



**UNIVERSITY of the
WESTERN CAPE**

**UNIVERSITY OF THE WESTERN CAPE
Faculty of Community and Health Sciences**

**The relationship between students' campus recreation needs and recreation patterns at
a tertiary institution in the Western Cape**

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2935925

**A thesis submitted in fulfilment of the requirements for the degree of
Magister Artium Sport, Recreation and Exercise Science
in the Department Sport, Recreation and Exercise Science**

University of the Western Cape

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ABSTRACT

The University Sport South Africa mandate is to promote sports, recreation, and mass participation at tertiary institutions in South Africa. Tertiary institutions could be used as sites to ensure an enabling environment where recreational opportunities can be created for the students to reap the benefits of participating in recreation. This study was aimed to determine the relationship between the students' recreation needs and the recreation patterns at a tertiary institution. The Self-Determination Theory was adopted as the study's theoretical framework. This study was a cross-sectional study that made use of quantitative methods to generate data. The entire student population was included and the sample was based on the power calculation of three hundred and seventy-nine (n=379) participants. A convenient sampling in the form of volunteer sampling was used and a questionnaire consisting of open- and closed-ended questions was administered online making use of Google Forms. The data was automatically downloaded to Excel from Google Forms. Afterwards, data was captured and imported to SPSS V.22. A substantial number of students of the participants who reside at home are aware of campus recreation but do not participate. The current recreational patterns of the participants are that they enjoy walking, jogging, exercising inside the gym, hiking, doing dance fitness and home exercises. Their reasons for participation are to keep healthy and fit, for fresh air, enjoyment, and (primarily males) to relax after lectures. A need for basic information about the benefits of being physically active was highlighted as a need. The recreational needs findings show a need to market recreational programmes using relevant platforms. Secondly, events must be marketed in advance and, lastly, visibility of the facility's signage or venues should be indicated. It can be concluded that the students see recreational centres, outdoor running activities and rock climbing as important and interesting. Out of the cross-tabulation verification tests and Pearson Chi-square analysis, only the campus recreation activities and student satisfaction with the UWC campus recreation staff showed a relationship between the variables. The significance test ($p \geq 0.05$) results confirmed a relationship between recreation activities and student satisfaction ($p \geq 0.003$).

10 Keywords: Campus recreation needs, recreation patterns, self-determination theory, sport administration, recreation programme, Western Cape.


DECLARATION

I hereby declare that “The relationship between students’ campus recreation needs and recreation patterns at a tertiary institution in the Western Cape” is my own work, that it has not been submitted before for any other degree in any other university, and that the sources I have used have been indicated and acknowledged as complete references.

Ntombise Nadia Mgulwa

February 2023

Signed:



DEDICATION

As I write this dedication, I cannot help but be teary-eyed; I'm writing and closing this chapter of my life during a very difficult time. I write it heavy-hearted, but I draw strength from Isaiah 41:10, which has truly carried me through this journey.

“Fear not, for I am with you. Be not dismayed, for I am your God. I will strengthen you; I will help you with my righteous hand.”

I want to dedicate this thesis to my late father, Makwenkwandile, my mother, Xoliswa, my grandmother Nonkululeko and my sister, Nangamso. Thank you for your unwavering support, for your understanding when I could not do or attend certain family gatherings, for always being there for me when I wanted to give up, and for reminding me why I embarked on this journey in the first place. I would have been unable to complete this without your constant support, guidance and prayers. I want to express my deepest gratitude to my late Father for your love and support. I am truly sad that I will graduate without you by my side, but I know you will forever be in my heart and with me in everything I do. May your soul Rest in Peace, Dad; I will always love and remember you. To my little sister, my best friend, thank you for being strong for me when I wanted to give up, for taking care of everything around the house when I could not, thank you for staying up with me on days I pulled an all-night and for your strong cups of coffee. To my prayer warrior, my mother, thank you for giving me life, thank you for always being there for me through thick and thin, and thank you for always believing in me and my abilities; you are the pillar of my strength; I celebrate you, I honour you, and I love you very much, Mama.

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LIST OF ABBREVIATIONS

4IR	Fourth Industrial Revolution
CHS	Central House Committee
CHS	Community and Health Sciences
EMS	Economic Management and Sciences
FISU	Fédération Internationale du Sport Universitaire
IOP	Institutional Operational Plan
NDP	National Development Plan
NIRSA	National Intramural-Recreational Sports Association
NSRP	National Sport and Recreation Plan
NWU	North-West University
SDS	Student Development Support division
SDT	Self-Determination Theory
SRSA	Sport and Recreation South Africa
USSA	University Sport South Africa
UWC	University of the Western Cape
WHO	World Health Organisation

APPENDICES

Appendix A: Information Sheet

Appendix B: Consent Form

Appendix C: Ethics Committee Letter

Appendix D: Questionnaire

CHAPTER 1

INTRODUCTION TO THE STUDY

1.1 Introduction

Sport and Recreation South Africa (SRSA) is the governing body for sport and recreation. It highlights its vision in the White paper as: “To build South Africa into an active winning nation” (SRSA, 2012: pg. 23). University Sport South Africa (USSA) is the recognised body for university sports and recreation mandated by SRSA to conform to the vision of sport and recreation in South Africa. Their mandate is to promote sports, recreation, and mass participation at tertiary institutions around South Africa (USSA, 2022). Similarly, the main objectives of UWC Sport are to contribute to holistic student development by out-of-classroom or co-curricular activities, which can involve sport and recreation, and, additionally, to contribute to the integration of the campus community (UWC Sport Administration, 2010). SRSA further supports the UWC sports stance that recreation is not just about fun and games, it plays a pivotal role in improving the health and well-being of an individual. Thus, it aims to create liveable communities and promote social cohesion. This is also supported by the World Health Organisation (WHO), which states that, with increased inactivity due to urbanisation, technology, and transportation, physical activity should be integrated into settings in which people live, work, and play.

The WHO looks at four objectives where a government can resolve inactivity. The first objective is to create active societies, which can be achieved by providing mass participation events, promoting the co-benefits of being physically active and building workforce capacity. The second objective is to create an active environment by improving walking and cycling networks and access to public open spaces for physical activity. The third objective is to create active systems by building research and development and strengthening policy, leadership, and governance. Lastly, the fourth objective is to create active people by developing and promoting

access to opportunities and programmes across multiple settings. This will help people of all ages and abilities to engage in regular physical activity as individuals, families, and communities (WHO, 2018). This is further supported by the South African National Development Plan (NDP) 2030, which aims to promote healthy behaviours and lifestyles and reduce disease burden to manageable levels. The plan highlights challenges faced by the South African health system and sets out nine long-term health goals, indicators and action points that will aid in achieving the 2030 vision. Of the 9 goals, the first five relate to the population's well-being, and the other four describe the required system. For this research, the following 2 goals were deemed most relevant. Goal significantly reduces the prevalence of non-communicable chronic diseases. Diet-related non-communicable ailments include obesity, diabetes and cardiovascular diseases, which comprise many diseases in South Africa. The risk factors for these chronic diseases include physical inactivity. Goal 7 stipulates that primary healthcare teams provide care to families and communities. Providing schools and communities with health education and adequate resources is essential to promote healthy behaviours and lifestyles. The plan further stipulates 9 priorities highlighting the critical interventions needed to achieve the 2030 vision. Priority 1 is to address the social determinants that affect health and diseases. This priority highlights the importance of collaboration across sectors. It states that health is everyone's responsibility, including the city planning officials. They need to be mindful of creating safe, liveable environments to promote physical activity in communities by providing pedestrian walks, cycling lanes, open parks and street lighting.

The link between this study's objective 2, priority 1 and WHO's objective 2 shows the importance of determining the individual's needs and creating a space for physical activities in communities. The above further highlights that health is everyone's responsibility, in order to promote physical activity there needs to be collaborations across all sectors. Priority 1 also addresses the importance of promoting diets and physical activity. It indicates that school is

the best place to instil change in behaviour and lifestyle. This can be done by making physical education compulsory, having access to adequate sporting facilities and establishing a culture of wellness in communities and at work. According to the NDP vision 2030, South Africans need to be more physically active as part of their culture. Therefore, the use of influential individuals in communities to promote and support physical activity to stimulate a healthy culture is essential. However, according to the NDP vision 2030, for this to happen, there needs to be a dedicated day to encourage physical activity and ensure that the designers of cities, suburban areas and rural villages encourage people to run, walk and cycle in safe spaces.

The National Sport and Recreation Plan (NSRP) supports the NDP vision 2030 for South Africa by facilitating opportunities where communities can participate in various physical activities by reinforcing a positive attitude amongst the youth. This will bring positive behavioural change and ensure synergy between school and community initiatives (SRSA, 2012). The SRSA has launched a “Choose 2B Active” programme aimed at promoting physical activity by using influential fitness influencers to promote the programme and host events across communities.

The NSRP also strongly emphasises the need to use active recreation programmes to develop citizenship values in young people and teach them how to make valuable contributions to their communities. Therefore, an increase in the interest in participating in recreation by creative opportunities, programmes, and campaigns to assist in stimulating and meeting the needs of diverse population segments is needed. One segment of the population that shapes and encompasses a considerable amount of South Africa is the youth, specifically the youth at tertiary institutions (NSRP, 2012).

The National Sport and Recreation Plan (NSRP) strives to build the roots of an active and winning nation. The aim is to have individuals become active from an early age to retirement.

This aim can be achieved by communities, schools, and churches promoting the importance and benefits of living a healthy lifestyle through recreational activities. In turn, this requires government to provide an enabling environment for the equitable delivery of sport and recreation, particularly to underprivileged communities and schools at risk of having the youth involved in delinquent activities. This can be achieved by using active recreation programmes to develop citizenship values in young people and to teach them how to make a valuable contribution to their communities. The NSRP provides details of three core implementation pillars: an active nation, a winning nation, and an enabling nation (Section 2, NSRP, 2012). Resources, education, and monitoring and evaluation must occur in communities and schools to achieve these objectives. Implementing the NSRP will lead to a better understanding and appreciation of the benefits of sport and recreation. The benefits mentioned in the NSRP are that people directly involved will benefit from a significantly enhanced quality of life. Furthermore, recreational opportunities offer personal benefits such as self-fulfilment and the development of personal relationships. Therefore, to increase interest in participating in recreation, creative opportunities, attractive programmes, and campaigns must be available to stimulate and meet the needs of diverse population segments.

Tertiary institutions could be used as sites to ensure an enabling environment where recreational opportunities can be created for the students to reap the benefits of participating in recreation. Many of the benefits associated with recreation are intangible, such as character building, health benefits, and principles of teamwork, discipline, and self-belief. Furthermore, these benefits positively impact students' performance and academic persistence (Penland, 2017). Sport and recreation have proved to play a pivotal role in the recruitment and retention of students in tertiary institutions (Solomon, 2005). It has been a long time since sports and recreation were just about playing. Instead, it contribute to the bigger picture of the University's objective. For example, a tertiary institution in the Western Cape Sport aims to "build the

University's profile" through sport and recreation (UWC Sport Administration, 2010). When prospective students determine which university to attend, it is said that they look into several things. One is that education takes top priority, but ultimately students are looking for something outside the classroom that will draw them back to campus, semester after semester (Cvijetinovic, 2017). This is further supported by acknowledging the impact of sport and recreation on student recruitment and retention at universities all around South Africa (Solomon, 2005). According to the National Intramural-Recreational Sports Association (NIRSA) (2002), intramural or recreation also strongly influences student recruitment. It is noted that a decrease in student involvement or integration into the campus community can cause a decrease in student retention. Hence there must be a smooth integration of new students into the social or academic culture of an institution. A study conducted at the University of Nebraska Lincoln indicated that participation in collegiate and utilisation of recreational facilities have repeatedly been found as two of the most significant factors in persisting at a higher learning institution (McClymont, 2013).

The tertiary institution where this study was conducted has a recreational programme involving residence and non-residence students participating in the University's co-curricular programme. However, more needs to be understood about students' campus recreation needs, whether they are making good use of the programmes on offer, and their current patterns concerning campus recreation. Therefore, this study will offer insight into the relationship between the recreational needs of students and their current campus recreation patterns. Accordingly, this study may inform future practices concerning campus recreation programmes to offer relevant and reflexive campus recreation programmes tailored to the needs of the students at tertiary institutions.

1.2 Statement of Problem

As a result of the increasing pressure students experience at universities, unhealthy lifestyles, stress, and fatigue are general concerns to university administrators (Gauche, 2006). This is supported by the literature showing that a college or university curriculum can be very demanding on a student and that successful institutions can serve their students with a quality academic and social system (Cvijetinovic, 2017). This social system is said to focus on students' daily life and consists of the recurring interactions among students that occur outside the formal academic areas of the university (Henchy, 2011). According to Cvijetinovic (2017), campus recreation programmes allow students to participate in activities geared toward sports and wellness. Cvijetinovic (2017) further states that, even though the university curriculum can be demanding, most students will be given free time in their schedules. What they do with their free time is up to them, and most will find extracurricular activities to participate in or find a part-time job. One of the most consistent findings in recreational research is that student satisfaction is highly correlated to extracurricular involvement, specifically in intramural and recreational sports (NIRSA, 2004). Thus, the students perform effectively in an academic environment and flourish throughout all phases of the co-curricular experience (Hamilton, 2014).

This study was conducted at a tertiary institution in the Western Cape, where the Sport Administration Department offers 21 sporting codes. Six are categorised as high-performance sports: athletics, basketball, cricket, football, netball, and rugby. The remaining 14 (boxing, chess, cheerleading, dance sport, e-sports, hiking, hockey, karate, supa-pool/snooker, squash, table tennis, tennis, and volleyball) are regarded as competitive or recreational codes. A typical campus recreation programme would consist of adapted netball (males and females), tag rugby, chess, table tennis, adapted football (males and females), indigenous games, quidditch, live band entertainment, beach volleyball, and the student-driven recreation activity called

dominoes. The University's Sport Administration Department plays a significant role in ensuring that recreational opportunities are offered to students in collaboration with the Central House Committee (CHC).

Findings from previous studies indicated that campus recreation programme activities need to be informed by the campus community's needs (Laka, 2009). A study by Asihel (2005) supported this, indicating that most female students did not participate in recreational sports on campus due to physical and social constraints. Lastly, the study by Wright (2007) demonstrated physical constraints for students with disabilities, such as time, lack of skills, awareness of available programmes, and administrative barriers. The main highlighted reason for the non-participation of students with disabilities in campus recreation was the communication breakdown between them and the sport administration, confirmed in a study by Mgulwa and Young (2014). It was further stipulated that the needs of students with disabilities were not considered, and there was no sense of affiliation to those students who did not reside on campus (Laka, 2009). The study further stated that determining needs is vital as it highlights the main elements of effective education, personal involvement, feedback, relevance, understanding, and motivation.

Therefore, this study offers insight into students' recreation needs and patterns at tertiary institutions to better understand the value of co-curricular experiences for students on campus. Consequently, this may inform reflexive campus recreation programming within sport administration.

1.3 Aim and Objectives

This study aimed to determine the relationship between students' campus recreation needs and recreation patterns at a tertiary institution in the Western Cape.

The objectives of the study were to:

1. Determine students' current recreational participation patterns at a tertiary institution in the Western Cape.
2. Determine students' recreational needs and preferences at a tertiary institution in the Western Cape.
3. Describe the relationship between campus recreation needs and student recreation patterns.

1.4 Hypothesis

No relationship exists between students' campus recreation needs and recreation patterns at a tertiary institution in the Western Cape.

1.5 Significance of the Study

A gap was identified from previous studies conducted at the University of the Western Cape that the needs of the students needed to be explored. The researcher in this study saw a need to conduct this study, which would ultimately answer some of the questions highlighted by the studies of Solomon (2005), Wright (2007), Laka (2009), and Mgulwa and Young (2014). For example, the causes of low participation in campus recreational programmes may be answered by knowing and offering activities in which students would like to participate. Therefore, the significance of this study in the field of recreation and the tertiary institution where this study took place was to determine the type of activities students at the institution are currently participating in and the type of activities they would prefer. The researcher hopes that the results will assist in promoting a healthy lifestyle among the students and further determine the relationship between recreation participation/patterns and campus recreation needs. The

determined students' recreational needs and preferences will be shared with the intention that the Sports Administration Department at the University will incorporate this information into their campus recreation planning.

1.6 Interpretation of Key Concepts

1.6.1 Sport and recreation

Two different terms and mass participation applies to both. The sport includes regulated, formalised, and structured activities, while recreation consists of activities aimed at having fun and involvement by individual choice (NRSP, 2012).

1.6.2 Campus recreation

Campus Recreation is essential to any tertiary educational institution and contributes to student development. Recreational activities not only enhance the quality of student life but also help in combating perceived academic stress (Windisch, 2005).

1.6.3 Tertiary institutions

Higher and tertiary education are often used interchangeably, representing all forms of organised educational learning and training activities beyond the secondary level (Mohamedbhai, 2008).

1.6.4 Recreation opportunities

Recreation opportunities can be referred to as opportunities provided to students to participate in different recreational activities during their free time that people may enjoy and recognise as having socially redeeming values (Hurd & Anderson, 2010).

1.6.5 Health promotion

An institution that is committed to creating an environment that encourages the health and well-being of all its members (Saurez-Reyes & Van den Broucke, 2015:49).

1.7 Summary of Research Methods

A brief description of the methodological considerations is provided to give the reader a short overview of the research approach and methods. The researcher adopted a cross-sectional quantitative research method to determine the relationship between students' campus recreation needs and patterns. The findings are presented in numerical form and analysed using statistical analysis to describe the relationship. The research design included selecting the population to collect data to answer the research question. The researcher calculated the power based on the population size for accurate representation and generalisation. A convenient sampling technique in the form of volunteer sampling was used, as participants could self-select whether they wanted to participate or not. Once the university granted permission, a link to the questionnaire, consent form and information sheet was sent to students' email addresses via the Registrar's office. The inclusion criteria were students must be registered for professional degrees longer than a semester and between 18 and 35 years old. The exclusion was any students who did not fall into the inclusion criteria. A Self-Determination Theory (SDT) was adopted as the study's theoretical framework. The instrument used was a questionnaire consisting of open- and closed-ended questions. After data collection, the data was automatically downloaded to Excel using Google forms. Afterwards, data was captured and imported to SPSS V.22. Descriptive statistics included mean, mode, standard deviation and cross-sectional. The inferential statistics included a Pearson's correlation in determining whether there is an association between the variables. There is a more detailed discussion of the methodological considerations in Chapter 3.

1.8 Outline of Study

Chapter 1 gave a background of this study and further explained and supported the motivation to conduct this research. This chapter covered the statement of the problem and the aims, objectives, and hypothesis of the study.

Chapter 2 provides a literature review focusing on the overview of recreation, and campus recreation at universities, touching on on-campus recreation at a tertiary institution in the Western Cape. The chapter explored the recreational benefits and related campus recreation participation patterns. Lastly, it provided a conceptual framework to support the relationship between students' campus recreation needs and recreation patterns.

Chapter 3 detailed the research methodology of this study. It outlined the research approach selected to investigate the stated research question. The chapter included the analysis method and concluded with an ethical statement.

Chapter 4 presented findings with inferential statistics of the research in a quantitative form.

Chapter 5 discussed this study's findings, comparing them to existing research to determine whether the existing research supports or opposes this study's findings.

Chapter 6 summarised the findings, interpretation of the findings, limitations of this study, recommendations, and recommendations for future research and conclusion concerning the relationship between students' campus recreation needs and recreation patterns.

1.9 Conclusion

The introductory chapter outlined the importance of campus recreation for tertiary students. Further, it highlighted the relationship between Sports Recreation South Africa, University Sport South Africa, and tertiary institutions and how institutions can impact South Africa and beyond by promoting physical activity. This chapter provides a broader perspective on the benefits of being physically active, touching on its impact on the student's academic performance and social well-being.

The aims and objectives of the study were stipulated, and the problem statement was discussed, indicating why the study was done. Furthermore, the key terms' interpretations were described for context, as they were primarily used throughout the study and were relevant.

CHAPTER 2 LITERATURE REVIEW

2.1 Introduction

The literature presented in this chapter reports on research related to the relationship between student recreation patterns and campus recreation needs. According to Maxwell (2006, p. 28-31), a literature review in a dissertation is “intended to inform a planned study”. This is supported by Paul and Criado (2020) a literature review is reviewing articles to identify and synthesise relevant literature to compare and contrast the findings of prior studies in a domain. Furthermore, reviewing articles provide the reader with knowledge of the research topic, help identify gaps and signal research avenues.

This literature is presented under the following topics: a broad overview of recreation and leisure activities, highlighting the history of overall recreation in societies and universities, and campus recreation at tertiary institutions. This is followed by determined the perceived benefits of campus recreation, the related campus recreation participation patterns, and the importance of using higher education as a setting for health promotion. The focus of the self-determination theory is on aspects that motivate students to participate in recreation and leisure activities willingly.

2.2 An Overview of Recreation and Leisure activities

Recreation refers to experiences and activities chosen and pursued by an individual in their free time (Mclean et al., 2017). Free time refers to the concept of leisure time concerned with an individual’s behaviour or state of mind during their free time, in which they could engage in specific activities to meet their personal needs (Weilbach, 2013). The basis is the experience sought, and activities pursued to ‘re-create’ the individual so that they may be refreshed and

enabled to resume daily obligations (John, 1986). This is supported by Li et al. (2021) who state that leisure activities refer to activities in which individuals participate in their free time outside their mandatory time (such as work, class and sleep). Furthermore, it is an action based on an open consciousness, free choice, and self-determination, obtained from the improvement of the sense of implication and experience of the activities, such as reading, sports and social activities.

Li et al. (2021) stated that leisure activities can improve individuals' physical and mental health and regulate the body and mind, alleviating the stress of life and providing a pleasant experience. Gray and Pelegrino (1973) stated that the recreation experience is a positive emotional response to participation in a recreation activity. The recreation response includes feeling good about yourself and others and an enriched sense of self-worth, which results from intrinsic or extrinsic motivators. Furthermore, there is evidence of reduced levels of stress and tension, which produce anxiety once one participates willingly in recreational activities (Gary & Pelegrino, 1973). This is further supported by Şenışık, S. et.al (2021).

In an ego-involving climate that promotes a win-at-all-costs attitude, such as in competitive sports, a participant's development can be undermined, resulting in a reduced commitment level and withdrawal. Thus, Sports Administration must find a balance in their services by offering recreational programmes to create the right environment to support the participant's intrinsic motivation (Ewing et al., 2002). According to Player (2010), the climate must meet the person's three innate psychological needs for this to happen. These three needs come from the Self Determination theory (Deci & Ryan, 2000) used as this study's framework. These three needs are listed as competence, relatedness and autonomy. According to Player (2010), meeting the participant's three psychological needs will help them remain intrinsically motivated in an activity. If these needs are met, the participant will likely be motivated and remain physically active (Player, 2010).

Recreation is chosen voluntarily by the participants and can either be for immediate satisfaction or because the participant perceives some personal or social values to be achieved by participating in the activity. It is usually enjoyable and, when part of organised or community services, is designed to meet the constructive and socially worthwhile goals of the individual participant, the group and society (Gary & Pelegrino, 1973). This is supported by Grant and Allan (1990), who said that recreation is also seen as a social institution, socially organised for social purposes. Thus, the campus community's needs must be known to ensure that the recreation programmes offered do meet the goals of the individual participant, the group and society at large. This is supported by a study by Li et al. (2021) whom proposed a two-dimension model. The first dimension is called "physiological leisure", which means that the activities selected are mainly to consume physical resources such as sports, outdoor, and adventure activities. The second dimension is called "psychological leisure", which means that the activity is executed by consuming the spiritual resources of the individuals, such as knowledge-based, literacy, and social activities. It is then imperative that the programmes offered should be inclusive for participants to choose the type of activity they want for whichever benefit, physiological, psychological or both. Li et al. (2021) explain whichever leisure activity a participant chooses will produce two types of results, pragmatic and hedonic. Leisure was further categorised into four categories. Category A: is physiological and pragmatic leisure in which people participate in activities such as hiking, mountain climbing, and adventure activities for practical benefits. Category B: is physiological and hedonic leisure, where people perform activities, such as sports and rest, to pursue hedonic benefits. Category C: is psychological and hedonic leisure. This mainly involves mental or brain abilities and is performed to pursue practical benefits such as knowledge. Category D: is psychological and hedonic leisure. Such activities are also performed by mental or brain abilities and people perform them to obtain hedonic benefits, such as social activities.

This is very important, especially in an academic context, that there should be a balance and different types of simulations for different outcomes and various activities to give students a choice for their goals.

In support of the above, recreation is perceived as an emotional condition within an individual that flows from a feeling of well-being and satisfaction (Gary & Pelegrino, 1973). It is characterised by feelings of mastery, achievement, exhilaration, acceptance, success, personal worth, and pleasure. Additionally, recreation reinforces a positive self-image. It is said to be a response to aesthetic experience, the achievement of goals, or positive feedback from others. This is supporting by Montgomery (2016) that participants might find more satisfaction in the physiological or psychological aspects of their leisure activities, where others may be more satisfied with social or anaesthetic aspects. This is supported by Bergeron (2007), who stated that participants experience competence and gain personal growth only if they are provided with positive feedback, good communication, and constructive coaching from the campus recreation staff.

Hedstrom and Gould (2004) felt that recreation participation allows for personal growth, competence, moral development, enhanced self-esteem, and camaraderie. This is further supported by Andre, et.al (2017) speaking on the benefits for students' participation in campus programs. For example, painting would only be recreation if the artist felt satisfied with capturing a desired mood on the canvas. Therefore, according to Kaplan (2018) participating in an activity does not in itself ensure recreation; instead, it is the psychological response felt by the individual which is the determinant. According to (Gary & Pelegrino, 1973), recreation occurs when a person experiences the tranquillity and beauty of nature, leading to inner calm and personal well-being. This view is supported by Khasnabis et al. (2010), who stated that a few of the benefits of participating in recreation for individuals and the community include:

- **Health promotion and disease prevention** - which explains that recreational activities are an enjoyable and effective way to improve health and well-being; it can relieve stress, increase fitness, improve physical and mental health, and prevent the development of chronic illnesses, such as heart disease;
- **Skills development** - the physical and social skills that can be developed by participation in recreational activities;
- **Awareness-raising, reduction of stigma and social inclusion** - recreational activities are a powerful and low-cost means to foster greater inclusion of people with disabilities; they bring people of all ages and abilities together for enjoyment and provide people with disabilities the opportunity to demonstrate their strengths and abilities, and promote a positive image of disability.

