

## QUALITY OF LIFE IN YOUNG ROMANIAN ATHLETES

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**Abstract.** *Quality of life means different things to different people, according, also, to the area of application. The aim of the research was to capture the quality of life experienced by young athletes, according to gender, sport performance, and related to the type of sport practiced. 116 athletes participated in the research, practicing individual and team sports. Starting from the Quality of Life Inventory developed by Michael B. Frisch, fifteen life domains were measured. After applying the t test for independent samples, no gender-related differences were observed in terms of perceived quality of life. However, athletes practicing individual sports were significantly more satisfied by their work and creativity (manifested in daily activities), and, also, regarding love and children (as life domains), compared to athletes practicing team sports. Using one-way analysis of variance, the experienced life quality according to the practiced type of sport (football, other team sports, striking combat sports, respectively other individual sports) was examined. Furthermore, data analysis emphasized that athletes with international results express significantly higher levels of satisfaction regarding their self-esteem in life domains such as love and children, compared to athletes who attain local or regional performances. Additionally, they exhibit significantly greater satisfaction with their creativity in daily activities but express less satisfaction with their community, compared to athletes achieving national-level sports results. The findings provide important data to coaches, multi-disciplinary team members and parents on the areas of quality of life that athletes are currently more or less satisfied with. In-depth interviews with athletes are necessary to better understand the differences observed.*

**Keywords:** *life quality; athletes; life domains; type of sport.*

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### Introduction

Quality of life is an important issue for all individuals and is a multidimensional construct (Berger & Tobar, 2007). Quality of life involves the harmonious fulfilment of personal goals

and desires. It also places emphasis on subjective experiences, perceptions and needs of the spirit rather than objective conditions of life and well-being (Peráčková & Peráček, 2020).

Quality of life has been considered synonymous with subjective well-being, happiness and life satisfaction. These terms tend to represent important aspects of psychological health. From a practical point of view, quality of life refers to functionality (behaviours) or in other words, the ability to do things and to live long enough to enjoy the results (Berger & Tobar, 2007). *Doing things* reflects the real meaning of life, as the ability to perform various activities is a central element of quality of life. Clearly, there is a wide range of components that can be considered in assessing a person's quality of life.

Exercise is not only beneficial for physical health, but also plays a key role in promoting mental well-being and quality of life in general (Grasdalsmoen et al., 2020). Quality of life is seen as a rather broad and pervasive concept, usually including subjective evaluations of both negative and positive aspects of life (Păunescu et al., 2018). In the definitions given over time to the concept of quality of life, it's often associated with happiness, life satisfaction or a subjective state of well-being that we all feel; these terms have been used synonymously in the literature without taking into account the specifics of each (Frisch, 1994). Happiness, life satisfaction and subjective well-being are interrelated, all of which are closely related to the notion of quality of life. There is broad consensus that life quality has multiple dimensions. Five characteristics might be used to group coverage: development and activity, social wellbeing, emotional wellbeing, material wellbeing, and physical wellbeing (Estoque et al., 2019). Quality of life is linked with the level of perceived stress (Pawłowski et al., 2023).

Quality of life research in Romania dates back to the early 1980s (Zamfir, 1984). One of the main findings of the country's first-ever survey on this topic was the inverse correlation between education and life satisfaction. During the economically difficult final decade of the Communist regime, university graduates reported lower life satisfaction compared to high school (or equivalent) graduates. This was attributed to higher aspirations for meaningful life goals, which often remained unfulfilled.

The Revolution of 1989 that ended the Communist regime in Romania emphasized quality of life as encompassing the aspirations for a better life and higher standard of living (Abraham, 2016). Consequently, one of the very first decisions of the provisional Government was to set up a Research Institute for Quality of Life (RIQL). During the transition period from Soviet type socialism to capitalism during 1990s and 2010s Romanian research on quality of life focused on the standard of living, i.e. incomes, consumption, life styles (Zamfir & Filipescu, 2016). The research methodology put emphasis on objective indicators from statistical surveys. The transition period was marked by two deep and painful recessions that were marked by neoliberal policies, hyperinflation, high unemployment, and severe decrease in the standard of living (Zamfir, 2004; Abraham, 2016). As in other Central and Eastern European countries, in Romania the neoliberal policies based on mass privatization and deregulation led to a deterioration of public health with higher mortality and a lower average lifespan (Stuckler et al., 2009).

