to attend to the recreational activities than single persons. This finding is in agreement with a study conducted by Milburn (2004) which points out that the biggest challenge for many women with families is creating their personal leisure time with their families/friends for more socialist cultures, with the societal expectation that they will take up the responsibility for managing their children’s education, health and future. Brown, Miller and Hansen (2001) indicate that two thirds of the women they surveyed in their study, had scarce time to be physically active during their leisure although most women expressed that given more social support; they could be more physically active.

Cheung (2005) survey on females’ constraints in physical recreation participation reported that female’s sporadic physical activity participation is as a result of time restraint while Young, Ross and Barcelona (2002) in their study on perceived constraints by college students to participation in campus recreational sports programs reported that commitments in school, work and family has restrained them as far as time is concerned which is a substantial determinants of participation in recreation activities by senior students and this seems constant by Henderson and Sheikhoslami (2007) on an exploration of the leisure activities and constraints to leisure that Iranian women encounter showed that home-based activities are most preferred recreational activities.
2.8 Influence of User Facility Charge on Recreation Participation

Hayes (2004) indicates that the cost of participation is the second greatest constraint to participation in recreation in a rural Costa Rican community while the previous research notes that time and money are the two top constraints to leisure (Jackson & Dunn, 1991). A study by Szabó (2006) shows that, among the most effective constraints to students’ participation in sports was lack of money, however, Stavropoulou (2008) notes that the cost of the activities is not a motivation factor to participation in recreational activities since it does not affect the choice of activity or the frequency of practicing. A study by Alberta (2004) that reports over half of those respondents (54.3%), who wanted to start a new activity identified user charges as a constraint.

According to Cortis, Swarikar and Muir (2007) study on participation in sport and recreation by culturally and linguistically diverse women in Australia, some women find sport and recreation to be less costly in Australia while most of the women find the cost of sport and recreation presented barriers to their participation, as well as lacking the money to participate themselves, some women also perceived women's sport and recreation organization’s to have resource problems.

2.9 Accessibility of Facilities and Recreation Participation

Availability and location of facilities determine the participation level in informal recreational activities (Jones, 1998). To participate in recreational activities that need to be carried out outside the home requires arrangement to travel and the means of
travel, this can have an impact on the level of satisfaction, that is, although low mobility can determine the level of participation, the higher mobility is not a requirement of greater participation, however, it can lessen the burden associated with travel (Jones, 1998). Collins (2008) indicates that the utmost profoundly used parks are the ones situated within urban areas. Similarly, Hyker (2010) indicates that accessibility and distance stress the urban residents on participation to outdoor recreation in the urban areas. This is in agreement with Neuvonen et al. (2007) study that shows distance to activity areas affects people’s participation in sporting activities. Similarly, this is supported by Askins’ (2004) study that also suggests that lack of safe and accessible means intensifies lack of participation in recreational activities since even if some people have the need, then, the public transport may not be available while Hoden (2010), Stanis et al. (2010) and Kara and Demirci (2010) indicates that long distance to activity areas is indicated as the most significant recreational constraints

Participation in recreational activities is regular if sport facilities were located near their homes (Grahn & Stigsdotter, 2003). Some studies have considered and weighed distance between recreational areas and peoples’ homes, for example, Grahn and Stigsdotter (2003) regarded one kilometre as the extreme distance for the peak usage of people. In other studies, it is suggested that the venue of day-to-day recreational activities should not exceed 250 -300 metres away from peoples' homes (Ministerraad, 1996). Alexandris and Carroll (1999) argues that to place facilities a distance from individual’s home would require one to consume a lot of time to get there, thus, raising the cost. A study by Salami et al. (2002) on the barriers towards participation of women
in sports in Iran where 1640 women were selected from different provinces of Iran show that lack of sport facilities for women and unsuitable financial situation hindered women’s participation in sports. Information on leisure facilities grows from seeing them, when people talk about them or read about them, when people come across them on their way to work or the market places and they are more likely to use that facility than the one nearer home since have become more aware of it (Jones, 1998).

2.10 Awareness and Recreation Participation

Many studies indicate that lack of awareness on the benefits of physical activity, social restrictions and cultural-related problems are among the common constraints to participation in sports among women (Ehsani, 2007). Brown, Clark, McCool and Stankey (1999) note that drawing awareness of recreational centres, satisfying recreation experiences by giving information of these centres that can provide given experiences to people helps disband recreationists among available sports thereby decongesting the centres and reducing conflict among different types of recreationists.

2.11 Expectations from the Significant Others on Recreation Participation

A study by Asihel’s (2005) on perceptions of constraints to recreational sports participation among the University of Western Cape undergraduate female students shows that expectations of significant others have prohibited female students from engaging in recreation sport in the university. This was so since the significant others never treat sport and recreation suitable practice culturally. This is in consistent with a study by Kagathi (2008) who also reports that support by family members like husband,
lover, brother, father or cohabiter is necessary before a woman can engage in a leisure activity. The UN (2007) report that the absence of gender labels in sport have contributed a great deal in the exceptional achievement of Chinese women athletes during international competitions.

Henderson and Bialescki (1999) in their study shows that lack of time because of family obligations was regarded as women’s main barrier in early and future family phases. This was also supported by Shaw (1994) who indicated that women are disadvantaged as far as time for participation is concerned due of household obligation and family commitments which are different from their male counterparts. A survey on women’s sport participation by Brown, Brown, Miller and Hansen’s (2000) indicates that majority of mothers with young children who have backing from their close people or surroundings like friends, family, partner, had constructive outcome on women’s willingness for participation while some women succeeds to get the power of drive, time and user charge needed for recreation participation no matter their socio-economic class or the back-up they might get or not.

2.12 Related Studies

In a study on the physical recreational behaviours and preferences of the residents in Istanbul, 1400 residents in 32 districts of that city were selected for study; lack of time, financial problems, and health problems were regarded as the strongest constraint to recreational activities participation (Kara & Demirci, 2010). The current study sought
to find out whether leisure time and income level influence the frequency of participation in recreational activities for women residing in Kibera Informal Settings.

An empirical study carried out on Botswana women indicates that 28% (395) of the target population reported their lack of participating in leisure is because of time constraint especially after work, 16% indicated lack of support from significant others, 28% due to unavailability and distance from the facilities, 13% due to family commitments and the remaining 15% due to lack of funds to pay for facilities (Kagathi, 2008). This is supported by Jackson and Dunn (1991) who reported time and money to be the two top constraints to leisure. This study intended to find out whether similar constraints have specific effects on frequency of participation in most recreational activities by women in Kibera informal settlements.

A study by Australian Sport Commission (2012) conducted on Participation of Australians and Tasmanians in Exercise, Recreation and Sport shows that consistent participation rates in physical activity for Australia and Tasmania are linked with education levels; regular participation rates increase with an increase of the level of education. The 2010 survey reported that in Australia, those with a university degree participation rate was (54.7%), diploma (50.6%), still at secondary school (51.8%) had the highest regular participation rate. The trend was the same even with those who did not complete the highest level of schooling (39.2%) while those who never went to school had (34.4%). In Tasmania, the results were similar in 2010 since those with a university degree or higher qualification had acquired the highest regular participation
rate of 56.2% participating in regular physical activity. Undergraduate degree or associate diploma had the second highest total regular participation rate at 47.9%; those who never completed the ‘highest level of school’ had the lowest total participation rate of all education levels, at 38.6 per cent. The current study was conducted in a slum and other than education level; it addressed other possible constraints to recreation participation like income level, family size, awareness of recreational facilities/programmes, age, accessibility and leisure time.

A study conducted by Stavropoulou (2008) on Constraints and Motives Related with Women’s Physical Activity participation, with an incidental sample of N=181 women aged between 30-65 years old indicates; about 10% of the sample has children below seven years old, 19% had children between the ages 7–14 years old, 22% between 15–18 years old while the rest 48% has older children or they have no children at all. More than 78% of the respondents are employed, majority earned between 20,000 to 30,000 pounds, 82% of the respondents were married and 63% used a car to get to the activity. The study further indicates lack of time was as a constraint in relation to family obligation, work obligation and distance from the activity with family obligation and work obligation taking the highest percentage, income level was not a determinant since the highest percentage reported cost of activity or user charge does not affect the choice of activity or frequency of participation.
2.13 Summary of Reviewed Literature

A slum is a poor residential area with temporary substandard housing structures which vary from simple shacks to temporary and well-developed structures, there is poor security, limited social amenities, poor sanitation, poor garbage disposal systems, crowded and occupied with people of low income, no proper roads, sewers, water, electricity, or green spaces for recreation and the houses are below the minimum standard (Erulkar & Matheka, 2007 and Harrison, 2002) and their personal lifestyle incorporates smoking, alcohol and drug abuse (Davis & Jason, 2007; Mazige, 2008).

Recreation is regarded as a valid human need directed for psychological and physical wellness of oneself and the larger society (Nelson, 2000). According to Iwasaki (2006), leisure and recreation participation are regarded as a sure way of fulfilling the earth with opportunities to live a valuable and meaningful life, which can help improve quality of life (Iwasaki, 2006). Autry (2001) marked that the experiential leisure activities are foundations of enhancing teamwork. According to Mozafari, Kalane, Shaji and Hadari (2010) and Walker, Virden & Jackson (2005), fear of assault, lack of facility, gender, race, high entrance fee, lack of care and broken equipment are among the factors affecting preferences and participation by different groups of people in recreational activities.

Hyker (2010) indicates that accessibility and distance pressures the urban residents on participation to outdoor recreation in the urban areas face Women living in Kibera Informer Settlement just like those in other slums of the world experience misgivings
as they try to cope with day-to-day societal expectations, due to the nature of their residential areas, their security is not guaranteed at night, there are regarded as the family care-givers, they are obliged by the society to be the home makers, most of them have no jobs or they rely on part-time casual jobs or small businesses, this leaves them at a dilemma on the choice of participating in recreational activities due to high user charge in some recreational centres, their income level allows them to cater only for the most basic needs hence regarding recreational activities luxurious. Therefore, the study tried to establish if the gender, user charge and accessibility of the recreational facilities influence the participation in recreational activities among women living in Kibera Informer Settlement.

As Mwisukha and Wanderi (2009) report, time has been a higher constraint to recreation participation; this is where the world has viewed time as a commodity and therefore, a feeling that there should be no time wasted in other activities which are not generating income, A study by Alexandris and Carroll (2010) on demographic differences in the perception of constraints on recreational sport participation shows that married individuals have less time to attend to the recreational activities than single persons. The women living in informal settlement due to family obligations find it difficult to balance their time, hence, leaving them with very little time or completely no time to attend recreational activities, in connection to this context, the need of this study to establish whether time influences the rate of participation in recreational activities among the women in Kibera informal settlement.
Hayes (2004) showed that education level is significantly related to the motivation for participating in recreational activities while Tierney, Chavez and Absher (2000) indicate that the higher the education level, the higher the likelihood of visiting the natural areas. A research conducted in France shows that the level of education is the most selective determinant as far as participation in sports is concerned, the study reviews that participation rates increase alongside the period of study and also the level attained, the parental level of education determines the young girls’ participation in sports and also their level of participation (Louveau, 2004). On the other hand, level of income is one among the most significant recreational constraints that play a crucial role on people’s participation in recreational activities as compared to gender, age, race and educational level (Johnson et al., 2001; Shores, Scott & Floyd(2007). Since most women in Kibera informal settlement are jobless, their education level and that of their spouses are relatively low, they rely on their husbands for basic upkeep or upkeep from small businesses they could be running, so, they may need to make a decision on whether to utilize their little earnings on paying for recreational activities or meet the essentials of their families. Therefore, the study addressed the accessibility to recreational opportunities, educational and income levels of women in Kibera to find out whether they influence their participation in recreational activities.

Bolen et al., (2000) indicated that as one ages, there is a decrease in participation in outdoor and physical activities. Currie (2004) found that the young mothers who participated in physical activity had greater feelings of wellbeing while older women are reported to be constrained by poor health, lack of companion and age related norms
which ultimately hinder positive outcome on their leisure and recreation participation (Ullman, 2011). There is need for active lifestyle even as one retires, women living in Kibera informal settlement are of different ages and they have different experiences on how they utilize their leisure time since their responsibilities tend to vary, therefore, a need to conduct a study to assess how age influences the participation level in recreational activities among women in Kibera informal settlement.