2.3 Importance of Campus Recreation

Historically, students participate in informal sports between classes and during campus breaks (Peters, 2014). The term intramural is used to refer to the different physical activities and sports within universities' parameters (Peters, 2014). Similarly, the term campus recreation is used by universities as a collective term instead of intramurals. It includes recreational activities other than sporting activities offered to students and staff on campus.

It is, therefore, important to note that campus recreation is an essential part of any tertiary institution, which can contribute positively to the development of students. Some of these benefits positively impact students' performance and academic persistence (Penland, 2017). Research has suggested that campus recreation positively influences a University's organisational climate, culture and reputation and contributes to the loyalty of important

constituencies (for example, students, alums and legislation), as reported by (Windisch, 2005). According to Iso-Ahola, (1989), one mechanism for coping with the constant demand related to college life would be participation in recreational activities, which has been shown to play an essential role in helping students balance and improve the quality of their lives. This is further supported by Montgomery (2016) that campus recreation has shown to enhance the college experience for students in many areas and participation in recreation can increase overall college retention, improve academic success, interpersonal skills and create positive work ethic for student. This was even more important during Covid-19, which highlighted an increase in mental health problems such as depression and anxiety (Qiu et al., 2020; Torales et al., 2020; Williams et al., 2020). It is said that engaging in leisure activities may provide protective benefits for psychological well-being (Kuykendall et al., 2018). Hence, the World Health Organisation (2020) emphasised allocating time for hobbies and leisure under Covid-19 mental health support strategies.

One of the other primary reasons for recreation at schools and universities is the educational value to the students (Coakley, 2001; Hendericks, 2004). Introducing campus recreation to tertiary institutions is one way of creating a sense of belonging. This is further supported by Montgomery A. (2016) study. According to Mittelstaedt (2006), campus recreation may provide extracurricular education opportunities, enable students to develop critical thinking skills, create new problem-solving strategies and sharpen decision-making skills. This information and new skills can be integrated into their lives. Coakley (2001) stated that the students get an opportunity to shift their focus from academics to co-curricular activities, increasing their interest in academic activities. It can be understood that participating in campus recreation has shown that it can relieve stress and improve time management skills which are important to balance the pressures and stress that college student's experience Montgomery A. (2016). Recreation programmes provide fitness training and stimulate interest in physical

activities among all students. Further, recreation programmes promote the corporate spirit of the university and contribute to the University's image in attracting new students.

A study by Forrester (2013) discussed campus recreational sports participation patterns, included students that use on-campus recreation centre facilities, programmes and services. They segmented participation information of students according to how frequently they used campus recreation facilities, programmes and services. Forrester (2013) found that 75% of students used on-campus recreation centre facilities, programmes and services. Additionally, of those participants, 80% participated in campus recreation programmes and activities at least once a week. The students who indicated they used the campus recreation facilities, programmes or services were asked how often they participated in various campus recreation activities. The top three activities or programmes that students participated in most frequently were: cardiovascular training (for example, treadmill, elliptical and stationary bike), inside the gym (weight training/lifting free weights) and, lastly, open recreational sport (for example, soccer, volleyball or basketball). Activities or programmes students used least were fitness classes, personal training and fitness assessments or testing.

Research showed that prospective students are mainly influenced to enrol in universities and continue studying at a particular university based on their recreational facilities and programmes offered. Forrester (2013) supported this by stating that campus recreation facilities and programmes are a factor for students deciding what college/university to attend, which forms part of the recruitment process. The findings indicated that 68% of students reported that the campus recreation facilities influenced their decision of which university to attend, and 62% reported that campus recreation programmes influenced their decision. Therefore, when recruiting, there needs to be retention of students. The study conducted by Forrester revealed that campus recreation facilities and programmes continued to be an even more significant factor for students when deciding to continue at their college or university due to their

contribution to the quality of life at their institution. The findings showed that 74% of students reported that campus recreation facilities influenced their decisions to continue attending their chosen college or university. A further 67% said that campus recreation programmes influenced their decisions to continue attending their chosen college or university. This showed an increase in the retention of students compared to the recruitment percentage. The above findings gave an idea of the importance of offering attractive programmes in well-equipped facilities, which can assist the university in attracting and retaining students.

Forrester (2013) reported that 83% of students said campus recreation, sports, and fitness activities were vital to them before enrolling in their chosen college or university. Furthermore, 75% of students reported that, at some level, participating in recreational activities and programmes has expanded their interest in staying fit and healthy during their time at university. Lastly, 90% of students reported that campus recreation, sports, and/or fitness activities would be essential for them to be healthy after graduating from their chosen college or university. These percentages showed differences between prior enrolments, after graduating and the importance of maintaining an active lifestyle during university. This difference may reassure sports departments that promoting the benefits of staying active needs to be reiterated for students to stay active during their academic years. Some of the health and wellness benefits students attributed to their participation in campus recreation facilities and programmes were well-being, overall health, fitness level, physical strength and stress management. The benefits of better concentration, balance/coordination in participating in the sport and self-confidence were at the bottom of the benefits reported by the students.

Besides the physical aspects for university students, campus recreation programmes impact various student learning outcomes. These include providing them with skills/abilities they will use after college/university and whether or not they feel they increased or improved in several learning outcomes. It was reported that 64% of students indicated that increased participation

in campus recreation had provided them with skills/abilities they would use after college or university. Students who participated in campus recreation facilities, programmes, or services reported increased soft skills. In turn, this will assist universities in producing graduates with positive attributes. Based on the results of the graph in Forrester's 2013 study, findings showed that time management skills were the most improved soft skills, followed by respect for others and improved academic performance.

Lastly, students were asked in which other ways their participation in campus recreation activities, programmes, and services helped or enhanced their experience at their college or university. Over 6700 students responded to this question. According to Forrester (2013), the top five responses were meeting new people and forming relationships, relieving stress, physical fitness, and improved health by weight loss and control and fun and enjoyment.

Therefore, this research will help to determine students' recreational participation patterns at a tertiary institution, offer activities and programmes that ensure that the sports department continues encouraging students to maintain an active lifestyle.

2.4 Campus Recreation at a Tertiary Institution in the Western Cape

According to a Western Cape University's website, sports build and profile the University's image by supporting both competitive sports and campus recreation as a contributor to the holistic development of the students and staff of the university.

An organisation's mission is its purpose or the reason for its existence. The mission should therefore describe the vision of the University's sports administration. According to written documents and the website, the University's mission in the Western Cape Sports Administration is to unite students to coordinate their sport experience to support their holistic development. Additionally, to implement a system for improving sport administration standards to make a meaningful contribution to the University's strategic priorities.

The University's vision is to become a leader in student development through sports. Their core functional areas included the management of an effective governance system, the development and attraction of applicable talent, leadership and human resource capabilities to deliver operational effectiveness and administer and support recreation and competitive sports development. Their key academic objectives, which can be achieved through sport and recreation, were to contribute to holistic student development in and out of the classroom/co-curricular activities. Secondly, to integrate the campus community by building social cohesion and supporting the University's mission as an engaged institution.

Peters (2014) conducted a comparison between South African universities and found that sporting facilities at the University of the Western Cape (UWC) are said to be modern facilities that are there to accommodate most sporting and recreational ambitions. Peters (2014) also mentioned at the time of her study that UWC offers more than 23 sports types, both at recreational and competitive levels. A unique service provided by the university for the benefit of the student population is the health and on-campus fitness club, with a variety of equipment. However, a study by Laka (2009) found that the campus recreation programmes' recreational activities needed to be informed by the campus community's needs or preferences. The study found that most of the 114 resident participating students (close to 80%) are primarily involved in informal recreation and more than 50% in swimming. Intramural recreational sports and instructional programmes are the least popular sports codes, with the intramural recreational sport having the lowest percentage of students (above 20%). According to Laka, many factors can be attributed to the low student interest in intramural recreational and instructional programmes, such as the unavailability of these activities, poor promotion and possible knowledge of venues where these events are hosted. He made an example of swimming. Almost every student knew where the swimming pool is on campus, but it still attracts fewer than 60% of the on-residence students. Based on the mean scores, one of the suggestions made

by the student's recreational sport service delivery needs was that the equipment should always be in good working order. Second, campus recreation staff must be easy to recognise, always available to assist and offer suitable enjoyable activities. This brings one back to the question of what are suitable, enjoyable recreational activities.

According to Solomon (2005), most female students did not participate in recreational sports on campus due to physical and social constraints. Additionally, Wright (2007) demonstrated physical constraints for students with disabilities, such as time, lack of skills, awareness of available programmes, and administrative barriers. The primary highlighted reason for the non-participation of disabled students in campus recreation is the communication breakdown between the students with disabilities and the sports department. It was further stipulated that the preferences of students with disabilities were not considered, resulting in no sense of affiliation to those students, including those that did not reside in the UWC residence (Laka, 2009). The study further stated that determining student preferences is vital as it enhances the main elements of effective education, personal involvement, feedback, relevance, understanding and motivation. The study highlighted that proper planning and organisation of campus recreation services would ensure the activities are demand-driven and student-based to encourage students to participate in available programmes and develop new ones (Mgulwa & Young, 2014; Laka, 2009). Thus, it was essential for the recreational coordinator to constantly keep abreast of the students' recreational patterns and preferences. Kimmm, (2009) supported the findings from studies conducted at UWC with evidence of three significant constraints: intrapersonal, interpersonal and structural. Intrapersonal constraints can be described as a person's psychological state and attitude, for example, a lack of interest in a specific recreational activity. Interpersonal constraints related to a person's interaction with others or lack thereof, such as having no one with whom to play. Structural constraints can be described as a lack of facilities, equipment or accessibility. In some way, the above three constraints

related closely to the self-determination theory used as a theoretical framework for this study, which covered autonomy, competence and relatedness. The theoretical framework is discussed later in this chapter.

2.5 Perceived Benefits of Campus Recreation

The role of campus recreation in the recruitment and retention of students is becoming well documented, as is the value students place on their participation in these programs in correlation to their overall satisfaction and success at a tertiary institution Koppelman (2005).

Thus, universities on a national basis ought to recognize the provision of recreation on campus as an essential element of balanced student life. The existence of recreation at schools and universities has an educational value for the students, including several positive developmental experiences, such as opportunities for identity work, skill development, and relationship building (Coakley, 2001; Dworkin et al., 2003). This included the benefits of improved academic performance and is supported by Sport and Recreation South Africa (SRSA, 2012). On academic performance, it was said that promoting the health and well-being of all members means promoting effective learning (Ansari & Stock, 2010). Participation in recreational programmes allowed students to develop positive behaviour, awareness of strengths, increased tolerance, self-control, and more vital social interaction skills, including a better healthy lifestyle for the non-disabled and students with disabilities (Mgulwa & Young, 2014).

However, Bartko and Eccles (2003) indicated that the lack of involvement in campus recreation was linked to elevated internalising and externalising behaviour, including lower academic performance and skills, such as problem-solving. It further also resulted in decreased involvement of the students in recreational programmes.

2.6 Related Campus Recreation Participation Patterns

It is stated in the literature that “the habits of students today will influence the norms, beliefs and cultures of communities in the future” (Leslie et al., 2001, p. 117). “Students’ habits engaged in during the ages of 18 to 22 years and the time they spend at higher education institutions will predict their habits during the rest of their lives” (Leslie et al., 2001, p. 117). It is stated that students at entry level in tertiary institutions are mainly at a stage of development where autonomy and identity are essential, becoming crucial in contributing to a sense of belonging and being part of a social group (Kleiber, 1999). This is further supported by Montgomery (2016). Therefore, according to Bandura (1986), participation in campus recreation enhanced social contact and individual development. Belch, Gebel and Mass (2001), creating opportunities for interaction, collaboration and unification was essential if campuses are to develop a sense of community. The relationships students form with other students through intramural sports/campus recreation participation are critical for satisfaction. Therefore, campus recreation programmes should aim to provide increased opportunities for interaction to foster student learning and personal and social development.

Research conducted by Peters (2014) support the above by stating that universities must use campus-based programmes to accommodate student development. Peters (2014) indicated university students’ health, wellness and lifestyle must become a priority as an individual’s current lifestyle and other behaviour may impact their future health and quality of life. Peters (2014) explained that South African studies indicate a huge problem experienced by several higher education institutions with student drop-outs (Buntin & Cloete, 2004). “The student drop-outs in South Africa point out a common problem source, namely stress and burnout” (Bojuwoye, 2002, p. 288; Gauche, 2006, p. 8). Peters (2014) concluded by saying: institutions for higher education must take it upon themselves to provide students with the necessary information using programmes to teach students improved personal habits, on how to cope

with academic stress, knowledge about university life, healthy lifestyle skills, and how to use the institutional support services.

Therefore, universities investing in and understanding the importance of promoting a healthy university and including it in their strategic planning by positive initiatives would benefit the campus community. More specifically, the development of the institution where this study took place as a health-promoting university will contribute to the various goals of the Institutional Operational Plan (IOP) goals 2016-2020. Goal 1 speaks about the contribution to the student experience; Goal 2 touches on the development of desired graduate attributes. The institutional operational plan of UWC consists of eight strategic goals that deliver the University's vision and mission. The IOP Goal 1 that speaks to the student experiences goes beyond the classroom. According to Henchy (2013), participation in non-academic aspects of campus life (such as campus recreation) can positively influence student success. Henchy (2013) mentioned that the Council for the Advancement of Standards (CAS; 2009) indicated that recreational sports programmes are viewed as essential components of higher education, supplementing the educational process by enhancing students' physical, mental, and emotional development. Henchy (2013) noted that, as much as there are many organisations within which students can be involved at a university, many students chose campus recreation centres to become involved. This is in concurrence with what Astin (1984) said. According to Henchy, Astin's (1984) theory of involvement asserted that participating in extracurricular activities contributed to the success of college students. According to this theory, as the number of students at a university increases, the amount of student learning that takes place will also rise. Tinto (1993) stated that introducing social systems which focused on the student's daily life outside the formal academic areas of the college/university should be one of the key focuses of the university. According to Tinto (1993), student participation in extracurricular activities (such as campus recreation) frequently led to friendships that continued beyond the initial activities.

The second IOP goal focused on for this research was the development of graduate attributes. According to the University's integrated graduate attributes and strategic plan, graduate attributes can be understood as the qualities, values, attitudes, skills and understanding that a particular university sets out as important for students to develop by the end of their studies. These attributes are intended to equip them for future employment and as critical and responsible citizens, contributing to society's social and economic well-being. The Education White Paper emphasised that South African higher education institutions should be producing graduates with skills and competencies that build the foundations for lifelong learning, including critical, analytical, problem-solving and communication skills, and the ability to deal with change and diversity in particular, the tolerance of different views and ideas (Education White Paper 3-A Programme for Higher Education Transformation, 1997). Therefore, this can be achieved by students participating in extracurricular programmes, which cannot be achieved if there is no sense of health promotion.

2.7 Higher Education as a Setting for Health Promotion

When reference is made to health promotion in universities, refers to the creation of healthy universities, where promoting healthy and active lifestyles among students. According to the UK Healthy Universities Network, a healthy university is considered to look at the holistic understanding of health. It takes a whole university approach and aspires to create a learning environment and organisational culture that enhances the health, well-being and sustainability of its community, enabling people to achieve their full potential. The Okanagan International Charter for Health-Promoting Universities and colleges (2015) set out the following vision: health-promoting universities and colleges transform the health and sustainability of current and future societies, strengthen communities, and contribute to the well-being of people and

places. They infuse health into everyday operations, business practices and academic mandates. By doing so, they enhance the success of institutions; create campus cultures of compassion, well-being, equity and social justice. Additionally, improving the health of the people who live, learn, work, play and love on our campuses; and strengthen the ecological, social and economic sustainability of communities and broader society.

The notion of health-promoting universities was first pioneered in the United Kingdom in 1990 around the “greening of universities” (Tsouros et al., as cited by Dooris & Doherty, 2010). In South Africa, there are 23 public higher education institutions. Peters (2014) compared ten traditional universities from 23 South African universities, including where this study occurred. Based on the comparison, a distinct difference was found between the universities, where facilities and the approach of the university to the importance of campus recreation to the student’s health, academic performance and student recruitment were evident. It was found that students involved in recreation programmes showed more persistence in academics than those not involved. Further, the interaction provided by recreational programmes offered students the opportunity to develop informal support groups, find study partners, and seek advice from other students and Faculty Hall (2006). It was evident from the comparison that each university does what it can to suit the needs of its students based on what it can offer. Additionally, it indicated that higher learning institutions are leading the way and playing a unique role in developing individuals, communities, societies and cultures.

The National Intramural Association, now known as NIRSA, is a committed organisation ensuring healthy students and communities (NIRSA, 2013). They advocate campus recreation, sport and wellness activities by providing educational and developmental opportunities for universities to learn and share knowledge while promoting healthy living on campus (NIRSA, 2013).

According to the WHO (1986, as cited by Dooris & Doherty, 2010), the healthy settings approach is rooted in the Ottawa Charter for health promotion, which states that the creation of health is lived by people within the settings of their everyday life; where they learn, work, play and love. This is in concurrence with Dooris (2002), stating that health promotion has shifted from targeting specific locations for behaviour interventions. Instead, it appreciates that the places and context in which people live are crucially important in determining health and well-being. The key objectives of health-promoting universities is to promote healthy and sustainable policies and planning and to provide healthy working and supportive social environments. Further, to establish and improve primary health care, facilitate personal and social developments, encourage broader academic interest and developments in health promotion, and develop links with the community (Dooris & Doherty, 2010).

The simplified model below illustrates how underpinning values such as partnership, participation and equity come together with public health and higher education drivers to inform action across the three focus areas reflected in the aims. In proposing a model for applying the perspective of the healthy setting within higher education, the consultation and development process drew on a rich body of work that has emerged over the past 15 years. The emphasis was on articulating the theory and practice of healthy universities, and central to the model is a “whole university approach”. Therefore, it is imperative that higher education institutions become drivers of health promotion that can also contribute to public health capacity, and capability building will require effective leadership and partnership development.

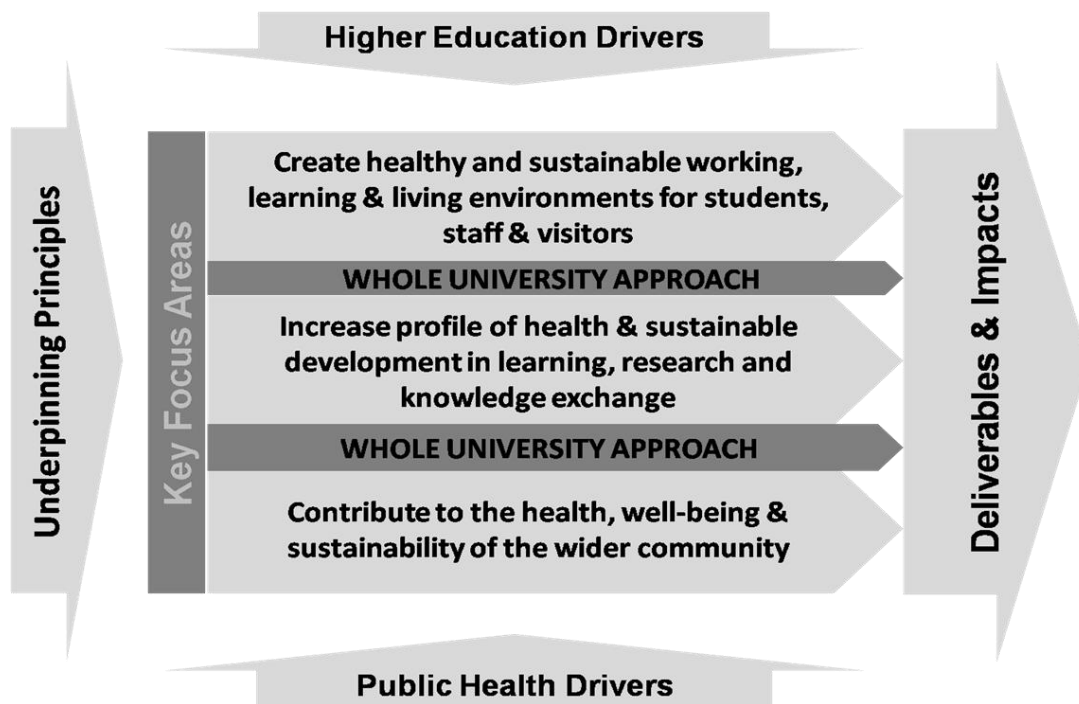


Figure 2.2.1 Whole university approach

2.8 Theoretical Framework

This study adopted Self Determination Theory (SDT) as the theoretical lens through which the data was collected and analysed. The SDT was developed by Edward L Deci and Richard M Ryan in 2000 and expanded and refined by scholars from many countries.

The SDT (See Figure 2.2) is based on the theory of human motivation, development and wellness. The theory looks at motivation as a process starting with a physiological or psychological need that activates a behaviour aimed at a goal. The central premise of this theory was that individuals have innate tendencies towards personal growth and vitality that are either satisfied or thwarted by their immediate environment. The theory focused on types rather than just the amount of motivation. This theory addressed social conditions that enhance versus diminish these types of motivation, proposing and finding that the degrees of basic psychological needs for autonomy, competence and relatedness are supported rather than

thwarted by both the type and strength of motivation. The SDT also examines people’s life goals or aspirations, showing differential relations of intrinsic and extrinsic life goals to performance and psychological health.

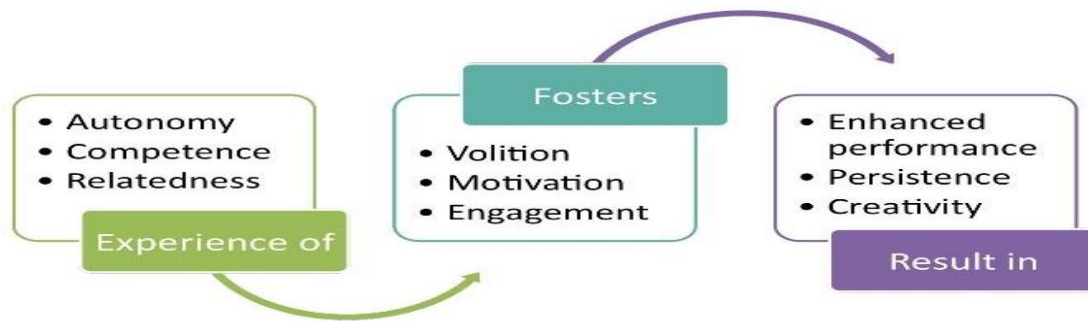


Figure 2.2.2: Model of self-determination theory (Deci & Ryan, 2000)

The SDT is a theory of motivation and personality that address universal, innate and psychological needs, competence, autonomy and relatedness. Autonomy refer to being self-initiating and self-regulating in one’s actions. In other words, people need to control their behaviours and goals. Competence refer to people’s need to gain mastery of tasks and learn different skills. Lastly, relatedness refer to people’s need to experience a sense of belonging and attachment to others. When people experience these three things, they become self-determined and able to be intrinsically motivated to pursue the things that interest them. If not, it may lead to a tendency to withdraw and become antisocial as compensatory motives for unfulfilled needs.

The three psychological conditions are considered essential for understanding the what, and why of pursuing goals. For this study, the three psychological conditions were applied to the constructs of this study in the following way.

- *Competence*: Applied by analysing how students interact with campus recreation programmes and mastering tasks obtained by gathering information about their recreation needs and patterns.
- *Autonomy*: Consider students' behaviour manifested in their recreation patterns, needs and participation.
- *Relatedness*: Taking into account recreation patterns concerning their recreation needs and considered their feelings of belonging when participating in campus recreation programmes.

Ensuring that the three natural and primary conditions are met would assist administrators in meeting the human motivation of the students, which would subsequently let the researcher know about the students' recreational patterns and preferences at the tertiary institution.

2.9 Chapter Summary

This chapter provides a broad overview of recreation, including the history in societies and universities, which help to understand recreation patterns. The focus is then on on-campus recreation at a tertiary institution where this study occurred. The essential aspects discussed are the perceived benefits of campus recreation, the related campus recreation participation patterns, and the importance of using higher education as a setting for health promotion. Later discussed the self-determination theory framework, which focused on aspects that motivates a person, more specifically a student, to participate in an activity willingly.

CHAPTER 3

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This study explored the relationship between students' campus recreation needs and patterns at a tertiary institution in the Western Cape. The hope is expressed that the students' recreational needs and preferences will be shared with the intention that the Sports Administration Department at the University will incorporate this information into their campus recreation planning. According to Smith (2015), the quantitative approach is a systematic process for obtaining quantifiable information and was deemed best for this study. Study findings are presented in a numerical form and analysed using statistical analysis to describe, test relationships and examine the cause and effect of relationships.

This chapter begins by outlining the research design adopted in this study, followed by the population and sampling of participants and the inclusion and exclusion criteria for the sample selection, followed by a description of the research setting. The research instrument, pilot study and data collection procedure, statistical data analysis, validity and reliability are described. The ethical statement/consideration are also presented in this chapter.

