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## RESEARCH ARTICLE

### Perceptions of Physical Activity among Students Living on and off Campus in a University in the Western Cape

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#### Abstract:

##### Background:

Universities are said to have a responsibility to offer holistic education and should, therefore, include ways to prevent risky behaviour such as sedentary living. University students are expected to make informed decisions about their future endeavours. About 23% of adults and 8% of adolescents globally do not meet the global recommendations on minimum Physical Activity (PA) for general health promotion of the World Health Organisation.

##### Objective:

The objectives of the current study were to explore factors that lead to participation and non-participation in PA among university students, as well as their preferred PA participation activities.

##### Methods:

The study used a qualitative ethnographic design to purposefully collect data from nine (9) participants by means of semi-structured one-on-one interviews. Open coding was applied when analysing the transcribed data through the ATLAS.ti software programme.

##### Results:

The findings reveal six themes: Factors that lead to Physical Activity (PA) participation; factors that lead to non-participation in PA; environmental convenience for PA participation; a definition of PA; PA participation preference and benefits of PA. Despite the known benefits of regular physical activity, research shows a significant decline in physical activity participation and an increase in sedentary behaviour in university students.

##### Conclusion:

Further studies are needed to interrogate PA and its related concepts to raise awareness of each concept. In conclusion, the study recognises that since lifestyle changes during the university period are sustained into adulthood, students tend to engage in risky behaviour such as alcohol and tobacco use, and physical inactivity, which may have long-term negative implications for their health and lead to poor perceptions about their body structure.

**Keywords:** Physical activity, Perception of physical activity, Physical activity participation, Self-Determination Theory, University students, Lifestyle.

#### Article History

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## 1. INTRODUCTION

Young people in tertiary institutions are observed as being mobile and appear to be moving constantly all over campus, whether going to classrooms, student centres, admin offices, etc. This notion can be viewed as a form of Physical Activity

(PA). According to reports by the American College of Sports Medicine, physical activity is the body's ability to move and contract muscles, which burns calories during movement [1]. Physical activity plays a significant role in the mental and emotional well-being of an individual [2]. Physical activity includes psychosocial benefits and positive outcomes such as illness prevention, physiological and mental gains [3, 4]. Physical activity is seen as a health beneficial factor that increases physical fitness and life expectancy thus, it is an

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important human need [3]. The benefits of PA are well documented in this field, and the known benefits are endless and impactful to all people participating in PA.

The benefits associated with PA include lowering the risks of being overweight and the chances of acquiring heart diseases, chronic diseases and certain types of cancer [5]. Participating in PA has shown a positive influence on social well-being and academic performance [6]. Positive influence can be viewed as a factor for human motivation. Deci *et al.* (2008) proposed a Self-determination Theory (SDT) as a way to learn and understand human motivation [7]. According to Deci *et al.* (2008), the self-determination theory includes elements such as personality development, self-regulation, universal psychological needs, life goals and aspirations [7]. Furthermore, energy and vitality, nonconscious processes, the relations of culture to motivation and the impact of the social environment on motivation, affect behaviour and wellness [7]. The current study by Deci *et al.* (2008) reported that students' participation in PA can be motivated by a variety of factors, which also subsequently can create a lack of participation [8]. Bryl *et al.* (2013) stated that PA should be viewed as an educational process used as a remedy to improve intellectual and mental capacities [6]. In recognising the significance of PA for health benefits and purposes, it is important to further understand the impact and statistics with regard to PA.

The World Health Organisation (WHO) reveals that 23% of adults and 8% of adolescents do not meet "WHO global recommendations on PA for health" [9]. The World Health Organisation, notes with concern the increase in people living a sedentary and inactive lifestyle [9]. Rowlands (2018) showed that physical inactivity is a behaviour, which has high prospects of life-threatening situations [10]. Furthermore, being physically inactive increases mortality rates, risks of heart diseases, obesity and mental health problems [10]. However, PA can counter and decrease the negative outcomes and promote healthy living. Noteworthy, physically inactive people can work towards improving their health and well-being by taking the initiative to take part in PA, sports and recreational activities at a moderate level of intensity on a daily basis [11]. It is well observed that university space provides opportunities in terms of facilities and equipments in which students can participate in PA of their choice, including but not limited to sports.

