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THE IMPACT OF AGE ON ADULT'S PARTICIPATION IN PHYSICAL ACTIVITIES DURING LEISURE TIME

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Abstract. One of the essential components of a healthy and high-quality lifestyle is reducing sedentary behaviour and engaging in physical activities during leisure time. Numerous studies have shown that increased physical activity during leisure time can significantly improve an individual's quality of life. Regular physical activity has been recognized by its positive impact on physical, mental, and social well-being. Therefore, modern society must encourage healthy habit, includinge regular physical exercise during leisure time. Considering the importance of physical activity in leisure time in terms of promoting and preserving overall health, we conducted this study aimed to examine the relationship between age and the choice of physical activities during leisure time. A survey was conducted with 268 respondents over the age of 25. The goal was to assess how age influences the selection and frequency of physical activities and how this impacts overall quality of life. The results indicated that age does indeed influence the choice and frequency of physical activities during leisure time. Based on these findings, we believe that efforts should be made to raise awareness about the importance of physical activity, especially among older individuals. Additionally, providing various independent and organized physical activities and events can indirectly promote physical and mental well-being among individuals of all ages.

Keywords: physical activity; leisure time; age; activity

Introduction

Physical activity refers to a large spectrum of movement that we do in everyday life. Physical activity refers to all forms of movement that can provide health benefits if undertaken regularly and of sufficient duration and intensity (WHO 2018). Following the WHO campaign, every movement counts; physical activity refers to all movement we do during the day, including walking, cycling, wheeling, struc-

tured sports, recreational activities, and play. Activities undertaken at home, at work, and in the garden, as well as activities such as shopping, active transport, cleaning the house, or taking the dog out, are also considered forms of physical activity. They are all important in increasing the movement time during the day.

Physical activity has a major role in maintaining health and providing healthy and quality life. Regular physical activity is a key factor in prevention of many diseases. Following the studies, people who are physically active and manage to meet the recommended levels of daily physical activity have a 20 – 30% reduced risk of premature death (Katzmarzyk, Friedenreich, Shiroma & Lee 2022). Studies evidence that 7 – 8 % of all cases of cardiovascular deceases, depression, and dementia, and around 5% of cases of diabetes 2 could be prevented with regular physical activity (Global Report for Physical Activity, 2022).

Following the results from numerous studies used as a baseline for creating the recommendations for physical activity by the World Health Organization (WHO 2018; 2019; 2022) physical activity is identified to be beneficial for physical health in terms of reducing the risk of cardiovascular diseases, type 2 diabetes, certain types of cancer. Improves the work of the immune system and supports overall physical health. Regular physical activity supports both cognitive and mental health as well. Regular physical activity is associated with improved concentration, memory, focus on tasks and greater cognitive flexibility (Hillman, Erickson & Hatfield 2017; Hajar et al. 2019; Abdelkarim et al. 2017; Basso & Suzuki 2017), enhanced cognitive skills, and better brain health. Participation in sports and physical activities fosters social skills, teamwork, and friendships, improves communication skills, and supports building a team spirit and sense of belonging and community.

Physical activity has many benefits for adults as well. It helps slow down the ageing process and acts as a protective factor for health. It is also important for a person's self-esteem, functional ability, cognitive abilities, life satisfaction, sense of usefulness, belonging, and connection to the community, and is often a source of relaxation and entertainment (Banić 2022). According to Lepan & Leutar (2012), physical activity gives older adults a sense of control over life, as they can take care of themselves, carry out their daily activities, and maintain personal hygiene for a longer time. Each physical activity has its specifics and targeted outcomes, but what they all have in common is the beneficial effects of the various physical, psychological, and social aspects of adult life (Banić 2022, p. 23).

The modern way of life, represented as reduced movement, increased sedentary behaviour, and unhealthy diet, often are associated with adults, mainly due to a lack of work-life balance. According to WHO data, physical inactivity is one of the leading risk factors for noncommunicable diseases and death worldwide. Alternately, regular physical activity reduces the risk of many types of cancer by 8 – 28%, heart disease and stroke by 19%, diabetes by 17%, depression and dementia by 28 – 32%. It is estimated that 4 – 5 million deaths per year could be averted if

the global population was more active (WHO 2018). Therefore, it is important to keep the quality of life of the adult population (Bjelica & Krivokapić 2011; Dragutinovic 2018) and support them in following the WHO recommendations for physical activity. Following the recommendations, adults should do at least 150 minutes per week of moderate-intensity aerobic activity or 75 minutes per week of vigorous aerobic activity (or a combination of both), preferably spread throughout the week. In addition, is recommended to add moderate to high-intensity muscle-strengthening activity (such as resistance or weights) at least 2 days per week and reduce the time of sitting as much as possible (WHO 2020). Yet, data evidence that 31% of adults failed to meet the recommended levels of PA (WHO 2024). Women and girls generally are less active than men and boys, widening health inequalities. Older adults and people living with disabilities are also less likely to be active and miss out on the physical, mental, and social health benefits. Following this, the goal of WHO (2024) is to reduce levels of physical inactivity in adults by 10% relative reduction by 2025 and 15% by 2030 from the 2010 baseline (WHO, 2024).