3.2 Research Designs

This cross-sectional study used quantitative methods to generate data (Chow, 2002). A cross-sectional study design included the selection of a sample of the population to collect data to answer the research question. It gathered data at a specific time (Olson & George, 2004). Included were the entire student population to ensure that every student received an opportunity to participate. Power and sample size estimations are used by researchers to determine how many subjects are needed to answer the research question (or null hypothesis) Jones et al. (2003). The researcher determined the sample based on a power calculation of 379 (n=379)

participants required to represent or generalise the entire population accurately, where the effect size of 0.5 was determined to arrive at the sample size using Raosoft, Inc. software (Raosoft, 2004). Determining the sample size included the following calculation:

$$x = Z(c/100)^2 r(100-r)$$

$$n = N x / ((N-1)E^2 + x)$$

$$E = \text{Sqrt}[(N-n)x/n(N-1)]$$

A modified online survey was administered using Google Forms. The questionnaire was pilot-tested, corrected it where necessary and distributed it to the students through the office of the Deputy Registrar's student database. This process made it easier to reach the entire university population. It gave each student an equal chance to express and engage on matters concerning their recreational needs for the duration of their academic year. This study received 237 (n=237) responses.

3.3 Population and Sampling

The term population or universe, means the entire mass of observations, which is the parent group from which a sample is to be formed. In research methodology population means characteristics of a specific group (Pandey & Pandey, 2015). Sampling means selecting a given number of subjects from a defined population as representative of that population (Pandey & Pandey, 2015). The population included all elements that meet specific criteria for inclusion in a study and a sample that will be a subset of the population selected for the study. The entire population of 25 000 registered students at the university were included in this study. The students had to self-select whether they wanted to complete the survey, thereafter those participants that met the inclusion criteria were filtered. The 379 (n=379) power was calculated

based on the population size, which determined the true representation or generalisation of the study. A convenient sampling technique in the form of volunteer sampling was used as participants could self-select institution to be part of this study.

Once the university granted permission to conduct the research, an email containing a link to the questionnaire, consent form and information sheet was sent to the student's email address. The students were instructed to read through the consent form and the information sheet; after that, if they agreed, to voluntarily proceed by clicking yes to complete the questionnaire. The study only sampled students enrolled in professional degrees. The university where this study took place has a great history from the South African apartheid regime. The population of the university consists of students from previously disadvantaged backgrounds who come from across the country. It has also grown to attract students from foreign countries (Tertiary 2016). The type of students enrolled in the university come from schools or areas where physical activity is not widely promoted. This present a challenge for the Sports Administration in terms of attracting them to participate in the programmes offered.

3.4 Inclusion Criteria

The study was open to all students at the university who lived in the residences or at home, including students who had or had not previously participated in the university recreational programme. The following inclusion criteria were used to select the participants to answer the questions in this study. Participants in the study were registered in professional degrees longer than a semester at the University where this study took place and were between 18-35 years old.

3.5 Exclusion Criteria

Participants who did not meet the inclusion criteria were excluded from participating in the study.

3.6 Research Settings

The study took place at a higher education institution in the Western Cape, established in 1959. The University has a history of creative struggle against oppression, discrimination and disadvantage. Among academic institutions, it has been at the vanguard of South Africa's historic change, playing a distinctive academic role in helping to build an equitable and dynamic nation. The University's key concerns with access, equity and quality in higher education arise from extensive practical engagement in helping the historically marginalised participate fully in the nation's life. Times have changed, and the University where this study took place strives to remain a vibrant institution of high repute in pursuit of excellence in teaching, learning and research. The University believes its strength will come from its ability to provide a nurturing space for its staff and students to grow in hope and to create and share knowledge (UWC history, n.d).

With the changing times, the University also boasts a well-equipped gym facility renovated in 2016, a sports hall that caters for dance (ballroom), cheerleading, aerobics and dance fitness. The campus also has netball and basketball courts, rugby and football fields and a cricket oval for major sports and recreational activities. The facilities are open to all registered students for various other activities. The university also boasts an Olympic size indoor swimming pool and an outdoor water polo swimming pool within walking distance of the residences. The major sporting and recreational codes offered at the university are listed in Table 3.6.1. All students can join whichever sports they like to play and recreational programmes in which they wish to participate.

Table 3.6.1 UWC Sports and recreation activities.

High Performance	Competitive	Recreation
Athletics	Boxing	Cheerleading
Basketball	Chess	Hiking
Cricket	Dance Spot	Karate
Football	Hockey	Squash
Netball	Rowing	Supa-Pool
Rugby	Swimming	Tennis
	Table Tennis	
	Volleyball	

The electronic nature of data collection in this study did not allow control over the participants who volunteered to participate. However, the settings of this study were natural and partially controlled. The questionnaire was completed online in the students' safe, conducive environment at their convenience.

3.7 Research Instrument

A questionnaire was used to determine the students' campus recreation needs and participation patterns to promote a healthy lifestyle. The questionnaire was in English as this is the primary medium of instruction used at the university where the data was collected. The reason for using a questionnaire as the tool for data collection were as follows: the questionnaire had been validated, was inexpensive, convenient for the researcher and participants, ensured anonymity and was consistent in asking the same questions for each participant.

The questionnaire consisted of open- and closed-ended questions (See Appendix D). The open-ended questions were clear and straightforward, easy to understand and allowed the participants to express views and engage in matters concerning their recreational participation at the university. Open-ended positives is to discover the responses that individuals give

spontaneously; the other is to avoid the bias that may result from suggesting responses to individuals Popping, (2015). The closed-ended questions used the Likert scale, where the respondents had to rank a particular answer from strongly disagree to strongly agree (1-5). Likert scale designed by Rensis Likert is a very popular rating scale for measuring ordinal data social science research. This scale includes Likert items that are simply-worded statements to which respondents can indicate their extent of agreement or disagreement on a five or seven-point scale ranging from “strongly disagree” to “strongly agree”. Likert items allow for more granularity (more finely tuned response) than binary items, including whether respondents are neutral to the statement (Bhattacharjee, 2012). The participants also had to rank the best programmes, the main reasons for not participating and so on. The questionnaire was modified and developed from the City of Cape Town’s 2011 recreation study and one from Kovac and Beck (1997). The questionnaire was developed using the Google forms application and distributed to the entire student population using the University’s email communication. This application allowed the questionnaire to be circulated to the students’ email addresses as an easily accessible link, as all students currently use the Google mail (G-mail) platform to access their accounts. This allowed for descriptive data to be collected for reporting purposes.

The structure of the questionnaire was as follows:

Section A included the participants’ information and demographics to determine the type of activities the students participate in, why they participate, how often they participate, how they found out about the activities and how can the programme be made more attractive to meet their recreational needs. This section also included gender, ethnicity, age, the faculty of registration, study level, disabled or not, place of residence, whether the participant was aware of any campus recreation programmes and whether they participated in any campus recreation activities at the university. They were also asked to indicate the recreation activities they currently participate in from a list compiled from the tertiary institutions’ recreation activities.

Section B dealt with the quality and importance of campus recreation services. It focused on how many times a week the student participated in recreation, whether they were active before enrolling at the university, fitness- and sport-related activities they currently participate in, and whether they participate in any student bodies/centres or societies on campus. In this section, the participants were asked to scale how satisfied they are with the state of facilities and services at the university sports department. They were also asked to rank the top three reasons they do not participate in recreational activities and three programmes they would like to see at the university.

Section C focused on the University's sports and recreational facilities. This section aimed to determine the accessibility of sports and recreation facilities at the university, especially for students with disabilities. The respondents could comment on whether they had experienced any difficulty in accessing any of the sports facilities and rank three more facilities the student would like to see.

3.8 Pilot Study

A pilot study was conducted with 20 students from the university where this study took place. Once feedback was received from the respondents, any necessary changes were made. The group of students were informed that their participation was voluntary and that the information received in the pilot phase of the research would not be included in the final results of the study.

3.9 Data Collection Procedure

Permission to proceed with surveying the participants was obtained from the Deputy Registrar of the University of the Western Cape (UWCRP010817NM). The participants in the study

were registered students at the university. Based on the nature of the research instrument, face-to-face meetings were not held. The consent and information form and a brief description of the study's purpose were all explained in the email. The stated purpose was to determine the student's recreational patterns and needs to inform the sports department, hoping they would include the student's needs in their recreational programmes. After permission was granted, the participants were sent an email via the registrar's student database containing the consent form, information sheet and a link to the questionnaire. The Office for Students with Disabilities at the tertiary institution was consulted to assist students with visual impairments. This data collection period was four weeks. The first call for participation requested the students to complete the questionnaire within two weeks. After two weeks, the desired number of participants had not responded, and a second call was sent, allowing one week for responses. As the response rate was still low after the second call, data was collected by actively inviting students to complete the questionnaire. This additional process lasted for one week.

3.10 Statistical Analyses of Data

This study included the entire population of professional degree-students at the university. The research question was to determine the association between students' campus recreation needs and patterns at a Western Cape university. The data adopted from the SDT used as the study's theoretical framework was collected and analysed. This determined the three innate and basic conditions for human motivation, autonomy, competence and relatedness in the STD were met, which subsequently indicated that the students' recreational patterns and preferences were met. The data collected using the questionnaire was analysed with the assistance of a statistician. The data was automatically downloaded into Excel using Google forms. This data was clean, as it consisted of direct entries from the participants. Data were captured and imported to SPSS V. 22. The descriptive statistics included the means, modes, standard deviations and cross-tabulations. These are presented in tables and graphs in Chapter 4. The inferential statistics

include a Pearson's correlation which determines any associations between variables. A coefficient (R-value) between +1 and -1 indicates an association between variables. The variables in this study included demographics, health promotion and recreation patterns, needs, preferences and patterns. The correlation was set with a p-value of 0.05 set as the level of significance. This type of analysis assisted in describing the type of data collected and highlighted any differences in the patterns and preferences of students. It will also help the researcher in answering, not answering or partially answering the research question.

3.11 Validity and Reliability

The two primary evaluation criteria in any measurement or observation is to measure what is intended to measure and that the same measurement process would yield the same results. The two concepts used to determine the above are validity and reliability. Reliability is concerned with stability and consistency. In other words, does the same measurement tool yield stable and consistent results when repeated over time? Validity is concerned with measuring of what is intended to measure and what the researcher thinks should be measured (Gratton & Jones, 2004). The instrument has already been validated by the City of Cape Town (2011) and Kovac and Beck (1997).

3.12 Ethics Statement

Permission for the study was obtained from the University's Humanities and Social Sciences Research Ethics Committee (HS17/1/23). Due to the nature of the study, permission was also sought from the Deputy Registrar to conduct the study at the university with the students as participants and to send the questionnaire to the student's email addresses. The students were given the information sheet and the consent form explaining the purpose of the study. They

had to indicate whether they read, understood and agreed to participate by clicking on the 'continue' button. The participants were informed that their participation was voluntary and that they could withdraw at any time without any consequences, especially if they experienced any discomfort answering the questions. For the visually impaired students, a staff member from the students with disability unit or the researcher read out the questions and the written answer (Best & Kahn, 2006). The researcher informed the participants that any data obtained would not be linked to any specific participant and anonymity would be maintained at all times by using coding.

The collected data will be securely stored for up to five years by the researcher and the supervisor at the University's Sport and Recreation Exercise Science Department. The data will then be destroyed by shredding hard copies and deleting all stored files on computers. The researcher keeps the data in a locked cupboard to which only the researcher and her supervisor had access to ensure the safekeeping of the research data.

3.13 Chapter Summary

In this chapter, the research methodology of the data collection process and procedure is presented as simply and clearly as possible. The next chapter presents the detailed findings of the data collection process.

CHAPTER 4

RESULTS OF THE STUDY

4.1 Introduction

This chapter presents the results and findings of a research study conducted at a tertiary institution in the Western Cape. The purpose of the study is to explore the relationship between students' campus recreation needs and patterns at a tertiary institution in the Western Cape using a questionnaire to collect the data. Tables are used to present the descriptive statistics on students' participation patterns, needs, and preferences.

4.2 Demographic Profile of Participants

The participants of this study were full-time registered students at a University in the Western Cape. The following section presented the demographical information of the 237 students who participated in the study. For this study, the demographics included the participants' gender, ethnicity, age, disability, faculty, study level and place of residence (Table 4.2.1).

Table 4.2.1 Demographic information of participants

Demographic Variable	Male		Female		Totals
	(N) 237	% Percentage	(N) 237	% Percentage	
Ethnicity:					
Black	48	64.9%	72	44.2%	120
Coloured	21	28.4%	66	40.5%	87
White	3	4.1%	16	9.8%	19
Asian	0	0.0%	1	0.6%	1
Indian	2	2.7%	6	3.7%	8
Other	0	0.0%	2	1.2%	2
Age:					
Under 18	1	1.4%	4	2.5%	5
18-20	19	25.7%	62	38.0%	81
21-23	26	35.1%	52	31.9%	78
24-26	9	12.2%	24	14.7%	33
27-29	4	5.4%	10	6.1%	14
30-32	4	5.4%	3	1.8%	7
33-35	5	6.8%	2	1.2%	7
36+	6	8.1%	6	3.7%	12
Faculty:					
Arts	10	13.5%	25	15.4%	35
Science	14	18.9%	29	17.9%	43
CHS	10	13.5%	44	27.2%	54
EMS	28	37.8%	33	20.4%	61
Education	6	8.1%	15	9.3%	21
Dentistry	0	0.0%	5	3.1%	5
Law	6	8.1%	11	6.8%	17
*1 Missing					
Year group:					
First-year	24	32.4%	48	29.4%	72
Second-year	8	10.8%	35	21.5%	43
Third-year	18	24.3%	38	23.3%	56
Fourth-year/Honours	13	17.6%	20	12.3%	33
Masters	7	9.5%	15	9.2%	22
PhD	4	5.4%	7	4.3%	11
Disability:					
Yes	2	2.7%	3	1.8%	5
No	72	97.3%	160	98.2%	232
Accommodation:					
Home with parents	24	32.4%	71	44.1%	95
University: on-campus residence	12	20.3%	30	18.6%	42
University: off-campus residence	8	10.8%	16	9.9%	24
Private accommodation	14	18.9%	33	20.5%	47
Own place	11	14.9%	10	6.2%	21
Other	2	2.7%	1	0.6%	3
*2 Missing					

*EMS - Economic and Management Science **CHS – Community and Health Sciences

Table 4.2.1 presents the participants' demographic information. Of the 237 participants, the representation of females (n=163; 68.8%) was greater than the males (n=74; 31.2%). Of the participants, 120 (50.6%) identified as Black, followed by 87 (36.7%) Coloured participants, 19 (8.0%) White participants, eight (3.4%) Indian, two (0.8%) categorised as other and one Asian (0.4%). A substantial number of participants', as many as (n=81; 34.2%) were aged between 18-20 years, followed by 78 (32.9%) between 21-23 years and three (13.9%) between 24-26 years. A total of 61 (25.8%) participants were registered in the Faculty of Economics and Management Science, followed by 54 (22.9%) in Community and Health Science and 43 (18.2%) in the Natural Sciences. Of these participants, 72 (30.4%) were in their first year of study, followed by 56 (23.6%) in third year and 43 (18.1%) in second year. The results revealed that five (2.1%) participants were disabled, and 232 (97.9%) indicated no disability. A significant number of the participants noted they live at home with their parents (n=95; 40.4%), followed by 47 (20.0%) in private accommodation and a few participants in the on-campus university residence (n=42; 19.1%).

The results of this section showed that black and coloured female participants aged 18-20 in their first year of Community and Health Sciences (CHS) were more aware of the campus recreation programmes.

4.3 Awareness of Campus Recreation

The following section provides information about the participants' awareness of campus recreation programmes on offer at the University, followed by how they found out about the activities to determine the best possible way of marketing it. Their satisfaction or dissatisfaction regarding the availability of information about recreational activity opportunities was then determined and is presented in table 4.3.1

Table 4.3.1 Student awareness of campus recreation programmes offered

Awareness Variable	Male		Female	
	(N) 237	% Percentage	(N) 237	% Percentage
Aware of campus recreation programmes:				
Yes	47	63.5%	111	69.8%
No	27	36.5%	48	30.2%
*4 Missing				
How did you find out about the activities:				
Posters around campus	14	18.9%	33	20.8%
Word of mouth	23	31.1%	57	35.8%
Communication emails	20	27.0%	39	24.5%
Social media	6	8.1%	11	6.9%
Campus activation	3	4.1%	4	2.5%
Other	8	10.8%	15	9.4%
*4 Missing				
Availability of information about recreational activity opportunities:				
Very dissatisfied	18	25.7%	47	31.1%
Somewhat dissatisfied	17	24.3%	34	22.5%
Neither satisfied nor dissatisfied	15	21.4%	32	21.2%
Somewhat satisfied	8	11.4%	19	12.6%
Very satisfied	8	11.4%	8	5.3%
No opinion	4	5.7%	11	7.3%
*16 Missing				

Table 4.3.1 indicates the students' awareness of the University's campus recreation programme. The results showed that 158 (67.8%) participants were aware of the University's campus recreation programmes, mostly made up of females (n=111; 69.8%), with 75 (32.2%) indicating they were unaware of any campus recreation programmes.

A total of 80 (34.3%) participants revealed that the most effective method of marketing the campus recreation programmes was by word of mouth, followed by 59 (25.3%) who found out about the activities through the University's electronic mail communication (emails), and 47 (20.2%) from posters around campus. The least (n= 7; 3.0%) was through campus activation drives, with others indicating that they found out about the activities from a notice board at the gym (n=23; 9.9%). If they did not know about recreation, they were asked how they thought these activities could be best marketed. Some of the suggestions were through campus radio, promotions during orientation week, having information stalls around campus, using lecture

halls for marketing, and making the posters stand out from regular academic communication. Other suggestions were to use social media platforms and market them in a way that allowed students to put their participation in out-of-classroom activities on their resumes for future employers or through the co-curricular transcript offered at the University through the Student Development Support division (SDS)/Student affairs. The University's electronic/online noticeboard and communication emails came up quite often as the best platform to market upcoming recreation events.

A total of 65 (29.4%) of the participants said they were very dissatisfied with the availability of information about recreational activity opportunities; 51 (23.1%) indicated they were somewhat dissatisfied, followed by 47 (21.3%) who were neither satisfied nor dissatisfied.

4.4 Campus Recreation Student Satisfaction

This section of the chapter presents results about the students' satisfaction regarding the services and recreation programmes offered, followed by their satisfaction with the fees charged for the various programmes and their satisfaction with the facilities where these programmes occurred.

Table 4.4.1: Participants' satisfaction with recreation services and programmes

		Male										
Service variable	Very dissatisfied		Somewhat dissatisfied		Neither satisfied nor dissatisfied		Somewhat satisfied		Very satisfied		No opinion	
	n	%	n	%	n	%	n	%	n	%	n	%
Campus recreation staff	6	8.8	11	16.2	21	30.9	10	14.7	11	16.2	9	13.2
Availability of fitness classes	9	13.0	12	17.4	22	31.9	10	14.5	7	10.1	9	13.0
Choices of recreation programmes	6	8.7	10	14.5	18	26.1	20	29.0	11	15.9	4	5.8
Scheduled times for recreation programmes	7	10.0	13	18.6	21	30.0	18	25.7	6	8.6	5	7.1
Availability of rental equipment for recreational activities	12	17.1	12	17.1	21	30.0	7	10.0	4	5.7	14	20.0
		Female										
Service variable	Very dissatisfied		Somewhat dissatisfied		Neither satisfied nor dissatisfied		Somewhat satisfied		Very satisfied		No opinion	
	n	%	n	%	n	%	n	%	n	%	n	%
Campus recreation staff	9	6.0	21	14.1	36	24.2	27	18.1	15	10.1	41	27.5
Availability of fitness class	17	11.3	25	16.7	39	26.0	24	16.0	12	8.0	33	22.0
Choices of recreation programmes	16	10.7	22	14.7	40	26.7	29	19.3	16	10.7	27	18.0
Scheduled times for recreation programmes	13	8.6	33	21.9	33	21.9	28	18.5	11	7.3	33	21.9
Availability of rental equipment for recreational activities	22	14.7	31	20.7	38	25.3	9	6.0	6	4.0	44	29.3

Table 4.4.1 shows that 57 (26.3%) participants were neither satisfied nor dissatisfied with the campus recreation staff service, followed by 50 (23.0%) with no opinion. The participants who had no opinion may be those students who do not participate in the recreation programmes at the University. A further 37 (17.1%) of the participants indicated they were somewhat satisfied, and 32 (14.7%) were somewhat dissatisfied with the campus recreation staff service.

The table shows that 61 (27.9%) participants said they were neither satisfied nor dissatisfied with the availability of fitness classes; 42 (19.2%) indicated they had no opinion, followed by 37 (16.9%) saying they were somewhat dissatisfied and 34 (15.5%) saying they were somewhat satisfied.

Altogether, 58 (26.5%) of the participants were neither satisfied nor dissatisfied with the choice of recreation programmes offered, 49 (22.4%) were somewhat satisfied, 32 (14.6%) said they were somewhat dissatisfied, and 27 (12.3%) were very dissatisfied.

Concerning the scheduled times for recreation programmes, 54 (24.4%) of the participants indicated that they were neither satisfied nor dissatisfied, 46 (20.8%) were somewhat dissatisfied, 46 (20.8%) were somewhat satisfied, and 20 (9.0%) said they were very dissatisfied.

Lastly, the table shows that 59 (26.8%) of the participants said they were neither satisfied nor dissatisfied with the availability of rental equipment for recreational activities, 58 (26.4%) had no opinion, 43 (19.5%) were somewhat dissatisfied, and 34 (15.5%) were very dissatisfied.

Table 4.4.2: Participants' satisfaction with recreation fees

		Male										
Recreation fees variable	Very dissatisfied		Somewhat dissatisfied		Neither satisfied nor dissatisfied		Somewhat satisfied		Very satisfied		No opinion	
	n	%	n	%	n	%	n	%	n	%	n	%
Fees associated with recreational programmes 16 missing	11	15.7	9	12.9	20	28.6	14	20.0	7	10.0	9	12.9
Fees associated with fitness classes 18 missing	11	15.7	11	15.7	20	28.6	11	15.7	7	10.0	10	14.3
Fees associated with campus recreation activities 17 missing	12	17.1	11	15.7	15	21.4	17	24.3	7	10.0	8	11.4
		Female										
Recreation fees variable	Very dissatisfied		Somewhat dissatisfied		Neither satisfied nor dissatisfied		Somewhat satisfied		Very satisfied		No opinion	
	n	%	n	%	n	%	n	%	n	%	n	%
Fees associated with recreational programmes 16 missing	15	9.9	19	12.6	44	29.1	20	13.2	13	8.6	40	26.5
Fees associated with fitness classes 18 missing	16	10.7	21	14.1	39	26.2	22	14.8	17	11.4	34	22.8
Fees associated with campus recreation activities 17 missing	16	10.7	27	18.0	32	21.3	22	14.7	22	14.7	31	20.7

Table 4.4.2 shows 64 (29.0%) students were neither satisfied nor dissatisfied with the fees associated with the recreation programmes, 49 (22.2%) had no opinion, and 34 (15.4%) were somewhat satisfied. The results from the rest of the participants shows that 28 (12.7%) were somewhat dissatisfied, and 26 (11.8%) were very dissatisfied with the fees associated with the recreation programmes offered at the university.

When it came to the fees associated with the fitness classes, 59 (26.9%), participants said they were neither satisfied nor dissatisfied, 44 (20.1%) had no opinion, followed by 33 (15.1%) who were somewhat satisfied, 32 (14.6%) who were somewhat dissatisfied, and 27 (12.3%) who were very dissatisfied.

Lastly, 47 (21.4%) participants were neither satisfied nor dissatisfied with the fees associated with campus recreation activities, 39 (17.7%) were somewhat satisfied, and 38 (17.3%) were somewhat dissatisfied.

Table 4.4.3: Participants' satisfaction with facilities

Male												
Facilities variable	Very dissatisfied		Somewhat dissatisfied		Neither satisfied nor dissatisfied		Somewhat satisfied		Very satisfied		No opinion	
	n	%	n	%	n	%	n	%	n	%	n	%
Indoor recreation facilities 17 missing	8	11.4	9	12.9	15	21.4	20	28.6	9	12.9	9	12.9
Outdoor recreation facilities 18 missing	9	12.9	6	8.6	14	20.0	22	31.4	14	20.0	5	7.1
Hours of operation for facilities 16 missing	9	12.9	10	14.3	21	30.0	14	20.0	10	14.3	6	8.6
Female												
Facilities variable	Very dissatisfied		Somewhat dissatisfied		Neither satisfied nor dissatisfied		Somewhat satisfied		Very satisfied		No opinion	
	n	%	n	%	n	%	n	%	n	%	n	%
Indoor recreation facilities 17 missing	13	8.7	21	14.0	30	20.0	30	20.0	31	20.7	25	16.7
Outdoor recreation facilities 18 missing	16	10.7	19	12.8	33	22.1	37	24.8	17	11.4	26	17.4
Hours of operation for facilities 16 missing	18	11.9	31	20.5	29	19.2	21	13.9	19	12.6	33	21.9

Table 4.4.3 shows information relating to students' satisfaction or dissatisfaction with the University's recreational facilities. A total of 50 (22.7%), of whom 30 (20%) were female, were somewhat satisfied with the indoor recreation facility; 40 (18.2%) were very satisfied, 30 (13.6%) were somewhat dissatisfied, and 21 (9.5%) were very dissatisfied. A further 59 (26.9%), of whom 37 (24.8%) were female, said they were somewhat satisfied with the outdoor recreation facilities, 47 (21.5%) were neither satisfied nor dissatisfied, 31 (14.2%) were very satisfied, 25 (11.44%) were very dissatisfied, 25 (11.44%) were somewhat dissatisfied.

Lastly, 50 (22.6%) participants said they were neither satisfied nor dissatisfied with the facility's hours of operation, 41 (18.6%) were somewhat dissatisfied, and 35 (15.8%) were somewhat satisfied.

The results in this section revealed an unclear indication of the participants' satisfaction or dissatisfaction with facilities, services, programmes, and fees relating to campus recreation. The female participants indicated they were neither satisfied nor dissatisfied with the fees associated with campus recreation or fitness classes. Additionally, some participants were neither satisfied nor dissatisfied, somewhat satisfied or somewhat dissatisfied with the operating hours of facilities, including the scheduled times for recreation programmes. The results indicated that the participants were more satisfied with the outdoor facilities than the indoor facilities, and more participants were satisfied than dissatisfied with both indoor and outdoor facilities. It could be that some of the participants either did not participate in these programmes or classes, as there was a high number of participants with no opinion.