Sports participation is an important form of exercise; however, the growth and level of participation are influenced by poverty and the lack of basic needs [12]. This is regarded as a social challenge/factor in the context of the current study. SDT suggests that human needs are regarded useful because it provides social factors that can directly and indirectly affect motivation, behaviour and well-being [7]. Other factors that affect PA participation include lack of sufficient information and awareness of PA benefits, the way individual approaches training and their eagerness to engage in PA [8]. Interestingly, WHO states that as countries develop economically, there is a drop in PA participation due to improved technology, mode of transportation, urbanisation and cultural values [9]. A decrease in participation can be witnessed at a higher education of learning, caused by an open environment and opportunities of

free will by students.

Yan *et al.* (2013) noted a decrease in physical activity participation among international students [5]. A multi-ethnic study reported that students from Asian and African countries have the lowest levels of PA participation, whereas white students within the same countries are the most physically active [13]. A study focusing on South African university students revealed that 33% of university students participated in PA, thus showing low levels of PA engagement [14]. Additionally, 47.6% of students participated in moderate physical activities and a further 19.4% in vigorous physical activity [14]. University students are expected to take planned decisions about their future; it is suggested that PA is prioritised and should be part of these autonomous decisions [15]. A study by Van der Heidjie *et al.* (2017) revealed that university students are predisposed to mental problems, and do not necessarily understand the values of PA and the benefits derived [16].

Students at university are thought to have positive experiences; however, the tertiary journey for some has intense psychological challenges resulting in chronic stress [17]. The authors further highlight that stress usually emanates from different sources such as academic, social, financial, available time and self-imposed circumstances [17]. Given the evidence of the literature above, it is evident that university life can be hazardous to students' health and overall wellbeing. It is, therefore, necessary to explore the perceptions of PA among students, given the open spaces presented and free will access to risky behaviour in a university environment. The current study aims to explore the perceptions of physical activity participation among students in a university in the Western Cape.

## 2. METHODOLOGY

### 2.1. Research Design

This study used a qualitative ethnographic method to purposefully recruit and select nine (9) participants. The objectives of the current study were to explore factors that lead to participation and non-participation in PA among university students. Furthermore, it also explores the preferred PA participation of students. Semi-structured interviews with open-ended questions were used to collect data from students that met the study's inclusion criteria.

### 2.2. Sample Size and Sampling Technique

The university population consists of about twenty thousand plus bonafide students. However, for this study, nine (9) participants were recruited to collect data until data saturation was reached. Data saturation was reached after transcribing the first seven interviews and common themes and similarities in the interviews were identified. After data saturation was reached, two extra interviews were conducted to validate the data and saturation.

### 2.3. Data Collection and Procedures

The study included students residing on and off campus. The study included undergraduate students registered on a full-

time basis. Participants were excluded if they represented and participated in competitive sporting codes at the university and in their communities. Ethics clearance from the university's research ethics committee was sought to collect data. The participants signed informed consent forms as a form of agreement with the researcher before taking part/continuing with the process, and were also allowed to ask questions. Data for the study were collected by means of one-on-one interview sessions, which were semi-structured with open-ended questions. The duration of the study interviews was a minimum of 30 minutes, and interviews were recorded using a digital recorder and transcribed verbatim.

#### 2.4. Data Analysis

The researchers used an audio tape recorder during the interview sessions and then transcribed the data. Open coding was applied during the analysis of the transcribed data of the interview sessions using ATLAS.ti software program. An independent co-coder was sought to transcribe the same data as the researchers and then later met with the researchers to discuss common themes identified. The program was of assistance to the researcher in highlighting significant statements, sentences, or quotes that provide a clear understanding of how participants perceive physical activity participation.

#### 2.5. Trustworthiness and Rigor

Trustworthiness entails establishing credibility, transferability, and dependability. To ensure credibility, the researcher used triangulation so that the research findings are credible. Triangulation is an activity used to examine a substantial number of various sources, methods, investigators, and theories. Transferability is established by providing readers with the evidence that the study's findings could be applicable to other contexts, situations, times and populations [18, 19]. To establish transferability, the researchers used a thick description; this is a technique used by the researcher to provide a robust and detailed account of their experiences during the collection of data [18, 19]. To establish dependability, the researchers relied on a technique called an external audit. This includes having research outside of the data collection, data analysis and the results of the research study [18, 19]. It is done to confirm findings and to ensure that findings are supported by the data collected.