Ehsani (2007) notes that the lack of awareness on the benefits of physical activity, social restrictions and cultural-related problems are among the common constraints to participation in sports among women, awareness of the recreational activities and its importance can be as a result of factors like education level and attitude, due to the lifestyle of Kibera residents, these two factors could contribute to their awareness of recreational activities and where they can be found. Hence, this study assessed how awareness influenced participation in recreational activities among women in Kibera informal settlement. Most of the reviewed studies on constraints to recreation participation seem to be conducted outside Kenya where living settings and economic growth is different, some of the studies were conducted on women living in good suburbs and others in colleges. Literature on studies conducted in informal settlement regarding recreation participation is dismal, so there was need to conduct a study to assess the determinants of participation in recreational activities among women living in Kibera Informal Settlement.
CHAPTER THREE
METHODOLOGY

3.0 Introduction

This chapter describes the research design, location of the study, target population, sample size and sampling procedures, instrumentation, sampling technique and pre-testing of research instruments. Other areas include logistical and ethical considerations, data collection procedures and data analysis techniques.

3.1 Research Design

The descriptive survey research design was used in this study because it seeks to establish the status of phenomena; it is used to explore existing status of variables for the purpose of describing a population too large to observe directly (Mugenda & Mugenda, 2003). This research design is appropriate for the current study because it sought to establish the current status of recreation participation and opportunities for women in Kibera Informal settlements, Nairobi County, Kenya.

3.2 Variables

The dependent variable was the frequency of participation in recreational activities by women in Kibera informal settlements and the independent variables were recreation participation determinants, namely; age categories, family size, education level, income level, available leisure time, user charge, accessibility and awareness.
3.3 Location of the Study

The study was conducted in Kibera informal settlements. The slum is reputed to be the second largest slum in Africa (Ndeti, 2003). It is located in Nairobi-West Sub-County, Nairobi County. It covers three locations of Sub-County, that is, Kibera, Serang'ombe and Laini Saba locations (Appendix G).

3.4 Target Population

The study targeted women living in the two divisions of Kibera informal settlements of age between 20 to 50 years since this age bracket is past regular schooling and therefore, their participation is not influenced by organized play programme in school and again they are not too old to have retired from participation in recreational activities, they are approximated to be 88,912 (Kenya National Bureau of Statistics, 2009).

3.5 Sampling Procedure and Sample Size

Out of the two divisions in Kibera informal settlements, Kibera division was purposively selected for the study as it has the expansive area of the informal settlements. Households were randomly selected from this division and women who met the age criterion in these households were targeted. The Fisher et al.\textsuperscript{3} formula (Mugenda & Mugenda, 2003) was used to determine the sample size whose subjects were selected using simple random sampling.

\[ n = \frac{Z^2pq}{d^2} \]

\( n \) = the desired sample size (if the target population is greater than 10,000)
Z = the standard normal deviate at the required confident level = 1.96
p= the proportion if the target population estimated to have the characteristics being measured = 0.5
q = 1-p
d = the level of the statistical significance set = 0.05

\[ n = \frac{(1.96)^2 (0.5)(0.5)}{(0.05)^2} = 384 \]

This number was considered appropriate and sufficient for it is manageable financially and meets the minimum criteria of acceptability in social science research.

3.6 Research Instrument

Data were collected using self-administered questionnaire (Appendix A) containing closed-ended questions with simple frequencies to capture information according to research objectives. The questionnaire consisted of a section of demographic data and the other section collected information on the participation in recreational activities among women in Kibera Informal Settlement. According to Kabiru and Njenga (2009), questionnaire is a suitable data collection tool in survey study because large coverage of the population can be realized with little time, personnel and cost.

3.7 Pre-Testing of Research Instrument

Thirty (30) women were randomly selected from Laini Saba Division in Kibera division who were not involved in the actual study for the pre-testing of instrument. The pre-testing helped determine the suitability and applicability of the research instrument and whether the questions were valid as interpreted by the respondents, or
had a consistent measure of the concept being studied. This also helped in training the research assistants.

3.8 Validity
To determine the validity of the instrument, the study used content validity. The researcher sought an expert’s judgment from university supervisors to ascertain the instruments validity. Their views were used to address the discrepancies, adjustments, corrections an also in rephrasing the statements as Mugenda and Mugenda (2003) indicates that experts judgment ensures accuracy of instrument is ascertained.

3.9 Reliability of Instrument
Reliability of the items of the questionnaire was ascertained by the test re-test method. This was done by administering questionnaires to thirty women from the selected homesteads of Kibera informal settlement twice, with three weeks’ time difference between the two tests. The completed instruments were analyzed after administration; the two analyses were used to calculate coefficient correlation where the Spearman Rank correlation was used to obtain a reliability index of 0.76 which was accepted as it reflected reliability of the instrument.

3.10 Data Collection Procedures
The questionnaire was hand-delivered by the researcher and research assistants to women who were randomly selected, this happened after the researcher explained the purpose of study to the respondents and after they agreed to take part in the study they
signed the consent form. Only the women who met the age criterion and gave the consent were asked to complete the questionnaire as the distributor waited. The data collection was conducted on Saturdays and Sundays to include the women working outside Kibera on working days in the study. Those who experienced any difficulty relating to language barrier were assisted by the researcher and the research assistants.

3.11 Data Analysis

The data were coded and organized for analysis using the Statistical Package for Social Sciences version 20.

The results were organized, tabulated and presented in frequencies and percentages. Chi-square ($\chi^2$) test of independence was used to test the hypotheses at a significance level of 0.05. Chi-square is a general test designed to evaluate whether the difference between observed frequencies and expected frequencies under a set of theoretical assumptions is statistically significant (Nachmias & Nachmias, 2005).

3.12 Logistical and Ethical Considerations

The researcher sought approval to conduct the research from the National Council for Science and Technology (Appendix C) and the office of the Assistant County Commissioner (Nairobi West Sub-County) as well as subjects’ consent to participate in the study (Appendix B). The respondents were assured of confidentially of the information that they provided.
CHAPTER FOUR

FINDINGS

4.0 Introduction

This chapter presents findings of the study whose purpose was to assess the determinants of women’s participation in recreational activities in Kibera informal settlement, Nairobi, Kenya. The study sought information from women residing in Kibera informal settlement using closed-ended questionnaire.

4.1 Demographic Characteristics of the Respondents

4.1.1: Age Categories of the Respondents

Figure 4.1 shows the distribution of the participants based on their age categories

![Pie Chart](image)

Figure 4.1: Age Categories of the Respondents
Majority of the respondents who were sampled were in the 20-25 age categories; this represented 152 (39.58%) of the total number of respondents. The second main age category was 26-30 with 104 (27.08%) of the respondents. 88 (22.92%) were between 31 and 40 years and only 40 (10.42%) of the respondents were within the age of 41-50 years.

4.1.2 Family Sizes of the Respondents

Figure 4.2 shows the distribution of the participants based on their family size.

Figure 4.2 Family Sizes of the Respondents

Figure 4.2 shows that most of the respondents, 165 (42.96%), had 1-2 children, while those with 3-4 children were 132 (34.38%), and those with 5 or more children were 59 (15.36%). Only 28 (7.29%) of the respondents had no children.
4.1.3 Education Level of the Respondents

Figure 4.3 shows the distribution of the participants based on their highest levels of Education

![Pie Chart]

Figure 4.3: Education Levels of the Respondents

Majority of the respondents, 223 (58.07%), had attained primary school level of education, 105 (27.34%) had secondary school level of education, those who had attained college level of education were 34 (8.85%), whereas 14 (3.65%) had not gone to school at all and only 8 (2.08%) had attained university education.
4.1.4 Employment Status of the Respondents

Figure 4.4 shows the distribution of the participants based on their employment status.

![Employment Status Pie Chart]

It is evident from figure 4.4 that the majority, 183 (47.66%) of the respondents were self-employed, 165 (42.97%) of them were unemployed and only 36 (9.38%) were employed.
4.1.5 Income Levels of the Respondents

Figure 4.5 shows the distribution of the participants based on their income levels.

Figure 4.5: Income Levels of the Respondents

Figure 4.5 shows that majority of the respondents, 342 (89.06%) earned Ksh.10, 000 and below, 14 (3.65%) earned between Ksh.10, 001-20, 000, 10 (2.60%) earned between Ksh.20, 001-30, 000 while 9(2.34%) earned between Ksh.30, 001 – 40, 000 and 9 (2.34 %) earned above Ksh.40, 000.
4.2 The Most Popular Recreational Activities for Women in Kibera Informal Settlement

The first objective that guided the study was to determine the most popular recreation activities for women in Kibera informal settlement. The frequencies and percentages of the responses are shown in tables 4.1 and 4.2.

Table 4.1: Indoor Recreational Activities for Women in Kibera Informal Settlement

<table>
<thead>
<tr>
<th>Activity</th>
<th>Responses/Percentages (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Movies and Cinemas</td>
<td>106 (27.6%)</td>
</tr>
<tr>
<td>Singing and Dancing</td>
<td>175 (45.8%)</td>
</tr>
<tr>
<td>Aerobics</td>
<td>39 (10.2%)</td>
</tr>
<tr>
<td>computer games</td>
<td>75 (19.5%)</td>
</tr>
<tr>
<td>Snooker / pool</td>
<td>19 (4.9%)</td>
</tr>
<tr>
<td>Darts</td>
<td>28 (7.3%)</td>
</tr>
<tr>
<td>weight lifting</td>
<td>35 (9.1%)</td>
</tr>
<tr>
<td>martial arts</td>
<td>88 (22.9%)</td>
</tr>
<tr>
<td>listening to music</td>
<td>329 (85.7%)</td>
</tr>
</tbody>
</table>

The respondents were asked if they participated in indoor recreational activity or not. The results in table 4.1 indicate that all the activities were engaged in for recreation by
women in Kibera informal settlement although the proportions of the women participating in each of the activities differed. Majority of women 329(85.7%) listened to music followed by 175(45.8%) who participated in singing and dancing, 106(27.6%) watched movies and cinemas, 88(22.9%) participated in martial arts, 75(19.5%) played computer games, 39(10.2%) participated in aerobics, 35(9.1%) in weight lifting and only 19(4.9%) and 28(7.3%) of the women participating in snooker pool and darts respectively.

Table 4.2: Outdoor Recreational Activities for Women in Kibera Informal Settlement

<table>
<thead>
<tr>
<th>Activity</th>
<th>Responses/Percentages (%)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Watching football</td>
<td>293 (76.3%)</td>
<td>91 (23.7%)</td>
<td></td>
</tr>
<tr>
<td>Playing team games</td>
<td>98 (25.5%)</td>
<td>286 (74.5%)</td>
<td></td>
</tr>
<tr>
<td>Swimming</td>
<td>65 (16.9%)</td>
<td>319 (83.1%)</td>
<td></td>
</tr>
<tr>
<td>Visiting parks</td>
<td>224 (58.3%)</td>
<td>160 (41.7%)</td>
<td></td>
</tr>
<tr>
<td>Playing ajua&amp; cards</td>
<td>51 (13.3%)</td>
<td>333 (86.7%)</td>
<td></td>
</tr>
<tr>
<td>Jogging/running</td>
<td>133 (34.6%)</td>
<td>251 (65.4%)</td>
<td></td>
</tr>
<tr>
<td>Walking</td>
<td>328 (85.4%)</td>
<td>56 (14.6%)</td>
<td></td>
</tr>
<tr>
<td>Cycling</td>
<td>69 (18.0%)</td>
<td>315 (82.0%)</td>
<td></td>
</tr>
</tbody>
</table>
Table 4.2 shows the responses of the women relating to their participation in outdoor recreational activities. The data indicate that a high percentage of women in Kibera informal settlement 328(85.4%) are engaged in walking during their free time followed by 293(76.3%) who watched football. Slightly above half of the respondents 224(58.3%) reported to visit parks as a recreational activity. The least outdoor recreational activity in which they participated was playing cards/ajua 51(13.3%), followed by 65(16.9%) who enjoyed swimming.