The lack of movement and increased sitting time negatively affect the health and overall well-being of adults. This is usually due to current life conditions (Lepeš & Halaši 2021). The current life conditions generate a lot of dynamics and stress that affects negatively on overall health. Increased stress creates muscle tension, digestion difficulties, and reduces sleep quality. This goes in a magic circle that can be stopped by physical activity. Physical activity activates endorphins that reduce the tension in the body. A relaxed body leads to relaxation of the mind and decreases stress symptoms (Danilović 2020, p. 10). Physical activity also provides a better quality of life quality, which is especially important for the elderly population. For them, the better physical condition also provides a feeling of independence as they can take care of themselves alone (Pedersen & Saltin 2006, cited by Danilović 2020, pp: 8). Having in mind all the benefits of physical activity in adults, it important to motivate them to move and support them by creating different possibilities for being physically active, support them in achieving new challenges, especially during their leisure time that can be effectively used by different forms of movement (Bjelica & Fratić 2011; Bjelica 2004; Dragutinovic 2018, p. 156).

LEISURE TIME

Leisure time is becoming an increasingly interesting topic nowadays, especially in the period of expansion of technology in all aspects of our lives. The way people spend their free time largely determines their lifestyle and quality of life. Many people do not pay enough attention to physical activity due to the many obligations of daily life, and such a lifestyle of adults similarly reflects the lifestyle of their children as well.

Leisure time has its own past, present, and future. It is an integral part of our lives, and therefore, it is important to use it systematically, planned, and effectively.

It is our need and interest, a factor in the development of children, young people, and even older adults (Rosić 2005). The perception of leisure time and leisure time activities has changed over the past decades. The activities that a person engages in during their leisure time depend on a variety of factors that determine the behaviour, everyday functioning, and actions are taken and, in the bottom line, determine a person's quality of life in general.

Physical activity is an aspect of quality leisure time. As a factor in leisure, PA is represented in two dimensions. On one side, it is a component of the quality, and on the other, it is a determinant of that quality.

The way an individual spends his or her leisure time is also reflected in his or her lifestyle. By constructing one's own lifestyle in the social environment, the individual also finds a sense of organization of one's life and the construction of one's identity. Lifestyles are relatively stable patterns of behaviour and manifest in all areas of life (Tomić-Koludrović & Leburić 2002; Radojević 2019).

Leisure has a special role in people's lives, especially nowadays, where people, even though they have increased leisure time, still feel overloaded and lack time (Wang I & Kao 2006, Rattinger 2020, p.17). Yet is not just a quantity in increasing leisure time. It`s also the quality of time as quality leisure time has a beneficial effect on the development of creativity, better memory, problem-solving, and successful learning, and thus successful inclusion in society—which is especially important for socially disadvantaged groups, such as older adults and retirees.

Each period of life has its own special characteristics that individuals try to cope with to improve their quality of life. Over the years, the perception of leisure time has changed. Part of this change is related to the importance of leisure for overall quality of life, and part is a result of people's changed mindsets and their need to provide overall health and well-being.

Because physical activity is an important part of quality leisure time, we initiated his study aiming to get insight into, whether and how much physical activity is represented in the activities with which their leisure time is filled.

Method of work

The activities that individuals do in their leisure time determine the quality of leisure time, as well as the quality of life in general. Physical activity is an integral part of the quality of leisure time. As an integral element, different types of physical activity are one of the contents of leisure time and an important aspect of leisure time. Having in mind the importance of physical activity during leisure, we initiated this study where the subject of research is the opinions of adults about the way they spend their leisure time and how it reflects on the quality of their life.

The research aims to identify the physical activity level among adults and the quality of leisure time in regard to their age. The research was conducted on a sample of 268 adult respondents over 25 years of age. The presented results are

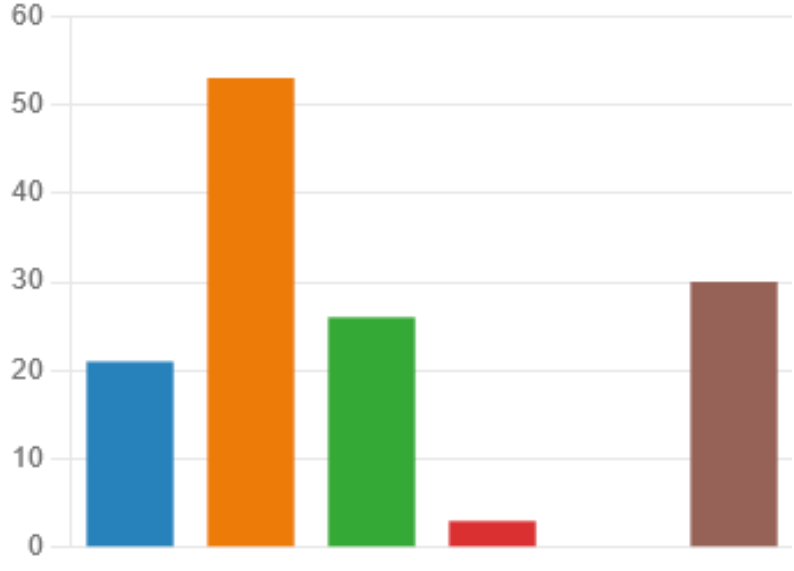
part of a larger study that examines adults' attitudes and experiences regarding their physical activities during their leisure time and its effects on movement habits, practicing their leisure time activities, and factors that affect the quality of their leisure time.