4.5 Student Recreation Patterns

The following section presents information about the current recreation patterns of the students at a tertiary institution in the Western Cape. The recreation patterns included questions about

the reasons for participating in recreation activities, how often the students participated, and what would make them want to participate if they were not actively participating. How frequently were they physically active before being a student at the tertiary institution, and in what sport and fitness-related activities they currently participate, including negative and positive experiences.

Table 4.5.1 Participation patterns of participants

Recreation patterns variable	Male		Female	
	(N) 237	% Percentage	(N) 237	% Percentage
Participation in campus recreation activities				
Yes	30	40.5%	44	27.7%
No	44	59.9%	115	7.3%
*4 Missing				
Reasons for participating in recreational activities				
For fresh air	17	25.4%	37	29.4%
To keep healthy and fit	26	38.8%	70	55.6%
For the enjoyment	14	20.9%	11	8.7%
To relax after lectures	5	7.5%	3	2.4%
To socialise	3	4.5%	3	2.4%
Other	2	3.0%	2	1.6%
*44 Missing				
Frequency of participation in campus recreation activities or events				
Daily	4	5.4%	10	6.3%
Weekly	20	27.0%	23	14.5%
Monthly	3	4.1%	5	3.1%
Yearly	1	1.4%	4	2.5%
I do not participate in the university campus recreation activities	28	37.8%	83	52.2%
I do participate in recreational activities on my own	18	24.3%	34	21.4%
*4 Missing				

Recreation patterns variable	Male		Female	
	n	% Percentage	n	% Percentage
What would make you participate in campus recreation activities?				
Promotion of the benefits of being involved in active recreation	15	20.3%	42	25.8%
Knowing people that are already active	11	14.9%	16	9.8%
Getting people that are already active	9	12.2%	38	23.3%
Having more accessible recreational sports/activities	8	10.8%	16	9.8%
Offering different recreational sports/activities	2	2.7%	7	4.3%
Offering the activities after class and at weekends	4	5.4%	9	5.5%
Transport after the programmes	1	1.4%	7	4.3%
Better supervision	-	-	-	-
Other	24	32.4%	28	17.2%
Physical activity on or off-campus				
Not at all	14	18.9%	47	29.7%
1 to 3 times a week	36	48.6%	85	53.8%
4 to 6 times a week	20	27.0%	24	15.2%
7 to 9 times a week	3	4.1%	0	0.0%
10 or more times a week	1	1.4%	2	1.3%
*5 Missing				
Physical activity before being a student				
Not at all	9	12.2%	40	25.5%
1 to 3 times a week	25	33.8%	52	33.1%
4 to 6 times a week	31	41.9%	53	33.8%
7 to 9 times a week	3	4.1%	7	4.5%
10 or more times a week	6	8.1%	5	3.2%
*6 Missing				
Fitness-related activities currently participating in				
Walking	43	58.1%	94	57.7%
Lifting weights/strength	14	18.9%	9	5.5%
Jogging track/ fitness trail	9	12.2%	17	10.4%
Group fitness/Conditioning classes	2	2.7%	6	3.7%
Aquatic/Swimming	0	0.0%	1	0.6%
Do not participate in any of the above	5	6.8%	26	16.0%
Other	1	1.4%	10	6.1%
Participation in student bodies/centres/societies on campus				
Yes				
No	8	11.0%	13	8.4%
*9 Missing	65	89.0%	142	91.6%

Table 4.5.1 shows information about participants' recreation patterns. Although more participants indicated their awareness of the campus recreation programmes in the previous section, only 74 (31.8) indicated they participated in the activities offered, with a high 159 (68.2%) not participating. This begs the question of why the students did not participate even though they are aware of the campus recreation programmes.

A total of 111 (47.6%) of the participants indicated they do not participate in the university campus recreation activities, followed by 52 (22.3%) who participated in recreation activities on their own. This would explain the high number of participants who did not participate in the university campus recreation activities. Only 43 (18.5%) participants indicated they participate in the campus recreation activities weekly, and 14 (6.0%) participate daily.

The participants were asked why they participated in recreational activities. A total of 96 (49.7%), primarily female, said they participated to keep healthy and fit, 54 (28.0%) for fresh air, 25 (13.0%) participated for enjoyment, and 8 (4.1%) (primarily males) participated to relax after lectures.

The students not participating in campus recreation activities were asked what would make them want to participate. A substantial number of students, as many as (n=57; 24.1%) said the promotion of the benefits of being involved in active recreation would make them participate, and 52 (21.9%), categorised as other, said they would participate if they had more time. Another student said getting the information earlier through more effective marketing tools and knowing they would not have to be committed or dedicated like in a competitive sport and play for fun would make them participate. Many students (n=121; 52.2%) said they are physically active using on or off-campus facilities 1 to 3 times a week. There were 61 (26.3%) who are not at all active, followed by 44 (19.0%), mainly female, who are physically active 4 to 6 times a week in either fitness, wellness, campus sports or personal physical fitness.

A total of 84 (36.4%) of the participants were physically active 4 to 6 times a week before being a student, and 77 (33.3%) were physically active 1 to 3 times a week before being a student. This is a significant decrease in the physical activity of students at the university (n=121; 52.2%). Followed by 49 (21.2%) who were not physically active before being a student, which indicates an increase in the current activity of the university students and ten (4.3%) who indicated they were physically active before being a student.

The participants were further asked in which fitness-related activities they currently participate. Of the participating females, 137 (57.8%) said they currently walk, 26 (11.0%) of the participants jog on the track, and 23 (9.7%) lift weights and do strength training. The other fitness-related activities the participants did are hiking, dance fitness and home exercises. The sport that students participated in before being a student were karate, boxing, netball, hockey and softball, although some indicated they did not participate in any sports. In efforts to ensure more students were involved in determining the type of activities they would like to participate in, 146 (67.3%) said that they would not be willing to participate in a group forum, and 71 (32.7%) said they would be willing to participate in further engagements. A total of 207 (90.8%) students said they do not participate in any student bodies, centres or societies on campus, and 21 (9.2%) indicated they do.

Table 4.5.2 List of activities in which students participate

Activities variables	Male		Female	
	n	%	n	%
Activities participants participate in				
Aerobics	0	0.0%	2	1.3%
Dance fitness	1	1.4%	5	3.1%
Five-a-side football	7	9.6%	1	0.6%
Adapted netball	0	0.0%	1	0.6%
Tag rugby	Na	-	-	-
Quidditch	Na	-	-	-
Chess	1	1.4%	1	0.6%
Foosball	1	1.4%	1	0.6%
Exercise (inside the gym)	9	12.3%	29	18.1%
Jogging	4	5.5%	7	4.4%
Boot camp	0	0.0%	1	0.6%
Ballroom dancing	0	0.0%	1	0.6%
Walking	5	6.8%	6	3.8%
Yoga	0	0.0%	2	1.3%
Zumba	0	0.0%	1	0.6%
Basketball				
Other	0	0.0%	1	0.6%
*4 Missing	43	58.9%	97	60.6%

Table 4.5.2 presents the results of 140 (60.1%) participants who indicated that they participated in activities other than those listed on the questionnaire: Tai chi, debating, tennis and

swimming. A further 38 (16.3%) of the participants (mainly females) said they prefer exercising inside the gym, 11 (4.7%) of the participants jog, and the other 11 (4.7%) walk. There were eight (3.4%) who participated in five-a-side football (mainly males), and six (2.6%) participated in dance fitness.

Table 4.5.3 Experiences while participating in recreation

Experiences variables	Male		Female	
	n	%	n	%
Negative experiences while participating in recreational activities:				
Being made fun of	11	14.9%	8	4.9%
Being uncomfortable when doing/executing an activity	5	6.8%	31	19.0%
Feeling self-conscious while participating	8	10.8%	34	20.9%
Feeling isolated	1	1.4%	11	6.7%
Got an injury	15	20.3%	8	4.9%
Could not do the activity properly and got discouraged	2	2.7%	7	4.3%
No negative experience	32	43.2%	62	38.0%
Other	0	0.0%	2	1.2%
Positive experiences while participating in recreational activities				
Losing weight	21	28.4%	66	40.5%
Feeling comfortable	23	31.1%	17	10.4%
Increase in confidence	7	9.5%	17	10.4%
Feeling excited about being active	6	8.1%	13	8.0%
Experiencing a sense of belonging to the campus	3	4.1%	1	0.6%
Motivated to start a healthy lifestyle	3	4.1%	12	7.4%
Made friends	4	5.4%	8	4.9%
Other	7	9.5%	29	17.8%

Table 4.5.3 shows that 94 (9.7%) of the participants never had negative experiences while participating in recreational activities, 42 (17.7%), consisting of 34 females (20.9%) and eight males (10.8%), were self-conscious, and 36 (15.2%), primarily female participants, felt uncomfortable when executing an activity. This could be due to several reasons, such as feeling self-conscious about their weight or not having the skill to play the activity. This touched on the Self Determination Theory (SDT) *competence* of mastering the task mentioned in Chapter 2 as the theoretical framework. It also emerged that 19 (8.0%) participants were made fun of,

and 12 (5.1%) felt isolated, which speaks to the need for *relatedness* or a sense of belonging as part of the SDT.

Of the participants, 87 (36.7%), mainly females, said they had positive experiences while participating in recreational activities by losing weight. This may indicate that, if a participant did exercises inside the gym as the most popular activity, the positive experience would be the loss of weight. There were 40 (16.9%), primarily male participants, who felt comfortable, and 36 (15.2%) participants indicated other. This was followed by 19 (8.0%) participants who felt positively excited about being active and 15 (6.3%) who felt motivated to start a healthy lifestyle.

Table 4.5.4 Group forum to discuss reasons for not participating in recreational activities

Group discussion variable	Male		Female	
	n	%	n	%
Group forum Yes, I am willing to participate in a group forum to discuss why I do not participate in campus recreation activities	24	35.8%	47	31.3%
No, I am not willing to participate in any further group discussions concerning this survey topic *20 Missing	43	64.2%	103	68.7%

Table 4.5.4 shows that 47 (31.3%), mostly female, participants showed interest in further engaging in a group forum to discuss the reasons for not participating and collectively coming up with solutions, and 103 (68.7%) were not willing to participate in any further group discussions.

This section revealed that the more positive their experience was when participating in recreational activities, the more they will spread the word to their peers. Furthermore, this section indicated that students read their emails and preferred that platform. However, there

needs to be a distinct difference between academic and recreational posters, which needed to be more creative and stand out for them to see. The section further suggested that most students did not participate in the University's campus recreation activities and participated independently. This suggested that students do not enjoy the offered activities and that the timing of the activities was not suitable, as most participants indicated they stay at home with their parents.

4.6 Personal Benefits of Participating in Recreation

This section shows the benefits of participating in recreation.

Table 4.6.1: Benefits of participating in recreation

Service variable	Male (N=220)								Female (N=220)							
	No benefit		Little benefit		Some benefit		Greatly benefit		No benefit		Little benefit		Some benefit		Greatly benefit	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Self-confidence	2	3.5	3	5.3	18	31.6	34	59.6	5	3.6	8	5.8	46	33.1	80	57.6
Feeling of physical well-being	0	0.0	4	6.8	12	20.3	43	72.9	5	3.6	5	3.6	30	21.9	97	70.8
Sense of accomplishment	2	3.4	6	10.3	11	19.0	39	67.2	2	1.5	8	6.0	41	30.6	83	61.9
Sense of adventure	0	0.0	5	8.8	18	31.6	34	59.6	6	4.5	11	8.3	36	27.3	79	59.8
Group cooperation skills	5	8.6	6	10.3	17	29.3	30	51.7	9	7.0	18	14.1	47	36.7	54	42.2
Respect for others	2	3.3	6	10.0	19	31.7	33	55.0	6	4.7	7	5.4	39	30.2	77	59.7
Communication skills	4	6.9	5	8.6	16	27.6	33	56.9	4	3.0	17	12.8	38	28.6	74	55.6
Belonging/association	5	8.5	4	6.8	19	32.2	31	52.5	13	9.9	15	11.5	40	30.5	63	48.1
Leadership skills	2	3.4	8	13.6	19	32.2	30	50.8	7	5.2	29	21.5	44	32.6	55	40.7
Defining problems	5	8.8	12	21.1	18	31.6	22	38.6	8	6.5	32	25.8	40	32.3	44	35.5
Problem-solving skills	4	6.9	9	15.5	19	32.8	26	44.8	9	7.0	29	22.7	40	31.3	50	39.1
Recreation skills	2	3.5	3	5.3	22	38.6	30	52.6	7	5.5	16	12.6	45	35.4	59	46.5
Fitness	0	0.0	4	6.9	11	19.0	43	74.1	3	2.2	6	4.5	30	22.4	95	70.9
Physical strength	0	0.0	2	3.5	19	33.3	36	63.2	1	0.8	4	3.0	29	22.0	99	75.0
Stress reduction	1	1.7	5	8.6	12	20.7	40	69.0	0	0.0	4	3.0	29	22.0	99	75.0
Balance/coordination	1	1.8	4	7.1	18	32.1	3	58.9	2	1.6	15	11.7	29	22.7	82	64.1
Developing friendships	2	3.6	9	16.1	15	26.8	30	53.6	10	7.8	22	17.1	37	28.7	60	46.5

Table 4.6.1 shows results concerning the benefits of participating in recreation. A total of 114 (58.2%) participants, of whom 80 (57.6%) were female, rated self-confidence as their most significant benefit when participating in recreation. A further 64 (32.7%) said there was some benefit in participating in recreation.

The results further indicated that 140 (71.4%) students, of whom 97 (70.8%) were female, felt participating in recreation greatly benefitted them regarding their physical well-being. A further 42 (21.4%) individuals indicated some benefit.

A total of 122 (63.5%) participants greatly benefitted in terms of feeling a sense of accomplishment when participating in recreation, with 52 (27.1%) stating it was of some benefit. A further 113 (59.8%) students said they greatly benefitted in terms of getting some sense of adventure, and 84 (45.2%) said they gained group cooperation skills due to participating in recreation. This was followed by 110 (58.2%), primarily female participants, stating they greatly benefitted in terms of respect for others; 107 (56.0%) students said their communication skills greatly benefitted, and 94 (49.5%) of the participants felt some sense of belonging to the university as a result of participating in recreation.

Furthermore, 85 (43.8%) of the participants rated leadership skills as a great benefit of their participation in recreation, with 66 (36.5%) being more capable of defining their problems, 76 (40.9%) being equipped with problem-solving skills, and 89 (48.4%) gaining recreation skills.

Of the participants, 138 (71.9%) indicated that their fitness level benefitted greatly from participating in recreation, with 41 (21.4%) saying there was some benefit for them. There were 125 (67.6%) participants who felt they greatly benefitted, and 48 (25.39%) said there was some benefit to their physical strength as a result of participating in campus recreation.

There were 139 (73.2%) participants who felt that participating in recreation greatly benefitted them in reducing their stress levels, 115 (62.5%) who were able to improve their balance or coordination, and 90 (48.6%) developed friendships as a result of participating in campus recreation.

Table 4.6.2 Motivation for participation

Motivation variable	n	% Percentage	n	% Percentage
Motivation or inspiration to participate in campus recreation activities:				
Parents	13	17.6%	27	16.6%
Friends	28	37.8%	58	35.6%
Campus recreation professional staff	1	1.4%	4	2.5%
Campus recreation work-study student/s	2	2.7%	6	3.7%
Academic staff member/s	2	2.7%	0	0.0%
Other	28	37.8%	68	41.7%

Table 4.6.2 displays the results of who motivated the students to participate in campus recreation activities. A total of 96 (40.5%) participants indicated ‘Other’, their health, fellow students, their own goals, being self-motivated or their doctor, and 86 (36.3%) said they were motivated or inspired by their friends. This may explain the top three personal reasons why participants did not participate because the a substantial number indicated that none of their friends was interested in recreational activities. There were 40 (16.9%) participants who were motivated or inspired by their parents, eight (3.4%) by campus recreation work-study students, five (2.1%) by the campus recreation professional staff, and two (0.8%) by academic staff members.

This section reveals that participants were self-motivated to participate in recreational activities to benefit their health and build self-confidence. However, the circle of friends the participant has would influence whether they participate in recreation. This told us that participants’

wanted to socialise with their friends; however, they stayed away if their friends were unwilling to participate.

4.7 Recreation Needs

This section shows responses of the participants' top three ranked facilities they would like more of at the university.

Table 4.7.1 Recreation facilities needs of participants

Facilities need variable	n	% Percentage	n	% Percentage
Difficulty accessing sports facilities:				
Yes	13	19.4%	21	14.0%
No	54	80.6%	128	85.3%

Table 4.7.1 displays the results of participants' experiences when accessing any sports facilities at the university and their recreational needs in terms of the facilities.

Of the participants', 182 (83.9%), mainly females, indicated they had never experienced difficulty accessing any sports facilities, and 34 (15.7%) said they had experienced difficulty. These participants were then asked to explain the difficulties they faced in accessing sports facilities. The following were given as reasons why it was difficult for them to access the sports facilities:

Challenges accessing sports facilities

“Do not know where to go and what is offered.”

“The gym operates within limiting parameters, e.g., vacation period, operational hours are reduced, and in full operational periods, it’s full most times.”

“Hockey facilities were always far from campus. It took a lot out of my day/time.”
“The booking process is strenuous.”

“Peak hour at gym.”

“Cleaning of the gym at certain times of the day and a closed swimming pool.”
“I can’t use the gym if I don’t have money.”

“Hockey AstroTurf, as we do not have one at campus to practice and improve.”

“Squash courts locked.”

“There is none at Tygerberg campus.”

“Always giving me time that doesn’t work.”

“Lack of awareness.”

Participants’ needs and desires

“Club community work.”

“E-Sport facility.”

“Accessible gyms at residence.”

“Performing arts facilities and programmes.”

“Boxing ring and gym.”

“Indoor basketball court.”

“Zumba classes.”

“More combat sports other than just boxing.”

From the participants’ responses, the researcher realised that students were not proactive in approaching the Sports Administration to ask what is offered and the operating times of facilities. People relied on being fed the information instead of asking for it when interested in participating. Second, what often came up from the responses is a lack of effective marketing

and communication of activities offered and at what time from the Sports Administration. There was also a lack of visibility of where activities or sports are played on the campus and a need for an AstroTurf and bigger gym facility or alternative fitness classes to accommodate the high demand of students making use of the gym.

This meant at the beginning and during the year, there needed to be continuous communication and marketing to remind students of what is on offer. The marketing material must stand out from the academic communications to grab the student's attention. If facilities are not centralised, a walk-about video could be created showing students where to find each facility on campus. It could be uploaded on social media platforms and the official university sports website. Furthermore, there must be visible signage of the facilities and their operating times.

Table 4.7.2: Recreation needs of participants

Recreation needs variable	Male						Female					
	Least important		Important		Most important		Least important		Important		Most important	
	n	%	n	%	n	%	n	%	n	%	n	%
Basketball	11	36.7	14	46.7	5	16.7	18	40.9	17	38.6	9	20.5
Volleyball courts	14	46.7	10	33.3	6	20.0	17	35.4	18	37.5	13	27.1
Jogging track	9	23.7	11	28.9	18	47.4	8	10.1	27	34.2	44	55.7
Tennis court	10	30.3	12	36.4	11	33.3	14	25.0	23	41.1	19	33.9
Recreational pool	12	37.5	8	25.0	12	37.5	9	14.8	17	27.9	35	57.4
Softball field	9	34.6	13	50.0	4	15.4	18	41.9	14	32.6	11	25.6
Soccer fields	6	18.2	10	30.3	17	51.5	13	28.9	14	31.1	18	40.0
Multi-purpose fields	2	5.6	12	33.3	22	61.1	7	10.9	19	29.7	38	59.4
Rock climbing wall	10	25.6	9	23.1	20	51.3	8	9.9	32	39.5	41	50.6
Recreation centre with multiple activity rooms	5	11.4	15	34.1	24	54.5	8	9.1	27	30.7	53	60.2
Hockey fields	11	33.3	10	30.3	12	36.4	16	29.1	13	23.6	26	47.3
Rugby fields	11	37.9	8	27.6	10	34.5	11	27.5	16	40.0	13	32.5
Netball fields	13	52.0	6	24.0	6	24.0	15	30.0	12	24.0	23	46.0
Beach volleyball courts	8	26.9	9	33.3	10	37.0	12	30.8	13	33.3	14	35.9
Dance/aerobic hall	15	46.9	8	25.0	9	28.1	11	12.9	28	32.9	46	54.1
Locker rooms	10	27.8	12	33.3	14	38.9	8	12.1	15	22.7	43	65.2
Childcare facility	8	28.6	8	28.6	12	42.9	17	34.0	11	22.0	22	44.0
Other	4	36.4	3	27.3	4	36.4	2	20.0	2	20.0	6	60.0

Table 4.7.2 presents the top facilities that participants indicated they would like more of. Most participants (n=132; 55.7%) indicated that a recreation centre with multiple activity rooms was required. Of these, 77 (58.3%), primarily females, indicated that this was the most important. The participants' second-ranked facility (n=120; 50.6%) was a rock-climbing wall, with 61 (50.8%) indicating this was the most important. The third-ranked facility was a tie (n=117; 49.4%) between a jogging track and a dance or aerobic hall; 62 (53.0%) indicated that a jogging track is most important, and 55 (47.0%) said a dance or aerobic hall was most important.

Amongst the other facilities, 57 (55.9%) participants said more locker rooms were the most important, and 60 (60.0%) said multi-purpose fields were the most important. The other responses participants specified they would like more of were the following:

Participants' needs and desires

- “Club community work.”
- “E-Sport facility.”
- “Accessible gyms at residence.”
- “Performing arts facilities and programmes.”
- “Boxing ring and gym.”
- “Indoor basketball court.”
- “Zumba classes.”
- “More combat sports other than just boxing.”

It can be understood from these responses that there was a need for different activities, recreational sports and facilities that would accommodate the student numbers and convenience for the sports facilities to be based on campus.

This section revealed that, even though most participants indicated they have never experienced difficulty accessing the sports facilities, a concerning number of participants said the facilities are not marketed well, making it challenging to locate them. Second, the facilities were sometimes locked, and some facilities were far from campus, for example, a hockey AstroTurf. It was further revealed that participants seemed to enjoy exercising in the gym and doing outdoor activities.

4.8 Importance of Campus Recreational Services

This section provides information about the importance of campus recreation activities in deciding to enrol and continue studying at a tertiary institution in Western Cap and staying active after graduation.

Table 4.8.1: Importance of campus recreation for participants

Male								
Facilities variable	Not important		Somewhat Important		important		Very Important	
	n	%	n	%	n	%	n	%
In deciding to attend my university, the availability of recreational activities was 3 missing	23	31.1	25	33.8	17	23.0	8	10.8
In deciding to continue at my university, the availability of recreational activities is 5 missing	19	26.0	20	27.4	19	26.0	15	20.5
Participation in recreational activities after graduation 5 missing	21	28.8	18	24.7	20	27.4	14	19.2

Female								
Facilities variable	Not important		Somewhat Important		important		Very Important	
	n	%	n	%	n	%	n	%
In deciding to attend my university, the availability of recreational activities was 3 missing	63	39.4	59	36.9	23	14.4	14	8.8
In deciding to continue at my university, the availability of recreational activities is 5 missing	54	34.0	53	33.3	37	23.3	15	9.4
Participation in recreation activities after graduation 5 missing	49	30.8	37	23.3	41	25.8	32	20.1

Table 4.8.1 shows that 86 (36.8%) of the participants felt that the availability of recreational activities was not important when choosing a university, 84 (35.9%) thought it was somewhat important, 40 (17.1%) said it was important to them; 22 (9.4%) of the participants who felt it was very important were female.

An equal number of 73 (31.5%) felt the availability of recreational activities was not important and somewhat important when deciding to continue at the university. There were 56 (24.1%) who said it was important, and 30 (12.9%) said it was very important. Furthermore, 70 (30.2%) of the participants felt that participation in recreational activities after graduation was not important, 61 (26.3%) said it was important to them, 55 (23.7%) said it was somewhat important, and 46 (19.8%) said it was very important.

This section revealed students did not necessarily consider the availability of recreational activities when deciding which university to attend. This may be due to not participating in any sports or activities before coming to the university where this study took place. Not knowing the benefits of being active may have contributed. As indicated, promoting the benefits of being involved in active recreation would motivate the students to participate.

The section also indicated that, once students started studying at the university, there was a significant 1 – 3 times increase in their physical activity compared to before they were students.

4.9 Recreational Programmes Most Liked by Participants

This section of the chapter presented the results of programmes and ways campus recreation at the university could be better in order of importance. Only the top three will be highlighted for discussion.