#### 2.6. Ethical Considerations

Permission to conduct this research was obtained from the University Research Committee, HSSREC (HS19/5/22). The participants were fully informed of the study, its objectives, requirements and written consent for participating in the study was requested. Participants were informed that their participation is purely voluntary and if they want to withdraw from the study at any point, they can do so without any prejudice. The information given by the participants was kept confidential and their identity protected at all times. Participants who agreed to take part in the study were given an information sheet and the study was explained to them. A consent form was distributed to participants who confirmed their interest and met the inclusion and exclusion criteria of the

study. Potential participants were given a 24-hour period to go through the information sheet and signed the consent form before the interviewing process could commence. Before each interview, participants were informed not to reveal their personal details, and if names were mentioned, during the interview, a pseudonym was used to protect their identity. Data obtained are stored for at least five years at UWC, where only the researcher and study supervisors have access to it.

### 3. RESULTS AND DISCUSSIONS

The results in this study are presented in two main themes, firstly, factors that lead to participation and non-participation in PA among university students and secondly: the range of PA activities students are engaging in.

#### 3.1. Factors that Lead to Participation and Non-participation in PA among University Students

Theme A: Factors that lead to non-participation in PA

It is important to understand the factors that lead to non-participation among students. Depth of understanding is critical to identifying the gap within the literature in order to add more meaningful and extensive relevant research. Participants were asked the following question: What were the factors that led to non-participation in PA? The following are responses and perceptions of participants:

Participant B: *"In university, most of the students are exposed to alcohol, going out and stuff, and that kind of stuff. Taking drugs...So that becomes a substitute for physical activity."*

Participant G: *"Time has always been a factor ever since the second semester because now there's a whole lot of work that we need to cover."*

Participant A: *"My studies stopped... I was so concerned about my academic excellence to an extent that I had forgotten about my wellbeing as an individual."*

Participant I: *"If am writing a test tomorrow I can't go exercise", it's going to have to be that or "Friday is my day off from exercise or if I overate yesterday, I feel like I shouldn't exercise. So those are some of the things that keep you from exercising, and even I'm too sore today, so I'm skipping two days or I'll come the next day...."*

Participant H: *"I remember last year, there was a time where I stopped "gymming" because of stress and not only stress, but like exams and everything. So I was like, I need some time, extra time to do that and I'd start shaking."*

Results in this study illustrate a transition of phases for these participants due to academic and environmental changes. This is evident in participant B, who perceives easy access to risky behavior, which is contrary to what literature records about university students.

Theme B: Factors that lead to PA participation

It is noted that the social environment plays a vital role for students and the general population to participate in PA

programmes. It can be beneficial to learn and understand the reasons and factors that participants in this current study experience to get an understanding of whether new trends in literature are to be explored further. Participants in this theme were asked: What were the factors that led to PA participation? The following are responses and perceptions of participants:

Participant A: *“Every-time I see someone running. I would be like, oh if I have time, I should go run, so that pushes me to be part of physical activities.”*

Participant F: *“There’s uhm park ways and there’s a lot of people running where I stay, ah it’s a fairly white community where I stay now, so its just the culture of where I stay. People run, so, it made my life easier.”*

Participant B: *“I believe it not okay to sit around and do nothing and eat a lot. Sometimes you have to balance your lifestyle. Balance what you eat and coupled by you doing a bit of physical activity.”*

Participant G: *“I was once slim and I gained weight. So I figured I want to go back there again, I want to be slim, so that is a big push for me to do physical activities.”*

Participant D: *“It is my stress reliever because I stress out a lot, so to avoid being stressed, I do moderate to vigorous physical activities.”*

Results in this study illustrate the influence of external factors that drive participants to take part in PA. The results in this study show that participants experienced and are aware of the benefits of participating in PA, which can be viewed as a positive factor that encouraged their involvement in PA.

#### Theme C: Environment convenience for PA participation

Many factors can contribute to participant’s successful/unsuccessful participation in PA. It is invaluable to explore the current experiences and perceptions of participants in this study, in order to create any necessary interventions. Participants in this theme were asked: Is it easy to engage in physical activity where you stay? And the probed to, explaining what makes it easy or not to engage in PA. The following are responses and perceptions of participants:

Participant C: *“The thing with safety on our campus is not a straight-forward question to it. Because there are, many people who are chased around campus. So I wouldn’t say that relatively safe. But to a certain extent it is safe.”*

Participant D: *“It is definitely not safe. Because I used to go to the gym in the morning and I used to have this other guy walk me, when he doesn’t come, I don’t come. Because I can’t do PA for my safety...”*

Participant G: *“Yea, it is but not entirely easy because where I stay, there’s a lot of gang violence and I can’t take part in physical activity on campus since I stay off campus.”*

“I guess being familiar with the environment and as well as the community at large. It just makes it easier to partake with the people that you are within the community, because obviously I am familiar with

those people.”