The study was conducted using a questionnaire as an instrument (electronic survey questionnaire), which is specially designed for the needs of this research. The questionnaire was administered online in the period of July/August 2023. Besides general data (gender, place of residence, employment, engagement in different types of physical activity), it also contains closed-ended questions – a scale of assessment where examiners determine the degree of agreement and satisfaction in the offered claims.

The obtained results were analyzed and presented using descriptive statistics: frequencies (f), percentages (%), and a non-parametric procedure: F-test (ANOVA). The data obtained from the research were processed using the statistical package SPSS 19. The results obtained are shown graphically for better visibility.

Results and discussion

The survey included 268 randomly selected respondents. In terms of age, the largest number of participants, 53%, are aged 35 – 44, followed by 26% aged 45 – 54, 21% aged 25 – 34, and the rest over 60 years old (Graphic1).

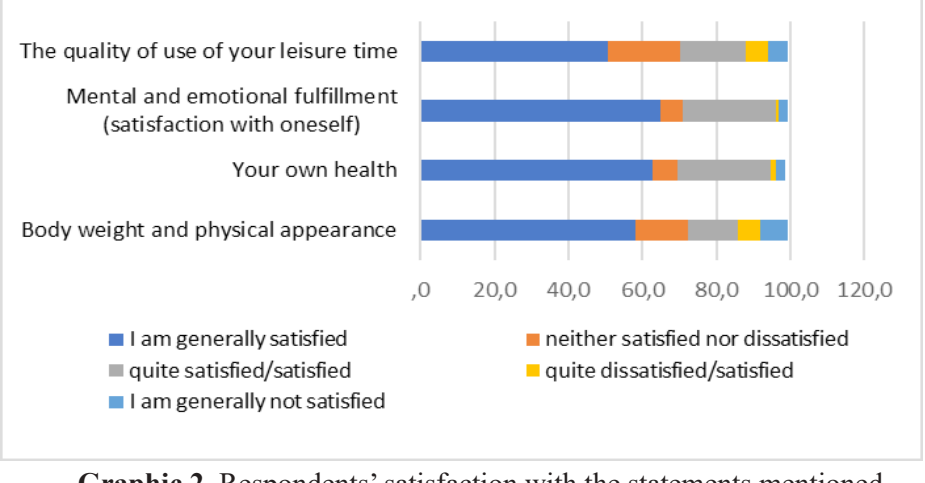


Graphic 1. Sample respondents by age

Regarding place of residence, the majority of participants – 98% – live in a city, and only 2% live in a village.

In terms of education, 54% have a higher education, 22% PhD degree, 15% have a master's degree, and 8% have a secondary school degree. The higher percentage of respondents with PhD degrees is a result of sharing the questionnaire among teaching staff at Goce Delcev University. In terms of employment, 95% of participants in our study were employed. Then, employee status, as well as the type of work, are associated with PA levels in adolescents (Kwak et al. 2015; Dane et al. 2011).

In the general data section, respondents were asked to express their satisfaction regarding several components that can impact personal satisfaction. These include body weight and physical appearance, satisfaction from physical health, mental health, emotional fulfilment, and satisfaction from the quality of use of personal leisure time. The obtained data show that the majority of the participants are *generally satisfied* with all the statements mentioned above (Graphic 2).



Graphic 2. Respondents' satisfaction with the statements mentioned

On the question related to the type of work and the level of physical activity at the workplace, 59% declared that they spend most of my working time sitting (office work, driving), 34.3% reported spending most of the time at work standing or moving to have a job that does not require a lot of physical effort (eg: seller, hairdresser, waiter, security, working with children/students, etc.). A small number of participants have work that requires more physical effort and movement often includes holding or lifting loads, objects, or tools (2.2%). The 3% of participants declare that they are not working (eg retired, unemployed, retired for health reasons, etc.). These results are presented in

Graphic 3. Following the obtained results, it can be concluded that the majority of our respondents have a working position that is mainly passive and in a sitting position, with no or very little physical activity. Sitting is defined as any activity while we are awake when the metabolic equivalent is lower than 1,5. The physiological equivalent during a calm state is not equal to sitting (Lepeš, Halaši 2021, p. 233). This means that sitting is related to a passive lifestyle and no reduction of calories. Due to this, prolonged sitting leads to negative effects on physical health and movement habits. The studies confirmed that prolonged sitting in adults increases the risk of mortality from heart disease by 16% and from cardiovascular diseases by 34% (Gao et al. 2024), creates discomfort in the shoulders, middle back, and lower back as well as reduces the body flexibility (Wenhua et al. 2017). Prolonged sitting is also related to an increased risk of chronic back pain and deterioration in brain health (Jiang et al. 2024). Prolonged sitting combined with reduced levels of physical activity is associated with a higher risk of death from all causes in cancer survivor patients (Cao, Friedenrich & Yang 2022). Besides the modern way of living that includes the use of technology and reduced active transport due to the use of cars as the main mode of transport, work is also one of the factors that affect sitting habits. As indicated by our results, the type of work was identified as a reason for decreased level of physical activity in adults and has an impact on developing a sedentary lifestyle (Graphic 3). This was confirmed in the study of Kwak et al. (2016) and Van Domelen et al. (2011). Both studies also indicated differences between PA level and sitting time among full-time workers and nonworkers, indicating that even workers who have a sitting job position have more PA levels than nonworkers. Differences are identified in terms of gender (Van Domelen et al. 2011) and in terms of country (Kwak et al. 2016).