Table 4.9.1 Programmes and activities to better campus recreation at the university

Programme Variable	Male (n=237)						Female (n=237)					
	Least important		Important		Most important		Least important		Important		Most important	
	n	%	n	%	n	%	n	%	n	%	n	%
More campus recreation sports 90 missing	4	7.5	24	45.3	25	47.2	17	18.1	52	55.3	25	26.6
More campus recreation sports tournaments 97 missing	4	7.3	23	41.8	28	50.9	24	28.2	35	41.2	26	30.6
Less emphasis on competition	19	42.2	19	42.2	7	15.6	48	57.1	24	28.6	12	14.3
More sport club opportunities 109 missing	3	6.8	24	54.5	17	38.6	12	14.3	45	53.6	27	32.1
Better marketing campaigns for recreation programmes 75 missing	3	5.7	18	34.0	32	60.4	7	6.4	50	45.9	52	47.7
More information in the campus newsletter, newspapers, website, or campus email services 75 Missing	2	3.6	21	38.2	32	58.2	8	7.5	47	43.9	52	48.6
More recreational sports and activity skill instructional classes/workshops 92 Missing	3	6.1	21	42.9	25	51.0	8	8.3	47	49.0	41	42.7
More special events (5kms, 10kms, fitness competitions, climbing competitions, mud runs, etc.) 65 Missing	2	3.9	15	29.4	34	66.7	13	10.7	38	31.4	70	57.9

Programme Variable	Male (n=237)						Female (n=237)					
	Least important		Important		Most important		Least important		Important		Most important	
	n	%	n	%	n	%	n	%	n	%	n	%
More individual recognition for participation or accomplishments 111 Missing	5	11.6	21	48.8	17	39.5	19	22.9	38	45.8	26	31.3
Better awards for campus champions 113 Missing	7	16.7	21	50.0	14	33.3	18	22.0	44	53.7	20	24.4
Extended facilities hours 101 Missing	6	13.0	22	47.8	18	39.1	16	17.8	40	44.4	34	37.8
More free or significantly cost-reduced recreation events/activities 80 Missing	7	14.6	22	45.8	19	39.6	11	10.1	44	40.4	54	49.5
More recreation trips 101 Missing	3	6.8	23	52.3	18	40.9	10	10.9	42	45.7	40	43.5
More distance-based recreation/adventure trips 105 missing	6	13.3	23	51.1	16	35.6	20	23.0	40	46.0	27	31.0
More local, one-day outdoor recreation trips 93 missing	5	10.6	25	53.2	17	36.2	17	17.5	44	45.4	36	37.1
More recreation events/activities during the week 103 Missing	4	9.1	26	59.1	14	31.8	15	16.7	50	55.6	24	26.7
No opinion 184 missing	17	60.7	7	25.0	4	14.3	16	64.0	7	28.0	2	8.0
Other 214 missing	6	50.0	3	25.0	3	25.0	7	63.6	2	18.2	2	18.2

Table 4.9.1 shows the top three programmes the participants would like more of at the university. A total of 172 (72.6%) ranked having more special events, such as 5 and 10km races, fitness classes, climbing competitions, mud runs and so on, as the top programmes they would like more of at the university. This was further broken down by 104 (60.5%) indicating it was most important, 53 (30.8%) saying it was important, and 15 (8.7%) saying it was least important.

The second top-ranked programme was a tied total of 162 (68.4%) participants saying better marketing campaigns of recreation programmes and more information in campus newsletters, newspapers, websites, or campus email services was what they would like more of at the university. Of these, 84 (51.9%) of the participants felt it was most important, 68 (42.0%) felt it was important, and ten (6.2%) thought it was least important.

The third-ranked programme included 157 (66.2%) participants who indicated they would like free or significantly cost-reduced recreational events/activities. Of these, seven (46.5%) indicated this was most important, 66 (42.0%) felt it was important, and 18 (11.5%) said it was least important.

This section revealed 76 (51.7%) of participants indicated it was important that more campus recreation sports took place at the university, with 68 (46.9%) suggesting that it was also important that more recreational sports and activity skill instructional classes or workshops happen on campus. Furthermore, the participants wanted more local, one-day outdoor recreation/adventure trips, so this could be more like hiking trips that take place even though the hiking club, of which (n=69; 47.9%) of the participants felt that this was important.

It is clear that the participants would like more outdoor activities, runs or jogging (5km/10km) at the university, as these were listed as the top two activities they are currently doing on campus. Marketing these upcoming events/programmes and using different information

platforms will ensure that participants know of events in advance and are aware of the services offered.

For those students that selected 'Other', some of what they indicated they would like to see more of were as follows:

Participants' needs and desires	“Psychological help for low self-esteem people to participate in health-enhancing programmes.”
	“Workshops and classes for students who might need sport and recreation in their field of work.”
	“Something like an anime, videogame or board game club.”
	“Rope-pulling competitions.”

It is gathered that students would like to see more non-traditional sports, other than netball or soccer. Furthermore, there's a need for an enabling environment for students who have never played sports or do not want to play competitively to have a platform where they can participate just for fun and for their health and wellness rather than just to win.

4.10 Programmatic and Personal Reasons for Not Participating in Recreation

This section shows the top three ranked programmatic and personal reasons participants' do not participate in recreation at the university where this study took place.

Table 4.10.1 Programmatic reasons why you do not participate in recreation

Programmatic Reason Variable	Male						Female					
	Least important		Important		Most important		Least important		Important		Most important	
	n	%	n	%	n	%	n	%	n	%	n	%
Unaware of what recreational activities are offered	16	30.8	1	25.0	23	44.2	20	18.0	33	29.7	58	52.3
Do not understand what recreational activities are for	22	66.7	7	21.2	4	12.1	32	54.2	20	33.9	7	11.9
Recreation activities not offered at a good time	10	25.0	11	27.5	19	47.5	23	22.5	43	42.2	36	35.3
Education/training to participate in recreational activities	19	50.0	11	28.9	8	21.1	26	32.5	33	41.3	21	26.3
Do not feel safe on campus	17	56.7	7	23.3	6	20.0	30	50.0	17	28.3	13	21.7
Do not feel recreational activities are marketed to me	12	31.6	16	42.1	10	2.3	17	21.3	36	45.0	27	33.8
Do not trust others to lead or guide	17	63.0	7	25.9	3	11.1	36	69.2	12	23.1	4	7.7
Do not feel safe participating in a specific recreational activity	19	65.5	4	13.8	6	20.7	34	56.7	19	31.7	7	11.7
No opinion	15	50.0	4	13.8	11	20.7	13	56.7	10	31.7	7	11.7
Other	6	50.0	4	33.3	2	16.7	8	40.0	9	45.0	3	15.0

Table 4.10.2 Personal reasons why you do not participate in recreation

Personal reason Variable	Male (n=220)						Female (n=220)					
	Least important		Important		Most important		Least important		Important		Most important	
	n	%	n	%	n	%	n	%	n	%	n	%
None of my friends is interested in recreational activities	26	56.5	12	26.1	8	17.4	52	57.8	24	26.7	14	15.6
Not confident that I can physically perform the activity	25	58.1	10	23.3	8	18.6	32	36.0	34	38.2	23	25.8
Too dangerous	27	75.0	5	13.9	4	11.1	40	71.4	13	23.2	3	5.4
Only have time for academic-related courses or academic studies	17	35.4	11	22.9	20	41.7	13	30	5	67	35	55
Work schedule/job conflicts with recreation activities	11	24.4	16	35.6	18	40.0	19	20.4	38	40.9	36	38.7
Have significant health-related issues	22	57.9	10	26.3	6	15.8	41	70.7	9	15.5	8	13.8
Feel as though activities are for people other than me	23	54.8	12	28.6	7	16.7	36	53.7	18	26.9	13	19.4
Simply not interested in recreational activities or sports	23	63.9	9	25.0	4	11.1	47	72.3	13	20.0	5	7.7
My family would not allow me to participate in activities	29	82.9	3	8.6	3	8.6	40	78.4	7	13.7	4	7.8
Childcare not available	28	82.4	3	8.8	3	8.8	41	75.9	8	14.8	5	9.3
I do not find any benefits from participating in recreational activity	29	76.3	4	10.5	5	13.2	48	77.4	9	14.5	5	8.1
Other	5	29.4	2	11.8	10	58.8	7	53.8	3	23.1	3	23.1

Table 4.10.1 is split into two parts; the first provides results on the *programmatic* reasons why students do not participate in recreation. The second part displays participants' reasons for not participating in recreation at the university where this study took place. The top three ranked programmatic reasons why they do not participate in recreation are:

There were 163 (68.8%) participants unaware of what recreational activities are offered. Of these, 81 (49.7%) indicated that this was the most important. This result supports previous results where one of the top three programmes participants would like at the university is better marketing of recreation programmes and more information in campus newsletters, newspapers, websites, or email services.

The second top-ranked programmatic reason was that 142 (59.9%) participants said the recreation activities were not offered at a good time. Of these, 55 (38.7%) felt this was most important, and 54 (38.0%) said it was important. Some of the reasons why students do not participate in recreation are: "The thing is, as a nursing student, there is no time for such stuff unless you stay on campus and no responsibilities at home", "Other responsibilities that I have when the times for activities are scheduled".

The third programmatic reason was a tie, with 118 (49.8%) participants indicating they do not feel they have the proper education/training for recreational activities and do not feel they are marketed towards them. Of the participants who thought they did not have the appropriate education/training for recreation, 44 (37.3%) thought it was important, and 52 (44.1%) felt it was important that recreational activities were not marketed towards them.

Other challenges that caused participants to be unable to participate other than the reasons listed on the questionnaire were as follows:

I am a Muslim female; it is difficult for me to be covered up and engage in a recreational sport. Therefore, I don't engage in these things as I can't dress appropriately.

The thing is, as a nursing student there, are not time for such stuff unless you stay on campus and no responsibilities at home.

It always feels like the university is only looking for the best, and beginners are not accepted as there is no focus on helping them to grow their skills, and it makes you not feel welcomed or comfortable.

Sometimes you only realize later that the sport has actually been running cause the advertisement are stuck on small posters for other sport programmed that aren't rugby and soccer, who have better university official posters. I wanted to do boxing this year and only saw the advert late in September and it had been in a corner on a pillar printed on an A4 paper made by a word document by the library and boxing started in February, so I didn't go.

The challenges of PhD studies and sustainable income generation makes it a lesser priority.

It can be seen from the responses that, firstly, the environment needed to be welcoming to all kinds of people. This could be done by the programmes or recreational sports being flexible in the attire worn and not insisting on specific clothing, which can isolate people by making them think they do not fit in. Secondly, most nursing students live at the Tygerberg campus, where recreational programmes should be offered during their leisure time. There's a need for a campus recreation programme to accommodate students who have never played sports before or do not want to play competitive sports. This will allow those students to feel comfortable and confident in learning how to play the sports without being put in an environment with competitive sports students, which ends up alienating that student who will eventually stay away from being active due to feeling inadequate.

The top three ranked personal reasons why the participants do not participate in recreation are:

The top-ranked personal reason for 152 (64.1%) students was that they only had time for academic-related courses or studies. Of these, 67 (44.1%) said this was important. The second-ranked reason for 138 (58.2%) participants was their work schedule/job conflicted with recreation activities, and 54 (39.1%), mostly females, said this was the most important. Lastly, the third-ranked for 136 (57.4%) participants was that none of their friends were interested in recreational activities. Of this, 72 (57.4%) indicated this as the least important.

Responses from participants who selected 'Other' as their reasons for not participating in recreation:

Fee to pay the gym.

Recreational activities are not marketed enough or correctly.

I do not have transport to take me back home. And spiritual activities clash with practice times or match days.

Far from my residence.

It can be seen from these responses that students did not participate in recreation due to the marketing of the recreation activities. They are not marketed effectively or timeously to allow students to make alternative transport arrangements or to complete their academic tasks to be free by the time recreation programmes took place. Lastly, there's an expectation that all recreation services should be offered free or at a reduced cost, particularly the gym facility.

This section showed that participants are not aware of the recreation programmes offered at the university. This could be due to ineffective marketing for the students to know in time or the programmes offered. Second, the scheduled times of the programmes were not convenient,

either clashing with the academic programme of students in demanding courses such as nursing or with personal responsibilities such as family or post-graduate studies. There were transport challenges for those residing off-campus, and some only have time for their academic courses. Thirdly, they do not have time due to their work schedule conflicting with recreational activities. This was, unfortunately, a problem as many students are forced to work for an income to support themselves at university. Therefore, activities, such as recreation, are deemed unimportant or time-wasting. Another reason was students do not understand the benefits of participating in recreational activities. Consequently, they did not see it as important to relax and be physically active between their studies and chose not to make time for it or chose other responsibilities as more important.

4.11 Student Satisfaction with Campus Recreation Facilities and Services

The inferential statistics section displayed the relationship between student satisfaction with their recreational needs and patterns concerning campus recreation facilities and services at a university in the Western Cape.

As discussed in Chapter 1, a survey was conducted using a questionnaire. Descriptive statistics on student participation patterns, needs and preferences were used to summarise the collected data in tables. Inferential statistics were used to draw conclusions from the data and understand the hypothesis by testing the significance between the various factors. A cross-tabulation (cross-tab) table, also known as a contingency table, was done to verify whether the cross-tab representation is true or false. The cross-tab is computed along with the chi-square analysis, which identified whether the study variables were independent or related. If the two elements are independent (have no relationship), the tabulation was termed insignificant, and the study termed a null hypothesis, meaning there is no relationship between the variables (Jays et al.,

2011). If the variables are related, the test results will be statistically significant, and be able to reject the null hypothesis, meaning some relationship between the variables can be stated. The chi-square statistic and the associated probability of chance observation may be computed for any table. If the variables are related, meaning the observed table relationships occur with a very low probability of 5%, then the results are “statistically significant” at the 0.05 or 5% level. This means the variables have a low chance of being independent (Jays et al., 2011). The statistical tests to determine the relationship between student campus recreational needs and patterns were cross-tabulation and the chi-square (X^2) test.

Table 4.12.1: Cross-tabulation between campus recreation activities in which students participate and satisfaction with indoor recreation facilities

Activities variables	Indoor recreation facilities														Pearson Chi-Square
	Very dissatisfied		Somewhat dissatisfied		Neither satisfied nor dissatisfied		Somewhat satisfied		Very satisfied		No opinion		Total		
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
Aerobics	0	0	0	0	1	50	0	0	1	50	0	0	2	100.0	Value- 69.227 df - 65 p-value- 0.337
Dance fitness	1	16.7	1	16.7	1	16.7	2	33.3	1	16.7	0	0.0	6	100.0	
Five-a-side football	0	0.0	1	14.3	0	0.0	3	42.9	3	42.9	0	0.0	7	100.0	
Adapted netball	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	1	100.0	
Chess	0	0.0	1	50.0	0	0.0	1	50.0	0	0.0	0	0.0	2	100.0	
Foosball	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0	0	0.0	2	100.0	
Exercising inside the gym	1	2.7	6	16.2	4	10.8	13	35.1	10	27.0	3	8.1	37	100.0	
Jogging	1	9.1	1	9.1	2	18.2	3	27.3	1	9.1	3	27.3	11	100.0	
Bootcamp	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	
Ballroom dancing	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	1	100.0	
Walking	1	9.1	1	9.1	5	45.5	2	18.2	2	18.2	0	0.0	11	100.0	
Zumba	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	1	100.0	
Basketball	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	
Other	14	10.8	18	13.8	30	23.1	25	19.2	17	13.1	26	20.0	130	100.0	

*Missing responses (n=24; 10.1%) **Significant at 0.05

Table 4.12.1 shows the participants' satisfaction with the University's indoor sports facility where the campus recreation activities took place. Of the 237 participants, 213 responded to this question. A split of the participants who participated in aerobics indicated that 50% (n=1) were neither satisfied nor dissatisfied, with the other 50% (n=1) very satisfied with indoor aerobics. Most students (n=2; 33.3%) said they were somewhat satisfied with the dance fitness facility. There was one student (16.7%) in each category of very satisfied, neither satisfied nor dissatisfied, somewhat dissatisfied and very dissatisfied. Most students were satisfied with the five-a-side football indoor facility, but three (42.9%) were very satisfied, three (42.9%) were somewhat satisfied, and one (14.3%) was somewhat dissatisfied. For chess, one student (50%) was somewhat satisfied, and one (50%) was somewhat dissatisfied. One student (50%) was somewhat satisfied with the indoor foosball facility, and one (50%) was neither satisfied nor dissatisfied. Most students (n=13; 35.1%) were somewhat satisfied with the indoor gym facility. Ten (27.0%) were very satisfied, six (16.2%) were somewhat dissatisfied, four (10.8%) were neither satisfied nor dissatisfied, three (8.1%) had no opinion, and one student (2.7%) was very dissatisfied with the indoor gym facility.

One student (100%) who participated in boot camp was somewhat dissatisfied with the indoor facility. One student (100%) was very satisfied with the indoor ballroom facility, and one (100%) was very satisfied with the indoor Zumba facility.

The following activities are not indoor sports and are, therefore, not applicable: adapted netball, jogging, and basketball,

Conducting the cross-tabulation alone does not provide sufficient evidence for a relationship; therefore, a chi-square test is done. The chi-square test gives the researcher an accurate picture of the relationship between campus recreation activities and students' satisfaction with the University's indoor sports facilities.

The Pearson chi-square was used to determine if a relationship exists between campus recreation activities and students' satisfaction with the indoor sport and recreation facilities at the University where this study took place. The Pearson chi-square test showed an H1 hypothesis: no statistical significance of the relationship existed between the campus recreation activities and their satisfaction with the University's indoor sports facilities ($p \geq 0.337$).

Table 4.13.1: Cross-tabulation between campus recreation activities in which students participate and satisfaction with outdoor recreation facilities

Activities variables	Outdoor recreation facilities														Pearson Chi-Square
	Very dissatisfied		Somewhat dissatisfied		Neither satisfied nor dissatisfied		Somewhat satisfied		Very satisfied		No opinion		Total		
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
Aerobics	0	0.0	0	0.0	1	50.0	0	0.0	0	0.0	1	50.0	2	100.0	Value - 59.151 df - 78 p-value- 0.945
Dance fitness	2	33.3	1	16.7	2	33.3	1	16.7	0	0.0	0	0.0	6	100.0	
Five-a-side football	0	0.0	1	14.3	0	0.0	4	57.1	2	28.6	0	0.0	7	100.0	
Adapted netball	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	1	100.0	
Chess	0	0.0	1	50.0	0	0.0	1	50.0	0	0.0	0	0.0	2	100.0	
Foosball	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0	0	0.0	2	100.0	
Exercising inside the gym	1	2.7	4	10.8	5	13.5	14	37.8	7	18.9	6	16.2	37	100.0	
Jogging	1	9.1	1	9.1	3	27.3	4	36.4	1	9.1	1	9.1	11	100.0	
Boot camp	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	
Ballroom dancing	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	1	100.0	
Walking	1	9.1	1	9.1	3	27.3	4	36.4	2	18.2	0	0.0	11	100.0	
Zumba	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	1	100.0	
Basketball	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	1	100.0	
Other	19	14.7	14	10.9	32	24.8	25	19.4	17	13.2	21	16.3	129	100.0	

*Missing responses (n=25; 10.5%) **Significant at 0.05

The cross-tabulation Table 4.13.1 displayed the results of the student's campus recreation activities and their satisfaction with the outdoor sports facilities. The first activity looked at was aerobics. The results revealed that one person (50%) was neither satisfied nor dissatisfied, and one (50%) had no opinion about the outdoor aerobics facility at the university. The next activity was dance fitness. Two (33.3%) of the students were very dissatisfied, two (33.3%) were neither satisfied nor dissatisfied, one (16.7%) was somewhat dissatisfied, and one (16.7%) was somewhat satisfied with the dance fitness outdoor facility. Four (57.1%) students were somewhat satisfied with the five-a-side football, two (28.6%) were very satisfied, and one (14.3%) was somewhat dissatisfied.

One student (100%) was somewhat satisfied with the adapted outdoor netball facility. The results for chess revealed one (50%) participant was somewhat dissatisfied, and one (50%) was somewhat satisfied with the outdoor facility. Two students participated in foosball. One (50%) was neither satisfied nor dissatisfied, and one (50%) was somewhat satisfied with the outdoor foosball facility.

The next activity was jogging; four students (36.4%) were somewhat satisfied, three (27.3%) were neither satisfied nor dissatisfied, one (9.1%) was very dissatisfied, one (9.1%) was somewhat dissatisfied, one (9.1%) was very satisfied, and one (9.1%) had no opinion about the outdoor facility. One (100%) student was somewhat dissatisfied with the outdoor boot camp facility.

Four students (36.4%) were somewhat satisfied with the outdoor walking facility, three (27.3%) were neither satisfied nor dissatisfied, two (18.2%) were very satisfied, one (9.1%) was somewhat dissatisfied, and one (9.1%) was very dissatisfied. One (100%) student was very satisfied with the Zumba outdoor facility, and one (100%) was somewhat satisfied with the basketball facility. Exercise inside the gym and ballroom dancing do not have outdoor facilities.

Cross-tabulation alone does not provide sufficient evidence for a relationship; therefore, a chi-square test was conducted. The chi-square test offers an accurate picture of the relationship between campus recreation activities and student satisfaction with the University's outdoor sports facilities.

The Pearson chi-square was used to determine if a relationship exists between campus recreation activities and students' satisfaction with the outdoor sport and recreation facilities. It showed an H1 hypothesis: no statistical significance for the relationship between the campus recreation activities and students' satisfaction with the outdoor sport and recreation facilities ($p \geq 0.945$).

Table 4.14.1: Cross-tabulation between campus recreation activities in which students participate and satisfaction with fees associated with them

Activities variables	Fees associated with campus recreation activities														Pearson chi-square
	Very dissatisfied		Somewhat dissatisfied		Neither satisfied nor dissatisfied		Somewhat satisfied		Very satisfied		No opinion		Total		
	n	%	n	%	n	%	n	%	n	%	N	%	n	%	
Aerobics	0	0.0	0	0.0	1	50.0	0	0.0	1	50.0	0	0.0	2	100.0	Value - 73.120 df - 65 p-value- 0.229
Dance fitness	1	16.7	3	50.0	1	16.7	1	16.7	0	0.0	0	0.0	6	100.0	
Five-a-side football	1	14.3	1	14.3	0	0.0	4	57.1	1	14.3	0	0.0	7	100.0	
Adapted netball	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	1	100.0	
Chess	1	50.0	1	50.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100.0	
Foosball	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0	0	0.0	2	100.0	
Exercising inside the gym	3	8.1	5	13.5	5	13.5	11	29.7	9	24.3	4	10.8	37	100.0	
Jogging	1	9.1	1	9.1	3	27.3	1	9.1	2	18.2	3	27.3	11	100.0	
Boot camp	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	
Ballroom dancing	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	1	100.0	
Walking	1	9.1	2	18.2	3	27.3	4	36.4	1	9.1	0	0.0	11	100.0	
Zumba	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	
Basketball	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	1	100.0	
Other	20	15.4	20	15.4	31	23.8	17	13.1	12	9.2	30	23.1	130	100.0	

*Missing response (n=24; 10.1%) **Significant at 0.05

A cross-tabulation (Table 4.14.1) was done to determine whether a relationship exists between campus recreation activities and satisfaction with associated fees. One student (50%) was neither satisfied nor dissatisfied, and one (50%) was very satisfied with the fees associated with aerobics. Three (50%) students were somewhat dissatisfied, one (6.7%) was neither satisfied nor dissatisfied, one (16.7%) was somewhat satisfied, and one (16.7%) was very dissatisfied with the fees associated with dance fitness.

Four (57.1%) participants were somewhat satisfied, one (14.3%) was very satisfied, one (14.3%) was somewhat dissatisfied, and one (14.3%) was very dissatisfied with the fees associated with five-a-side football.

One student (100%) was very satisfied with the fees associated with adapted netball. One student (50%) was somewhat dissatisfied, and one (50%) was very dissatisfied with the fees associated with chess. One student (50%) who participated in foosball was neither satisfied nor dissatisfied, and one (50%) was somewhat satisfied.

Amongst the participants who exercised in the gym, eleven (29.7%) were somewhat satisfied, nine (24.3%) were very satisfied, five (13.5%) were neither satisfied nor dissatisfied, five (13.5%) were somewhat dissatisfied, four (10.8%) had no opinion, and three (8.1%) were very dissatisfied with the fees.

Three students (27.3%) were neither satisfied nor dissatisfied with the fees associated with jogging. Three (27.3%) students had no opinion, two (18.2%) were very satisfied, one (9.1%) was somewhat satisfied, one (9.1%) was somewhat dissatisfied, and one (9.1%) was very dissatisfied.

One student (100%) was somewhat dissatisfied with the fees associated with the boot camp, and one (100%) was neither satisfied nor dissatisfied with the fees related to ballroom dancing.

Four (36.4%) participants were somewhat satisfied, three (27.3%) were neither satisfied nor dissatisfied, two (18.2%) were somewhat dissatisfied, one (9.1%) was very satisfied, and another one (9.1%) was very dissatisfied with the fees associated with walking. One participant (100%) was neither satisfied nor dissatisfied with the fees associated with basketball.

As cross-tabulation alone does not provide sufficient evidence of whether a relationship exists, so a chi-square test was conducted. The chi-square test will provide a real picture of the relationship between campus recreation activities and the student's satisfaction with fees associated with them.

The Pearson chi-square was used to determine whether a relationship exists between campus recreation activities and students' satisfaction with the associated fees. The Pearson chi-square test showed the H1 hypothesis there is no statistical significance of the relationship between campus recreation activities and satisfaction with the associated fees ($p \geq 0.229$).

Table 4.15.1 Cross-tabulation between campus recreation activities in which students participate and satisfaction with the campus recreation staff

Activities variables	Campus Recreation Staff												Total	Pearson chi-square	
	Very dissatisfied		Somewhat dissatisfied		Neither satisfied nor dissatisfied		Somewhat satisfied		Very satisfied		No opinion				
	n	%	n	%	n	%	n	%	n	%	n	%			
Aerobics	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0	0	0.0	2	100.0	Value - 101.356 df - 65 p-value- 0.003
Dance fitness	2	33.3	1	16.7	2	33.3	1	16.7	0	0.0	0	0.0	6	100.0	
Five-a-side football	0	0.0	0	0.0	1	14.3	5	71.4	1	14.3	0	0.0	7	100.0	
Adapted netball	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	1	100.0	
Chess	0	0.0	2	100.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100.0	
Foosball	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0	0	0.0	2	100.0	
Exercising inside the gym	1	2.7	4	10.8	8	21.6	13	35.1	5	13.5	6	16.2	37	100.0	
Jogging	0	0.0	3	27.3	0	0.0	1	9.1	2	18.2	5	45.5	11	100.0	
Boot camp	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	
Ballroom dancing	0	0.0	0	0.0	1	50.0	0	0.0	0	0.0	0	0.0	1	100.0	
Walking	0	0.0	1	9.1	5	45.5	3	27.3	2	18.2	0	0.0	11	100.0	
Zumba	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	0	100.0	1	100.0	
Basketball	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	1	100.0	
Other	12	9.4	18	14.2	36	28.3	11	8.7	13	10.2	37	29.1	127	100.0	

*Missing responses (n=27; 11.4%) **Significant at 0.05

A cross-tabulation (Table 4.15.1) was done to determine whether a relationship exists between campus recreation activities and satisfaction with the campus recreation staff. One student (50%) was neither satisfied nor dissatisfied, and one (50%) was somewhat satisfied with the aerobics staff. Two participants (33.3%) were neither satisfied nor dissatisfied, two (33.3%) were very dissatisfied, one (16.7%) was somewhat satisfied, and one (16.7%) was somewhat dissatisfied with the dance fitness recreation staff.