In addition to secondary analysis of official statistics data, a secondary approach in quality of life research in Romania featured opinion data through sociological surveys. From 1990 to 2010, RIQL conducted 13 surveys based on nation-wide representative samples regarding quality of life in Romania (Mărginean & Precupețu, 2011). Among their main findings based on these surveys, overall life satisfaction correlates strongest with individual and household

income and, secondly, with health satisfaction. During the troublesome transition period and its prolonged standard of living crisis, there was a diminished emphasis on sport and leisure activities as contributors to quality of life (Urse, 2005). Even after the conclusion of the transition period in the mid-2000s, EU accession in 2007, and the subsequent rise in real incomes, Romania continued to have one of the lowest rates of recreational sport participation in the EU, with around one-fifth of adults engaging in such activities (Gagea et al., 2010). A study conducted on a randomly selected sample of 730 Romanian adults, all professionally active and aged between 22 and 43, found that less than 40% of them dedicated their free time to sporting activities. Additionally, significant minorities either engaged in sedentary pursuits (20%) or reported having no free time available (Păunescu et al., 2013). A pilot study in 2015 investigated the relationship between quality of life and participation in physical activity programs (Vasiliu, 2015). According to more recent data from the Special Eurobarometer 472, 63% of Romanians never practice sports, while only 6% practice sports regularly (Tătar et al., 2018), in the context in which physical activity and quality of life have gone hand in hand for centuries (Du et al., 2022). Since the internet took off in earnest around 1996, most of the world's population has 'changed'. The characteristics of the generation born after the digital technology boom also differ from those of the previous generation. Generation Z, or better known as the net generation (people born after 1995 or 2000), has been exposed to technology from a young age (Fadilah, 2018). Increasingly, physical activity has been replaced by activity in front of screens of various kinds (TVs, laptops, smartphones, tablets, iPads and apps for almost every aspect of everyday life). This phenomenon poses real and lasting challenges for children growing up in the 21st century (Cataldo et al., 2021). The presence of digital technology offers many benefits for people. Work can be done more easily and information is easier and faster to access. But behind these benefits, there are millions of threats "lurking", especially for children (Viner et al., 2019). They are willing to spend most of their time with their gadgets rather than playing a game of basketball, football, badminton or riding a bike in the park (Lloyd, 2014). To combat these challenges, children should be provided with opportunities to be physically active throughout the day, opportunities that help them develop motor skills, reduce the risk of chronic disease, help children understand the relationship between movement and well-being and as a result appreciate the value and benefits of being physically active (Brewer & Renck Jalongo, 2018).

Another research topic deals with the increase prevalence of lifestyle diseases, especially unhealthy diet and obesity among children and adolescents. Research data on this topic started to be available from the mid-2010s. A cross-sectional study in Bucharest, the capital of Romania, found a high prevalence of unhealthy eating behaviours reported by study participants (Barbu et al., 2015). According to representative study at the national level, "the prevalence of underweight children was low, almost one in four children in Romania was overweight or obese (according to WHO criteria) between 2006 and 2015. [...] Male gender, prepubertal age, and urban environment, were the most relevant risk factors associated with overweight status in Romanian children" (Chiriță-Emandi et al., 2016). More recent studies identified an alarming level of overweight prevalence (including obesity) for children from the urban areas of Western Romania, higher in boys and at the pre-puberty ages. Furthermore, the highest prevalence of overweight (including obesity) was found in children aged 10 years, and the lowest in adolescents at 18 years (Pop et al., 2021). A 2022 study found a higher number of overweight children, compared to the number of mothers who consider that their children are overweight.