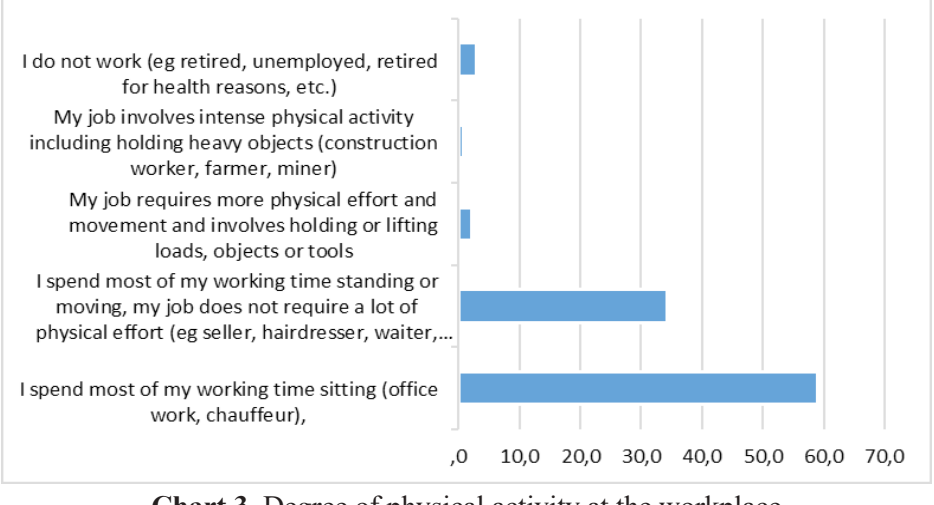


Chart 3. Degree of physical activity at the workplace

Differences according to the age of the respondents in terms of practicing physical activities in their leisure time

Physical activity is one of the components and aspects of leisure time. Therefore, one of the aims of our study was to identify the level of physical activity of respondents during their leisure time concerning their age. Respondents' attitudes were analyzed using the non-parametric statistical procedure analysis of variance (ANOVA). Analyzing the results notable that there are statistically significant differences between the respondents at the level of 0.05 and 0.01. Differences are generally found between older respondents who are over 55 years of age and younger ones (category 25 – 35 and category 35 – 45). Results are presented in Table 1.

When asked *which of the listed activities you practice in your leisure time*, several statements were offered, in which each of the respondents determined the degree of practice of the given activity. Statistically significant differences at the 0.01 level were observed for the following statements: *Creative activities (art, painting, photography, sewing, knitting, music)* and *Activities in the home (gardening, horticulture, pet care.* Differences were observed among respondents between 55 – 65 years old who answered that they do it *very often*, and respondents from the age group 25 – 35, who answered that they *never do it in their leisure time*. These results suggest different interests in leisure time depending on age as well as the greater interest of older adults for less active forms of leisure content and more creative activities that often include handwork and handcraft. Also, older adults are more interested in activities related to home. Other studies confirm differences in engagement in different types of leisure time activities between younger and older adults (Elsden et al. 2022; Bone et al. 2024). While creative activities can be related to personal interests in creation, they can also be related to skills, for example, knowing how to sew, knit, etc. These are activities that were more common in older generations, while younger adults are not very familiar with them. On the side of interest in home-based activities, it can be related to the level of mobility of older adults and their social connections and social contacts.

In terms of time spent in participation in selected leisure time activities (Q: *In the last week, how many hours did they spend on each of the offered activities), statistically significant differences at the level of 0.01 were* observed in all the mentioned statements. Activities such as cycling, fitness, aerobics, and yoga were suggested. *Cycling, including cycling to work*, was practised less than 1 a week among the respondents who are 35 – 45 years old, while those 55-65 years old never practised such an activity.

The respondents were also asked to determine *what type of physical activity they had practiced in their leisure time in the last week*. Statistically significant differences at the 0.01 level were observed in the following activities.

Regarding the **activity of cycling**, differences were observed between respondents aged 55-65 who answered that they *never* practiced it, and respondents aged 45 – 55 who declared that they practice it *3-4 hours a week*.

In terms of **the fitness activity**, differences were observed between respondents aged 45 – 55 who practice this activity *more than 5 hours a week* and respondents aged 55 – 65 who answered that they *do not practice* this activity in their leisure time.

Statistically significant differences were also observed in the **aerobic** activity between respondents aged 55 – 65 who answered that they *do not practice* this activity, and respondents aged 25 – 35 who answered that they practice it *3 – 4 hours a week*.

Regarding the **yoga** activity, there are differences between respondents aged 35 – 45 who answered that they *do not practice* it and respondents aged 55 – 65 who practice it *4 – 5 hours a week* during their leisure time.