Five students (71.4%) said they were somewhat satisfied, one (14.3%) was neither satisfied nor dissatisfied, and one (14.3%) was very satisfied with the five-a-side football staff. One student (100%) was very satisfied with the adapted netball staff, and two (100%) were somewhat dissatisfied with the chess staff. Two students participated in foosball; one (50%) was neither satisfied nor dissatisfied, and one (50%) was very satisfied with the staff. Eight students (21.6%) were neither satisfied nor dissatisfied with the gym staff, six (16.2%) had no opinion, five (13.5%) were very satisfied, four (10.8%) were somewhat dissatisfied, and one (2.7%) was very dissatisfied.

One student (100%) took part in boot camp and was somewhat dissatisfied with the staff. One student (100%) participated in ballroom dancing and was somewhat dissatisfied with the staff. Five participants (45.5%) were neither satisfied nor dissatisfied with the walking staff, three (27.3%) were somewhat satisfied, two (18.2%) were very satisfied, and one (9.1%) was very dissatisfied. One person (100%) participated in Zumba and was very satisfied with the staff. One person (100%) participated in basketball and was somewhat satisfied with the staff.

The cross-tabulation alone does not give sufficient evidence of whether a relationship exists; therefore, a chi-square test was conducted. The chi-square test will provide a real picture of the relationship between campus recreation activities and the students' satisfaction with the campus recreation staff.

The Pearson chi-square was used to determine if a relationship exists between campus recreation activities and students' satisfaction with the university campus recreation staff. The Pearson chi-square test showed the H0 hypothesis in the statistical significance of the relationship between the campus recreation activities and satisfaction with the campus recreation staff ($p \geq 0.003$).

Table 4.16.1: Cross-tabulation between campus recreation activities in which students participate and satisfaction with the availability of information about recreational activity opportunities

Activities variables	Availability of Information About Recreational Activity Opportunities														
	Very dissatisfied		Somewhat dissatisfied		Neither satisfied nor dissatisfied		Somewhat satisfied		Very satisfied		No opinion		Total		Pearson chi-square
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
Aerobics	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0	0	0.0	2	100.0	Value - 71.912 df - 65 p-value- 0.260
Dance fitness	4	66.7	1	16.7	1	16.7	0.0	0	0	0.0	0	0.0	6	100.0	
Five-a-side football	1	14.3	2	28.6	2	28.6	0	0.0	0	0.0	1	14.3	7	100.0	
Adapted netball	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	1	100.0	
Chess	1	50.0	1	50.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100.0	
Foosball	0	0.0	0	0.0	2	100.0	0	0.0	0	0.0	0	0.0	2	100.0	
Exercising inside the gym	5	13.5	14	37.8	5	13.5	8	21.6	2	5.4	3	8.1	37	100.0	
Jogging	2	18.2	3	27.3	4	36.4	0	0.0	2	18.2	0	0.0	11	100.0	
Boot camp	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	
Ballroom dancing	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	
Walking	3	27.3	2	18.2	3	27.3	1	9.1	2	18.2	0	0.0	11	100.0	
Zumba	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	
Basketball	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	1	100.0	
Other	48	36.6	26	19.8	25	19.1	14	10.7	8	6.1	10	7.6	131	100.0	

*Missing responses (n= 23; 9.7%) **Significant at 0.05

A cross-tabulation (Table 4.16.1) was done to determine whether a relationship exists between campus recreation activities and students' satisfaction with the availability of information about recreational activity opportunities. One student (50%) was somewhat satisfied, and one (50%) was neither satisfied nor dissatisfied with the availability of information about aerobics opportunities. Four (66.7%) participants were very dissatisfied, one (16.7%) was somewhat dissatisfied, and one (16.7%) was neither satisfied nor dissatisfied with the availability of information about dance fitness. Two students (28.6%) who participated in five-a-side football were somewhat dissatisfied with available information about it, two (28.6%) were neither satisfied nor dissatisfied, one (14.3%) was very dissatisfied, and one (14.6%) had no opinion. One participant (100%) was mostly satisfied with the availability of information about adapted netball. Among the students who played chess, one (50%) was somewhat dissatisfied, and one (50%) was very dissatisfied with the availability of information about chess opportunities.

Two students (100%) said they were neither satisfied nor dissatisfied with the availability of information about foosball. Most of the students who exercised in the gym (n=14; 37.8%) were somewhat dissatisfied, eight (21.6%) were somewhat satisfied, five (13.5%) were neither satisfied nor dissatisfied, five (13.5%) were very dissatisfied, three (8.1%) had no opinion, and two (5.4%) were very satisfied with the availability of information.

Four (36.4%) of the students who went jogging said they were neither satisfied nor dissatisfied with the availability of information about jogging opportunities, three (27.3%) said they were somewhat dissatisfied, and two (18.2%) said they were very dissatisfied. One person (100%) participated in boot camp and was somewhat dissatisfied with the availability of information.

One student (100%) was somewhat dissatisfied with the availability of information about ballroom dancing opportunities. Three students (27.3%) were very dissatisfied with the availability of information about walking opportunities on campus, three (27.3%) were neither

satisfied nor dissatisfied, two (18.2%) were somewhat dissatisfied, two (18.2%) were very satisfied, and one (9.1%) was somewhat satisfied. One person (100%) was somewhat dissatisfied with the availability of information about Zumba, and one person (100%) was neither satisfied nor dissatisfied with the availability of information about recreational activity opportunities.

The cross-tabulation alone does not give sufficient evidence of whether a relationship exists; therefore, a chi-square test was conducted. The chi-square test will provide a real picture of the relationship between campus recreation activities and the students' satisfaction with the availability of information.

The Pearson chi-square was used to determine if a relationship exists between campus recreation activities and student satisfaction with the availability of information about recreational activity opportunities at the university. The Pearson chi-square test showed the H1 hypothesis that there was no statistical significance of the relationship between the campus recreation activities and the student's satisfaction with the availability of information about recreational activity opportunities ($p \geq 0.260$).

Table 4.17.1: Cross-tabulation between campus recreation activities in which students participate and satisfaction with the availability of rental equipment for recreational activities

Activities variables	Availability of Rental Equipment for Recreational Activities														Pearson chi-square
	Very dissatisfied		Somewhat dissatisfied		Neither satisfied nor dissatisfied		Somewhat satisfied		Very satisfied		No opinion		Total		
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
Aerobics	0	0.0	0	0.0	1	50.0	0	0.0	0	0.0	1	50.0	2	100.0	Value - 65.718 df - 65 p-value- 0.452
Dance fitness	2	33.3	3	50.0	0	0.0	0	0.0	1	16.7	0	0.0	6	100.0	
Five-a-side football	1	14.3	1	14.3	3	42.9	1	14.3	0	0.0	1	14.3	7	100.0	
Adapted netball	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	1	100.0	
Chess	1	50.0	1	50.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100.0	
Foosball	0	0.0	0	0.0	2	100.0	0	0.0	0	0.0	0	0.0	2	100.0	
Exercising inside the gym	7	18.9	9	24.3	6	16.2	4	10.8	2	5.4	9	24.3	37	100.0	
Jogging	0	0.0	4	36.4	3	27.3	1	9.1	0	0.0	3	27.3	11	100.0	
Boot camp	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	
Ballroom dancing	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	
Walking	4	36.4	1	9.1	3	27.3	1	9.1	0	0.0	2	18.2	11	100.0	
Zumba	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	1	100.0	
Basketball	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	
Other	18	15.5	20	15.4	40	30.8	7	5.4	6	4.6	39	30.0	130	100.0	

*Missing responses (n= 24; 10.1%) **Significant at 0.05

A cross-tabulation (Table 4.17.1) was conducted to determine whether a relationship exists between campus recreation activities and satisfaction with the availability of rental equipment. One student (50%) who participated in aerobics was neither satisfied nor dissatisfied with equipment availability, and one (50%) had no opinion. Three dance fitness participants (50%) were somewhat dissatisfied with the availability of rental equipment, two (33.3%) were very dissatisfied, and one (16.7%) was very satisfied. Three students (42.9%) who participated in five-a-side football were neither satisfied nor dissatisfied with the availability of rental equipment, one (14.3%) was somewhat satisfied, one (14.3%) had no opinion, one (14.3%) was very dissatisfied, and one (14.3%) was somewhat dissatisfied. One student (100%) who participated in adapted netball had no opinion about equipment availability. One student (50%) who played chess was somewhat dissatisfied with equipment availability, and one (50%) was very dissatisfied. Two students (100%) who participated in foosball were neither satisfied nor dissatisfied with equipment availability.

Nine people (24.3%) who exercised inside the gym were somewhat dissatisfied with the rental equipment availability, nine (24.3%) had no opinion, seven (18.9%) were very dissatisfied, six (16.2%) were neither satisfied nor dissatisfied, four (10.8%) were somewhat satisfied, two (5.4%) were very satisfied, four (36.4%) were somewhat dissatisfied, three (27.3%) were neither satisfied nor dissatisfied, three (27.3%) had no opinion, and one (9.1%) was somewhat satisfied. Of those who participated in boot camp, one (100%) was somewhat dissatisfied, one (50%) was somewhat dissatisfied, and one (50%) was somewhat dissatisfied.

One participant (100%) was somewhat dissatisfied with ballroom dancing. Four students (36.4%) were very dissatisfied with walking, three (27.3%) were neither satisfied nor dissatisfied, two (18.2%) had no opinion, one (9.1%) was somewhat dissatisfied, and one (9.1%) was somewhat satisfied. One (100%) Zumba participant was somewhat satisfied, and

one (100%) student was very dissatisfied with the availability of rental equipment for basketball.

Cross-tabulation alone does not give sufficient evidence of whether a relationship exists; therefore, a chi-square test was conducted. The chi-square test will provide a real picture of the relationship between campus recreation activities and the student's satisfaction with the availability of rental equipment.

The Pearson chi-square was used to determine if a relationship exists between campus recreation activities and students' satisfaction with the availability of rental equipment at the university where this study took place. The Pearson chi-square test showed the H1 hypothesis that there was no statistical significance of the relationship between the campus recreation activities and satisfaction with the availability of rental equipment for recreational activities ($p \geq 0.452$).

Table 4.18.1: Cross-tabulation between campus recreation activities in which students participate and satisfaction with the hours of operation for facilities

Activities variables	Hours of Operation for Facilities														Pearson chi-square
	Very dissatisfied		Somewhat dissatisfied		Neither satisfied nor dissatisfied		Somewhat satisfied		Very satisfied		No opinion		Total		
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
Aerobics	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0	0	0.0	2	100.0	Value - 64.236 df - 65 p-value- 0.503
Dance fitness	1	16.7	2	33.3	1	16.7	2	33.3	0	0.0	0	0.0	6	100.0	
Five-a-side football	1	14.3	1	14.3	0	0.0	2	28.6	3	42.9	0	0.0	7	100.0	
Adapted netball	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	1	100.0	
Chess	0	0.0	1	50.0	1	50.0	0	0.0	0	0.0	0	0.0	2	100.0	
Foosball	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0	0	0.0	2	100.0	
Exercising inside the gym	5	13.5	8	21.6	8	21.6	7	18.9	5	13.5	4	10.8	37	100.0	
Jogging	2	18.2	2	18.2	2	18.2	1	9.1	3	27.3	1	9.1	11	100.0	
Boot camp	0	0.0	2	100.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	
Ballroom dancing	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	1	100.0	
Walking	1	9.1	2	18.2	3	27.3	4	36.4	0	0.0	1	9.1	11	100.0	
Yoga	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	1	100.0	
Zumba	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	1	100.0	
Basketball	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	1	100.0	
Other	17	13.0	23	17.6	30	22.9	17	13.0	13	9.9	31	23.7	131	100.0	

*Missing responses (n= 23; 9.7%) **Significant at 0.05

A cross-tabulation (Table 4.18.1) was done to determine whether a relationship exists between campus recreation activities and satisfaction with the facility's hours of operation. One participant (50%) was neither satisfied nor dissatisfied with the hours of operation for the aerobics facility, and one (50%) was somewhat satisfied. Two students (33%) were somewhat dissatisfied with the hours of operation for dance fitness facilities, two (33%) were somewhat satisfied, one (16.7%) was neither satisfied nor dissatisfied, and one (16.7%) was very dissatisfied. Three (4.9%) participants were very satisfied with the hours of operation for five-a-side football, two (28.6%) were somewhat satisfied, one (14.6%) was somewhat dissatisfied, and one (14.6%) was very dissatisfied. Three students participated in adapted netball; one (100%) was very satisfied, one (50%) was neither satisfied nor dissatisfied, and one (50%) was somewhat dissatisfied with the hours of operation for the facility.

Among the chess players, one (50%) was neither satisfied nor dissatisfied, and one (50%) was somewhat dissatisfied with the hours of operation. One student (50%) who participated in foosball was neither satisfied nor dissatisfied, and one (50%) was somewhat dissatisfied with the hours of operation. Among the students who exercised in the gym, eight (21.6%) were neither satisfied nor dissatisfied with the hours of operation for the facility, eight (21.6%) were somewhat dissatisfied, seven (18.9%) were somewhat satisfied, five (13.5%) were very dissatisfied, five (13.5%) were very satisfied, and four (10.8%) had no opinion. Two students (27.3%) who jogged were very satisfied with the hours of operation for facilities, two (18.2%) were neither satisfied nor dissatisfied, two (18.2%) were somewhat dissatisfied, two (18.2%) were very dissatisfied, one (9.1%) was somewhat dissatisfied, and one (9.1%) had no opinion.

Both the respondents who participated in boot camp were somewhat dissatisfied (100%). One participant (100%) who participated in ballroom dancing was very satisfied with the hours of operation for the facilities. Four (36.4%) participants who walked were somewhat dissatisfied with the hours of operation of the athletics track where students walk, (27.3%) were neither

satisfied nor dissatisfied, two (18.2%) were somewhat dissatisfied, one (9.1%) was very dissatisfied, and one (9.1%) had no opinion.

Cross-tabulation alone does not give sufficient evidence of whether a relationship exists; therefore, a chi-square test was conducted. The chi-square test provides a real picture of the relationship between campus recreation activities and students' satisfaction with hours of operation for facilities.

The Pearson chi-square was used to determine whether a relationship exists between campus recreation activities and students' satisfaction with hours of operation for facilities at the university. The Pearson chi-square test showed the H1 hypothesis: no statistical significance of the relationship between the campus recreation activities and their satisfaction with the hours of operation for facilities ($p \geq 0.503$).

Table 4.19.1: Cross-tabulation between campus recreation activities in which students participate and satisfaction with scheduled times for recreation programmes

Activities variables	Scheduled Times for Recreation Programmes														Pearson chi-square
	Very dissatisfied		Somewhat dissatisfied		Neither satisfied nor dissatisfied		Somewhat satisfied		Very satisfied		No opinion		Total		
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
Aerobics	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0	0	0.0	2	100.0	Value -69.580 df - 65 p-value- 0.326
Dance fitness	2	33.3	1	16.7	1	16.7	2	33.3	0	0.0	0	0.0	6	100.0	
Five-a-side football	0	0.0	1	14.3	1	14.3	4	57.1	1	14.3	0	0.0	7	100.0	
Adapted netball	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	1	100.0	
Chess	0	0.0	1	50.0	0	0.0	1	50.0	0	0.0	0	0.0	2	100.0	
Foosball	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0	0	0.0	2	100.0	
Exercising inside the gym	2	5.4	11	29.7	4	10.8	11	29.7	5	13.5	4	10.8	37	100.0	
Jogging	1	9.1	3	27.3	3	27.3	3	27.3	0	0.0	1	9.1	11	100.0	
Boot camp	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	
Ballroom dancing	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	1	100.0	
Walking	2	18.2	3	27.3	2	18.2	3	27.3	0	0.0	1	9.1	11	100.0	
Zumba	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	1	100.0	
Basketball	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	1	100.0	
Other	13	9.9	23	17.6	39	29.8	17	13.0	9	6.9	30	22.9	131	100.0	

*Missing responses (n= 23; 9.7%) **Significant at 0.05

Table 4.19.1 showed cross-tabulation results for campus recreation activities and students' satisfaction with scheduled times for recreation programmes. Of the two students who participated in aerobics, one (50%) was somewhat satisfied with the facility's hours of operation, and one (50%) was neither satisfied nor dissatisfied. Two (33.3%) dance fitness participants were somewhat satisfied with the facility's hours of operation, two (33.3%) were very satisfied, one (16.7%) was neither satisfied nor dissatisfied, and one (16.7%) was somewhat dissatisfied. Four (57.1%) of participants in five-a-side football were somewhat satisfied with the hours of operation, one (14.3%) was somewhat satisfied, one (14.3%) was neither satisfied nor dissatisfied, and one (14.3%) was somewhat dissatisfied. One student (100%) who participated in adapted netball was somewhat satisfied with the scheduled times. Of the two chess players, one (50%) was somewhat dissatisfied with the hours, and one (50%) was somewhat satisfied. One foosball student (50%) was somewhat satisfied with the scheduled times for recreation programmes, and one (50%) was neither satisfied nor dissatisfied

Eleven students (29.7%) who exercised inside the gym were somewhat satisfied with the operational hours of the facility, 11 (29.7%) were somewhat dissatisfied, five (13.5%) were very satisfied, four (10.8%) were neither satisfied nor dissatisfied, four (10.8%) had no opinion, and two (5.4%) were very dissatisfied. Three (27.3%) students were neither satisfied nor dissatisfied with jogging hours, three (27.3%) were somewhat satisfied, three (27.3%) were somewhat dissatisfied, one (9.1%) was very dissatisfied, and one (9.1%) had no opinion.

One person (100%) was somewhat dissatisfied with the scheduled times for boot camp. Three (27.3%) walking participants were somewhat dissatisfied with the hours, three (27.3%) were somewhat satisfied, two (18.2%) were very dissatisfied, two (18.2%) were neither satisfied nor dissatisfied, and one (9.1%) had no opinion. One respondent (100%) who participated in ballroom dancing was somewhat satisfied. One student who participated in Zumba was very

satisfied with the times (100%). One student who participated in basketball was neither satisfied nor dissatisfied with the scheduled times (100%).

Cross-tabulation alone does not give sufficient evidence of whether a relationship exists; therefore, a chi-square test was conducted. The chi-square test provides a real picture of the relationship between campus recreation activities and the student's satisfaction with scheduled times for recreation programmes.

Pearson chi-square was used to determine if a relationship exists between campus recreation activities and students' satisfaction with scheduled recreation programmes. It showed the H1 hypothesis that no statistical significance of the relationship between the campus recreation activities and their satisfaction with scheduled times for recreation programmes exists ($p \geq 0.326$).

Table 4.20.1: Cross-tabulation between campus recreation activities in which students participate and satisfaction with the availability of fitness classes

Activities variables	Availability of Fitness Classes												Total		Pearson chi-square
	Very dissatisfied		Somewhat dissatisfied		Neither satisfied nor dissatisfied		Somewhat satisfied		Very satisfied		No opinion				
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
Aerobics	0	0.0	0	0.0	1	50.0	0	0.0	1	50.0	0	0.0	2	100.0	Value - 78.901 df - 65 p-value- 0.115
Dance fitness	2	33.3	1	16.7	1	16.7	1	16.7	1	16.7	0	0.0	6	100.0	
Five-a-side football	1	14.3	1	14.3	0	0.0	3	42.9	2	28.6	0	0.0	7	100.0	
Adapted netball	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	1	100.0	
Chess	0	0.0	1	50.0	0	0.0	1	50.0	0	0.0	0	0.0	2	100.0	
Foosball	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0	0	0.0	2	100.0	
Exercising inside the gym	2	5.4	8	21.6	5	13.5	9	24.3	7	18.9	6	16.2	37	100.0	
Jogging	0	0.0	2	18.2	5	45.5	2	18.2	0	0.0	2	18.2	11	100.0	
Boot camp	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	
Ballroom dancing	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	1	100.0	
Walking	2	18.2	0	0.0	5	45.5	2	18.2	1	9.1	1	9.1	11	100.0	
Yoga	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	1	100.0	
Zumba	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	1	100.0	
Basketball	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	1	100.0	
Other	18	14.0	23	17.8	40	31.0	13	10.1	5	3.9	30	23.3	129	100.0	

*Missing responses (n= 25; 10.5%) **Significant at 0.05

Table 4.21.1: Cross-tabulation between campus recreation activities in which students participate and satisfaction with fees associated with fitness classes

Activities variables	Fees Associated with Fitness Classes														Pearson chi-square
	Very dissatisfied		Somewhat dissatisfied		Neither satisfied nor dissatisfied		Somewhat satisfied		Very satisfied		No opinion		Total		
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
Aerobics	0	0.0	0	0.0	1	50.0	0	0.0	1	50.0	0	0.0	2	100.0	Value - 88.822 df - 65 p-value- 0.027
Dance fitness	1	16.7	2	33.3	3	50.0	0	0.	0	0.0	0	0.0	6	100.0	
Five-a-side football	1	14.3	1	14.3	0	0.0	1	14.3	4	57.1	0	0.0	7	100.0	
Adapted netball	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	1	100.0	
Chess	1	50.0	1	50.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100.0	
Foosball	0	0.0	0	0.0	1	50.	0	0.0	1	50.0	0	0.0	2	100.0	
Exercising inside the gym	2	5.4	6	16.2	9	24.3	8	21.6	6	16.2	6	16.2	37	100.0	
Jogging	2	18.2	1	9.1	3	27.3	1	9.1	1	9.1	3	27.3	11	100.0	
Boot camp	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	
Ballroom dancing	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	1	100.0	
Walking	1	9.1	1	9.1	3	27.3	6	54.4	0	0.0	0	0.0	11	100.0	
Zumba	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	1	100.0	
Basketball	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	1	100.0	
Other	18	14.0	18	14.0	38	29.5	15	11.6	8	6.2	32	24.8	129	100.0	

*Missing responses (n= 25; 10.5%) **Significant at 0.05

Table 4.22.1: Cross-tabulation between campus recreation activities in which students participate and satisfaction with choices of recreation programmes

Activities variables	Choices of Recreation Programmes														Pearson chi-square
	Very dissatisfied		Somewhat dissatisfied		Neither satisfied nor dissatisfied		Somewhat satisfied		Very satisfied		No opinion		Total		
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
Aerobics	0	0.0	0	0.0	1	50.0	0	0.0	0	0.0	1	50.0	2	100.0	Value 61.860 df - 65 p-value-0.588
Dance fitness	2	33.3	1	16.7	1	16.7	2	33.3	0	0.0	0	0.0	6	100.0	
Five-a-side football	0	0.0	1	14.3	1	14.3	3	42.9	2	28.6	0	0.0	7	100.0	
Adapted netball	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	1	100.0	
Chess	0	0.0	1	50.0	0	0.0	1	50.0	0	0.0	0	0.0	2	100.0	
Foosball	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0	0	0.0	2	100.0	
Exercising inside the gym	3	8.1	5	13.5	11	29.7	9	24.3	3	8.1	6	16.2	37	100.0	
Jogging	0	0.0	3	27.3	4	36.4	3	27.3	0	0.0	1	9.1	11	100.0	
Boot camp	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	
Ballroom dancing	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	1	100.0	
Walking	1	9.1	1	9.1	5	45.5	1	9.1	3	27.3	0	0.0	11	100.0	
Zumba	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	1	100.0	
Basketball	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	1	100.0	
Other	15	11.6	19	14.7	32	24.8	27	20.9	15	11.6	21	16.3	129	100.0	

*Missing responses (n= 25; 10.5%) **Significant at 0.05

Table 4.22.1 displayed results for campus recreation activities and students' satisfaction with choices of recreation programmes. Of the students who participated in aerobics, one (50%) was neither satisfied nor dissatisfied, and one (50%) had no opinion. Two (33.3%) dance fitness participants were somewhat satisfied, two (33.3%) were very dissatisfied, one (16.7%) was neither satisfied nor dissatisfied, and one (16.7%) was somewhat dissatisfied. Three (42.9%) of participants in five-a-side football were somewhat satisfied, two (28.6%) were very satisfied, one (14.3%) was neither satisfied nor dissatisfied, and one (14.3%) was somewhat dissatisfied. One adapted netball participant (100%) was very satisfied. One chess player (50%) was somewhat dissatisfied, and one (50%) was somewhat satisfied. One (50%) foosball player was neither satisfied nor dissatisfied, and one (50%) was somewhat satisfied.

Eleven participants (29.7%) who exercise inside the gym were neither satisfied nor dissatisfied, nine (24.3%) were somewhat satisfied, six (16.2%) had no opinion, five (13.5%) were somewhat dissatisfied, three (8.1%) were very satisfied, three (8.1%) said they were very dissatisfied. Among the jogging participants, four (36.4%) were neither satisfied nor dissatisfied, three (27.3%) were somewhat satisfied, three (27.3%) were somewhat dissatisfied, and one (9.1%) had no opinion. One (100%) student who participated in boot camp was very dissatisfied. One student (50%) who sang in the choir was neither satisfied nor dissatisfied.

One (100%) ballroom dancing participant was somewhat satisfied with the choice of programmes. Five walking participants (45.5%) were neither satisfied nor dissatisfied, three (27.3%) were very satisfied, one (9.1%) was somewhat satisfied, one (9.1%) was somewhat dissatisfied, and one (9.1%) was very dissatisfied. One (100%) student who participated in Zumba was very satisfied, and one (100%) basketball participant was neither satisfied nor dissatisfied with the scheduled times for recreation programmes.