Results show that students are more likely to be exposed to significant risks on campus and in their home residences. Students in this study have reported that their environment is exposing them to significant harmful and risky threats, and that can be a huge hindrance to their participation in PA.

### 3.2. The Variety of Preferred PA in Which University Students Engage

#### Theme D: Definition of Physical Activity

Physical activity is one of the recommended methods used to promote healthy living in relation to the improvement of physical, psychological and emotional well-being [20]. This is reported to have an influence on how students perceive physical activity. Participants in this theme were asked a question: What does the term PA mean to you? The following are responses and perceptions of participants:

Participant E: *“Losing weight...being healthy I guess.”*

Participant F: *“Physical activity means being physically active, by running or doing something that will make your body active in terms of, sort of like a gym or, running, or playing sports, or maybe walking,”*

Participant D: *“So it is any activity that increases your heart rate*

Results in this study appear to understand the meaning of PA and have a sense of understanding of the forms of activities that require energy expenditure. However, there could possibly be a misconception and unintended interpretation of PA as a concept.

#### Theme E: PA participation preference

Students can participate in PA by means of many domains, such as active transport to campus (cycling), leisure-time physical activity, and domestic [21]. Participants in this theme were asked; do you consider yourself to be physically active? And further probed, if yes, what activities do you participate in? The following are responses and perceptions of participants:

Participant G: *“It could be jogging, it could be doing your basic exercises, pull-ups, push-ups, sit-ups, stretching your legs.”*

Participant C: *“Physical activity can basically be anything from washing dishes, from lifting something heavy, your lifting something that requires you, or that requires you to have not only mental strength, but also like physical strength.”*

Participant I, *“Like exercises, like people go to gyms, do sports sort of physical activities that people can do to be fit.”*

The results show that participants are engaging in various forms, and common known physical activities. This shows the diversity of and preference for certain kinds and types of activities.

#### Theme F: Benefits of PA

Through PA, one can experience benefits ranging from psychosocial health, functional ability and general improvement on the quality of life [11]. Participating in physical activity is associated with positive physical and psychosocial outcomes; it can allow people to move efficiently in a variety of environments [22, 23]. Participants in this theme were asked; are you aware of any benefits associated with physical activity? The following are the responses and perceptions of participants.

Participant I: *"It reduces stress."*

Participant H: *"You are able to maintain a healthy lifestyle and a healthy life."*

Participant G: *"Physical activity improves your mental agility."*

Participant B: *"For me the first benefit is good body structure... I mean, you can actually feel yourself that yes I am physically active and you can see certain muscles. Secondly, for health reasons it is important. You can be healthy. For example the more I gym, the more I eat, and the more I gym all the time. But most importantly, the two hours of gym are important for me to destress, to forget about my life problems, and in reality the two hours per day is actually important."*

Participant E: *"First it gives you a clear mind and by clear mind, I'll give an example: you're studying right, you study, you study, you study... and then you decide to take a break, for probably like thirty minutes. That thirty minutes you do this... whatever physical activity that you are doing. I'm telling you, by the end of activity, yes you'll be tired, but at the same time your mind will be clear. And then you can go back to studying again."*

Participants in this study demonstrated an understanding of the benefits associated with PA. It is assumed that their participation may be motivated by their knowledge of PA benefits.

#### 4. DISCUSSION

The current study explored the perception of physical activity participation among university students. The objectives of the current study were to explore factors that lead to participation and non-participation in PA among university students as well as their preferred PA participation activities. Results of the current study report factors that lead to non-participation in PA among students in the university. Based on the quotes from participants, it is clear that students' behaviour is a leading factor in their non-participation in PA. Literature suggests that university students are expected to take calculated decisions about their future endeavours and that PA be prioritised and should be part of these autonomous decisions [15].