According to the obtained results, we can conclude that age is a significant determinant when comes to the selection of physical activity practiced during leisure time. The youngest age group 25 – 35 is mainly engaged with vigorous activity such as aerobics which is practiced 3 – 4 hours per week. The age group 45 – 55 is engaged in cycling and fitness and these activities are practiced 3 – 5 times per week respectively, yet most of this group is not engaged in yoga activities. Compared to them, the eldest age group of participants aged 55 – 65 are mainly engaged in yoga 4 – 5 times per week but they are not fans of aerobics, fitness, and cycling. Analyzing the specifics of suggested activities in terms of intensity, dynamics, and types of movement, it can be concluded that more vigorous activities that combine cardiovascular endurance and muscle strength, such as fitness activities and aerobics, are more attractive for adults at younger ages 25 – 35. Cycling, which is mainly moderate intensity and does not require strength, is more convenient for adults at age 45 – 55, while yoga, which combines flexibility exercises and breathing exercises and engages core muscles, fits best in the needs of elderly adults at the age of 55 – 65. A similar trend in engagement in leisure time activities is noted in the study of Fan et al. 2013; while the selection of different physical activities is very individual, our results also suggest that age is an important determinant for involvement. This should be considered when leisure time programs are created and offered to the public.

Table 1. Differences in the views and opinions among participants according to the age of the respondents in terms of practicing physical activities in their leisure time (t-test)

LEISURE TIME ACTIVITIES					
ANOVA					
	Sum of Squares	df	Mean Square	F	Sig.
Which of the following activities do you practice in your leisure time?					

Creative activities (art, painting, photography, sewing, knitting, music)	Between Groups	16,618	3	5,539	4,282	,006**
	Within Groups	338,961	262	1,294		
	Total	355,579	265			
Activities in the home (gardening, horticulture, pet care)	Between Groups	26,295	3	8,765	5,496	,001**
	Within Groups	417,855	262	1,595		
	Total	444,150	265			
In the last week, how many hours did you spend on each of the following activities:						
Cycling, including cycling to work:	Between Groups	7,727	3	2,576	4,267	,006**
	Within Groups	158,138	262	,604		
	Total	165,865	265			
Indicate how much time during the week you spend in some form of physical activity:						
cycling	Between Groups	49,287	3	16,429	6,784	,000**
	Within Groups	634,472	262	2,422		
	Total	683,759	265			
fitness	Between Groups	30,356	3	10,119	3,475	,017**
	Within Groups	762,998	262	2,912		
	Total	793,353	265			
aerobics	Between Groups	105,766	3	35,255	14,369	,000**
	Within Groups	642,835	262	2,454		
	Total	748,602	265			
yoga	Between Groups	25,981	3	8,660	4,498	,004**
	Within Groups	504,425	262	1,925		
	Total	530,406	265			

*p< 0.05 **p<0.01

The last set of questions is related to motivation for PA during leisure, company while being PA and overall satisfaction of their PA during leisure time.

On the question of **how they prefer to perform physical activities in their leisure time,** there are differences between the answers of respondents aged 55 – 65 who answered that they wanted to do it *with family and friends*, and respondents aged 45 – 55 who prefer to perform physical activities in *an organized group*. The

study by Lindsay – Smith et al. (2019) confirmed that being physical in organized groups maintains regular attendance and do more PA than participants would on their own. These suggest that social aspects of PA programs increased the motivation of participants and their engagement in PA. In line with our results, we can also add that the period of 45 – 55 is also a period where social interaction out of home is important as most of the people of this age are already free from many obligations at home and maintaining contact with same-minded people is important for their lives.

Table 2. Differences between participants with different age regarding/in correlation with the type of physical activities in their lesisure time (ANOVA)

ANOVA						
		Sum of Squares	df	Mean Square	F	Sig.
In your leisure time, how do you prefer to perform physical activities:	Between Groups	17,861	3	5,954	4,530	,004**
	Within Groups	344,335	262	1,314		
	Total	362,195	265			
To what extent are you satisfied with the time you spend in physical activities in your leisure time?	Between Groups	28,285	3	9,428	4,822	,003**
	Within Groups	512,317	262	1,955		
	Total	540,602	265			
Which of the following statements are the main motives for your involvement in activities in your leisure time?						
reduced stress	Between Groups	,720	3	,240	7,067	,000**
	Within Groups	8,904	262	,034		
	Total	9,624	265			
better health	Between Groups	,693	3	,231	18,656	,000**
	Within Groups	3,246	262	,012		
	Total	3,940	265			
improving immunity	Between Groups	,477	3	,159	2,861	,037**
	Within Groups	14,561	262	,056		
	Total	15,038	265			

If you don't have enough physical activities in your leisure time, what is the reason for that?						
lack of money	Between Groups	2,292	3	,764	3,458	,017**
	Within Groups	57,889	262	,221		
	Total	60,180	265			
lack of company	Between Groups	1,536	3	,512	3,328	,020**
	Within Groups	40,299	262	,154		
	Total	41,835	265			

*p< 0.05 **p<0.01

We were also interested in the *level of satisfaction of our respondents with their time spent in PA* (*How are you satisfied with the time you spend in physical activities in your leisure time?*). Statistically significant differences were obtained between respondents aged 55 – 65 who answered that they are *quite satisfied*, and respondents aged 25 – 35 who answered that they are *mostly satisfied* with the time they spend in physical activity in their leisure time. Maturity and knowing what you want in life are closely related to the level of satisfaction of participants at elderly ages.