Cross-tabulation alone does not give sufficient evidence of whether a relationship exists; therefore, a chi-square test was conducted. The chi-square test provides a real picture of the relationship between campus recreation activities and the students' satisfaction with scheduled times for recreation programmes.

The Pearson chi-square was used to determine whether a relationship exists between campus recreation activities and students' satisfaction with scheduled times for recreation programmes. The test showed the H1 hypothesis, no statistical significance of the relationship between the campus recreation activities and their satisfaction with scheduled times for recreation programmes ($p \geq 0.588$).

Table 4.23.1: Cross-tabulation between campus recreation activities in which students participate and satisfaction with fees associated with recreation programmes

Activities variables	Fees Associated with Recreation Programmes														Pearson chi-square
	Very dissatisfied		Somewhat dissatisfied		Neither satisfied nor dissatisfied		Somewhat satisfied		Very satisfied		No opinion		Total		
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	
Aerobics	0	0.0	0	0.0	1	50.0	0	0.0	0	0.0	1	50.0	2	100.0	Value - 70.998 df - 65 p-value- 0.285
Dance fitness	1	16.7	1	16.7	3	50.0	1	16.7	0	0.0	0	0.0	6	100.0	
Five-a-side football	1	14.3	1	14.3	0	0.0	3	42.9	2	28.6	0	0.0	7	100.0	
Adapted netball	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	1	100.0	
Chess	1	50.0	1	50.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100.0	
Foosball	0	0.0	0	0.0	1	50.0	1	50.0	0	0.0	0	0.0	2	100.0	
Exercising inside the gym	2	5.4	5	13.5	10	27.0	9	24.3	3	8.1	8	21.6	37	100.0	
Jogging	2	18.2	0	0.0	4	36.4	1	9.1	0	0.0	4	36.4	11	100.0	
Boot camp	1	100.0	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	1	100.0	
Ballroom dancing	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	1	100.0	
Walking	1	9.1	1	9.1	4	36.4	3	27.3	2	18.2	0	0.0	11	100.0	
Zumba	0	0.0	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	1	100.0	
Basketball	0	0.0	0	0.0	1	100.0	0	0.0	0	0.0	0	0.0	1	100.0	
Other	17	13.0	18	13.7	38	29.0	14	10.7	10	7.6	34	26.0	131	100.0	

*Missing responses (n= 23; 9.7%) **Significant at 0.05

A cross-tabulation (Table 4.23.1) was done to determine whether a relationship existed between campus recreation activities and students' satisfaction with fees associated with recreation programmes. The results revealed that one student (50%) who participated in aerobics was neither satisfied nor dissatisfied, and one (50%) had no opinion about fees associated with recreation programmes. Three (50%) participants in dance fitness were neither satisfied nor dissatisfied, one (16.7%) was somewhat satisfied, one (16.7%) was somewhat dissatisfied, and one (16.7%) was very dissatisfied. Of the students who participated in five-a-side football, three (42.9%) said they were somewhat satisfied, two (28.6%) were very satisfied, one (14.3%) was somewhat dissatisfied, and one (14.3%) was very dissatisfied with the fees. One (100%) adapted netball participant was very satisfied with the fees. One (50%) chess player was very dissatisfied, and one (50.0%) was somewhat dissatisfied. Foosball showed a split with one (50.0%) student being somewhat satisfied and one (50.0%) being neither satisfied nor dissatisfied. Of the students who exercise inside the gym, 10 (27.0%) said they were neither satisfied nor dissatisfied, nine (24.3%) were somewhat satisfied, eight (21.6%) had no opinion, five (13.5%) were somewhat dissatisfied, three (8.1%) were very satisfied, and two (5.4%) were very dissatisfied with the fees.

Four joggers (36.4%) said they were neither satisfied nor dissatisfied with the fees, four (36.4%) had no opinion, two (18.2%) were very dissatisfied, and one (9.1%) was somewhat satisfied. One student who participated in boot camp was very dissatisfied (100%). Of the two students who sang in a choir, one (50%) was neither satisfied nor dissatisfied, and one (50%) was very dissatisfied with the fees. The next activity was gardening, one student (50%) was neither satisfied nor dissatisfied, and one (50%) was very satisfied. Ballroom dancing students indicated they were somewhat satisfied with the fees associated with recreation programmes.

Four (36.4%) students who participated in walking were neither satisfied nor dissatisfied with the fees, three (27.3%) were somewhat satisfied, two (18.2%) were very satisfied, one (9.1%)

was somewhat dissatisfied, and one (9.1%) was very dissatisfied. The yoga student (n=1; 100%) and obstacle course participant (n=1; 100%) had no opinion. The Zumba student (n=1; 100%) was somewhat satisfied. Basketball students said they were neither satisfied nor dissatisfied with the fees associated with recreation programmes.

A cross-tabulation table alone does not give sufficient evidence of whether a relationship exists; therefore, a chi-square test was done. The chi-square test provides a real picture of the relationship between campus recreation activities and the student's satisfaction with the associated fees.

The Pearson chi-square was used to determine if a relationship exists between campus recreation activities and students' satisfaction with the fees associated with recreation programmes. The test showed the H1 hypothesis: no statistical significance of the relationship between the campus recreation activities and the student's satisfaction with the fees associated with recreation programmes ($p \geq 0.407$).

4.12 Chapter Conclusion

This chapter provided descriptive and inferential statistics on the relationship between students' recreation needs and patterns. Cross-tabulation and the Pearson chi-square were deemed appropriate to gather the required statistics to conclude the collected data. The findings revealed a need to go back to basics in terms of educating students about what a recreational activity is, the purpose of recreation programmes and what they hope to achieve in terms of promoting an active lifestyle, creating a healthy campus, social cohesion, a sense of belonging and to play for fun in their leisure time. Secondly, a programme that is inclusive, accessible and diverse needs to be drawn up in terms of indoor and outdoor activities to be offered. Programmes for 5km, 10 km races, hiking and social fun runs must be available. Indigenous

games, performing arts, E-sports, fitness classes and adapted traditional sports should be offered to give students who have never played sports before an opportunity to learn a new skill without the fear of being mocked by competitive players or feeling inadequate and losing confidence. They would also provide an opportunity to build self-confidence, regardless of their challenges or fears. The findings also revealed a need for more facilities on campus, such as an AstroTurf, an indoor centre for multiple activities, and alternative gym facilities. A suggestion made by the respondents, is having gyms in the student residences. Other universities, such as the University of the Witwatersrand, have this system in place. This could assist in terms of creating space in the main gym. Furthermore, there is a need for visible signage of facilities and clear indications of where activities will occur. This is best done by centralising all activities in one open field and avoiding changing venues every time to prevent students from having to look for places and getting lost. Marketing of these programmes needs to be more aggressive and strategic. Word of mouth and email were the best way current communication was received. However, posters of the recreation programme must be bold and stand out from academic notices. Creative suggestions were using campus radio and having promo people to market the recreation events, especially during orientation and on iKamva. The inferential statistics findings showed only the variables between the campus recreation activities and student satisfaction with the university campus recreation staff that a relationship exists between the variables as the chi-square was less than .05 or 5%, meaning it was statistically significant. The other variables had no relationship, meaning the variables were independent. Therefore, more elements are independent (have no relationship), and this study is termed a null hypothesis, meaning there is no relationship between the variables except for the relationship between the campus recreation activities and student satisfaction with the university campus recreation staff.

The next chapter provides a discussion of the study findings. Chapter six contained conclusions, limitations of this study and recommendations for further research and implementation.

CHAPTER 5

DISCUSSIONS OF THE STUDY FINDINGS

5.1 Introduction

This study aimed to determine the relationship between students' campus recreation needs and patterns with the intention that the Sports Administration Department, where this study took place, will incorporate this information into their campus recreation planning. The research was presented in five chapters. Chapter 1 addressed the aims and objectives of the study and the hypothesis that no relationship exists between students' campus recreation needs and patterns at a tertiary institution. Chapter 2 reviewed literature on the relationship between the students' recreation patterns and their campus recreation needs and the importance of using higher education as a setting for health promotion, while the self-determination theory framework focused on aspects that motivate a person. Chapter 3 presented a detailed methodology of the data collection process and procedure. A quantitative method was used to determine the relationship between students' campus recreation needs and recreation patterns for this study. Chapter 4 presents the findings of the data analysis, and Chapter 5 discussed the results. Chapter 6 presents the conclusion, limitations and recommendations for future research.

The discussion was undertaken concerning the literature review and research questions of this investigation. The structure was presented in the following order: Summary of the findings, and interpretation of the results, which followed the results in Chapter 4.

An online survey modified and developed from the City of Cape Town's 2011 recreation study and Kovac and Beck's (1998) study was used to determine the relationship between students' campus recreation needs and recreation patterns which formed part of the main variables

measured in the inferential statistics of this study. The self-determination theory (SDT) (Deci & Ryan, 2000) guided the data collection and analysis.

5.2 Discussion of the Findings

This study primarily aimed to describe the relationship between students' campus recreation needs and recreation patterns at a tertiary institution in the Western Cape. It was necessary to determine the current recreational participation patterns, recreational needs and preferences of students at the university to achieve this goal. Based on these findings, the students' recreational needs and preferences will be shared with the intention that the Sports Administration department will incorporate this information into their future campus recreation plans.

The findings showed that most participants resided at home with their parents or in private accommodation. The students were aware of campus recreation programmes but did not participate. The current recreational patterns of the participants are that they enjoyed walking, jogging, exercising inside the gym, hiking, doing dance fitness and home exercises. Their reasons for participation were to keep healthy and fit, for fresh air, enjoyment, and (primarily males) to relax after lectures. Forrester (2013) stated that the top four responses, according to his study findings, were that participating in campus recreation aided students in relieving stress, for physical fitness, fun and enjoyment.

The participants who did not participate in the campus recreation programmes were asked what would make them participate. The response was a need for basic information about the benefits of being physically active. This requirement was supported by the WHO (2018) that promoting the co-benefits of being physically active was essential. If students understand the benefits of

being physically active, it will motivate them to take their health and fitness seriously. This theory is also supported by Khasnabis et al. (2010), who stated one of the benefits of participating in recreation is health promotion and disease prevention. They explained that recreational activities are an enjoyable and effective way to improve health and well-being; they can relieve stress, increase fitness, improve physical and mental health, and prevent the development of chronic diseases, such as heart disease.

Second, the students indicated that they would participate in recreation if they had more time because some see it as a time-wasting exercise. In contrast to our study findings, Forrester (2013) reported that increased participation in campus recreation provides students with skills/abilities used during and after college/university. The soft skills that were improved as a result of participating in campus recreation were time management skills, being the most improved, followed by respect for others and an improvement in academic performance. Therefore, students must understand the benefits of being physically active and how it can impact their lives positively rather than staying away because of lack of time.

This goes back to what was discussed earlier: an effective marketing strategy for upcoming events should be marketed in advance. This would help to increase participation as it would give students time to complete their academic tasks before the event and for those that reside off campus to arrange alternative transport. The other reason that would make students participate in the programmes was knowing they do not have to be committed or dedicated like in competitive sports, and lastly, to play for fun. This suggests that the programme may have been competitive. According to Ewing et al. (2002), an ego-involving climate/environment that promotes a win-at-all-cost attitude, as in competitive sports, may undermine a participant's development, resulting in a reduced commitment level and withdrawal. Ewing et al. (2002),

went on to explain that the right environment must have been created by supporting the students' intrinsic motivation, which, according to Player (2010), can happen if the climate meets the person's three innate psychological needs. Referring to this study's theoretical framework, the self-determination theory (Deci & Ryan, 2000), these are, 1. Competence, 2. Relatedness and 3. Autonomy. Player (2010) says that meeting the three psychological needs will help students remain intrinsically motivated in an activity and will stay physically active. The other recreational patterns participants often mentioned were Tai chi, debating, swimming, five-a-side football, and tennis. These findings agree with Forrester's (2013) study of the top three activities: exercising inside the gym, walking, jogging (categorised as cardiovascular activities) and adapted sports such as five-a-side football.

Of the students who participated in on- or off-campus activities, most did so one to three times a week. The data supported the theory of participating at least once a week in cardiovascular activities, such as exercising inside the gym or participating in recreational sports such as soccer and volleyball (Forrester, 2013).

The other objective of the study was to determine the students' recreational needs after determining their current recreational patterns, as discussed above. The findings showed a need to market recreational programmes on effective platforms. Some of the platforms the participants said are more effective are word of mouth, the University's communication emails, campus radio, promo people to market the recreation events, especially during orientation, and on iKamva. Secondly, the events were to be marketed in advance to allow students time to plan their schedules and, lastly, visibility of the facility's signage or venues. The results showed students sometimes saw the posters late due to where they are displayed among academic

communications, or they do not know where to locate the venue resulting in non-attendance. The other needs mentioned were more locker rooms at the gym and a multi-purpose field.

The top three facilities participants would like more of at the university are:

1. A recreational centre with multiple activity rooms,
2. A rock-climbing wall and
3. A jogging track and dance or aerobic hall.

The data suggest that investment in facilities such as a recreation centre with multiple activities in addition to the lifestyle gym on campus will increase the level of participation. According to Forrester (2013), 75% of students used on-campus recreation centre facilities, programmes and services. Laka (2009) reported that the reasons for non-participation by students were the unavailability of the required activities, poor promotion and possible knowledge of venues where these events are hosted.

5.3 Interpretation of Results

5.3.1 Demographic profile of participants

The entire student population was included to ensure that every student received an opportunity to participate in this study. The sample was determined based on a power calculation of three hundred and seventy-nine ($n=379$) participants required to ensure an accurate representation or generalisation of the entire population. This study received 237 responses. There were efforts put in place to circumvent this by resending calls to students to complete the survey, however as it was done closer to the examination period that could be the reason for resistance to complete the survey as the focus shifts to preparation of exams. Furthermore, if the same

measurement tool would be repeated over time it would yield the similar outcome as a pilot test using the same tool was used to test reliability. Therefore, the results simply means it could not be generalised to the broader population. However, it is valid and reliable. The demographics included the participants' gender, ethnicity, age, disability, faculty, study level and place of residence.

The demographic results showed mostly black and coloured female participants aged between 18 and 20 in first-year Community and Health Sciences (CHS) were more aware of the campus recreation programmes at the university. The data suggested that first-year students aged 18 to 20 wanted to participate in recreation programmes that could assist in transitioning to a new environment by making friends and having a sense of belonging to the university. This was supported by Caldwell and Witt (2011), who stated that elements and characteristics of leisure experiences contributed directly to the development of identity, autonomy, competence and social connectedness among adolescents.

This is further supported by Leslie et al. (2001), who say the right time to promote positive habits is between the ages of 18 to 22, and the time spent at higher education institutions will predict their habits for the rest of their lives. This data suggested that health and wellness must be stressed if communities want to contribute to an active and healthy nation. The Community and Health Science Faculty comprised of health disciplines, so the students were more inclined to be physically active, especially in programmes such as Sport, Recreation and Exercise Science.

The University has a substantial number of black and coloured students, which explained the substantial number of respondents being black and coloured. The gender difference told us that participants still participated in activities that society perceived as predominantly female or

male activities or sports. In this study, most females and males indicated that their reason for participating in recreation was to keep healthy and fit. The substantial number of females, according to their current patterns, wanted to stay healthy and fit by exercising inside the gym, while the males preferred participating in five-a-side football.

5.3.2 Campus recreation awareness

The results suggested the students are very dissatisfied with the availability of information about recreational activity opportunities. This caused low participation in recreational activities because either the students did not know of the activities offered or they found out about them late and could not arrange transport, as most of the respondents in this study live at home with their parents. Literature suggested a relationship exists between students' perceptions, which consist of awareness, knowledge, attitudes and intentions of their surroundings and their physical behaviour. Thus, a positive perception, attitude and awareness lead to participation in recreation (Stolk et al., 2014). Furthermore, female respondents who indicated awareness of recreation programmes said they learnt about them by word of mouth or the University's communication emails. However, this does not reflect participation, as respondents said they were very dissatisfied with the availability of information. This included information about the activities offered, a clear indication of the location where the programmes will take place, and the time.

The respondents who were unaware of recreation programmes were asked how best the programmes could be marketed. The suggestions were campus radio, promotion during orientation week, having information stalls around campus, using lecture halls for marketing and making the posters stand out from the usual academic communications. The study findings

revealed the importance of increasing awareness of recreational sports. The information gathered could help the University of the Western Cape (UWC) better understand students' perspectives about recreational sports. Information from this type of research could also be used by the UWC when considering marketing strategies and promotional materials (Stolk et al., 2014).

Furthermore, using social media platforms and marketing the programmes in a way that shows students if they participate in out-of-classroom programmes (extra mural activities), they could put it on their resumes for future employers or receive the co-curricular transcript offered at the University's Student Development Support division (SDS)/Student Affairs when they graduate. This can be done when they fill leadership positions in the planning and implementation of the programmes together with the Sports Administration staff, especially the Sport Recreation Management students.

The use of iKamva and university communication emails came up quite often as the best platform to market upcoming recreation events, as students always check those platforms for academic purposes. However, the content and poster design must stand out from academic communications to attract their attention, or they will fall among the other communicate and be missed. The respondents were mostly first-year students aged 18 to 20, which explains why the suggestion was to use creative and out-of-the-box marketing methods, as these appeal to the younger generation who live in a technological era with the fourth industrial revolution (4IR), where most things have been digitised. A study by Stolk et al. (2014) revealed that participants in focus groups suggested an open day to showcase all recreational sports to increase awareness among students. It was further suggested that these open days should take place in open spaces on campus, with opportunities for students to participate in various recreational sports.

5.3.3 Campus recreation student satisfaction

This section explored the students' satisfaction with campus recreation, particularly the recreation staff services and programmes offered, and satisfaction with recreation fees and campus facilities. The results were unclear regarding recreation staff, fees and facilities. Students that participated in the study were neither satisfied nor dissatisfied with the recreation staff, which may be due to most of them living at home or in private off-campus accommodation. Even though they are aware of the campus recreation activities, they do not participate. This may be because of dissatisfaction with the type of activities offered and the time when they are provided because of students' living arrangements or the marketing strategies used to market the activities, which need to be more aggressive. The results reveal that students were more satisfied with outdoor compared to indoor facilities. This may be due to the limited facility at the University for indoor activities. Research showed a well-equipped gymnasium catering for students and staff, a sports hall catering for dance, such as ballroom dancing, and classes accommodating beginner-level karate, aerobics, cheerleading and self-defence, to name a few. Existing research suggests that two of the most significant factors in college/university persistence are participation in collegiate and using recreational facilities (McClymont, 2013). Facilities are important in contributing to continuous involvement in recreational programmes. Findings also revealed the participants are unaware of where different facilities are located, which means the marketing materials must stipulate where each facility is with clear signage.

5.3.4 Student recreation patterns

This section forms part of the study's objective, which was to determine the student's campus recreation patterns. The respondents in this study were mainly students who live at home rather than in the university residences; therefore, the results show students are aware of the campus recreation programme, but many do not participate, and the question that must be asked, why. Based on the results, one may argue that it may be due to different factors, such as marketing material that does not stand out. The times when the activities are offered may not be suitable for students who reside off-campus, or the type of activities are not what students want. Because the respondents of this study mostly lived at home with their parents, it might explain why they would be aware of the campus recreation programme but not participate. Respondents indicated that timeous marketing of events was a challenge as they only found out about events when they had passed or missed the poster or communication. The other indication was the type of activities offered, difficulty locating facilities where the programmes take place or transport home after the event, hence the decision to instead participate in activities within their communities.

5.3.5 Personal benefits of participating in recreation

The results revealed a balance of benefits for males and females participating in recreation. The top benefit of participating in recreation for males is physical well-being, and stress-reduction and gaining physical strength for females. Kaplan (2018) reported evidence of reduced levels of stress and tension-producing anxiety once one participates willingly in recreational activities. Recreation response includes feeling good about yourself and others and an enriched sense of self-worth resulting from intrinsic or extrinsic motivators Kaplan (2018). This is

supported by the student's responses stating that participating in recreational activities reduced stress, provides a sense of accomplishment and gained physical strength.

5.3.6 Recreation needs

This section forms part of the second study objective, which was to determine the student's campus recreation needs. The recreation needs section explored the students' recreation needs based on sports facilities. The top three most important facilities were ranked based on participants' responses. The section first looked at whether the students experienced any difficulty in accessing the facilities on campus. The study participants (n=182; 83.9%) indicated they had never encountered difficulties accessing the sports facilities. The remaining participants (n=34; 15.7%) who had experienced problems were questioned about their challenges. A few of their responses which were interesting to share are listed below.

One student said: "Do not know where to go and what is offered". This speaks to two things; the type, lack of or no visible signage of facilities where sports facilities are located. Secondly, whether the marketing of the events offered is done timeously for students to plan their academic obligations, such as doing assignments early, so they are free during the recreation time slot. The other point is where these marketing materials are displayed. Existing study findings support the research findings from Solomon (2005), which found that most female students did not participate in recreational sports on campus due to physical and social constraints. Laka (2009) indicated the recreation programme should be informed of their needs and preferences by the campus community.

Furthermore, the lack of hockey facilities was highlighted as a significant concern. The students indicated that not having hockey facilities on campus deprived them of having more and longer practice sessions to improve their skills.

Furthermore, the booking process for facilities on campus is said to be very strenuous. There must be a strict and orderly booking process to monitor the University's facilities as they are also an income stream. However, when a student structure or society on campus needs to book a facility, there should be a more accessible system or process to avoid discouraging students who take the initiative to plan events. This finding also suggests that there may be no one taking the students through the application process so they are not put off by the administration and sections they may not understand when completing it alone. The importance of taking care of and having enough facilities, as mentioned by Kampf (2010), is that it becomes a place on campus that enables students to improve their mental and physical well-being.

Lastly, exercising inside the gym came up as one of the activities in which students engage. Based on the responses, the facility is too small for the student demand, especially during peak times. A multi-purpose centre with multiple rooms for activities such as dance and aerobic classes was identified as one of the top-ranked facilities students need and may assist in bringing down the numbers in the gym.

The off-campus residence, Tygerberg, was mentioned as not having any recreational programmes, which needs to be addressed. According to Cvijetinovic (2017), over the past decade, there has been an increase in the need for wellness activities. Additionally, offering programmes to all campuses will provide the students with outlets for holistic wellness and social interaction with other students.

5.3.7 Importance of campus recreational services

The researcher explored the importance of campus recreation services for the participants, ranked from not important, somewhat important, to very important. The questions posed to the participants were to check how important the availability of recreational activities was for them before enrolling in a university, how important the availability of recreation was when deciding to continue at that particular university, and how important was participation in recreation after graduation.

Results showed the availability of recreational activities in deciding to attend a university was not important for females (n=63, 39.4%), and 25 (33.8%) males said it was somewhat important. These results may be influenced by the gender inequalities and roles attributed to men and women in society. The Gender Equality and Participation in Sport report by the Council of Europe (2016) found men tend to practice sports or other physical activities more often than women in the European Union. It was further found that the frequency of playing sports or engaging in other physical activities differs significantly according to age. This theory is supported by Solomon (2005), who found female students did not participate in recreational sports due to physical and social constraints. This suggests that, attending to the constraints females face, participation in recreational sports may increase. The lack of school sports or other physical activities at schools contributes to youth not seeing the importance of campus recreation when deciding in which university to enrol. This finding is supported by the South African National Development Plan (NDP) (2030), which suggests instilling or changing behaviour and lifestyle starts at schools. Furthermore, inequalities in terms of gender roles explain the results of this study in terms of young boys being able to go outside and play street soccer and girls staying at home doing household chores. In Chapter 1, it was mentioned that, when prospective students determine which university to attend, they look into several things.

Education takes top priority, but ultimately students are looking for something outside the classroom that will draw them back to campus, semester after semester (Cvijetinovic, 2017). This is further supported by acknowledging the impact of sport and recreation on student recruitment and retention at universities around South Africa (Solomon, 2005). Thus, it is imperative that universities invest and include sports and recreation in their strategic plans to recruit and retain students. The findings somewhat agree with existing research about what students consider when determining which university to enrol at and whether to continue at that particular university.

When deciding to continue at a university, the results of the question about the availability of recreation were as follows. Twenty (27.4%) of the males said it was somewhat important and 54 (34%) of the females said it was not important; whether campus recreation programmes were offered or not, they would continue studying at the university. It is important to note that, once students are not exposed to recreation or physical activity at an early age, the chances of them participating at university or when they are older are very low as there are factors that influence that decision, including behavioural traits (Leslie et al., 2001). An interesting study finding was the difference between males and females; the females did not view campus recreation programmes being offered as determining factors for them to enrol at the university compared to males. This contradicts existing research, even though it does not break down the ratio between males and females. However, referring to “students” is interpreted as inclusive of both. Therefore, the research says that students prioritise education; however, out-of-classroom activities will draw them back to campus (Cvijetinovic, 2017).

Therefore, promoting the benefits of being physically active and offering demand-driven activities will influence even those sedentary students to start participating by promoting

physical activity benefits such as social inclusion and physical and mental health, to mention a few. This is supported by Penland (2017), who stated these benefits positively impact the students' performance and persistence in their academic life. Barkto and Eccles (2003) and a study by Penland (2017) support the theory that involvement in recreational programmes affects academic performance and skills development, such as problem-solving.

According to the study results, there was an increase in physical activity among the students when they got to the university where this study took place. This may result from the need for students to be active, socially included, make friends, and for physical and mental health to deal with the pressure of academics.

Higher learning institutions are educational institutions that also prepare global citizens. Therefore, the benefits of sports and recreation must be reiterated to ensure that, once the students graduate and go into our communities, citizens who value the importance of physical activity are produced, especially in countries such as South Africa, where there are high levels of obesity. This is supported by research findings conducted by the WHO (2018). According to this study, 49 (30.8%) of the females and 21 (28.8%) of the males said they do not see the importance of participating in recreation after graduation.