4.3 Demographic Factors Determining the Frequency and Percentage (%) of Participation in Recreational Activities among Women in Kibera Informal Settlement

This sub-section addresses the second objective that focused on determining if age of the respondents, their family size, education level and their income level determine the frequency of participation in recreation activities among women in Kibera informal settlement. Cross tabulations between the demographic factors determining participation and frequency of women’s participation were done and the results presented for both indoor and outdoor activities. Hypothesis testing was done using the chi-square test to determine if the demographic factors significantly influenced the frequency of participation in indoor and outdoor recreational activities.
Table 4.3: Frequency and Percentage (%) of Participation in Indoor Recreational Activities per week in Relation to Income Level

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Income Level</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>10,000 &amp; below</td>
<td>10,001-20,000</td>
</tr>
<tr>
<td>Once</td>
<td></td>
<td></td>
</tr>
<tr>
<td>79 (22.8%)</td>
<td>4 (28.6%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>Twice</td>
<td>96 (28.1%)</td>
<td>5 (35.7%)</td>
</tr>
<tr>
<td>Thrice</td>
<td>54 (15.8%)</td>
<td>1 (7.1%)</td>
</tr>
<tr>
<td>Four and above</td>
<td>84(24.6%)</td>
<td>4 (28.6%)</td>
</tr>
<tr>
<td>None</td>
<td>30 (8.8%)</td>
<td>0 (0.0%)</td>
</tr>
<tr>
<td>Total</td>
<td>342 (89.1%)</td>
<td>14 (3.6%)</td>
</tr>
</tbody>
</table>

\[ n=384, \text{df}=16, \text{p-value}=0.582, \alpha=0.05 \]

Table 4.3 shows that 342(89%) of the respondents earned less than Ksh.10,000 a month while 9(2.3%) earned over Ksh.40,000 a month, but majority 96(28.1%) and 96(24.6%) who earned less than Ksh.10,000 a month participated twice and four times and above per week respectively. The group with higher income of more than Ksh40,000 is 9(2.3%); this group participated once and four times and above per week. From this trend, it is clear that the groups earning less also participated in indoor recreational activities regularly just as the group with the higher income.
The Chi-square test of independence showed no statistically significant ($p>0.05$) association in the frequency of participation in indoor recreational activities by women in Kibera Informal settlement in relation to income level. Hence, the null hypothesis that participation in indoor recreational activities by women in Kibera Informal settlement would not be significantly influenced by income level is accepted. This implies that participation in indoor recreational activities by women in Kibera Informal settlement in relation to income level is not significantly different; level of income was not a determining factor.

### Table 4.4: Frequency and Percentage (%) of Participation in Outdoor Recreational Activities per week in Relation to Income Level

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Income Level</th>
<th>10,000 &amp; below</th>
<th>10,001-20,000</th>
<th>20,001-30,000</th>
<th>30,001-40,000</th>
<th>Above 40,000</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once</td>
<td>10,000 &amp; below</td>
<td>118 (34.7%)</td>
<td>7 (50%)</td>
<td>2 (20%)</td>
<td>6 (66.7%)</td>
<td>4 (44.4%)</td>
<td>137 (35.9%)</td>
</tr>
<tr>
<td></td>
<td>10,001-20,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>20,001-30,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>30,001-40,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Above 40,000</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>342 (89.1%)</td>
<td>14 (3.6%)</td>
<td>10 (2.6%)</td>
<td>9 (2.3%)</td>
<td>9 (2.3%)</td>
<td>384 (100%)</td>
</tr>
</tbody>
</table>

$n=384$, $df=16$, $p$-value=0.633, $\alpha=0.05$
Table 4.4 shows that 342 (89.1%) of the respondents earned less than Ksh.10, 000 a month while 9 (2.3%) earned over Ksh.40, 000 a month. Majority, 118 (34.7%) and 87 (25.6%) who earned less than Ksh.10, 000 a month participated once and twice per week respectively. It is clear that 26 (7.6%) and 52 (15.3%) participated thrice and four and above times per week. Only 9 (2.3%) with higher income of more than Ksh.40, 000 participated once and four times and above per week. From this trend, it is evident that the groups earning less than Ksh.10, 000 participated in outdoor recreational activities more while the ones with higher income participated less in the out-door activities per week; this implied that the income per month *per se* is not what determines the frequency of participation since those earning less participated more frequently than the group with the higher pay; this explains why activities like walking that are not associated with any payment are highly participated in.

The Chi-square test of independence showed that the frequency of participation in out-door recreational activities in relation to income level of women in Kibera Informal settlement is statistically not significant ($p > 0.05$). Hence, the null hypothesis that participation in out-door recreational activities would not be significantly influenced by income level is accepted. This implies that participation in out-door recreational activities by women in Kibera Informal settlement is not significantly influenced by income level.
Table 4.5: Frequency and Percentage (%) of Participation in Indoor Recreational Activities in Relation to Education Level

<table>
<thead>
<tr>
<th>Frequency</th>
<th>No Formal Education</th>
<th>Primary</th>
<th>Secondary</th>
<th>College</th>
<th>University</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once</td>
<td>1 (7.1%)</td>
<td>55 (24.7%)</td>
<td>24 (22.9%)</td>
<td>6 (17.6%)</td>
<td>1 (12.5%)</td>
<td>87 (22.7%)</td>
</tr>
<tr>
<td>Twice</td>
<td>2 (14.3%)</td>
<td>66 (29.6%)</td>
<td>27 (25.7%)</td>
<td>11 (32.4%)</td>
<td>2 (25.0%)</td>
<td>108 (28.1%)</td>
</tr>
<tr>
<td>Thrice</td>
<td>0 (0.0%)</td>
<td>31 (13.9%)</td>
<td>19 (18.1%)</td>
<td>8 (23.5%)</td>
<td>1 (12.5%)</td>
<td>59 (15.4%)</td>
</tr>
<tr>
<td>Four and above</td>
<td>7 (50%)</td>
<td>48 (21.5%)</td>
<td>31 (29.5%)</td>
<td>9 (26.5%)</td>
<td>4 (50.0%)</td>
<td>99 (25.8%)</td>
</tr>
<tr>
<td>None</td>
<td>4 (28.6%)</td>
<td>23 (10.3%)</td>
<td>4 (3.8%)</td>
<td>0 (0.0%)</td>
<td>0 (0.0%)</td>
<td>31 (8.1%)</td>
</tr>
<tr>
<td>Total</td>
<td>14 (3.6%)</td>
<td>223 (58.1%)</td>
<td>10 (27.3%)</td>
<td>34 (8.9%)</td>
<td>8 (2.1%)</td>
<td>384 (100%)</td>
</tr>
</tbody>
</table>

\[ n=384, df=16, p=0.017, \alpha=0.05 \]

Table 4.5 shows 108 (28.1%) of the respondents participated in indoor recreational activities twice in a week and 66 (29.6%) of them with primary level of education, while those with university education, 8 (2.08%) participated least. Out of those who participated most in a week, 48 (21.5%) had attained primary level of education followed by 31 (29.5%) who had attained secondary education level respectively. Out of those who never participated, 4 (28.6%) had no formal education.

The Chi-square test of independence showed statistically significant \( p<0.05 \) of association in the frequency of participation in indoor recreational activities in relation to educational level. Hence, the null hypothesis that participation in recreational
activities would not be significantly influenced by education level is rejected. This implies that the frequency of participation in indoor recreational activities was determined by the women’s education level.

Table 4.6: Frequency and Percentage (%) of Participation in Out-door Recreational Activities in Relation to Education Level

<table>
<thead>
<tr>
<th>Frequency</th>
<th>No Formal Education</th>
<th>Primary</th>
<th>Secondary</th>
<th>College</th>
<th>University</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once</td>
<td>6 (42.9%)</td>
<td>73 (33%)</td>
<td>42 (40.0%)</td>
<td>14 (41.2%)</td>
<td>2 (25%)</td>
<td>137 (35.9%)</td>
</tr>
<tr>
<td>Twice</td>
<td>3 (21.4%)</td>
<td>54 (24.4%)</td>
<td>26 (24.8%)</td>
<td>11 (32.4%)</td>
<td>2 (25%)</td>
<td>96 (25.1%)</td>
</tr>
<tr>
<td>Thrice</td>
<td>1 (7.1%)</td>
<td>17 (7.7%)</td>
<td>5 (4.8%)</td>
<td>2 (5.9%)</td>
<td>3 (37.5%)</td>
<td>28 (7.3%)</td>
</tr>
<tr>
<td>Four and above</td>
<td>1 (7.1%)</td>
<td>31 (13.9%)</td>
<td>21 (20%)</td>
<td>5 (14.7%)</td>
<td>0 (0.0%)</td>
<td>58 (15.1%)</td>
</tr>
<tr>
<td>None</td>
<td>3 (21.4%)</td>
<td>48 (21.7%)</td>
<td>13 (10.5%)</td>
<td>2 (5.9%)</td>
<td>1 (12.5%)</td>
<td>65 (17.0%)</td>
</tr>
<tr>
<td>Total</td>
<td>14 (3.6%)</td>
<td>223 (58.1%)</td>
<td>105 (27.3%)</td>
<td>34 (8.9%)</td>
<td>8 (2.1%)</td>
<td>384 (100%)</td>
</tr>
</tbody>
</table>

\(n=384, df=16, p=0.109, \alpha=0.05\)

Table 4.6 shows that 137 (35.9%) of the respondents participated in outdoor recreational activities once in a week where 6 (4.4%) and 72 (52.6%) had no formal education or had attained primary level of education respectively. On the other hand, those with college and university education were 14 (41.2%) and 2 (25%) but participated least in outdoor recreation activities. 58 (15.1%) participated in outdoor recreational activities four times and above per week, from this group 1 (1.7%) had no
formal education while 31(53.4%) and 21(36.2%) had attained primary and secondary levels of education respectively. Out of those who never participated, 3 (4.6%) had no formal education. From these results, it is evident that majority of the respondents had only literacy level primary education and this forms the major group of those who participated in outdoor recreational activities most.

The Chi-square test of independence showed no statistically significant ($p>0.05$) association between the frequency of participation in outdoor recreational activities and educational level. Hence, the null hypothesis that participation in outdoor recreational activities would not be significantly influenced by education level is not rejected. This implies that the frequency of participation in outdoor recreational activities was not significantly determined by the education level of women in Kibera Informal settlements.
Table 4.7: Frequency and Percentage (%) of Participation in Indoor Recreational Activities in Relation to Family Size

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Family Size</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No Child</td>
</tr>
<tr>
<td>Once</td>
<td>10 (35.7%)</td>
</tr>
<tr>
<td>Twice</td>
<td>8 (28.6%)</td>
</tr>
<tr>
<td>Thrice</td>
<td>2 (7.1%)</td>
</tr>
<tr>
<td>Four times and above</td>
<td>7 (25%)</td>
</tr>
<tr>
<td>None</td>
<td>1 (3.6%)</td>
</tr>
<tr>
<td>Total</td>
<td>28 (7.3%)</td>
</tr>
</tbody>
</table>

\(n=384, df=12, p=0.414, \alpha=0.05\)

Table 4.7 shows that a higher proportion of the women, 107 (27.9%) participated twice in a week followed by 98(25.5%) who participated in indoor recreational activities four or more times in a week. Out of these two larger groups, majority, 45(27.3%) and 42 (25.5%) respectively had a family size of 1-2 children. The trend from the responses shows that the rate of participation decreased with an increase in the size of the family.

The Chi-square test of independence showed that frequency of participation in indoor recreational activities in relation to family size of women in Kibera Informal settlement is statistically not significant \(p>0.05\). Therefore, the study does not reject the null hypothesis. This implies that participation in indoor recreational activities is not significantly determined by family sizes for women in Kibera Informal settlement. This
means that the frequency of participation in indoor recreation activities by women in Kibera Informal settlements is not determined by the family size.

Table 4.8: Frequency and Percentage (%) of Participation in Outdoor Recreational Activities in Relation to Family Size

<table>
<thead>
<tr>
<th>Frequency</th>
<th>No Child</th>
<th>1-2</th>
<th>3-4</th>
<th>5 or more</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once</td>
<td>12 (44.4%)</td>
<td>67 (40.9%)</td>
<td>43 (32.6%)</td>
<td>14 (23.0%)</td>
<td>136 (35.4%)</td>
</tr>
<tr>
<td>Twice</td>
<td>6 (22.2%)</td>
<td>38 (23.2%)</td>
<td>33 (25%)</td>
<td>18 (29.5%)</td>
<td>95 (24.7%)</td>
</tr>
<tr>
<td>Thrice</td>
<td>4 (14.8%)</td>
<td>11 (6.7%)</td>
<td>9 (6.8%)</td>
<td>4 (6.6%)</td>
<td>28 (7.3%)</td>
</tr>
<tr>
<td>Four and above</td>
<td>3 (11.1%)</td>
<td>28 (17.1%)</td>
<td>14 (10.6%)</td>
<td>11 (18.0%)</td>
<td>56 (14.6%)</td>
</tr>
<tr>
<td>None</td>
<td>2 (7.4%)</td>
<td>20 (12.2%)</td>
<td>33 (25%)</td>
<td>10 (23.0%)</td>
<td>65 (16.9%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>27 (7.1%)</td>
<td>164 (42.9%)</td>
<td>132 (34.6%)</td>
<td>57 (15.4%)</td>
<td>384 (100%)</td>
</tr>
</tbody>
</table>

\(n=384, \ df=12, p=0.079, \alpha=0.05\)

Table 4.8 shows that majority, 136 (35.4%) of the women participated in outdoor recreational activities once per week followed by 95 (24.7%) who participated in outdoor recreational activities twice per week. Out of those two larger groups, a higher number of 67 (40.9%) and 38 (23.2%) respectively had family sizes of 1-2 children. Out of those with regular participation of three and four and above times per week, a higher proportion of 11 (6.7%) and 14 (10.6%) had family sizes 1-2 and 3-4 respectively. From the trend, it is clear that the frequency of participation in outdoor recreational activities decreased with an increase in the size of the family. Regular participation in outdoor
recreational activities tends to improve to those families with children and deteriorates for the families with no children at all.