Fast food consumption and other lifestyle factors, such as sedentary activities were associated with children being overweight and obese (Negruț et al., 2022).

Although health is one of the most important areas of quality of life, there are other areas, such as working conditions, school, neighbourhood, friends, learning, creativity, and values which complement the quality of life areas. Aspects of cultural, moral and spiritual values are also key aspects of quality of life, which adds to the complexity of its measurement. In this context, the quality of life of individuals, groups and communities depends on many factors, starting with what each individual and family undertakes, continuing with community-level interventions and ending with public policy measures (Talarska et al., 2018).

## **Methodology**

### *Scope*

The purpose of the research was to evaluate the quality of life experienced by young athletes, according to gender, sport performance, and related to the type of sport practiced.

### *Research questions*

- 1) What are the gender-related differences, in the case of athletes, in terms of perceived quality of life?
- 2) What are the type of sport-related differences concerning the quality of life experienced?
- 3) Does sports performance influence athletes' quality of life?

### *Participants*

One hundred and sixteen athletes from Romania, aged between 19 and 26, participated in the study (43 female and 73 male athletes),  $M_{\text{age male}} = 22.07.$ , respectively  $M_{\text{age female}} = 21.67.$ , and having at least one year of competitive experience. Athletes are distributed as follows:

- according to the sport branches, four groups were formed: football (N = 34); other team sports (N = 25, of which 14 practice handball, 6 basketball, and 5 rugby); striking combat sports (N = 36, of which 20 practice karate, 5 kick-boxing, 3 boxing, 3 taekwondo and 5 fencing); other individual sports (N = 21, of which 7 practice tennis, 5 athletics, 5 gymnastics, and 4 swimming);
- according to sports performance, three groups were examined: athletes having international results (N = 39), national performances (N = 45), respectively regional/local sports results (N = 32). Each of the three investigated groups included athletes practicing different sports disciplines.

### *Instruments*

Starting from the Quality of Life Inventory (QoLI) developed by Michael B. Frisch (Frisch, 1994), and adapted for Romania by Raluca Livinți, 15 life domains were measured in the present research on a 6-point rating scale (where 1 = Very unsatisfied, and 6 = Very satisfied).

The main question was: “How satisfied are you with your ...?” (e.g., health, self-esteem, money, work, etc.). The 15 quality of life areas addressed (as in previous research, see Păunescu et al., 2018) were: Health, Self-Esteem, Money, Work, Goals and Values, Play, Creativity, Love, Help (helping others), Friends, Relatives, Children, Neighborhood, Home, and Community (Frisch, 2014).

### Procedure

The self-report instrument was administered online via Google Forms between October 2023 - February 2024. Athletes provided written informed consent and had the option to withdraw from the research at any point. Additionally, measures were taken to ensure the confidentiality of the data collected.

### Results

To answer the first research question, the study examined group-level values regarding perceived quality of life.

Table 1. *Descriptive statistics – quality of life according to gender*

	health	self- esteem	values	money	work	play	creativity	helping others
M (male)	5.11	5.25	5.32	4.45	4.85	5.03	4.93	5.01
female	4.98	5.19	5.33	4.53	5.19	4.98	5.21	5.23
SD (male)	0.936	0.925	0.911	1.17	1.23	1.04	1.06	0.890
female	0.913	0.852	0.837	1.14	1.03	1.03	0.940	0.895
Skew (male)	-2.00	-1.60	-2.26	-1.12	-1.44	-0.74	-1.02	-0.879
female	-1.33	-1.34	-0.94	-1.50	-1.35	-1.44	-0.983	-1.11
K (male)	5.86	3.04	7.69	1.45	2.25	-0.34	0.715	0.903
female	2.28	3.14	-0.11	3.07	1.39	3.74	0.027	0.651

Note. Skew: Skewness coefficient, K: Kurtosis coefficient.