In Chapter 2, the state of recreation at university was discussed. According to Forrester (2013), before enrolling in their chosen college/university, 83% of students reported that campus recreation, sports, and fitness activities were important to them. Then 75% of students reported at some level that participating in recreational activities and programmes has expanded their interest in staying fit and healthy during their time at university. Lastly, 90% of students reported that campus recreation, sports, and fitness activities would be important for them to be healthy after graduating from their chosen college/university. These percentages show

differences between prior enrolment and after graduating compared to the importance of maintaining an active lifestyle during university. However, the results of this study show a different view from the existing research, which may be a result of the context of the previous exposure of students who enrol at the university. Furthermore, the significant increase in physical activity of 1 to 3 times compared to before they were students indicates that, once the benefits of staying active are reiterated, students remain or start being active during their academic years.

5.3.8 Recreational programmes most liked by participants

Earlier under Recreation Needs, it was mentioned that the top three facilities participants would like to see more of on campus. These were a recreation centre with multiple activity rooms, a rock-climbing wall and a tie between a jogging track and a dance or aerobic hall, which could be accommodated in the recreation centre with multiple activity rooms.

In this section, the researcher explored the participants' top three programmes they would like to see more of at the university. Among other challenges and programmes selected by participants, the following were ranked top three:

1. More special events, such as 5 and 10km races, fitness classes, climbing competitions and mud runs.
2. Visible marketing campaigns for recreation programmes about recreational events and more information in the campus newsletter, newspaper, websites, or campus email services.
3. The participants said they would like the recreation events/activities to be free or significantly cost-reduced.

The results indicate the importance of recreation in communities and its impact on our lives and livelihood. This is supported by Cvijetinovic (2017), who stated that participation in recreational programming influences students to continue being active after graduation. This shows that recreational programmes can influence a student's overall health awareness. Competitive sports are taken seriously due to commercialisation; however, recreation must be taken as seriously and not forget that recreation is life; therefore, recreational plans from schools and higher learning institutions affect the type of citizen who goes into the communities. Thus, recreational programmes should be in place to ensure a healthy and active nation.

The National Sport and Recreation Plan (NSRP) supports this. It strives to build the roots of an active and winning nation (NSRP, 2012). Furthermore, monitoring and evaluating programmes are critical to ensure the needs of participants are met and, if not, changing programmes to meet them. Laka (2009) stated that determining needs is important as it highlights the main elements of feedback, relevance and understanding of participants' needs. Marketing is paramount; having a good programme alone defeats the purpose if there are no participants due to lack of or ineffective marketing. The importance of marketing/promoting the programmes to increase participation is supported by Laka (2009).

CHAPTER 6

RECOMMENDATIONS AND CONCLUSION OF THE STUDY

6.1 Introduction

This study aimed to determine the relationship between students' campus recreation needs and patterns with the intention that the Sports Administration at a university in the Western Cape would incorporate this information into their future campus recreation plans. This chapter addresses the of this study and concludes with recommendations for planning campus recreation and future research in the field of recreation.

6.2 Recommendations

6.2.1. According to Cvijetinovic (2017), continuous promotion of the benefits of being physically active should be emphasised to increase participation and for students to view recreation as taking care of their health and wellness and as a lifestyle for them to perform well academically as opposed to time-wasting.

6.2.2. To ensure students understand what recreation is compared to competitive sports. The education and implementation of campus recreation should be done so that students know the difference. The activities in the programme are recreational to foster fun and enjoyment of participating, so the students feel confident and excited to come back whenever they want as compared to the strict rules and win-at-all-cost mentality of competitive sports. The education may be done by sharing information on the benefits of recreation through posters and student communication emails throughout the year.

6.2.3. Institutions of higher learning must employ recreation specialists as they do with sports managers to organise and manage sports. The pressure put on sports managers on top of their high performance or competitive codes to also plan recreational programmes is not fair to recreation. Hence you will find recreational programmes are not implemented how they should be to achieve the outcomes of enjoyment and fun. Recreation should not be seen as a just-by-the-way programme but instead, form part of the strategic plans of the university to cater for the rest of the students not interested in joining a competitive sport.

Mthethwa (2017) recommended establishing a body that deals with recreational activities in South African institutions of higher learning. I fully support the establishment of this body; as he mentioned, the recreation field is not understood clearly in South Africa from an implementation perspective and therefore gets overshadowed by competitive sports.

6.2.4 A student body that will act as an Opi-dan residence for students who do not reside on campus should be established to have representatives and a voice in cases where there are planning meetings with students. This will enable the Opi-dan students to address challenges that most affect them with the hope of increasing their participation in on-campus recreation

6.2.5 The marketing and communication of the campus recreation programme must be done with equal effort as competitive sports. It is worth noting that an external company sponsors some posters for High-Performance codes. Therefore, resources such as a budget where necessary, human resources, space and equipment must be invested to mitigate any challenges. Students should also be told of the difference, and by whom certain events are funded.

6.2.6 Investment in facility signage for better visibility for students to locate venues. Furthermore, investing in building facilities that would accommodate students for recreational and not only high-performance purposes.

6.2.7 A strategic plan of a yearly recreation programme must be planned and reviewed quarterly in terms of its impact and participation. Also, a review of the students' recreation needs using a Google survey should be sent out to all students every three years to assess the new students in every three-year cycle. This will aid the Sports Administration department in offering activities based on the students' needs and what they can accommodate based on available resources.

6.2.8 Programmes from internal stakeholders on time management for students to accommodate leisure time for physical activity.

6.2.9 The university should explore the option of being recognised as a healthy campus through the Fédération Internationale du Sport Universitaire (FISU) International University Sports Federation, aiming to improve student health and well-being on campus through physical activity. The link to the FISU website; <https://www.fisu.net/healthy-campus>

6.2.10 Recommendation to have a monitoring and evaluation system in place.

6.3 Limitations of the Study

6.3.1 The sampling study was not met; therefore, could not generalise results to the broader population. The researcher sent numerous calls to all full-time registered students to complete the study. However, it was close to examinations, which may explain the resistance to completing the survey, as students were focused on examinations at the time.

6.3.2 The study was confined to the views of full-time registered students at a university in the Western Cape. The part-time students were not considered for this study.

6.4 Recommendations for Future Research

6.3.3 A qualitative research approach for future research is recommended, thus reducing the number of participants and having follow-up questions allowing the researcher to understand better the students' needs and satisfaction with campus recreation for future implementation.

6.3.4 Exploring the recreational needs of university staff to incorporate them into the recreational programmes or have a staff wellness programme throughout the year instead of once a year.

6.3.5 Investigating the state of recreation at all South African public universities in an effort to draft a policy document to address matters of recreation in institutions and establishing a body that deals with recreational activities in South African higher learning institutions.

6.3.6 A further research recommendation would be to explore the impact of Covid-19 and online learning and teaching on students and staff and how recreation can address the challenges of isolation, lack of social interaction and stress resulting from disrupted lives.

6.5 Conclusions

The objectives of the study were met. As most participants were not UWC residence students, this would assist the recreation coordinator in understanding what activities students who do not reside on campus would like to participate in. The following responses were concluded:

- Students saw recreational centres, outdoor running activities and rock climbing as important and interesting. One of the preferred activities for the students who participated in this study was the 10km run hosted at the university. This event has evolved to be open to walkers and recreational runners. Therefore, as there is support and interest for this event, the Sports Administration should use the opportunity to promote health and wellness on campus by advertising aggressively to motivate staff and students to partake.
- Furthermore, Sports Administration offered the programmes mentioned as the students' recreational participation patterns. However, participation was low, so there should be more focus on effectively marketing these events and using platforms that students regularly visit, such as the lecture halls, and for marketing material to stand out from traditional academic communication.
- Students should be taught the importance of adopting the culture of paying for certain services, such as being a gym member, as they would have to do at an outside gym after graduation. Therefore, the responses regarding cost reduction for events and recreation events should not be considered. According to available data, university gym fees start from a minimum of R130 per month to R600 per annum for students; this is affordable, considering what students get in return.
- Furthermore, there is no evidence that students must pay a fee to participate in the recreation programmes at the university where this study took place. This could indicate

that students may confuse organised sports where players are expected to pay club fees as recreation; hence the responses indicated cost reduction for recreation events. It can be concluded that students need to be taught the difference between recreation and competitive sports.

Based on the problem statement, research aim and objectives, the following hypotheses were formulated: No relationship exists between students' campus recreation needs and recreation patterns at a tertiary institution in the Western Cape.

Inferential statistics were used to draw conclusions from the data collected, explaining the hypothesis by testing the significance of the various factors. The statistical tests to determine the relationship between students' campus recreational needs and patterns were cross-tabulation and the Pearson chi-square (X^2) test.

Out of the cross-tabulation verification tests and Pearson Chi-square analysis, only the campus recreation activities and student satisfaction with the University's campus recreation staff showed a relationship between the variables.

Significance was tested ($p \geq 0.05$) between campus recreation activities and student satisfaction with the university campus recreation staff using a Pearson chi-square test. The results confirmed a relationship between recreation activities and student satisfaction ($p \geq 0.003$). The results confirmed if students are not satisfied with recreation staff services and knowledge, it will affect their participation in campus activities. It is essential that knowledgeable recreation specialists be employed to ensure the programme is well run.

6.6 Study Conclusions

The study aimed to determine the relationship between students' campus recreation needs and recreation patterns at a tertiary institution in the Western Cape. Therefore, determining the type of activities students at the institution are currently participating in and the type of activities they would prefer would assist in promoting a healthy lifestyle among the students and further determine the relationship between recreation participation/patterns and campus recreation needs. The study findings of the participants indicate a need for campus recreation knowledge sharing for students to understand the benefits of recreation. Furthermore, the importance of aggressive marketing to ensure that students are aware when and where recreation programs will be taking place. The findings further indicate the relationship between recreation activities and student's satisfaction, hence it is important that the needs and preferences of students are regularly administered.

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Appendix A



UNIVERSITY OF THE WESTERN CAPE

Private Bag X 17, Bellville 7535, South Africa

Tel: +27 21-959 2377 Fax: 27 21-959 3688

E-mail: myoung@uwc.ac.za

INFORMATION SHEET

Project Title: The relationship between students' campus recreation needs and recreation patterns at a tertiary institution in the Western Cape.

What is this study about?

This is a research project conducted by Ntombise Nadia Mgulwa at the University of the Western Cape. We are inviting you to participate in this research project because you are a UWC registered student, you meet the inclusion criteria for this type of study and lastly as a UWC student you will have a great impact in ensuring we offer a more student-driven campus recreation. The purpose of this research project is to explore the relationship between students' campus recreation needs and recreation patterns at a tertiary institution in the Western Cape.

What will I be asked to do if I agree to participate?

After completing the consent form, you will be asked to complete an online survey which will be sent to your UWC student email with the link to access the survey. The questions will consist of closed and open-ended type of questions which will include yes or no questions, ticking off

as well as questions that will require you to elaborate on. This survey should take you more or less 20 minutes to complete. There will be no type of medical testing required.

Would my participation in this study be kept confidential?

The researchers undertake to protect your identity and the nature of your contribution. To ensure your anonymity, you will not be required to reveal your name or any other personal information on the surveys. To ensure your confidentiality the information received will only be handled by the researcher; the data will be held at a secure location that will only be accessible by the researchers using password protected computer files. If we write a report or article about this research project, your identity will be protected.

What are the risks of this research?

There may be some risks from participating in this research study. All human interactions and talking about self or others carry some amount of risks. We will nevertheless minimise such risks and act promptly to assist you if you experience any discomfort, psychological or otherwise during the process of your participation in this study. Where necessary, an appropriate referral will be made to a suitable professional for further assistance or intervention.

What are the benefits of this research?

This research is designed to help you personally as a UWC student, as well as the UWC Sport Administration department in order to determine the type of activities students at the institution are currently participating in, the type of activities they would prefer participating in; with the hope of promoting a healthy lifestyle among the students and further to determine the

relationship between recreation patterns and campus recreation needs. The determined students' recreational needs and patterns will be shared with the intention that Sport Administration departments at tertiary institutions will incorporate this information to their campus recreation planning.

Do I have to be in this research and may I stop participating at any time?

Your participation in this research is completely voluntary. You may choose not to take part at all. If you decide to participate in this research, you may stop participating at any time. If you decide not to participate in this study or if you stop participating at any time, you will not be penalized or lose any benefits to which you otherwise qualify.

What if I have questions?

This research is being conducted by Nadia Ntombise Mgulwa from the Sport, Recreation and Exercise Science department at the University of the Western Cape. If you have any questions about the research study itself, please contact Nadia Mgulwa at: Sport Administration department, University of the Western Cape, Bellville, 7535, 021 959 2548, nmgulwa@uwc.ac.za or 2935925@myuwc.ac.za

Should you have any questions regarding this study and your rights as a research participant or if you wish to report any problems you have experienced related to the study, please contact:

Dr Marié Young

Head of Department: SRES

University of the Western Cape

Private Bag X17

Bellville 7535

myoung@uwc.ac.za

Prof Anthea Rhoda

Dean of the Faculty of Community and Health Sciences

University of the Western Cape

Private Bag X17 Bellville 7535

chs-deansoffice@uwc.ac.za

This research has been approved by the University of the Western Cape's Research Ethics Committee.

Appendix B



UNIVERSITY OF THE WESTERN CAPE

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E-mail: myoung@uwc.ac.za

CONSENT FORM

Title of Research Project: The relationship between students' campus recreation needs and recreation patterns at a tertiary institution in the Western Cape

The study has been described to me in language that I understand. My questions about the study have been answered. I understand what my participation will involve and I agree to participate of my own choice and free will. I understand that my identity will not be disclosed to anyone. I understand that I may withdraw from the study at any time without giving a reason and without fear of negative consequences or loss of benefits.

Participant's name:

Participant's signature.....

Date.....



Appendix C

OFFICE OF THE DIRECTOR: RESEARCH RESEARCH AND INNOVATION DIVISION

Private Bag X17, Bellville 7535
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T: +27 21 959 2988/2948
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17 July 2017

Ms NN Mgulwa
SRES

Faculty of Community and Health Sciences

Ethics Reference Number: HS17/1/23

Project Title: The relationship between students' campus recreation needs and recreation patterns at a tertiary institution in the Western Cape.

Approval Period: 03 February 2017 – 03 February 2018

I hereby certify that the Humanities and Social Science Research Ethics Committee of the University of the Western Cape approved the methodology and ethics of the above mentioned research project.

Any amendments, extension or other modifications to the protocol must be submitted to the Ethics Committee for approval. Please remember to submit a progress report in good time for annual renewal.

The Committee must be informed of any serious adverse event and/or termination of the study.

Ms Patricia Josias

A handwritten signature in black ink that reads "Josias".

Research Ethics Committee Officer

University of the Western Cape

PROVISIONAL REC NUMBER - 130416-04

Appendix D

The relationship between students' campus recreation needs and recreation patterns at a tertiary institution in the Western Cape

This is a research project being conducted by Ntombise Nadia Mgulwa at the University of the Western Cape. We are inviting you to participate in this research project because you are firstly a UWC registered student, you meet the inclusion criteria for this type of study and lastly as a UWC student you will have a great impact in ensuring we offer a more student-driven campus recreation program. The purpose of this research project is to explore the relationship between students' recreation needs and recreation patterns at a tertiary institution in the Western Cape.

The intention of this form is to gather your responses with regard to your participation in recreation on campus. Please note that your participation in this project is voluntary. This questionnaire will take 20 - 30 minutes to complete

*required

1.

Mark only one oval.

Option 1

2. I Agree to participate in this study *

Mark only one oval.

Yes

No

Participant Information

Please do answer all the questions in this survey to the best of your ability. Refraining from completing all the questions will impact the ability to gain valuable information that could assist in improving campus recreation program offerings at UWC.

Note that you might not be able to proceed to the different sections in the survey if your have not answered all the questions as required.

3. A. Gender *

Mark only one oval.

Male

Female

4. B. What is your ethnicity? *

Mark only one oval.

Black

Coloured

White

Asian

Indian

Other: _____

5. C. What is your age?

** Mark only one oval.*

Under 18

18-20

21-23

24-26

27-29

30-32

33-35

36+

6. D. Which Faculty are you registered in? *

Mark only one oval.

- Faculty of Arts
- Faculty of Science
- Faculty of Community and Health Science
- Faculty of Economic and Management Science
- Faculty of Education
- Faculty of Dentistry
- Faculty of Law

7. E. What is your study level?

** Mark only one oval.*

- First year
- Second year
- Third year
- Fourth year/Honours
- Masters
- PhD

8. F. Do you have any disability?

** Mark only one oval.*

- Yes
- No

9. G. Place of residence *

Mark only one oval.

- Home with parents
- University: on-campus residence
- University: off-campus residence
- Private accommodation
- Own place

Other: _____

10. H. Are you aware of UWC any campus recreation programs? *

Mark only one oval.

- Yes, I am aware.
- No, I am not aware of this.

11. I. Do you participate in campus Recreation activities? *

Mark only one oval.

- Yes
- No

12. J. If you do participate in the UWC campus recreation activities, please select the activities that you participate in below:

Check all that apply.

- Aerobics
- Dance Fitness
- 5-aside football
- Adapted netball
- Tag rugby
- Quiditch
- Chess
- foosball
- Exercise (inside the gym)
- Jog
- Bootcamp
- Futsal
- Hip-hop dancing
- Ballroom dance
- Cricket for the blind
- Walking
- Zumba
- Indeginous games
- Basketball

Other: _____

13. If you selected 'Other", please list the activities here

14. K. How did you find out about the activities: *

Mark only one oval.

- Posters around campus
- Word of mouth
- UWC Communication (emails)
- Social media (Facebook, Instagram, Twitter)
- Campus activation
- Other: _____

15. If you selected "other" please specify how you found out?

16. L. If you did NOT know about recreation, how do you think these activities could be best marketed?

17. M. How often do you participate in campus recreation activities or events? *

Mark only one oval.

- Daily
- Weekly
- Monthly
- Yearly
- I do not participate in the university campus recreation activities
- I do participate in recreation activities on my own.

18. N. If you do NOT participate in UWC campus recreation activities, what recreation activities do you participate in OFF campus?

19. O. Why do you participate in recreation activities?

Check all that apply.

- For fresh air
- To keep healthy and fit
- For the enjoyment
- To relax after lectures
- To socialize

Other: _____

20. If you selected 'other', please indicate which off campus activities you participate in.

21. P. Have you ever experienced any of the following negative experiences while participating in recreation activities? *

Check all that apply.

- Being made fun of
- Being uncomfortable when doing/ executing an activity
- Feeling self-conscious while participating
- Feeling isolated
- Got an Injury
- Reprimanded
- Couldn't do the activity properly and got discouraged
- No

Other: _____

22. If you selected 'Other', please provide your experience here

23. Q. Have you ever experienced any of the following positive experiences while participating in recreational activities?

Check all that apply.

- Losing weight
- Feeling comfortable
- Increase in confidence
- Feeling excited about being active
- Experiencing a sense of belonging to UWC
- Motivated to start a healthy lifestyle
- Made friends

Other: _____

24. If you selected 'Other', please provide your experience here

25. R. Answer the following statements related to the importance of campus recreation to you? *

Mark only one oval per row.

	Not important	Somewhat Important	Important	Very Important
In DECIDING TO ATTEND my university,, the availability of recreation activities were	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
In DECIDING TO CONTINUE at my university,, the availability of recreation activities are	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Participation in recreation activities AFTER GRADUATION	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

26. S. In order to have the best UWC experience, in your opinion, what would you like to see happening at UWC in terms of recreation or programs offered? *

27. T. If you are not already participating in campus recreation activities, what would make you want to participate?

Check all that apply.

- Promotion of the benefits of being involved in active recreation
- Knowing people that are already active
- Getting the information earlier through more effective marketing tools
- Having more accessible recreational sports/activities
- Offering different recreational sports/activities
- Offering the activities after class and weekends
- Transport after the programs
- Better supervision

Other: _____

28. If you selected 'Other', please list what would make you participate.

29. U. Do you think having an information desk for all non-resident students would help to encourage more students to participate in recreational programs? If yes, why.

30. V. Would you be willing to participate in a group forum to discuss why you DO NOT participate in campus recreation activities

Mark only one oval.

Yes, I am willing to participate in a group forum to discuss why I do not participate in campus recreation activities

No, I am NOT WILLING to participate in any further group discussions concerning this survey or topic

31. If yes please leave your contact details below.

**Quality and Importance of
Campus Recreational Services**

Please read each question carefully and circle your responses to the following questions. Please note that some questions ask for multiple responses.

32. 1. How many times a week are you physically active on or off campus? (This includes fitness, wellness, aquatics, campus sports or personal physical fitness using on-or-off campus facilities.)

Mark only one oval.

Not at all

1 to 3 times a week

4 to 6 times a week

7-9 times a week

10 or more times a week

33. 2. How many times a week were you physically active BEFORE being a student? *Mark only one oval.*

- Not at all
- 1-3 times a week
- 4 to 6 times a week
- 7 to 9 times a week
- 10 or more times a week

34. 3. What sport(s) were you active in BEFORE being a student? (Please list ACTIVITIES or state that you did not)

35. 4. What FITNESS-RELATED activities do you CURRENTLY participate in? (Mark all that apply)

Check all that apply.

- Walking
- Lift weights/ Strength
- Jogging track/ fitness trail
- Group fitness/ Conditioning classes
- Aquatic/ swim
- Do not participate in any of the above
- Other

36. If you selected 'Other', please specify

37. 5. What SPORT-RELATED activities do you CURRENTLY participate in? (Please list i.e. campus sports, sport clubs, campus recreation special events or activities, basketball, volleyball, soccer, rugby, etc. If you do not participate in any please state so)

38. 6. Do you participate in any student bodies/ centres/ societies on campus? (i.e. SRC, House committees, etc.)

Mark only one oval.

Yes

No

39. If you answered 'Yes', please indicate which body(s)/ centre(s)/ society(s) you participate in.

40. 7. Concerning your campus recreation facilities and services, how satisfied are you with each of the following on a scale from 1 - 6?

Mark only one oval per row.

	Very Dissatisfied	Somewhat Dissatisfied	Neither Satisfied or Dissatisfied	Somewhat Satisfied	Very Satisfied	No Opinion
Indoor recreation facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Outdoor recreation facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fees associated with campus recreation activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Campus recreation staff	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of information about recreational activity opportunities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Availability of rental equipment for recreational activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hours of operation for facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Scheduled times for	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

recreation programs						
Availability of fitness classes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fees associated with fitness classes	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Choices of recreation programs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fees associated with recreation programs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

41. 8. Rank 3 PROGRAMS you would like at your university. (Mark your top 3 ranking)

Mark only one oval per row.

	Least important	Important	Most important
More campus recreation sports	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More campus recreation sport tournaments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Less emphasis on competition	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More sport club opportunities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Better marketing campaigns of recreation programs	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More information in campus newsletters, newspapers, website,, or campus email service.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More recreational sport and activity skill instructional classes / workshops	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More special events (5Ks, 10Ks, Fitness Comps, Climbing Comps, Mud Runs, etc.)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More individual recognition for participation or accomplishments	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Better awards for campus champions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Extended facilities hours	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More FREE or significantly cost-reduced recreation events / activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More recreation trips, activities,, and events	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More distance-based recreation / adventure trips	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
More local, one-day outdoor recreation / adventure trips	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

More recreation events / activities during the week	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No opinion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

42. If you chose 'Other', please indicate it here

43. 9, Rank top 3 PROGRAMMATIC reasons why you DON'T participate in RECREATION. (Mark your top 3 ranking in order of importance)

Mark only one oval per row.

	Least important	Important	Most important
Unaware of what recreation activities are offered	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Don't understand what recreation activities are for	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recreation activities not offered at a good time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Don't feel I have the proper education/training for recreational activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Don't feel safe on campus	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Don't feel recreation activities are marketed towards me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Don't trust others to lead or guide	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Don't feel safe participating in a specific recreation activity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
No opinion	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

44. If selected 'Other', please indicate it here

45. 10. Rank top 3 PERSONAL reasons why you DON'T participate in RECREATION.
 (Mark your top 3 ranking in order of importance)

Mark only one oval per row.

	Least important	Important	Most important
None of my friends are interested in recreation activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Not confident that I can physically perform the activity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Too dangerous	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Only have time for academic-related courses or academic studies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work schedule / job conflicts with recreation activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Have significant health-related issue(s)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feel as though activities are for people other than me	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Simply not interested in recreation activities or sports	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My family wouldn't allow me to participate in activities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Child care not available	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I don't find any benefits from participating in recreational activity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

46. If you selected 'Other', please indicate your reason here

47 11. Concerning your participation in recreation, rate each benefit in the following areas.

Mark only one oval per row.

	No Benefit	Little Benefit	Some Benefit	Greatly Benefit
Self-confidence	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Feeling of physical well-being	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sense of accomplishment	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sense of adventure	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Group cooperation skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Respect for others	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communication skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Belonging / association	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Leadership skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Defining problems	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Problem-solving skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recreation skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Fitness	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Physical strength	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Stress reduction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Balance / coordination	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Developing friendships	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

48. 12. Who motivates or inspires your participation in campus recreation activities?
(Mark all that apply)

Check all that apply.

- Parents
 Friends
 Campus recreation professional staff
 Campus recreation work-study student/s
 Academic staff member/s

Other: _____

49. If selected 'Other', please indicate here

Facilities

The aim of this section is to determine how accessible are sports and recreation facilities at UWC, more especially for our students with disabilities.

50. A) Have you ever experienced difficulty accessing any of the sport facilities?

Check all that apply.

- Yes
 No

51. If yes, please explain?

52. B) Rank 3 FACILITIES you would like MORE of at you university: (Mark your top 3 ranking in order of importance)

	Least important	Important	Most important
Basketball courts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Volleyball courts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Jogging track	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Tennis courts	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recreation Pool	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Softball field	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Soccer fields	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Multi-purpose fields	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rock climbing wall	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Recreation Centre with multiple activity rooms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Hockey fields	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rugby fields	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Netball fields	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Beach Volleyball fields	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Dance hall/ aerobic hall	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Locker rooms	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Child care facilities	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

53. If chosen 'Other', please specify;
