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Research

Sources of Nutrition Information Used by Tennis Trainee Athletes at the University of Limpopo in Limpopo Province, South Africa: A Descriptive Study

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Background

The dietary intake of tennis athletes training at the University of Limpopo (UL) were reported to be suboptimal. However, the nutrition information sources guiding these athletes remain unknown.

Methods

A descriptive cross-sectional study was carried out to purposively obtain 30 registered UL-affiliated tennis team athletes. Data were collected at the UL tennis courts. Demographic data and information sources used for sport nutrition were collected using self-designed questionnaires in English.

Results

The mean age of the athletes was 20.3±1.1 years. All were registered students at UL. All male athletes (100%) and 92.2% of females were single. More than half of the males (n=9; 56.2%) and many females (n=5; 35.7%) had participated in tennis for 1 – 2 years at UL. Most participated in tennis 3 – 6 times a week, for 1 – 2 hours per day. Most males (n=8; 50%) and females (n=7; 50%) obtained nutrition information from social media followed in both cases by a coach (43%). Of those who used social media, most males (n=3; 37%) and females (n=7; 43%) used Instagram, followed by Facebook (males, n=3; 37% versus females, n=2; 28%). Tik-Tok and YouTube were hardly ever used. However, none of the athletes had ever consulted a nutrition professional such as a dietitian for nutrition information.

Conclusion

Social media, particularly Instagram, was the most used source of information by our sample of tennis athletes at the University of Limpopo.

INTRODUCTION

The sport of tennis is one of the most participated in globally (Oršolić, Tudor, and Šarić 2020; Fleming, Naughton, and Harper 2018), characterised by intermittent short rest intervals and high intensity intervals (Fleming et al. 2022). As with other high intensity sports, especially on match days (Domínguez et al. 2021), optimal nutrition and appropriate timing of nutrient consumption (Kerksick et al. 2018) play a crucial role in improved performance and overall health (Köse et al. 2021; Fleming, Naughton, and Harper 2018). However, athletes often manipulate dietary items to suit their specific needs following guidance received from various information sources. These sources ultimately serve as their guide during training, hydration, and nutritional intake before, during and after the sport event. Athletes should be adequately informed through appropriate information sources to make suitable nutrition choices during their training sessions, competitions and in their daily lives (Köse et al. 2021). Regular competitive and emerging athletes often depend on other teammates, social media, or coaches as sources for their nutrition information (Bird and Rushton 2020). Some of these information sources used by athletes may, at times, bear weak scientific support ulti-

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mately misleading the athletes (Jacobson, Winter-Roberts, and Gemmell 1991). Tennis is among other developing sports in South Africa (SA), particularly among the university students. However, it is noted that most studies conducted in SA on the sport of tennis focus primarily on mental health and not necessarily nutrition information sources (Cowden and Meyer-Weitz 2016; Walker 2013). Those reporting about the information sources used for nutrition by tennis athletes are lacking. At the University of Limpopo (UL), however, tennis seemed not to be a popular sport among UL students as a few (30 students) affiliated as competitive athletes during the time of this research. This smaller number of affiliates is expected at UL possibly as most students are from semi-rural and rural communities of Limpopo Province where tennis sport is unpopular. This hitch potentially affects tennis participation within the high schools and UL. The dietary information on the intake before, during and after training of these tennis athletes at UL were found to be suboptimal (Thabiso et al. 2023). Information sources may offer insufficient or misleading nutrition information. However, the information sources used by these athletes for nutritional guidance remain unknown. Therefore, the present study investigated the information sources for nutrition for these athletes during training as a reference on which guidance and better practices can be established.

METHOD

A quantitative descriptive study was carried out to purposively obtain 30 registered UL tennis team athletes. Tennis athletes who are affiliated as competitors at the UL during the time of research data collection were 14 female and 16 male athletes. Therefore, all the 30 athletes were recruited to participate. Ethical approval was obtained from the UL Research and Ethics Committee (TREC/ 485/2022; UG), while consent to participate was obtained from athletes in a written form. All athletes who were registered as students at the UL and were affiliates of the tennis team participated. Recruitment to participate was conducted by the researchers two weeks before data collection through posters, and word of mouth advertisements. Data were collected at the UL tennis sports ground in the afternoon on two non-consecutive weekdays in the month of October 2022. The self-administered questionnaire was in English as the medium of instruction at UL. This questionnaire included section on demography, for instance, age, gender, number of years involved in tennis sport, and duration of training. The other section of the questionnaire included information sources used for sport nutrition covering, for instance, the type of source, such as the internet, social media, or professional, including websites, YouTube, and dietitian/nutritionist as examples of subtypes. All the 30 tennis athletes completed and returned the questionnaires giving a 100% response rate. Data was then transferred onto the SPSS [(version 28.0) IBM, Armonk, NY, USA] for analysis. Descriptive statistics such as percentages, mean and standard deviation values were used to describe the information sources of UL tennis team athletes.