We were also interested in the main motivation that drives participant to join in different activities during their leisure time. We asked: *Which of the following statements are the main motives for your involvement in activities in your leisure time?* and several statements were offered. In general, there are statistically significant differences between respondents aged 55 – 65 and younger respondents. The same was observed in the statements: reduced stress, better health, and improved immunity. These three categories are not the main motive that helps respondents aged 55 – 65 to be physically active, as they prefer rest and active rest as a main driving force for activity. Compared to them, younger ones consider benefits in reduced stress improved health, and immune system as important motives to be engaged in PA during leisure. These results are logical considering that adults at the age above 55 are less stressed from work and family duties, and they have more spare time and time to take care of their health, yet due to physiological reasons related to aging, they prioritize rest. On the other hand, younger ones up to the age of 45 are in the period of full working capacity and productivity, have families with younger children, lot of interest in terms of social gettering and social activities and all these cause additional stress that leads to decrease of immunity and healthy issues.

On the side of obstacles that stop our respondents from having PA at a level they prefer to, several statements were offered including lack of time, lack of money and

offer for activities, lack of company etc. Statistically significant differences were found in the statements: *lack of time* and *lack of company.*

Regarding the *lack of time* as a burden for being PA, statistically significant differences are noted between the responses of respondents who are 55 – 65 years old who consider that this is not a reason that influences their engagement in physical activity, compared to respondents aged 45 – 55 who consider this as a main reason for low physical activity they have in their leisure time. Respondents aged 55 – 65 believe that the *lack of company* is the reason for reduced physical activities in their leisure time, in contrast to younger people aged 25 – 35 who do not consider this to be an issue. The explanation in these answers also can be found in different life roles and obligations between different adult groups that affect at their PA engagement during leisure time.

Conclusion

One of the factors for quality and long life is responsible behavior towards health, including a healthy and active lifestyle, which includes regular physical activity at every age period. Adults are not an exception from this, moreover, in different periods of adulthood, different forms of PA are more important for maintaining physical, mental, and cognitive health and overall well-being. Our study results show that each decade in adulthood brings different interests, motives, and possibilities for joining in health-enhancing physical activities during leisure time, yet the main message is that making PA part of everyday leisure time is beneficial at all ages. In terms of supporting adults to achieve the best of their age and be a good example for younger generations, is important to understand different motives for each age period and, the individual needs of every adult and work on the development of targeted interventions to promote physical activity, tailored to their specific motivations and preferences. This can support targeted interventions to promote physical activity across various age groups, considering their unique preferences and potential barriers. Improving levels of physical activity will benefit the health and well-being of each individual and will also provide community support. Community and state policies can support individuals in building a healthy and quality life. Implementing effective policies to increase levels of physical activity requires a collective effort, coordinated across multiple government departments at all levels, including health, transport, education, employment, sport and recreation, and urban planning. Priority should be given to policy actions that address disparities in levels of physical activity, promoting, enabling, and encouraging physical activity for all. Investing in education for quality leisure time is also a long-term investment of society in the future.

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IMPLEMENTING A WELLNESS PROGRAMME TO OVERWEIGHT STUDENTS AND WORKING PEOPLE THROUGH TRAINING IN THE METHODOLOGY

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Abstract. Health Wellness is an approach to health that encompasses maintaining and improving physical, mental, and emotional well-being through proactive, positive, and holistic wellness practices. Because of the relevance of this contemporary global issue, the research is committed to the creation and validation of a holistic wellness methodology targeting overweight students and working people. Based on the analysis of current research and applying a competency-based approach, the aim is to create a comprehensive Wellness Yoga training program in individual or group classes. This holistic wellness program aims to provide a positive effect and highlight its importance in applying an interdisciplinary principle that combines knowledge and methodologies from different fields. A positive effect was found at the end of the program on the persons studied.

Keywords: health wellness; yoga practice; training; interdisciplinary holistic approach

Introduction

The Global Wellness Institute defines wellness as the active pursuit of activities, choices, and lifestyles that lead to a state of holistic (whole) health[1]. Wellness is a state of happiness, health, or success that can be defined in one word as well-being or well-being[2].

The evolution of the wellness concept is a complex and multi-layered process that traces the changing understandings of health and well-being over the centuries. From magical and religious practices to modern scientific approaches, wellness continues to evolve, responding to the needs and challenges of each era (Dimitrova 2016; Dimitrova 2019).

Wellness is an approach to health that encompasses the maintenance and improvement of physical, mental, and emotional well-being through proactive, positive, and holistic wellness practices.

The genesis of the wellness concept is seen as the result of the symbiosis and evolution of science and human culture refracted through the prism of the new millennium. It is accepted that the transition from achieving a purely therapeutic effect to the purposeful creation of well-being, comfort, and care for the health of the individual continues its evolutionary development, to reach the modern form of understanding the wellness concept, the basis of which is "Health Promotion and Disease Prevention" (Vassileva 2012), and authors in their work consider health wellness in a multi-component way (Dimitrova et al. 2023).

Dr. Roger Smith adopts the following definition "Wellness is a conscious, purposeful and responsible approach that modifies an individual's lifestyle to optimize personal health and achieve well-being, understood as a multidimensional dimension that includes physical, emotional, intellectual, social and spiritual health. To achieve this, various conventional and holistic practices, techniques, and teachings are applied that have an impact on the physical, emotional, intellectual, spiritual, social, and occupational spheres of an individual's life" (Davchev 2017).