Table 1. *Descriptive statistics – quality of life according to gender - continuation*

	love	friends	children	relatives	home	neighbourhood	community
M (male)	4.93	5.05	4.67	4.95	5.36	4.90	4.60
female	4.84	5.21	5.12	4.91	5.35	4.86	4.77
SD (male)	1.39	1.03	1.31	1.19	0.91	1.27	1.24
female	1.62	0.94	1.20	1.38	0.89	0.99	1.07
Skew (male)	-1.48	-1.54	-0.89	-1.37	-2.10	-1.44	-1.60
female	-1.35	-1.34	-1.36	-1.66	-1.18	-0.32	-0.62
K (male)	1.61	3.14	0.014	1.98	6.40	1.98	2.67
female	0.78	2.07	1.76	2.18	0.40	-0.99	-0.27

Table 2. *Independent Samples T-Test – quality of life according to gender*

		Statistic	df	p		Effect Size
health	Student's t	0.7450	114	0.458	Cohen's d	0.14321
self- esteem	Student's t	0.3504	114	0.727	Cohen's d	0.06735
goals and values	Student's t	-0.0618	114	0.951	Cohen's d	-0.01189
money	Student's t	-0.3722	114	0.710	Cohen's d	-0.07155
work	Student's t	-1.5078	114	0.134	Cohen's d	-0.28986
play	Student's t	0.2538	114	0.800	Cohen's d	0.04878
creativity	Student's t	-1.4217	114	0.158	Cohen's d	-0.27331
helping others	Student's t	-1.2767	114	0.204	Cohen's d	-0.24542
love	Student's t	0.3322	114	0.740	Cohen's d	0.06387
friends	Student's t	-0.8077	114	0.421	Cohen's d	-0.15526
children	Student's t	-1.8361	113	0.069	Cohen's d	-0.35387
relatives	Student's t	0.1576	114	0.875	Cohen's d	0.03030
home	Student's t	0.0419	114	0.967	Cohen's d	0.00805
neighbourhood	Student's t	0.1932	114	0.847	Cohen's d	0.03713
community	Student's t	-0.7251	114	0.470	Cohen's d	-0.13939

No significant differences were observed between male and female athletes in terms of perceived quality of life, in the entire sample (Table 2,  $p > 0.05$ ). However, female athletes are a little more satisfied by their work, friends, community and creativity in daily activities, while male athletes are a little more satisfied by their health (when compared to female athletes).

The second research question was addressed using the ANOVA procedure. The results are initially presented at the descriptive level. (Table 3).

Table 3. *Descriptive statistics – quality of life according to the type of sport (football = 34, striking combat sports = 36, other individual sports = 21, other team sports = 25)*

	type of sport	health	self- esteem	values	money	work	play	creativity	help
M	1 football	5.06	5.24	5.32	4.50	4.59	4.94	4.91	4.79
	2 striking combat sports	5.22	5.22	5.28	4.28	5.00	5.08	5.14	5.22
	3 individual sports	5.05	5.29	5.52	4.67	5.57	5.14	5.38	5.14
	4 team sports	5.04	5.12	5.20	4.60	5.04	5.12	4.92	5.32
SD	1 football	0.983	0.890	0.684	1.11	1.37	1.23	0.90	0.978
	2 striking combat sports	0.866	0.989	1.14	1.21	1.15	0.937	1.07	0.866
	3 individual sports	0.805	0.717	0.602	0.796	0.507	0.793	0.865	0.573
	4 team sports	0.889	0.927	0.913	1.38	1.06	0.726	1.19	0.852