The Chi-square test of independence showed that frequency of participation in out-door recreational activities in relation to family size is not statistically significant \((p>0.05)\). Therefore, the null hypothesis that there would be no significant association for frequency of participation in out-door recreational activities with respect to family size is not rejected. Hence, the frequency of participation in out-door recreational activities was not significantly influenced by family sizes of women in Kibera Informal settlements.

Table 4.9: Frequency and Percentage (%) of Participating in Indoor Recreational Activities per Week in Relation to Age

<table>
<thead>
<tr>
<th>Frequency</th>
<th>20-25</th>
<th>26-30</th>
<th>31-40</th>
<th>41-50</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once</td>
<td>32 (21.1%)</td>
<td>26 (25.0%)</td>
<td>21 (23.9%)</td>
<td>8 (20%)</td>
<td>87 (22.7%)</td>
</tr>
<tr>
<td>Twice</td>
<td>46 (31.6%)</td>
<td>29 (27.6%)</td>
<td>22 (25.0%)</td>
<td>9 (22.5%)</td>
<td>108 (28.1%)</td>
</tr>
<tr>
<td>Thrice</td>
<td>30 (19.7%)</td>
<td>16 (15.4%)</td>
<td>12 (13.6%)</td>
<td>1 (2.5%)</td>
<td>59 (15.4%)</td>
</tr>
<tr>
<td>Four times or above</td>
<td>37 (24.3%)</td>
<td>25 (24.0%)</td>
<td>21 (23.9%)</td>
<td>16 (40%)</td>
<td>99 (25.8%)</td>
</tr>
<tr>
<td>None</td>
<td>5 (3.3%)</td>
<td>8 (7.7%)</td>
<td>12 (13.6%)</td>
<td>6 (15%)</td>
<td>31 (8.1%)</td>
</tr>
<tr>
<td>Total</td>
<td>152 (39.6%)</td>
<td>104 (27.1%)</td>
<td>88 (22.9%)</td>
<td>40 (10.4%)</td>
<td>384 (100%)</td>
</tr>
</tbody>
</table>

\(n=384, df=12, p=0.038, \alpha=0.05\)
Table 4.9 shows that 152 (39.6%) of the respondents were between the ages of 20-25, 102 (27.1%) of the respondents between ages 26-30, 88 (22.9%) of the respondents between ages 31-40 and 40 (10.4%) of the respondents between ages 41-50. For age groups 20-25 and 26-30 years, a larger proportion of them participated in indoor recreational activities twice, i.e. 46(31.6%) and 29(27.6)% respectively. For the age group of 31-40 years, a higher proportion of 21(23.9%) participated both once and four times and above per week. For the oldest age group (41-50 years) in the study, a bigger number 16(40.0%) participated in the activities four times and above. From this trend, it is evident that the older age groups tended to participate more frequently in the indoor activities per week, and this can be due to health issues.

The Chi-square test of independence showed a significant ($p<0.05$) association in the frequency of participation in indoor activities in relation to age. Hence, the null hypothesis that there would be no significant relationship in the frequency of the women’s participation in indoor recreational activities in relation to age is rejected. It can therefore, be concluded that there is a significant relationship in the frequency of participation in indoor activities per week in relation to the age groups. So, age of women in Kibera Informal settlements determines their frequency of participation in indoor recreational activities.
Table 4.10: Frequency and Percentage (%) of Participation in Outdoor Recreational Activities in Relation to Age in Years

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Age in Years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20-25</td>
</tr>
<tr>
<td>Once</td>
<td>66 (44.0%)</td>
</tr>
<tr>
<td>Twice</td>
<td>38 (25.3%)</td>
</tr>
<tr>
<td>Thrice</td>
<td>14 (9.3%)</td>
</tr>
<tr>
<td>Four and above</td>
<td>19 (12.7%)</td>
</tr>
<tr>
<td>None</td>
<td>15 (9.7%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>152 (39.6%)</td>
</tr>
</tbody>
</table>

\[n=384, \, df=12, \, p=0.038, \, \alpha=0.05\]

Table 4.10 shows 152 (39.6%) of the respondents were between 20-25 years of age, 104 (27.1%) were in the 26-30 age category, 88(22.9%) between the age group 31-40 and finally the 41-50 years category was represented by 40(10.4%) of the respondents. Majority of those in the younger age group, 20-25 and 26-30 who formed 66(44.0%) and 38(36.5%) of the respondents respectively participated in outdoor recreational activities once in a week. For the 31-40 and 41-50 age group, majority participated in outdoor recreational activities once 23 (26.1%) and twice 13(31.0%) respectively. This implies the older group participated more in outdoor recreational activities.
The Chi-square test of independence showed a significant association \((p = 0.05)\) between the frequency of participating in outdoor recreational activities and age. Hence, the null hypothesis that there would be no significant relationship in the frequency of participating in outdoor activities in relation to their age is rejected. This implies that the frequency to which women in Kibera informal settlement participated in outdoor recreational activities in relation to age as a determinant is significantly different. The age of the women significantly determined their participation in outdoor recreational activities; the older women participated in outdoor recreational activities more frequently than the younger ones.

4.4 Factors Influencing Frequency of Participation in Recreational Activities by Women in Kibera Informal Settlement

This section addresses objective 3 which focuses on determining if the frequency of participation in recreational activities among the women in Kibera informal settlement is influenced by available leisure time, user facility charges, accessibility to recreation facilities/programmes and awareness of available recreation opportunities. The frequency of participation in recreational activities was compared with the four factors to determine the influence they have on frequency of participation in indoor and outdoor recreational activities. Cross tabulations were done between frequency of participation in both indoor and outdoor activities and the four factors. The results are presented in the subsequent tables (4.11, 4.12, 4.13, 4.14 4.15 and 4.16). Hypothesis testing was then done using chi-square at 0.05 level of significant.
Table 4.11: Frequency and Percentage (%) of Participation in Indoor Recreation Activities per Week in relation to Availability of Leisure Time

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Availability of time</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>Once</td>
<td>50 (20.7%)</td>
<td>37 (25.9%)</td>
<td>86 (22.7%)</td>
<td></td>
</tr>
<tr>
<td>Twice</td>
<td>72 (29.9%)</td>
<td>36 (25.2%)</td>
<td>108 (28.1%)</td>
<td></td>
</tr>
<tr>
<td>Thrice</td>
<td>44 (18.3%)</td>
<td>15 (10.5%)</td>
<td>59 (15.4%)</td>
<td></td>
</tr>
<tr>
<td>Four times or above</td>
<td>64 (26.6%)</td>
<td>35 (24.5%)</td>
<td>99 (25.8%)</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>11 (4.6%)</td>
<td>20 (14.0%)</td>
<td>31 (8.1%)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>241 (62.8%)</td>
<td>143 (37.2%)</td>
<td>384 (100%)</td>
<td></td>
</tr>
</tbody>
</table>

\( n=384, df=4, p=0.003, \alpha=0.05 \)

Table 4.11 shows that 241 (62.8%) of women respondents reported that availability of time was a determinant in participating in the indoor recreational activities while 143 (37.2%) respondents indicated that it was not a determinant. Out of those who reported availability of time as a determinant in participating in indoor activities, a higher proportion 71(29.9%) participated twice. It is interesting that it is only 11(4.6%) who did not participate and yet they said that availability of time was a determinant. Generally, a higher percentage 230(95.4%) of those who said availability of time was a determinant participated in indoor activities at least once as compared to those who indicated that time was not a determinant 125(87.4%).
The Chi-square test of independence showed a significant \( p<0.05 \) association between the frequency of participation in the indoor recreational activities and availability of leisure time. Hence, the null hypothesis that there would be no significant relationship in the frequency of the women’s participation in the indoor activities in relation to availability of time is rejected. This means that availability of leisure time influences the frequency of participation in indoor recreational activities for the women residing in Kibera informal settlements.

**Table 4.12: Frequency and Percentage (%) of Participation in Outdoor Recreational Activities per Week in Relation to Availability of Leisure Time**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Availability of Time</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Total</td>
</tr>
<tr>
<td>Once</td>
<td>90(37.0%)</td>
<td>44(31.2%)</td>
<td>134(34.9%)</td>
</tr>
<tr>
<td>Twice</td>
<td>68(28.0%)</td>
<td>29(20.6%)</td>
<td>97(25.3%)</td>
</tr>
<tr>
<td>Thrice</td>
<td>20(8.2%)</td>
<td>9(6.4%)</td>
<td>29(7.6%)</td>
</tr>
<tr>
<td>Four times and above</td>
<td>41(16.9%)</td>
<td>18(12.8%)</td>
<td>59(15.4%)</td>
</tr>
<tr>
<td>None</td>
<td>24(9.9%)</td>
<td>41(29.1%)</td>
<td>65(16.9%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>243 (63.3%)</td>
<td>141 (36.7%)</td>
<td>384 (100%)</td>
</tr>
</tbody>
</table>

\( n=384, df=4, p=0.000, \alpha=0.05 \)

Table 4.12 shows that majority 243(63.3%) of the respondents reported availability of leisure time as a determinant in their frequency of participating in outdoor recreational activities while 141(36.7%) of the respondents reported otherwise. Larger proportions of both those who reported availability of time as a determinant and those who reported
that it is not a determinant participated in outdoor recreational activities once a week 97(37.0% and 44(31.2%) respectively). A bigger percentage 41 (29.1%) of those who said availability of time is not a determinant did not participate in the activities; this implies that the failure to participate is not per se because of availability of time but possibly because of other factors.

The Chi-square test of independence shows that the frequency of participating in outdoor recreational activities and availability of leisure time are statistically significant (p<0.05). Therefore, the null hypothesis that there would be no significant relationship in the frequency of participating in indoor activities in relation to availability of leisure time is rejected. This implies that the frequency to which women in Kibera informal settlements participate in outdoor recreational activities is significantly determined by availability of leisure time.
Table 4.13: Frequency and Percentage (%) of Participation in Indoor Recreational Activities per Week in Relation to User Charges

<table>
<thead>
<tr>
<th>Frequency</th>
<th>User Charge</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Once</td>
<td>62 (23.8%)</td>
</tr>
<tr>
<td>Twice</td>
<td>76 (29.2%)</td>
</tr>
<tr>
<td>Thrice</td>
<td>38 (14.6%)</td>
</tr>
<tr>
<td>Four times or above</td>
<td>66 (25.4%)</td>
</tr>
<tr>
<td>None</td>
<td>18 (6.9%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>260 (67.7%)</td>
</tr>
</tbody>
</table>

\[n=384, df=4, p=0.642, \alpha=0.05\]

Table 4.13 shows that 260 (67.7%) of the respondents indicated that user charges is a determinant of women’s participation in indoor recreational activities while 124(32.3%) of the respondents were of the view that user charges was not a determinant. Out of those who reported user charges as a determinant in women’s participation in indoor recreational activities, a higher proportion 76(29.2%) participated twice per week while those who reported it as not a determinant, a higher proportion 33(26.6%) participated four times or more per week in indoor recreational activities. Notably, 13(10.5)% of the respondents who reported that user charges was not a determinant never participated in any indoor recreational activity compared to 18(6.9)% of the respondents who reported user charges as a determinant who never participated in any recreational activity.
The Chi-square test indicated no significant ($p>0.05$) association in the frequency of participation in indoor recreational activities in relation to user charges. The null hypothesis that there is no significant association between the frequencies of participating in indoor activities in relation to user charges is not rejected. This implies that user charger does not influence the frequency of participation in indoor recreational activities for the women residing in Kibera informal settlements.