Engaging in risky health behaviour, including alcohol and tobacco use, has long-term negative implications on living a healthy lifestyle [24]. The behavioural complex of students can be influenced by personal, social and environmental factors, whether they engage in PA or not [11]. According to Takomana *et al.* (2012), lifestyle changes during the university

period are sustained well into adulthood [25]. Results in this theme complement Nxumalo *et al.* (2017) who determined that 50% of participants in their study reported that they have enjoyed studying more than participating in sport and felt that engaging in sports would disrupt their studies [26].

Additionally, participants in this study reported that external factors serve as motivation to get involved in PA. The current study aligns with one by Sweet *et al.* (2012), who acknowledge that the perception of a social environment enables choices, options, and acknowledgements of one's opinion, and allows for rationale and then offers choices, which can be deemed critical to encourage PA participation [27]. A balanced level of PA shows improvement in general health, which contributes significantly to and improves emotional wellbeing [11]. As echoed by participants in this study, PA yields positive outcomes. The self-determination theory (STD) regards this notion as autonomy, which refers to the perceived origin/source of own behaviour regarded in this context as PA [27]. This relates to the reasoning and behaviour/motivation behind participation in PA for participants in this study. Deci *et al.* (2008) reiterated that social conditions and processes influence more than physical action, equally emotional connections while carrying out an activity [28]. It is also worrisome that some participants encountered security threats and concerns during their PA participation. Students' safety has become a significant factor in most South African universities; students and parents are equally concerned about this subject [29].

Participants in this study reported knowledge of what PA is, and explained the concept in their own words. This demonstrated an understanding and alignment of their knowledge with literature, which defines PA as any form of bodily movement produced by skeletal muscles whereby energy is expended [11, 22]. Literature suggests that participation in PA in universities can differ due to cultural, environmental and economic development [26]. Additionally, participants reported their preferred activities of PA, this includes common activities recognised by literature. Abou Elmagd (2016) reported four categories of exercise and PA, which include activities that focus on endurance, strength, balance and flexibility [11]. The author stresses that people often put their energy into one form of category, whereas combining all these forms of exercises/PA provides an extra benefit [22]. To experience PA benefits, it is recommended that at least 150 minutes of exercise of moderate intensity per week, such as brisk walking, and muscular strengthening activities should be undertaken [1, 30]. Nxumalo *et al.* (2017) suggested that participants learn from different cultures and participation allows participants to travel to various areas to participate in competitions/tournaments [26]. Participants further report their experienced benefits of PA, which is also aligned with the literature. Research states that PA has a strong relationship with living a healthy lifestyle, hence, it can be associated with better physical and mental health [31]. In line with the literature, participants in this study illustrated knowledge and understanding of the benefits of PA [26].

## CONCLUSION

Despite the known benefits of regular physical activity, research shows a significant decline in physical activity participation and an increase in sedentary behaviour among university students. Counsellors and/or psychologists could be encouraged to educate and bring forth awareness to students about PA and its contribution to healthy living [16]. However, a conclusion can be drawn that the relevance of this study will benefit students, health care and fitness departments in bringing awareness, introducing educational programmes and interventions regarding PA. A great need exists to create a safe environment for students on campus. In many instances, campus security is not visible, which leads to students feeling unsafe while on campus, especially during early mornings and/or after lecture hours. There has been a disruption observed throughout South African higher education where gender-based violence has been reported and that could have possibly been an influence in the rise in campus safety. Additionally, students appear to have knowledge of PA, however, sports, PA, recreation and related concepts are used interchangeably, and to some participants, it is perceived as the same thing.

## FUTURE RESEARCH

Additional research are required in order to instill awareness of PA and related concepts. PA research needs to consistently incorporate current trends and social dynamics towards a more holistic approach. Auxiliary factors such as the year level of study, age and qualifications of registered students could possibly serve as a basis for recruiting participants. Additionally, future research can explore the economic situation of the students as a factor that influences their participation.

## ETHICS APPROVAL AND CONSENT TO PARTICIPATE

Permission to conduct this research was obtained from the University Research Committee, HSSREC, South Africa (HS19/5/22).

## HUMAN AND ANIMAL RIGHTS

Not applicable.

## CONSENT FOR PUBLICATION

All patients participated on a voluntary basis and gave their informed consent.

## AVAILABILITY OF DATA AND MATERIALS

Not applicable.

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## CONFLICT OF INTEREST

The authors declare no conflict of interest, financial or otherwise.

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Declared none.

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