Table 3. Descriptive statistics – quality of life according to type of sport - continuation

	type of sport	love	friends	children	relatives	home	neighbourhood	community
M	1 football	4.32	5.06	4.32	4.53	5.26	4.71	4.44
	2 striking combat sports	5.50	5.11	5.29	5.17	5.56	5.00	4.42
	3 individual sports	4.67	5.43	4.52	5.00	5.33	5.24	4.95
	4 team sports	5.08	4.96	5.00	5.08	5.12	4.68	5.04
SD	1 football	1.59	1.13	1.32	1.42	1.21	1.51	1.48
	2 striking combat sports	0.69	0.887	1.02	1.06	0.60	1.07	1.16
	3 individual sports	1.93	0.598	1.29	1.26	0.48	0.70	0.66
	4 team sports	1.29	1.10	1.29	1.26	1.05	1.03	0.93

Regarding ANOVA, only the significant differences between groups will be underlined (Tables 4-7). Concerning homogeneity of variances test (Levene's)  $p < 0.05$  in the case of the following life domains: work and love, the Games-Howell Post-hoc test being used.

Table 4. One-Way ANOVA (Welch's) – quality of life according to type of sport

	F	df1	df2	p
work	6.19	3	60.3	<.001
love	6.01	3	49.1	0.001
children	4.15	3	111	0.008

Table 5. Games-Howell Post-hoc Test – work

		1 football	2 striking combat sports	3 other individual sports	4 other team sports
1 football	Mean difference	—	-0.412	-0.983	-0.4518
	p-value	—	0.530	0.002	0.489
2 striking combat sports	Mean difference	—	—	-0.571	-0.0400
	p-value	—	—	0.058	0.999
3 other individual sports	Mean difference	—	—	—	0.5314
	p-value	—	—	—	0.137

Table 6. Games-Howell Post-hoc Test – love

		1 football	2 striking combat sports	3 other individual sports	4 other team sports
1 football	Mean difference	—	-1.18	-0.343	-0.756
	p-value	—	0.001	0.903	0.194
2 striking combat sports	Mean difference		—	0.833	0.420
	p-value		—	0.253	0.457
3 other individual sports	Mean difference			—	-0.413
	p-value			—	0.837

Table 7. Tukey Post-hoc Test – children

		1 football	2 striking combat sports	3 other individual sports	4 other team sports
1 football	Mean difference	—	-0.962	-0.200	-0.676
	p-value	—	0.008	0.935	0.159
2 striking combat sports	Mean difference		—	0.762	0.286
	p-value		—	0.114	0.809
3 other individual sports	Mean difference			—	-0.476
	p-value			—	0.555

Significant differences ( $p < 0.05$ ) were observed between types of sports, in the case of the following areas of quality of life: work, love and children.

- athletes practicing individual sports (tennis, athletics, gymnastics and swimming) are significantly more satisfied with their work, compared to football players;
- athletes practicing striking combat sports (karate, kick-boxing, boxing, taekwondo and fencing) are significantly more satisfied regarding love and children (as life domains), compared to footballers.

Next, differences between athletes practicing individual sports and team sports were explored (Tables 8 and 9).



Table 8. Descriptive statistics – quality of life according to the type of sport: individual sports (n = 57) vs. team sports (n = 59)

		health	self-esteem	values	money	work	play	creativity	help
M	1 individual	5.16	5.26	5.35	4.44	5.25	5.12	5.30	5.19
	2 team sport	5.05	5.15	5.27	4.53	4.78	5.02	4.90	5.02
SD	1 individual	0.841	0.897	0.973	1.09	0.987	0.867	0.906	0.766
	2 team sport	0.936	0.906	0.784	1.22	1.27	1.07	1.03	0.974

Table 8. Descriptive statistics – quality of life according to the type of sport: individual sports (N = 57) vs. team sports (N = 59) - continuation

		love	friends	children	relatives	home	neighbourhood	community
M	1 individual	5.11	5.25	4.98	5.12	5.47	5.09	4.60
	2 team sport	4.56	5.05	4.51	4.71	5.19	4.68	4.68
SD	1 individual	1.45	0.808	1.18	1.13	0.570	0.950	1.03
	2 team sport	1.55	1.12	1.36	1.38	1.17	1.40	1.37

Table 9. Independent Samples T-Test – quality of life according to the type of sport (individual sports vs. team sport)