Table 4.14: Frequency and Percentage (%) of Participation in Outdoor Recreational Activities per Week in Relation to User Charge

<table>
<thead>
<tr>
<th>Frequency</th>
<th>User charge</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Once</td>
<td>99 (38.1%)</td>
</tr>
<tr>
<td>Twice</td>
<td>65 (25.0%)</td>
</tr>
<tr>
<td>Thrice</td>
<td>17 (6.5%)</td>
</tr>
<tr>
<td>Four times or above</td>
<td>36 (13.9%)</td>
</tr>
<tr>
<td>None</td>
<td>43 (16.6%)</td>
</tr>
<tr>
<td>Total</td>
<td>259 (67.4%)</td>
</tr>
</tbody>
</table>

$n=384$, $df=4$, $p=0.723$, $α=0.05$

Table 4.14 shows that 259(67.4%) of the respondents indicated user charge as a determinant of the frequency of their participation in outdoor recreational activities while 125 (32.6%) of the respondents indicated it was not a determinant. Out of those who reported user charge as a determinant, 97(38.1%) participated in outdoor
recreational activities once per week compared to 39(28.3%) of the respondents who indicated user charge not being a determinant. It is notable that almost the same percentage of those who indicated user charge as a determinant and those who did not 43(16.6%) and 23(18.9) % respectively), did not participate in any outdoor recreational activity.

The Chi-square test of independence showed no significant ($p>0.05$) association in the frequency of participating in outdoor recreational activities and user charges. Hence, the null hypothesis that there would be no significant relationship in the frequency of participating in indoor activities in relation to user charges is upheld. This implies that the frequency to which women in Kibera informal settlements participated in outdoor recreational activities was not significantly related for those who reported user charges as a determinant and for those who did not indicate that user charge as a determinant. Therefore, available user charge does not influence the frequency of participation in outdoor recreational activities for the women residing in Kibera informal settlement.
Table 4.15: Frequency and Percentage (%) of Participation in Indoor Recreational Activities in Relation to Distance to the Recreational Opportunities

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once</td>
<td>63(22.7%)</td>
<td>24(22.4%)</td>
<td>87(22.7%)</td>
</tr>
<tr>
<td>Twice</td>
<td>72(26.0%)</td>
<td>36(33.6%)</td>
<td>108(28.1%)</td>
</tr>
<tr>
<td>Thrice</td>
<td>46(16.6%)</td>
<td>13(12.1%)</td>
<td>59(15.4%)</td>
</tr>
<tr>
<td>Four times or above</td>
<td>76(27.4%)</td>
<td>23(21.5%)</td>
<td>99(25.8%)</td>
</tr>
<tr>
<td>None</td>
<td>20(7.7%)</td>
<td>11(10.3%)</td>
<td>31(8.1%)</td>
</tr>
<tr>
<td>Total</td>
<td>277(73%)</td>
<td>107(27%)</td>
<td>384(100%)</td>
</tr>
</tbody>
</table>

n=384, df=4, p=0.335, α =0.05

Tables 4.15 shows that 277 (72.1%) of the respondents reported that distance to the recreational facilities is a determinant in their participation in indoor recreational activities while 107(27.9%) of the respondents indicated that distance does not influence their frequency of participation in indoor recreational opportunities. A higher proportion 76(27.4%) of those who reported distance to recreational opportunities influences the frequency of participation participated four or more times per week. 36(33.6%) of the respondents who reported that the distance to indoor recreational opportunities does not influence the frequency of their participation were involved in indoor recreational activities twice per week while 23(21.5%) participated in the activities four or more times per week. At least 353(91.9%) of those who reported
distance as a determinant and those who reported distance not being a determinant participated in an indoor recreational activity at least once per week.

The Chi-square test of independence showed no significant \((p>0.05)\) association between the frequencies of participating in indoor recreational activities in relation to distance to indoor recreational opportunities. Hence, the null hypothesis that there would be no significant relationship in the frequency of participating in indoor activities in relation to distance to indoor recreational opportunities was upheld. This implies that distance to the indoor recreation opportunities does not influence the frequency of participation in indoor recreational activities for the women residing in Kibera informal settlements.

**Table 4.16: Frequency and Percentage (%) of Participation in Outdoor Recreational Activities per Week in Relation to Distance to the Recreational Facilities**

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Distance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Once</td>
<td>99 (38.1%)</td>
</tr>
<tr>
<td>Twice</td>
<td>65 (25.0%)</td>
</tr>
<tr>
<td>Thrice</td>
<td>17 (6.5%)</td>
</tr>
<tr>
<td>four times or above</td>
<td>36 (13.8%)</td>
</tr>
<tr>
<td>None</td>
<td>43 (16.5%)</td>
</tr>
<tr>
<td>Total</td>
<td>260(67.7%)</td>
</tr>
</tbody>
</table>

\(n=384, \text{df} =4, p=0.727: \alpha=0.05\)
Table 4.16 shows that 260 (67.7%) indicated distance to outdoor recreational opportunities as a determinant of their participation in outdoor recreational activities while 124 (32.3%) of the respondents reported otherwise. Out of those who indicated distance to outdoor recreational opportunities as a determinant, 99 (38.1%) participated once in a week in the outdoor recreational activities as compared to 39 (31.5%) of respondents who did not report distance as a determinant yet they participated once per week, only 43 (16.5%) of those reported distance as a determinant never participated at all whereas 22 (17.7%) of the respondents never reported distance as a determinant, yet they never participated at all.

The Chi-square test of independence showed that there was no significant ($p>0.05$) association between the frequency of participating in outdoor recreational activities and the distance to outdoor recreational facilities. Therefore, the null hypothesis that there is no significant relationship in the frequency of participating in indoor activities in relation to distance to outdoor recreational facilities was not rejected. This implies that there was no significant association between the frequency to which women in Kibera informal settlements participated in outdoor recreational activities and distance to the outdoor recreational facilities. The distance to recreational facilities did not determine their frequency of participation in recreational activities.
Table 4.17: Frequency and Percentage (%) of Participation in Indoor Recreational Activities per Week in Relation to Transport to the Recreational Facilities

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Transport</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Total</td>
</tr>
<tr>
<td>Once</td>
<td>68(23.8%)</td>
<td>19(19.4%)</td>
<td>87(22.7%)</td>
</tr>
<tr>
<td>Twice</td>
<td>78(27.3%)</td>
<td>30(30.6%)</td>
<td>108(28.1%)</td>
</tr>
<tr>
<td>Thrice</td>
<td>41(14.3%)</td>
<td>18(18.4%)</td>
<td>59(15.4%)</td>
</tr>
<tr>
<td>four times or above</td>
<td>78(27.3%)</td>
<td>21(21.4%)</td>
<td>99(25.8%)</td>
</tr>
<tr>
<td>None</td>
<td>21(7.3%)</td>
<td>10(10.2%)</td>
<td>31(8.1%)</td>
</tr>
<tr>
<td>Total</td>
<td>286(74.5%)</td>
<td>98(25.5%)</td>
<td>384(100%)</td>
</tr>
</tbody>
</table>

$n=384, df=4, p=0.495, \alpha=0.05$

Table 4.17 shows that 286 (74.5%) of the respondents reported that transport is a determinant of their participation in indoor recreational activities while 98 (25.5%) of the respondents reported that transport does not influence their frequency of participation in indoor recreational opportunities. A larger proportion 78(27.3%) of those who reported transport is a determinant to their access to indoor recreational opportunities participated in the activities four or more times per week. 30(30.6%) of the respondents who reported that transport does not determine their participation in indoor recreational opportunities participated in the indoor recreational activities twice per week while 21(21.4%) of the respondents who reported that transport does not determine their participation in indoor recreational opportunities participated in the
activities four or more times per week. At least 353 (91.9%) of those who reported transport as a determinant and those who reported transport not being a determinant participated in an indoor recreational activity at least once per week.

The Chi-square test of independence showed no significant (p > 0.05) association between the frequency of participation in indoor recreational activities in relation to transport to the indoor recreational opportunities. Hence, the null hypothesis that there would be no significant relationship in the frequency of the women’s participation in indoor activities in relation to transport to the indoor recreational opportunities was upheld. This means that transport to indoor recreational opportunities did not influence the frequency of participation in indoor recreation activities for the women residing in Kibera informal settlement.

Table 4.18: Frequency and Percentage (%) of Participating in Outdoor Recreational Activities per Week in Relation to Transport to the Recreational Facilities

<table>
<thead>
<tr>
<th>Frequency per week</th>
<th>Transport</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td>Once</td>
<td>110 (38.5%)</td>
</tr>
<tr>
<td>Twice</td>
<td>73 (25.5%)</td>
</tr>
<tr>
<td>Thrice</td>
<td>19 (6.6%)</td>
</tr>
<tr>
<td>four times or above</td>
<td>39 (13.6%)</td>
</tr>
<tr>
<td>None</td>
<td>45 (15.7%)</td>
</tr>
<tr>
<td>Total</td>
<td>286 (74.5%)</td>
</tr>
</tbody>
</table>

n=384, df=4, p=0.368: α=0.05
Table 4.18 shows 286(74.5%) of the respondents indicated transport to outdoor recreational facilities as a determinant of participation in outdoor recreational activities while 98 (25.5%) of the respondents indicated otherwise. Out of those who indicated transport to outdoor recreational facilities as a determinant, 110(38.5%) participated once in a week in outdoor recreational activities as compared to 28(28.6%) of respondents who did not report transport as a determinant yet they participated once per week, only 45(15.7%) of those reported transport as a determinant never participated at all whereas 26(20.4%) of the respondents never reported transport as a determinant, yet they never participated at all.

The Chi-square test of independence showed that there was no significant ($p>0.05$) association between the frequency of participating in outdoor recreational activities in relation to transport to outdoor recreational opportunities. Therefore, the null hypothesis that there is no significant relationship in the frequency of participating in indoor activities in relation to transport to outdoor recreational opportunities was accepted. This implies that there was no significant difference in the frequency in which women in Kibera informal settlement participated in outdoor recreational activities in relation to transport to outdoor recreational opportunities. Therefore, transport to the recreation facilities did not significantly determine their participation in outdoor recreational activities.
Table 4.19: Frequency and Percentage (%) of Participation in Indoor Recreational
Activities per Week in Relation to Awareness

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Yes</th>
<th>No</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Once</td>
<td>42 (19.1%)</td>
<td>45 (27.4%)</td>
<td>87 (22.7%)</td>
</tr>
<tr>
<td>Twice</td>
<td>64 (29.1%)</td>
<td>44 (26.8%)</td>
<td>108 (28.1%)</td>
</tr>
<tr>
<td>Thrice</td>
<td>35 (15.9%)</td>
<td>24 (14.6%)</td>
<td>59 (15.4%)</td>
</tr>
<tr>
<td>Four times or above</td>
<td>64 (29.1%)</td>
<td>35 (21.3%)</td>
<td>99 (25.8%)</td>
</tr>
<tr>
<td>None</td>
<td>15 (6.8%)</td>
<td>16 (9.8%)</td>
<td>31 (8.1%)</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>220 (57.3%)</td>
<td>164 (42.7%)</td>
<td>384 (100%)</td>
</tr>
</tbody>
</table>

\( n=384, df=4, p=0.174, \alpha=0.05 \)

Table 4.19 shows that 220 (57.3%) of the respondents indicated that awareness of the indoor recreation facilities is a determinant of women’s participation in indoor recreational activities while 164 (42.7%) of the respondents indicated that awareness of the indoor recreation facilities was not a determinant. Out of those who reported awareness of the indoor recreation facilities is a determinant of women’s participation in indoor recreational activities, a higher proportion 64 (29.1%) of the respondents participated four and above times in a week while those who reported that awareness is not a determinant, a higher proportion, 45 (27.0%) of the respondents participated once in a week in indoor recreational activities.

The Chi-square test of independence indicated no significant \( (p>0.05) \) association in the frequency of participation in indoor recreational activities in relation to awareness of
the indoor recreation facilities \( p>0.05 \) Thus, the null hypothesis that there would be no significant association in the frequency of participating in indoor activities in relation to awareness of the indoor recreational facilities is upheld. This implies that the frequency to which women in Kibera informal settlement participated in indoor recreational activities was not significantly associated for those who reported awareness of indoor recreational facilities as a determinant and for those who did not indicate awareness of indoor recreational facilities as a determinant. Hence, the frequency of participation in indoor recreational activities for the women residing in Kibera informal settlement is not significantly influenced by their awareness of indoor recreational activities.