Table 1. Demographic characteristics of female athletes (n=14; 46.6%)

Variable	Mean±SD Min Max
Age (yrs.)	20.2±1.1 18 22
Marital status	**n (14) Percentage (100%)**
Single	13 92.2%
Staying with partner	1 7.1%
Years of participation in tennis	
< 1 year	1 7.1%
>1 – 2 years	5 35.7%
3 – 4 years	5 35.7%
>4 years	3 21.4%
Frequency of training per day	
Once	12 85.7%
Twice	2 14.2%
Training frequency per week	
1 – 2 times	1 6%
3 – 4 times	4 25%
5 – 6 times	6 38%
Daily	5 31%
Duration spent during training	
< 1 hour	1 7.1%
1 – 2 hours	7 50.0%
2 – 3 hours	6 42.8%

RESULTS

According to Table 1, female athletes were aged 20.2±1.1 years and contributed 46.6% of the study population. Almost all the female athletes were single and participated in tennis sport for 1 – 2 years (35.7%) and 3 – 4 years (35.7%) while at UL. Majority of the female athletes (85.7%) trained once a day for almost the entire week (38%) spending about 1 – 2 hours (50.0%) and 2 – 3 hours (42.8%) per session.

Table 2 shows that male athletes were aged 20.5±1.8 years and contributed more than half (53.3%) towards the study population. All male athletes were single and more than half (56.2%) of them participated in tennis sport for 1 – 2 years while studying at UL, training once per day. A few athletes trained for 5 – 6 times (37.5%) and 3 – 4 times (25.0%) per week for 1 – 2 hours (93.7%) per session.

Table 3 indicates that half of the females relied on social media (50%) and coach (43%) as their sources for the nutrition information during training. Of those who used social media, Instagram (43%) and Facebook (28%) were the most used sources by athletes.

Table 4 shows that half of the males (50%) relied on social media followed by those who used coach (44%) as the sources for the nutrition information during training. Of those athletes who used social media, Instagram (37%) and Facebook (37%) were the most used information sources.

Table 2. Demographic characteristics of male athletes (n=16; 53.3%)

Variable Mean±SD Min Max	
Age (yrs.)	20.5±1.8 19 24
Marital status	
Single	16 100%
Years of participation in tennis n (16) Percentage (100%)	
< 1 year	3 18.7%
>1 – 2 years	9 56.2%
3 – 4 years	2 12.5%
>4 years	2 12.5%
Training frequency per day	
Once	10 62.5%
Twice	6 37.5%
Training frequency per week	
1 – 2 times	1 6.2%
3 – 4 times	4 25.0%
5 – 6 times	6 37.5%
Daily	5 31.2%
Duration spent during training	
< 1 hour	1 6.2%
1 – 2 hours	15 93.7%

Table 3. Sources used for nutrition information by female athletes (n=14)

Source of information	Females
	n (%)
Coach	6(43.0%)
Teammates	1 (7.0%)
Social media	7(50.0%)
Instagram	3(43.0%)
Facebook	2(28.0%)
YouTube	1(14.0%)
Tik-Tok	1(14.0%)

Table 4. Sources used for nutrition information by male athletes (n=16)

Source of information	Males
	n (%)
Coach	7(44.0%)
Teammates	1(6.0%)
Social media	8(50.0%)
Instagram	3(37.0%)
Facebook	3(37.0%)
YouTube	2(25.0%)
Tik-Tok	0

DISCUSSIONS

This study recruited 30 affiliated tennis athletes, which when compared to other studies this number is assumed to be low (Fleming, Naughton, and Harper 2018). The latter is not surprising as tennis is not a popular sport in Limpopo province compared to soccer and netball. Therefore, this small number of participants in our study was anticipated. Majority of the athletes in our study were males, aged 20.5 years and participated in tennis for 1.5 years while registered at UL. In another studies, youth athletes who participated in sport while still at university were also reported (Masoga et al. 2022; Gomez, Bradley, and Conway 2018). Therefore, it is not unusual for the current researchers to obtain younger athletes. One study during the assessment of knowledge, attitudes and information sources found that nutrition experts were among the type of information sources used during sport by the majority (57%) of athletes (Vázquez-Espino, Rodas-Font, and Farran-Codina 2022; Hornstrom et al. 2011). On the contrary, none of the athletes used a nutrition professional (dietitian) for their nutrition information in the current study; instead, social media, coaches and teammates were used. Similar results where a nutrition professional was the least used as an information source were reported in two other studies (Masoga et al. 2022), whereas social media and coaches were the most used sources by athletes in one of the municipalities in Limpopo. These two information sources, coaches and trainers, were evidently reported to have 64.1% nutritional knowledge inadequacy (Danh et al. 2021). Relying on nutritional information sources that bears inadequate nutrition knowledge may at times deliver scientifically unsupported nutrition messages compared to nutrition experts (Vázquez-Espino, Rodas-Font, and Farran-Codina 2022). This may generally pose a threat to the health, nutrition, and training outcomes of athletes (Masoga et al. 2022). This is factual based on findings by Bird and Rushton (2020) who reported that athletes were misguided towards unreliable dietary practices by the type of nutritional information sources used.

CONCLUSION AND RECOMMENDATION

This study was aimed to investigate the information sources used for sport nutrition by tennis athletes training at UL. The athletes relied mostly on social media, particularly Instagram, for their information on sport nutrition. Some social media platforms may at times require validation for the reliability of information on sport nutrition offered. Therefore, we recommend that nutrition professionals be assigned to these athletes for nutritional guidance for improved health and sporting performance.

AUTHORS CONTRIBUTION

Conceptualization: Tumelo Tshabaku Sekgobela, Thabiso Sepodumo, Johanita Mamaila. Investigation: Tumelo

Tshabaku Sekgobela, Thabiso Sepodumo, Johanita Mamaila. Data curation: Khutso Matlala Ramokolo, Sylven Masoga. Writing – original draft: Khutso Matlala Ramokolo, Sylven Masoga.

AVAILABILITY OF DATA AND MATERIALS

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

COMPETING INTERESTS

There is no competing interest for this study

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