		Statistic	df	p		Effect Size
health	Student's t	0.647	114	0.519	Cohen's d	0.1202
self-esteem	Student's t	0.661	114	0.510	Cohen's d	0.1227
goals and values	Student's t	0.487	114	0.627	Cohen's d	0.0904
money	Student's t	-0.404	114	0.687	Cohen's d	-0.0750
work	Student's t	2.197 <sup>a</sup>	114	0.030	Cohen's d	0.4080
play	Student's t	0.583	114	0.561	Cohen's d	0.1082
creativity	Student's t	2.219	114	0.028	Cohen's d	0.4122
help	Student's t	1.080	114	0.283	Cohen's d	0.2005
love	Student's t	1.962	114	0.052	Cohen's d	0.3644
friends	Student's t	1.070	114	0.287	Cohen's d	0.1988
children	Student's t	1.991	113	0.049	Cohen's d	0.3715
relatives	Student's t	1.750	114	0.083	Cohen's d	0.3250
home	Student's t	1.675 <sup>a</sup>	114	0.097	Cohen's d	0.3111
neighbourhood	Student's t	1.843 <sup>a</sup>	114	0.068	Cohen's d	0.3422
community	Student's t	-0.361	114	0.719	Cohen's d	-0.0670

<sup>a</sup> Levene's test is significant (p < .05), suggesting a violation of the assumption of equal variances.

The following significant differences were observed (Table 9) – athletes practicing individual sports (striking combat sports, tennis, athletics, gymnastics, and swimming) are

significantly more satisfied by their work ( $p = 0.030$ ) and creativity manifested in daily activities ( $p = 0.028$ ), and, also, regarding love and children (as life domains), compared to athletes practicing team sports (football, handball, basketball and rugby). The difference is marginally significant, considering love as an area of quality of life ( $p = 0.052$ ). The effect size index ( $d$ ) generally shows moderate to weak group differences.

To answer the third research question: *Does sports performance influence athletes' quality of life?* the ANOVA procedure was used. Table 10 captured the results at the descriptive level.

Table 10. *Descriptive statistics – quality of life according to sports performance (international results,  $n = 39$ , national performances,  $n = 45$ , and regional/local sports results,  $n = 32$ )*

	Performance	health	self-esteem	values	money	work	play	creativity	help
M	1 international	5.23	5.46	5.28	4.36	5.15	5.05	5.44	5.26
	2 national	4.96	5.16	5.44	4.53	5.07	5.09	4.78	5.20
	3 local/regional	5.09	4.91	5.09	4.69	4.75	4.94	5.19	4.81
SD	1 international	0.872	0.822	0.999	1.22	1.14	0.79	0.821	0.81
	2 national	1.07	0.824	0.893	1.22	1.01	0.94	1.17	0.75
	3 local/regional	0.641	1.15	0.689	1.06	1.34	1.22	0.738	1.03

Table 10. *Descriptive statistics – quality of life according to sports performance (international results,  $n = 39$ , national performances,  $n = 45$ , and regional/local sports results,  $n = 32$ ) - continuation*

	Performance	love	friends	children	relatives	home	neighbourhood	community
M	1 international	5.08	5.10	5.24	5.18	5.49	4.79	4.38
	2 national	5.31	4.98	4.76	4.78	5.27	5.18	5.00
	3 local/regional	4.13	5.19	4.22	4.81	5.34	4.72	4.63
SD	1 international	1.51	1.10	0.94	1.14	0.68	1.08	1.18
	2 national	0.92	1.10	1.40	1.41	0.83	0.91	0.70
	3 local/regional	1.68	0.89	1.29	1.28	1.21	1.49	1.54

Regarding the one-way analysis of variance, only the significant differences between groups will be presented (Tables 11-16). With respect to homogeneity of variances test (Levene's)  $p < 0.05$  in the case of the following life domains: creativity, love and community (the Games-Howell Post-hoc test being used). When  $p > 0.05$  (in the case of Levene's test) the Tukey Post-hoc Test was used.