Table 4.20: Frequency and Percentage (%) of Participation in Outdoor Recreational Activities per Week in Relation to Awareness

<table>
<thead>
<tr>
<th>Frequency</th>
<th>User Charge</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Yes</td>
<td>No</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>Once</td>
<td>74 (33.6%)</td>
<td>64 (39.0%)</td>
<td>138 (35.9%)</td>
<td></td>
</tr>
<tr>
<td>Twice</td>
<td>61 (27.7%)</td>
<td>36 (22.0%)</td>
<td>97 (25.3%)</td>
<td></td>
</tr>
<tr>
<td>Thrice</td>
<td>18 (8.2%)</td>
<td>10 (6.1%)</td>
<td>28 (7.3%)</td>
<td></td>
</tr>
<tr>
<td>Four times or above</td>
<td>38 (17.3%)</td>
<td>18 (11.0%)</td>
<td>56 (14.6%)</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>29 (13.2%)</td>
<td>36 (22.0%)</td>
<td>65 (16.9%)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>220 (57.3%)</td>
<td>164 (42.7%)</td>
<td>384 (100%)</td>
<td></td>
</tr>
</tbody>
</table>

\( n=384, df=4, p=0.052, \alpha=0.05 \)
Table 4.20 shows that 220 (57.3%) of the respondents indicated that awareness of out-door recreational facilities is a determinant of women’s participation in indoor recreational activities while 164(42.7%) of the respondents indicated that awareness of out-door recreational facilities was not a determinant. Out of those who reported awareness of out-door recreational facilities as a determinant of women’s participation in out-door recreational activities, a higher proportion 74(33.6%) of the respondents participated once per week while those who reported awareness is not a determinant, a higher proportion 64(39.0%) of the respondents participated once in a week in out-door recreational activities.

The Chi-square test of independence indicated no significant ($p>0.05$) association in the frequency of participation in out-door recreational activities in relation to awareness of out-door recreational facilities. Thus, the null hypothesis that there would be no significant association in the frequency of participating in out-door activities in relation to awareness of the indoor recreational facilities is upheld. This implies that the frequency to which women in Kibera informal settlement participated in out-door recreational activities was not significantly related for those who reported awareness of out-door recreational facilities as a determinant and for those who did not indicate awareness of out-door recreational facilities as a determinant. Hence, awareness of out-door recreational facilities did not influence the frequency of participation in out-door recreational activities for the women residing in Kibera informal settlement.
CHAPTER FIVE
DISCUSSION OF FINDINGS

5.1 Demographic Characteristics

From the findings, 344(89.6%) of the respondents were 40 years and below. This could be explained by the fact that this age that found sense in participating in the study and this is the age that is mostly found in the slum residential area because they are at the stage of child-rearing and parenting and at the same time, majority of them are housewives or women who are running small businesses within the slums. However, few women over 40 years participated in the study; those in age category 41-50 years accounted for 40(10.4%). This could be as a result of them feeling that they could be too old to go out, and participate in outdoor activities with young ones, hence, they restrict themselves to indoor recreational activities and the few who participate could be due to doctor’s advice. This is supported by a study by Cordes and Ibraham (1999) which showed that much of free time tends to be focused towards the end of the age range where the adolescent and retired have substantially more time to participate as compared to the middle age group who seem to have pressure in time management due to varied obligations.

The findings show that most families had small family sizes with 1 to 2 children. This can be explained by the harsh economic conditions in the slum areas. Majority of the women were parents at the stage of child-bearing and parents who were mainly housewives or involved in running small businesses within the slums which did not interfere much with taking care of their children. This tends to differ with the findings
of a study conducted by Kundu (2003) in Kolkata that indicated the average household size to be 5.05 people with variations for different household types. This implies that the women in Kibera informal settlements might be more informed in terms of family planning as compared to those in Kolkata.

The results indicate that more than half of the respondents had attained only primary education level implying low literacy level which is a characteristic in most slums. This tends to differ with Kundu’s (2003) study in Kolkata that indicated that 51.9% of women were below the primary level of education. Notably, whereas over 40% of the respondents were not employed, the 47.4% who indicated that they were as self-employed operated mainly small businesses which provide low income. The findings indicate that the earning per day for majority of the families was Kenya shillings three hundred (Ksh. 300) and below implying that there are some families who earned less than a dollar per day. Almost 90% of the respondents were either unemployed or self-employed. This is similar to findings by M’mbaha (2004) in Mathare slum in Kenya that showed the same results.

5.2 The Most Popular Recreation Activities for Women in Kibera informal settlement

The most popular indoor leisure activity among the women in Kibera informal settlements was listening to music followed by singing and dancing. The least popular was snooker/ pool followed by darts. This is not surprising as the access to snooker/ pool and darts facilities are hard to come by in the slums and if available, the cost may
be out of reach to the residents most of whom are low income earners and who mainly work to meet their basic needs. Listening to music does not cost much as compared to the other recreational activities which have higher costs and least accessible, also, one can listen to music as she attends to other house chores. This is supported by findings of a study by Asihel (2005) on perceptions of constraints to recreational sports participation of university of the Western Cape undergraduate female students which reported that some of the respondents argued that they can also recreate as they read. This is also consistent with the study by Henderson and Sheikhoslami (2007) on an exploration of the leisure activities and constraints to leisure that Iranian women encounter showed that home-based activities are most preferred and participated in. This also agrees with the work of Martin and Mason (2003) who found that the most popular activities done in Iran for both men and women were reading and listening to music.

The most popular outdoor activity amongst women in Kibera informal settlements was leisure walking followed by watching football. This may be possibly because there are no associated costs with these activities and can be done as one goes to work. The least popular outdoor activity is playing cards and ajua followed by swimming. Playing cards and ajua are recreational activities that are traditionally associated with men since gambling is involved in the game. Swimming would require swimming pool which appears to have been inaccessible to most respondents and as it also involves paying the user charge. This is consistent with the findings by Asihel (2005) that people older than 56 years of age indicated that they preferred to walk in their free time. Kelly and
Warnick (1999) also found out that walking is the primary recreational activity for Americans over the age of 45. In addition, Robinson and Godbey (1997) found that sports and hobbies represent 12% of American’s free time, where walking is regarded the primary activity.

A study in Australia and Tasmania found the most popular activity to be walking (Australian Sport Commission, 2012). Australian Bureau of Statistics (2006) and Delaney (2013) also found walking to be the most popular recreation activity. This is also similar to findings of a study by Corti and Donovan (2002) on the relative influence of individual, social and physical environment determinants of physical activity which reported that the most frequently used facilities were informal: the streets (45.6%); public open space (28.8%) and the beach (22.7%); this shows that walking in the street was most preferred. This was, however, not the case for a study in America which found running and jogging as the most popular outdoor activities (Outdoor Foundation, 2012).

5.3 Demographic Factors Determining the Frequency of Participation in Recreation Activities among Women in Kibera Informal Settlement

5.3.1 Age of the Respondents and Frequency of Participation in Recreation Activities

The frequency of participation in recreational activities by women in Kibera informal settlement in relation to age groups differed significantly. Those in age groups 20-25,
26-30 and 31-40 years participated in the indoor recreational activities twice per week while the oldest age group in the study participated four times and above. From this trend, it is evident that the older age groups tended to participate more in the indoor activities per week, and this can be because of availability of time and available charges for participation whereas the young generation could be obliged by other responsibilities like child-rearing and hence, missing regular participation while the old generation could be having plenty of time since they have passed the stage of bringing up young children.

The Chi-square test of independence showed a significant (p=0.038) association in the frequency of participating in the indoor activities. It can therefore be concluded that there is a significant relationship between the frequencies of participation in indoor activities per week in relation to the age groups.

The scenario was the same for outdoor activities where the majority of those in the younger age group, 20-25 and 26-30 years participated in outdoor recreation activities once in a week while the older age group (31-40 and 41-50 years) participated more (twice). This relationship was significant (p<\alpha) implying a significant association between the frequency in which women in Kibera informal settlement participate in outdoor recreational activities in relation to age. These findings agree with a study by Australian Sports Commission (2012) on Participation of Australians and Tasmanians in Exercise, Recreation and Sport of 2010 which reported that ages 25-34 had lowest regular participation while ages 35-44 had highest regular participation. This can be compared to the findings of a study by Cordes (1999) that reported availability of time
as a determinant of recreational participation where highest quantity of free time tends to be towards the end age scale having adolescent and retired to have more time left than the middle age group who are on high point of time pressure.

These results however differ with a study conducted by Delaney (2013) that indicated participation in sport and recreational activity tends to peak during the early teenage years and drop thereafter. Australian Bureau of Statistics (2006) also found that participation decreases with age, however, the statistics were for respondents with physical disabilities, which is also found in a study conducted by Bolen et al., (2000) that compared participation by age and concluded that age increases with decrease in participation in outdoor and physical activities. Majority of the women in Kibera informal settlement can be categorized in this grouping where the younger ones participated less frequently as compared to the older generation.

5.3.2 Family Size and Frequency of Participation in Recreation Activities

In relation to family sizes, majority of those who participated in the indoor recreation activities more frequently had a family size of 1-2 children. The families with no children participated once per week. The families who had 1-2 children had higher participation in the indoor recreational activities as compared to those with 3-4 children. This could be due to family obligations; the more the number of children, the more the care they want from the mother and in return, less the participation in the indoor recreational activities.
Participation in the indoor recreational activities may be high for those with children since they spend most hours indoors attending to their children; hence, high participation in activities such as listening to music.

The Chi-square test of independence showed that there was no significant association in the frequency of participation in indoor recreational activities in relation to family size. The frequency of participation in outdoor recreational activities with respect to the family size followed the same trend where the families with 1-2 children participated frequently followed by families with 3-4 children, while the families with no children participated least. This shows that the frequency of participation in outdoor recreational activities is not determined by the family size per se but may be associated with other factors.

A study in Iran by Henderson and Sheikhoslami (2007) on an exploration of the leisure activities and constraints to leisure that Iranian women encounter divided the family size into three categories; no children, 1-2 children and 3 or more children. The study found that those with no children had more constraints related to community structure while those with 3 or more children had constraints related to household expectations, personal health and safety. On the other hand, Alberta (2004) found that constraints such as being obliged by family and overcrowded facilities were considered to be important or very important by between 40% and 50% of respondents. This can also be related to a study conducted by Stavropoulou (2008) on constraints and motives related with women’s physical activity participation, with an incidental sample of N=181.
women aged between 30-65 years old indicates; about 10% of the sample had children below seven years old, between the ages 7–14 years old, 22% between 15–18 years old while the rest 48% had older children or they had no children at all. The study further indicated that lack of time was a constraint in relation to family obligations, work obligations and distance from the activity, with family obligations and work obligation taking the highest percentage. The findings of this study can be compared to the above studies since the women in Kibera informal settlement with 1-2 children had higher participation in both indoor and outdoor recreational activities while those with no children had less participation in both indoor and outdoor recreational activities.

5.3.3 Education Level and Frequency of Participation in Recreation Activities

From the findings, it is clear that majority of the respondents had only acquired primary level of literacy and this forms the major group that participated regularly in both indoor and outdoor recreational activities. The Chi-square test of independence showed statistically significant association in the frequency of participation in indoor recreational activities in relation to educational level of the respondents. Hence, the null hypothesis that frequency of participation in the indoor recreational activities would not be significantly influenced by education level is rejected. This might be due to the fact that most of the indoor recreation activities are associated with payment for use of the facilities which in turn is connected to income level and education level. The common indoor activities in which women in Kibera informal settlement participated such as listening to the music or watching television are all coupled to purchasing the radio or television.
The Chi-square test of independence showed no statistically significance association in the frequency of participation in outdoor recreational activities in relation to educational level. Hence, the null hypothesis that frequency of participation in outdoor recreational activities would not be significantly influenced by education level is accepted. Therefore, the frequency of participation in outdoor recreational activities by the women in Kibera informal settlement is not determined by their level of education. This might be due to the fact that most of the outdoor recreation activities such as walking, which was ranked the most popular outdoor activity in this study engaged by women in Kibera informal settlement are not associated to any payment since most women could do walking as they go for their social group meetings or walking to the parks.

This is supported by findings of a study conducted in Australia that found participation in recreation activities increased with their level of education (Sport & Recreation Tasmania, 2012). They found that regular participation rates in physical activity for Australia and Tasmania are correlated with education levels. In Australia, those with a university degree (54.7%), diploma (50.6%) or still at secondary school (51.8%) had the highest regular participation rate. Conversely, the regular participation rate was lowest for those who did not complete the highest level of schooling (39.2%) or who never went to school (34.4%) (Sport and Recreation, Tasmania, 2012). Another research in France showed that the level of education is the most discriminating factor
where women’s access to sport is concerned. Participation rates tended to increase with the length of studies and the level of education attained (Tallen, 2011).