Ivkov (2012) justifies that "Promotion of personal health, is an organized effort of professionals and society to educate the individual on issues of personal health and the development of a social system that provides each person with a standard of living adequate to maintain and improve health".

Statement of the problem

The stress-adaptive response of humans is something necessary for survival and coping with life's difficulties, but prolonged stress leads to chronically elevated cortisol levels. As a consequence, a rapid depletion of glucose stores occurs, which serves as a signal for the body to quickly replenish them. Cortisol causes an increase in appetite and a desire to immediately and in larger quantities the body to accept food, mostly sweet and fatty. On the other hand, it promotes the accumulation of fat in the cells with consequent obesity, reduces muscle mass, impedes the functioning of memory, and hence accompanying health problems. For a general adaptation syndrome and the effect of cortisol under stress, one of the pioneers on this topic Hans Celier (2018), which stress nowadays, is the number one enemy for people and its consequences – rapid weight gain.

It has been found that there is a link between emotional stress and obesity. Stress contributes to weight gain and the development of obesity according to the authors (Derya 2023; Dimitrova 2020) who recommend educational interventions among youth (presentations, lecture courses, and discussions).

Naturopathy is focused on the body's ability to heal itself through diet and lifestyle changes, herbs, massage, and wellness practices for healthy aging (Tomova & Angelov 2023).

In this regard, the author (Ilinova 2014) argues that various sports and physical activities "increase a girl's/woman's physical fitness and strength potentially

increasing individual attractiveness to the opposite sex, increasing self-esteem and sense of one's attractiveness, so sport is also essential" not only for the female reproductive system but also for increasing the Wellbeing Index.

Body mass index (BMI) is a medical and biological indicator that is used to determine normal, healthy weight in people of different heights and serves to diagnose obesity or malnutrition. To determine the limits of overweight and obesity, the so-called body mass index (BMI), also known as the Quetelet index, is most commonly used. The following formula is used:

BMI = weight (kg) / height (m)²

Women with body fat > 30% and men with body fat > 25% are defined as obese. In children and adolescents, the amount of adipose tissue changes with age, according to WHO (World Health Organization)[3] criteria.

Methodology

In view of the relevance of the contemporary global problem, the research is devoted to the creation and validation of a wellness holistic methodology aimed at overweight students and working people.

According to Dimitrova (2016, 2023), different methodologies are used globally to measure healthy recreational exercise practices to achieve a healthy lifestyle according to Eastern or national traditions and culture as long as they are effective. Health-enhancing physical activities have a wide range of impacts when applied comprehensively.

The study focused on the application of an Eastern practice (yoga) that is a convenient and effective method of exercise not only for weight loss but also for improving the components of physical fitness, leading to a reduction in the health risk factors of overweight people and the process of obesity. In recent decades, yoga asanas (exercises) have become an alternative and beneficial program with a rehabilitative nature for fitness concerning people who have physical difficulties or obesity (Yogananda 1998).

Developing a holistic wellness methodology to reduce weight and increase the Wellness Index through yoga asana, breathing and meditation practices, diet, and outdoor nature hikes can impact emotional stress reduction and can have a significant positive effect on the overall health of individuals with elevated body mass index (Eknoyan 2008).

The study aimed to develop a model of a specialized holistic yoga methodology to reduce weight in overweight people and increase their global happiness index. The task we set ourselves was to establish the level of obesity (BMI) and the difference in individual weight of the participants at the beginning and at the end of the experiment.

The study group consisted of 30 persons aged (18±34) years. As applied yoga methodology was conducted 2 times in natural conditions (yoga studio) and 3 times

in online home conditions.

In this context, the present study aims to analyze a group of individuals' body mass, BMI-s, and the effect of hatha yoga practice (5p per week) combined with meditative stress control techniques and a nutritional weekly regimen. The research paper proposes an original Wellness Holistic Model for obesity presented in Table 1.

Table 1. Wellness holistic weekly program for overweight people (by *Olga Bozhkova – Master in SPA Culture)*

WELLNESS WEEKLY PROGRAM FOR OVERWEIGHT YOUNG AND WORKING PEOPLE				
SCHEDULE:	**8:00 am**	**1:00 pm**	**7:00 pm**	**10:30 pm**
Monday	**Food plan** Breakfast Yoga class 60 min + 15 min - meditation Positive Phrase Weight control	Lunch	Dinner	Positive Phrase Hairy body
Tuesday	**Food plan** Breakfast Yoga class 60 min + 15 min - meditation Positive Phrase Weight control	Lunch	Dinner	Positive Phrase Hairy body
Wednesday	**Food plan** Breakfast Yoga class 60 min + 15 min - meditation Positive Phrase Weight control	Lunch	Dinner	Positive Phrase Hairy body
Thursday	**Food plan** Breakfast Yoga class 60 min + 15 min - meditation Positive Phrase Weight control	Lunch	Dinner	Positive Phrase Hairy body

Friday	**Food plan** Breakfast	Lunch	Dinner
	Yoga class 60 min + 15 min - meditation		
	Positive Phrase Weight control		Positive Phrase Hairy body
Saturday	**Food plan** Breakfast	Lunch	Dinner
	Mountain hike Positive Phrase Weight control		Positive Phrase Hairy body
Sunday	**Food plan** Breakfast	Lunch	Dinner
	HOLIDAY		Positive Phrase Hairy body

Data and analysis of results

The changes in body mass composition indices under the influence of the holistic yoga methodology and the integrated application of the eastern movement practice with the additional approaches described in Table 1 can be considered positive when the % TM was reduced within the short period of three months of the conducted experiment.