Table 11. ANOVA one way – quality of life according to sports performances

	F	df1	df2	p
Self-esteem	3.23	2	113	0.043
Creativity	4.52	2	74.9	0.014
Love	6.49	2	61.9	0.003
Children	5.91	2	112	0.004
Community	4.30	2	59.8	0.018

Table 12. Tukey Post-hoc Test – self-esteem (in relation to sports performance)

		1 international	2 national	3 local/regional
1 international	Mean difference	—	0.306	0.555
	p-value	—	0.288	0.035
2 national	Mean difference		—	0.249
	p-value		—	0.475

Table 13. Games-Howell Post-hoc Test – creativity (in relation to sports performance)

		1 international	2 national	3 local/regional
1 international	Mean difference	—	0.658	0.248
	p-value	—	0.009	0.377
2 national	Mean difference		—	-0.410
	p-value		—	0.150

Table 14. Games-Howell Post-hoc Test – love (in relation to sports performance)

		1 international	2 national	3 local/regional
1 international	Mean difference	—	-0.234	0.952
	p-value	—	0.679	0.041
2 national	Mean difference		—	1.186
	p-value		—	0.002

Table 15. *Tukey Post-hoc Test – children (in relation to sports performance)*

		1 international	2 national	3 local/regional
1 international	Mean difference	—	0.481	1.018
	p-value	—	0.184	0.002
2 national	Mean difference		—	0.537
	p-value		—	0.149

Table 16. *Games-Howell Post-hoc Test – community (in relation to sports performance)*

		1 international	2 national	3 local/regional
1 international	Mean difference	—	-0.615	-0.240
	p-value	—	0.017	0.750
2 national	Mean difference		—	0.375
	p-value		—	0.412

In relation to sport performances, the following significant differences between groups (in terms of the perceived quality of life) were found ( $p < 0.05$ ):

- athletes having international results (in the entire sample) are significantly more satisfied about their self-esteem ( $p = 0.035$ ), regarding love ( $p = 0.041$ ) and children ( $p = 0.002$ ), as life domains, compared to athletes obtaining local/regional performances;
- athletes having international sports results are significantly more satisfied by their creativity, manifested in daily activities ( $p = 0.009$ ) and significantly less satisfied by the community ( $p = 0.017$ ), compared to athletes with national level performances;
- athletes with national performances, a group with its own unique strengths and achievements, report significantly higher satisfaction in the domain of love ( $p = 0.002$ ), compared to athletes with local/regional results

## Discussions and Conclusion

The current study addresses the quality of life experienced by young athletes, according to gender, type of sport practiced, and athletes' sports performances. In sports, early specialization was explored in relation to perceived quality of life – in this context, college athletes reported lower Health-Related Quality of Life (Burwell et al., 2022). The role of the coach was also investigated, being found that the compassionate coach was positively linked with athletes' life quality (Oliveira et al., 2021).

When the 15 life domains / areas of quality of life were explored in the present study, according to gender, no significant differences were observed between athletes. However, female athletes are a little more satisfied by their work, community, friends, and creativity manifested in daily activities, while male athletes are a bit more satisfied by their health, regarding self-esteem and love (the sum for male athletes = 74.41, while the sum in the case of female athletes = 75.7, in terms of the reported satisfaction for the 15 life domains investigated). Specialized literature asserted that men are more likely to experience a higher quality of life

than women (Nowak et al., 2021) – however, the mean age for male athletes was 30.19, while  $M_{age}$  for female was 25.12, an important difference, years which can contribute to social and financial improvements and influence, therefore, individuals' perceived quality of life. In 2018 we underlined, also, a higher overall quality of life in the case of male athletes (see Păunescu et al., 2018). However, it's worth noting that the sample investigated was considerably smaller compared to the current one.