Younger (1998) noted that high levels of education have been found to inspire participation in a whole variety of leisure activities; and this increases the opportunity to participate in leisure activities, as well increases awareness and the desire. This is in agreement with findings by Muiruri (1990) that indicates interest in recreational activities nurtured in schools and other educational institutions is carried forward into later life. With this particular study, more than half had one level of education (primary); this can explain why the results showed no significant relationship for outdoor recreational activities. This is partly a reflection of the influence that education has on occupation and income; hence, influence on recreation participation. Women in Kibera informal settlement having achieved primary level of literacy seemed to participate mostly in the recreational activities that are not influenced by education level like walking and listening to music.

5.3.4 Income Level and Frequency of Participation in Recreational Activities

The findings of the study showed that majority of the respondents earned less than 10,000 Kenyan shillings a month but they participated in indoor recreational activities more than once in a week. The group with higher income of more than Kenyan shillings 40,000 participated four times and above in a week. The Chi-square test of independence did not show statistically significant association in the frequency of participation in indoor recreational activities in relation to income level of the
respondent. It is evident that the group earning less than Kenyan shillings 10,000 per month and the other group earning more than Kenyan shillings 40,000 per month had more regular participation. This might be due the fact that the most of the indoor recreational activities that they participated in such as like ‘listening to music’ are not associated with regular payment. The Chi-square test of independence showed no statistically significant association in the frequency of participation in outdoor recreational activities in relation to income of the women in Kibera informal settlement. Hence, the null hypothesis that participation in outdoor recreational activities would not be significantly influenced by income level is not rejected. This implies that participation in outdoor recreational activities by women in Kibera informal settlement is not significantly influenced by income level. From trend observed, it is evident that the groups earning less than Kenyan shillings 10,000 participated in outdoor recreational activities more frequently while the ones with higher income participated less frequently in the out-door activities in a week; this indicates that the income per month is not what determines the frequency of participation in outdoor recreational activities for women in Kibera informal settlement. This clarifies why activities such as walking that are not associated with any payment are popular.

Tallen (2011) also found that women in France and UK participated in recreation activities with respect to their income levels. Women in UK with an annual household income of £52,000 or more were three times more likely to engage in recreational activities than women earning less than £15,600. In France, on the other hand, those who did not engage in any recreation activity included 44% of women farm workers,
27% of women laborers but only 4% of women in management positions and higher intellectual professions. Women in Kibera informal settlement participated in affordable recreational activities regardless of their low income level which does not support Tallen’s findings. The findings of the study by Kouhkamari and Moghaddam (2015) reported that there was an effective relationship between the degree of the facilitating factors of the staff participation in sports activities and economic and financial constraints.

5.4 Opportunity Factors Determining the Frequency of Participation in Recreational Activities among Women in Kibera informal settlements

5.4.1 Available Leisure Time and Frequency of Participation in Recreational Activities

Findings of the current study show that majority of those who reported availability of time as a determinant of their participation in indoor activities participated in indoor recreational activities twice in a week. It is surprising that while they reported time as a determinant, 95% of them still participated in the indoor activities possibly because there are some activities in which they can engage while attending to other house chores such as listening to music and watching TV. This implies that even though availability of time was a determinant, the respondents still created time to participate in an indoor activity at least once in a week. The Chi-square test of independence showed a significant association between the frequency of participating in indoor
recreational activities and availability of time; implying that the frequency of participation of the women in indoor recreational activities in relation to availability of time is significantly related at 99% confidence level. This finding is in agreement with ones in studies done on time use in America by Robinson and Godbey (1999) and Nielsen and Hansen (2007) which showed that Americans had an average of 35 to 40 hours of free time per week and much of this time comes in small portions during weekdays, rather than in big blocks on weekends; therefore, TV viewing normally consumes half of all free time whereas 27 hours per month is spent on internet (for both work and leisure) This shows that staring at screens is a major use of Americans’ time.

For outdoor activities, a higher proportion of those who indicated availability of time is not a determinant did not participate in any outdoor recreation. Chi-square test of independence showed a significant association between the frequencies of participating in outdoor recreational activities in relation to availability of leisure time; Implying that the frequency of participation of the women in outdoor recreational activities in relation to availability of leisure time is significantly related.

This is in tandem with the findings of a study by Franklin (1996) that reported most people do not have time for physical or active recreation activities due to constraints or barriers such as work, family, school and social organization yet they relatively spend two or three hours per day watching television or engaging themselves in other sedentary or passive leisure activity. These results are similar to the findings of a study in America that reported the main reason for lack of participation in recreational
activities to be lack of time (Alberta, 2004). These findings are also supported by Young et al. (2003) in their study on perceived constraints by college students to participation in campus recreational sports programs, where they found lack of time due to commitments in school, work and family as a significant variable \( (p=0.009) \) in influencing participation of older students in recreational activities, this is also similar to findings by Mwisukha and Wanderi (2009) in their study on participation in leisure activities that cited the problem of time famine as a constraint; they argue that there has been a scarcity of free time for leisure because people are busy trying to meet daily survival needs which has made some people to extend their official working hours to earn extra allowances as well as carrying their official work to their homes. This is in agreement with the results of a study by Cortis, Swarikar and Muir (2007) on participation in sport and recreation by culturally and linguistically diverse women in Australia that indicated time to be a major barrier to participating in sport and recreation due to the women's family and work commitments. Some women also found that organized sporting activities were not offered at times that were convenient to them. This is at variance with findings of a study by Stavropoulou (2008) that reported time constraints do not have an effect on women’s participation in general and on participation frequency. Women in Kibera informal settlement participation in recreational activities seem to be constrained by the time factor.
5.4.2 User Facility Charge and Frequency of Participation in Recreational Activities

Majority of those who reported user charges as a determinant of their participation in indoor recreational activities, participated twice in a week (29%) while those who indicated that it is not a determinant participated in indoor recreational activities four times or more in a week. This implies that women in Kibera informal settlements who participated twice in a week only took part in activities that are cheap and available for them like watching TV; TV needs to be bought once and not regularly. The Chi-square test of independence showed no significant association between the frequency of participating in indoor recreational activities in relation to user charges. This implies that there is no significant relationship between the frequency of participation in indoor recreational activities by women in Kibera informal settlements and user charges. These shows there could be other factors apart from user charges that determine their participation in indoor recreation activities such as lack of leisure time as it is reported above, family obligations and lack of knowledge on relevance of recreation activities. This finding is not in tandem to results of a study by Hayes (2004) on the understanding of motivations, preferences and constraints of recreation in a rural Costa Rican community which found that the cost of participation was the second greatest constraint to participation. This is in agreement with previous research that has also documented that time and money are the two top constraints to leisure (Jackson & Dunn, 1991).

Majority of those who reported user charges as a determinant to participation in outdoor recreational activities and those who did not report user charge as a determinant to
participation in outdoor recreational activities participated in outdoor recreational activities once in a week. The Chi-square test of independence did not show any significant association between the frequency of participation in outdoor recreational activities and user charges. This implies that there is no significant relationship between the frequency of participation in outdoor recreational activities by women in Kibera informal settlement and user charges. This shows that participation in outdoor recreational activities by women in Kibera informal settlement could be determined by other factors such as low self-esteem, ignorance, lack of skills, inappropriate facilities, Lack of company from the family members or friends, Lack of time because of working or family obligations, Lack of interest due to previous bad experiences that can create negative effect on motivation or the probability that the activities one could be looking for are not offered in the slums. This is in agreement with findings by Stavropoulou (2008) that reported cost of the activities is not a motivation factor to participation in recreational activities since it does not affect the choice of activity or the frequency of practicing. The findings of the current study are not in tandem with the findings of a study by Alberta (2004) that reported over half of those respondents (54.3%), who wanted to start a new activity identified user charges as a constraint. This is Similar to findings of a study by Cortis, Swarikar and Muir (2007) on participation in sport and recreation by culturally and linguistically diverse women in Australia that reported some women found sport and recreation to be less costly in Australia while most of the women found the cost of sport and recreation presented barriers to their participation, as well as lacking the money to participate themselves while some women perceived women's sport and recreation organization’s to have resource problems.
5.4.3 Accessibility of the Available Recreation Facilities and Frequency of Participation in Recreational Activities

Majority of those who reported that both distance and transport to recreational opportunities influenced the frequency of participation in indoor recreational activities participated four or more times in a week while those who reported that both the distance and transport to indoor recreational opportunities does not influence the frequency of participation in indoor recreational activities participated twice in a week. This shows that majority of women in Kibera informal settlement participated in indoor recreational activities that do not involve travelling away from their homesteads or they attend the facilities that are close to their homes. The Chi-square test of independence showed no significant association between the frequency of participating in the indoor recreational activities in relation to both distance and transport to indoor recreational activities. This implies that there is no relationship between the frequency of participation in indoor recreational activities in relation to distance and transport to the recreational facilities. The findings of a study by Askins’ (2004) also suggested that lack of safe and accessible means aggravates this effect that some people have particular needs in their use of public transport which may not be provided for.

For outdoor activities, Majority of those who reported that both distance and transport to outdoor recreational opportunities influenced the frequency of participation in outdoor recreational and those who reported that both the distance and transport to outdoor recreational opportunities does not influence the frequency of participation in
outdoor recreational activities participated once in a week. The Chi-square test of independence showed no significant association between the frequency of participation in outdoor recreational activities in relation to both distance and transport to outdoor recreational activities; this implies that the frequency of participation in outdoor recreational activities by the women in Kibera informal settlement is not determined by both the distance and transport to the recreational activities. This is in agreement with the findings of a study by Stavropoulou’s (2008) that reported distance is not a determinant for the frequency of participation in recreational activities since majority of the women (63%) reported that they use a car in order to get to the activity. The findings of a study by Collins (2008) disagrees with these findings by noting that the commonly used parks are those situated within the urban areas because the areas are densely populated and most people who use parks tend to visit the one closest to them. This is also supported by the findings of studies by Hoden (2010) and Kara and Demirci (2010) that reported long distance to activity areas as the most significant recreational constraints. The women in Kibera informal settlement seem to participate regularly in indoor recreational activities as compared to outdoor recreational activities, this could be as a result of available indoor recreational opportunities in their houses such as radios and TVs and, more so, no transport is associated with their participation.
5.4.4 Awareness of Available Recreation Facilities and Frequency of Participation in Recreational Activities

From the findings, it is clear that the majority of those who reported awareness of indoor recreational activities as a determinant of their participation in the indoor recreational activities participated four times and above in a week (29%) while those who indicated that it is not a determinant, participated once per week. This implies that women in Kibera informal settlement participated regularly in the indoor recreational activities they are aware of.

The Chi-square test of independence indicated no significant association in the frequency of participation in indoor recreational activities in relation to awareness of the indoor recreational facilities. This suggests that there is no significant relationship between the frequency of participation in indoor recreational activities for the women in Kibera informal settlement and awareness of indoor recreational activities. From the findings of current study, it is evident that the most popular available facilities such as radios and televisions are owned by most households in Kibera informal settlement. Other indoor activities such as aerobics could be unpopular because of the regular user charge associated to them and not lack of awareness per se. On the other hand, activities like ajua could be regarded as men activities by the women residing in Kibera informal settlement.

For the outdoor recreational activities, it is clear that the majority of those who reported awareness of outdoor recreational activities as a determinant of their participation in outdoor recreational activities participated once in a week 74(33.6%) while those who
indicated that it is not a determinant participated once per week 64(39.0%). The Chi-square test of independence indicated no significant association in the frequency of participation in outdoor recreational activities in relation to awareness of the outdoor recreation facilities. This implies that there is no significant relationship between the frequency of participation in outdoor recreational activities by women in Kibera informal settlement and awareness of outdoor recreational activities. This is not in tandem with the findings of a study by Ehsani (2007) that reported lack of awareness on the benefits of physical activity, social restrictions and cultural-related problems are among the common constraints to participation in sports among women which is also in agreement with the findings of a study by Brown, Clark, McCool and Stankey (1999) that indicated drawing awareness of recreation centres, satisfying recreation experiences by giving information of these centres that can provide given experiences to people helps disband recreationists among available sports thereby decongesting the centres and reducing conflict among different types of recreationists. Some women in Kibera informal settlement seem to be aware of outdoor recreational activities but they may be constrained from regular participation by factors; such as time due to family obligations.
CHAPTER SIX

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

6.0 Introduction

This chapter gives summary of the findings, conclusions and recommendations drawn from the findings in connection with the determinants of women’s participation in recreation activities in Kibera informal settlement.