Before the implementation of the Holistic Wellness Methodology, participants in the study group were tested on two indicators of body mass index and participant weight, and after its three-month implementation. The results obtained were processed using analysis of variance on the variable of body mass index (BMI) presented in Table 2.

Table 2. Mean levels of variability Wilcoxon t-criterion

n	I research		II research	d	T emp	T 0.01
	BMI	Me_1	Me_2			
30		36.60	33.95	2.65	0	109

Figure 1. Mean BMI values at the beginning and the end of the experiment

Table 2 reveals the average levels of body mass index (BMI), at the beginning of the measurement period it was 36.6%, the total for all study subjects, after its completion the BMI decreased by 2.65% - 33.95%. Although, at first glance, the profit is not large for the short study period there is a significant progress of the study group. The difference is statistically significant.

A visualization of individual baseline and endpoint BMI data for the entire study group is presented in Figure 2.

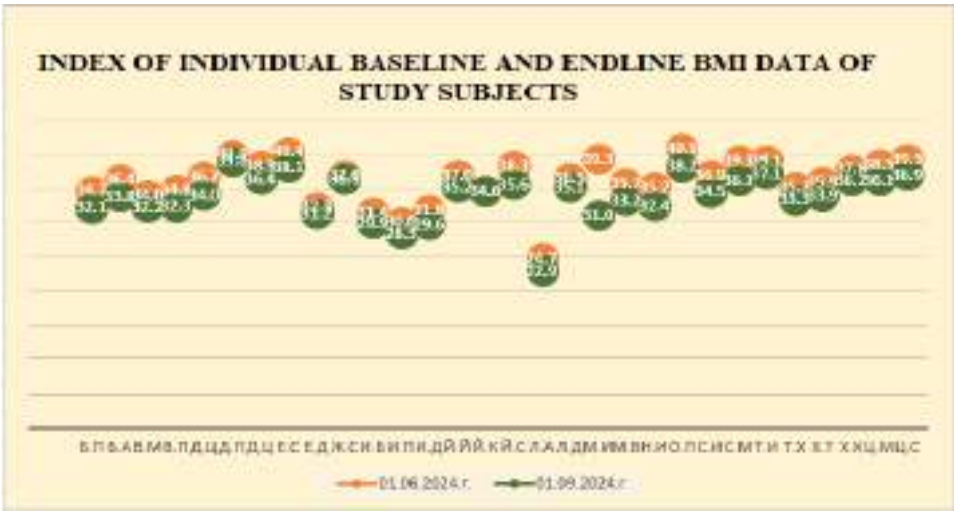

Figure 2. Individual BMI values – start and end date

Figure 2 shows that almost all participants made significant progress following the holistic methodology. The greatest difference was observed in the subject with initials М.І (М.И) where the body mass index of 39.3% had not decreased to 31%, with a difference of 8.3%, which is an exceptional achievement of any of the subjects in the short period.

Table 3 presents the mean levels of variability according to the Student's t-criterion for dependent excerpts by weight indicator (kg).

Table 3. Descriptive statistics for weight indicator

	n	$\bar{X}$	S	V	As	Ex
Start	**30**	**103.16**	**12.19**	**11.81**	**-1.02**	**1.18**
End	**30**	**97.06**	**11.79**	**12.14**	**-1.01**	**1.00**

The mean values of the indicator – weight are presented, at the beginning of the study period the average weight was 103.16 kg, at the end of the experiment it decreased by 6.1 kg in total for the target group – 97.06 kg. Standard deviation and coefficient of variation, asymmetry, and excess are presented and presented graphically in Figure 3.

Figure 3. Graphical representation of the average values of the weight indicator at the beginning and end of the study

The biggest difference in measured weight was observed in S.M (C.M) who had reduced his body weight by 9 kg at the end of the experiment. Significant progress was also observed in two other subjects S.I (С.И) had reduced his weight by 8 kg and J.S (Й.С) where a weight reduction of 7.4 kg was observed after the, end of the holistic methodology. The individual values obtained are due to the more rapid metabolic process, being 20±22 years of age.

In conclusion

The results of the experiment show a very good impact on the subjects for the short period of three months in terms of BMI, weight index, and indices of mental well-being and balance, which will be presented in another paper.

With a focus on evidence-based practices, the Wellness methodology for health, weight loss, overall benefits, and mental well-being is an invaluable resource for individuals who wish to improve their health status and wellness by implementing meditation techniques and stress management exercises.

Holistic methodology is critical in educating and motivating individuals to prioritize their health and psycho-emotional well-being.

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NOTES

1. https://globalwellnessinstitute.org/what-is-wellness/.

2. https://www.wellbeing.iastate.edu/wellbeing-blog/2015/11/wait-minuteis-it-wellbeing-or-well-being.

3. Health Conference, New York, 19-22 June – https://www.who.int/about/governance/constitution.

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