When the sports disciplines practiced were examined, it was found that athletes practicing individual sports (tennis, athletics, gymnastics and swimming) are significantly more satisfied by their work, compared to football players, while athletes practicing striking combat sports (karate, kick-boxing, boxing, taekwondo and fencing) are significantly more satisfied regarding love and children (as life domains), compared to footballers. Regarding children (as an area of quality of life), participant's age can explain these differences. Most football players (in the current research) are 23-24 years old, while most athletes from striking combat sports are 19-20 years old, being significantly more relaxed/ satisfied with the thought that they do not currently have children, and in the same time significantly more satisfied with the emotional area of their lives. Regarding work (as a life domain), participants' level of performance can explain the differences observed, most of the footballers having local/regional results, while athletes practicing individual sports such as tennis, athletics, gymnastics and swimming obtaining, mainly, national sports performances (being, therefore, more satisfied by their activity). Previous studies have shown that „no quality of life differences were found based on sport specialization” (Patel & Jayanthi, 2018), while Nowak et al. (2021) mentioned that “the type of practiced sport did not turn out to be a quality of life determinant”, personality factors having a more important role.

Next, differences between athletes practicing individual sports and team sports were investigated. It was found that athletes from individual sports (striking combat sports, tennis, athletics, gymnastics, and swimming) are significantly more satisfied by their work and creativity manifested in daily activities, and, also, regarding love and children (as life domains), compared to athletes practicing team sports (football, handball, basketball and rugby). Considering love, as an area of quality of life, the difference is marginally significant. The effect size index shows, however, moderate to weak differences between groups, in terms of perceived quality of life. In 2000, Vaez-Mousavi argued that the quality of life experienced by female athletes practicing individual sports was higher than that of female athletes practicing team sports, while for men, the results were the opposite (male athletes from team sports experiencing a higher level of quality of life). Similar results were reported by Păunescu et al. (2018).

Athletes' quality of life was also investigated in relation to sports performances. It is worth noting that in 1996, Wrisberg asserted that until that date “little attention has been given to determining the influence of competitive athletics on the life quality of participants”. The present research emphasized that athletes having international results (in the entire sample) are significantly more satisfied about their self-esteem, regarding love and children, as life domains, compared to athletes obtaining local/regional performances. Also, athletes having international sports results are significantly more satisfied by their creativity, manifested in daily activities, but significantly less satisfied by the community, compared to athletes with national-level performances. Considering community, researchers mentioned that “transformative relationships and meaningful learning experiences may promote a better sense of community well-being” (Ault et al., 2024). Not least, athletes with national performances

were significantly more satisfied regarding love than those with local/regional results. In-depth interviews with athletes are needed in the future to better understand the differences highlighted.

Current study's limitations refer to athletes' competitive experience (minimum one year in the present research), athletes' material situation (which was not explored in the present study), marital status, or athletes' level of education. The social and cultural background of the participants can influence the results, as well as the number of participants in each group (for example, each sport discipline could be separately investigated, including larger samples). Also, the history of injuries, time since last injury, or severity of injuries sustained, which can cause distress and anxiety (see, for example, Patenteu et al., 2023) were not examined (is known that injuries affect Health-Related Quality of Life in athletes - Houston et al., 2017). Future studies need to select different groups of athletes, of different ages, considering all the variables mentioned above, to be able to look increasingly clear on the quality of life experienced by athletes.

In a world where artificial intelligence (AI) "is increasingly becoming a driving force in revolutionizing various sectors" (Vasile, 2023), sport is no exception, therefore, further studies can also focus on the use of AI in sports and the impact on athletes' quality of life (on life domains such as: work, creativity, self-esteem, learning, play, etc.). Also, the limits of self-report measures are well known (Predoiu et al., 2022); however, questionnaires are critical tools for identifying different perceptions of individuals (Rădoi et al., 2019), being used in research worldwide.

The findings of the present study provide important data to coaches, athletes, sport psychologists, multidisciplinary team members and parents, on the areas of quality of life that athletes are currently more or less satisfied with, thus guiding them in their professional and personal development.

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