6.1 Summary of the findings

6.1.1. Demographic Characteristics of the Respondents

The study findings show that majority of the respondents were young with 344(89.6%) falling below 40 years. Most of the respondents had small family sizes with children ranging from 1 to 2. With respect to education level, more than half of the respondents had only primary education level with less than 10% who had attained college level education. Moreover, the findings also show low levels of employment which could be as a result of the low education levels; almost half of the respondents were unemployed and were housewives, while the other half were involved in running small business in the area. Just like employment, the income levels were also quite low with 95% of the respondents reporting an income level of 10,000 Kenyan shillings and below.
6.1.2. The Most Popular Recreation Activities for Women in Kibera informal settlement

The most popular indoor recreation activity for women in Kibera informal settlement was found to be listening to music, followed by singing and dancing. The least popular indoor recreational activities were aerobics and snooker/pool. While the most popular outdoor recreational activity was leisure walking and the least popular outdoor recreation activity for women in Kibera informal settlement was swimming and playing cards/ajua.

6.1.3 Influence of Demographic Factors on Frequency of Participation in Recreation Activities among Women in Kibera Informal Settlement

i. There was a significant relationship between frequency of participation in both indoor and outdoor recreational activities and age of the women in informal settlement.

ii. There was no significant association between the women’s frequency of participation in both indoor and outdoor recreational activities and family size.

iii. Education level had an influence on frequency of participation in the indoor recreational activities. However, education level had no significant association with frequency of participation in outdoor recreational activities.

iv. The income level of the women in Kibera informal settlement had no significant relationship with the frequency of their participation in both indoor and outdoor recreational activities; majority of those who frequently participated in both
indoor and outdoor recreational activities earned less than Kenya shillings (Ksh).10, 000 a month.

v. The family size had no significant influence on the frequency of participation in both indoor and outdoor recreational activities; those with family size of 1-2 children participated most frequently.

6.1.4 Influence of Opportunity Factors on Frequency of Participation in Recreation Activities among Women in Kibera Informal Settlement

Leisure time had significant influence on frequency of participation in both indoor and outdoor recreational activities. User facility charge, accessibility and awareness had no significant association with the frequency of participation in both indoor and outdoor recreational activities.

6.2 Conclusion

i. The most popular indoor recreational activity of women in Kibera informal settlement was listening to music followed by singing and dancing while the least popular indoor recreational activity was aerobics and snooker/pool.

ii. The most popular outdoor recreational activity was walking while the least popular outdoor recreational activity for women in Kibera informal settlement was swimming and playing cards/ajua.

iii. Frequency of participation in both indoor and outdoor recreational activities by women in Kibera informal settlement was influenced by the age
iv. Frequency of participation in both indoor and outdoor recreational activities was not influenced by the family size or the number of children.

v. Frequency of participation in the indoor and outdoor recreational activities by women in Kibera informal settlement was not influenced by their monthly income.

vi. The family size was not a determining factor for participation in both indoor and outdoor recreational activities.

vii. Available leisure time was a major determinant of participation by women in Kibera informal settlement in both indoor and outdoor recreational activities.

viii. User facility charge was reported to have no influence on frequency of participation in both indoor and outdoor recreational activities by women in Kibera informal settlement.

ix. Accessibility (transport and distance) had no influence on the frequency of the women’s participation in both indoor and outdoor recreational activities.

x. Awareness of available recreational activities did not determine the frequency of participation of women in Kibera informal settlement in both indoor and outdoor recreational activities.

6.3 Recommendations for Policy and Practice

i. The county government should set aside land for developing various recreational facilities within the informal settlement areas to be accessed by all residents to mitigate time constraints; for example, construction of swimming pools since swimming is reported as the least popular outdoor activity.
ii. The ministries of Health and Sports, Culture and the Arts to educate the members of the public within the informal settlement on the health benefits of recreation and good time management so as to encourage more people including those with higher levels of education to take part in various recreation activities since level of education emerged as one of the demographic factors influencing frequency of participation in indoor recreational activities.

iii. The city planning department to give greater emphasis on creation of streetscapes within and outside the informal settlement areas that enhances walking for recreation.

iv. Recreation service providers to avail affordable and pleasanter recreational facilities and programme catering for all ages since age arose as one of the demographic factors influencing frequency of participation in recreational activities among women in Kibera informal settlement.

6.4 Recommendations for Further Research

i. It is recommended that research be conducted to examine the recreation patterns, constraints and preferences to recreation participation in other informal settlement in Kenya.

ii. The current study was a case of a single gender of age 20-50, further studies need to be carried out to assess both gender and a cross-section of participants of all ages.
iii. The growth of informal settlements all over the world has been on increase; therefore, there is need for regular studies on recreation in these areas from time to time due to economic, social and other demographic conditions.
REFERENCES


Australian Sport Commission. (2012). Participation of Australians and Tasmanians in Exercise, Recreation and Sport. An Analysis of the 2010 Exercise,
Recreation and Sport Survey (Erass) Results on use of public parks. *Journal of Park and Recreation Administration*, 14, 1-17.


Popović R. & Kocić J. (2002). Barriers to Women Participation in Sport and Recreation. *Scientific Meeting with International Participation, Skopje, Macedonian FYR.*


Shwu-Ching, H, Spaulding, A.& Riney, M (2004), *A Qualitative Look at Leisure Benefits for Taiwanese Nursing Students*; The Qualitative Report Volume 9,


World Health Organization (2009). Myths about Physical Activities:


APPENDIX A: Questionnaire

Section A: Demographic Data

The following questions are about you; please follow the instructions for each question.

Please tick the most appropriate response that applies to you or fill in the blank spaces provided.

1. Current age in years
   - a) 20 - 25
   - b) 26 - 30
   - c) 31 - 40
   - d) 41 - 50

2. Family size.
   - a) No Children
   - b) 1 - 2 Children
   - c) 3 - 4 children
   - d) 5 or more Children

3. Education level:
   - a) No formal Education
   - b) Primary
   - c) Secondary
   - d) College
   - e) University

4. What is your occupation?
   - a) Employed
b) Self-employed/ Business Woman

c) Not Employed

5. Please tick your approximate income per month in Ksh.

a. 10,000 and below
b. 10,001-20,000
c. 20,001 - 30,000
d. 30,001 – 40,000
e. Above 40,000

Section B: Tick the box that best describes your views on each category

6. Do you take part in any of the following indoor recreational activity during your free time?

<table>
<thead>
<tr>
<th>Indoor Activities</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Going to movies and cinemas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Singing and Dancing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Aerobics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Playing computer games</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Snooker / Pool</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Playing Darts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight Lifting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Martial Arts</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Listening to Music</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watching Football</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Outdoor Activities

<table>
<thead>
<tr>
<th>Activity</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Playing Team Games</td>
<td></td>
</tr>
<tr>
<td>Swimming</td>
<td></td>
</tr>
<tr>
<td>Visiting Parks</td>
<td></td>
</tr>
<tr>
<td>Playing Ajua and Cards</td>
<td></td>
</tr>
<tr>
<td>Jogging/running</td>
<td></td>
</tr>
<tr>
<td>Walking</td>
<td></td>
</tr>
<tr>
<td>Cycling</td>
<td></td>
</tr>
</tbody>
</table>

7. How many times a week do you participate in the indoor recreational activities?

   a) Once
   b) Twice
   c) Thrice
   d) Four times and above
   e) None

8. How many times a week do you participate in the outdoor recreational activities?

   a) Once
   b) Twice
   c) Thrice
   d) Four times and above
   e) None
9. Please tick against the answer that shows whether the following opportunity factors determine your participation in indoor recreational activities.

<table>
<thead>
<tr>
<th>Factor</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>I do not have adequate leisure time</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I cannot afford the charges for recreation facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I do not have transportation to the recreation facilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>My age does not allow me to participate</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am not interested in any recreation activity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am not aware of any recreation facilities/opportunities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The available recreation opportunities are far distant from where I live</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix B: Informed Consent Letter

DETERMINANTS OF WOMEN’S PARTICIPATION IN RECREATIONAL ACTIVITIES IN KIBERA INFORMAL SETTLEMENTS, NAIROBI, KENYA

Department of Recreation Management and Exercise Science

Kenyatta University – Kenya

Researcher: Purity Mureithi

Dear Madam,

The researcher is a post graduate student pursuing a Master of Science degree in leisure and recreation management at Kenyatta University. This research is part of the course. The researcher intends to conduct a survey on the recreation opportunities among women in the slum. The Questionnaire attached will seek to assess determinants of participation in recreational activities for women in Kibera informal settlements.

Please note that all data collected will be treated with strict confidence and for statistical purposes only. It is expected that you will respond to the questionnaire and hand it back immediately upon completion. Please answer to the best of your knowledge and as honestly as possible. The finding of this study will present needed information that will be used to make recommendations in deciding which recreation opportunities to be availed.

Your sincere co-operation in responding to this questionnaire will be highly appreciated.

Thank you in advance.

Purity Kagwiria Mureithi

I56/CE/11784/2007
Appendix C: Approval Letter

MINISTRY OF HIGHER EDUCATION
NATIONAL COUNCIL FOR SCIENCE AND TECHNOLOGY
P. O BOX 30623-00200
NAIROBI.

Dear sir/Madam,

Re: Conducting Research in Kibera informal settlements.

I am a student at Kenyatta University pursuing masters’ degree in leisure and recreation management. I am currently doing my research based on assessment of determinants of participation in recreational activities for women in Kibera informal settlements.

I am requesting for your approval to conduct my research involving women who work and reside in Kibera informal settlements.

The researcher would like to assure that the data collected will be treated confidentially and will be used for research purpose only.

Attached find a copy of the questionnaire to be used

Thank you in advance.

Purity Kagwiria Mureithi.

I56/CE/11784/2007
## Appendix D: Research Budget

<table>
<thead>
<tr>
<th>ITEM</th>
<th>AMOUNT</th>
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</thead>
<tbody>
<tr>
<td>Proposal typing</td>
<td>16,000</td>
</tr>
<tr>
<td>Traveling costs</td>
<td>25,000</td>
</tr>
<tr>
<td>Stationary</td>
<td>30,000</td>
</tr>
<tr>
<td>Computer services</td>
<td>20,000</td>
</tr>
<tr>
<td>Proposal binding</td>
<td>5,000</td>
</tr>
<tr>
<td>Research Assistants</td>
<td>45,000</td>
</tr>
<tr>
<td>Data Analysis</td>
<td>30,000</td>
</tr>
<tr>
<td>Production of thesis</td>
<td>40,000</td>
</tr>
<tr>
<td>Contingencies</td>
<td>30,000</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>241,000</strong></td>
</tr>
</tbody>
</table>
## Appendix E: Research Schedule

<table>
<thead>
<tr>
<th>TIME</th>
<th>ACTIVITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>August – November 2011</td>
<td>Problem selection</td>
</tr>
<tr>
<td>December 2011</td>
<td>Reading on the problem</td>
</tr>
<tr>
<td>January 2012- July 2012</td>
<td>Proposal development and submission</td>
</tr>
<tr>
<td>August 2012</td>
<td>Presentation at the department</td>
</tr>
<tr>
<td>December 2012</td>
<td>Submission of the proposal to the school</td>
</tr>
<tr>
<td>July 2013</td>
<td>Pilot Testing of Instrument</td>
</tr>
<tr>
<td>Aug 2013</td>
<td>Data collection</td>
</tr>
<tr>
<td>Sep-Dec 2013</td>
<td>Data analysis</td>
</tr>
<tr>
<td>Jan 2014-August 2015</td>
<td>Writing and submission of thesis</td>
</tr>
<tr>
<td>Dec 2015</td>
<td>Graduation</td>
</tr>
</tbody>
</table>
Appendix F: Research Permit

THIS IS TO CERTIFY THAT:
Prof./Dr./Mr./Mrs./Miss/Institution
Purity Kagwiria Mureithi
(Address) Kenyatta University
P.O Box 443844-06100, Nairobi.
has been permitted to conduct research in

Location
Lang’ata
District
Nairobi
County

on the topic: Determinants of women’s participation in recreational activities
in Kibera slums, Nairobi, Kenya.

for a period ending: 31st August, 2013.

Applicant’s Signature

For Secretary
National Council for Science & Technology
Appendix G: Kibera map
Appendix H: Field Photos

1. A boy crossing a make-shift bridge

2. Drainage trench blocked by a heap of plastic waste

3. Kibera residents surfing internet

4. Children playing in a filthy compound

5. Kibera residents making use of their leisure time by engaging in physical activities

6. Residents taking part in aerobics