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# The influence of physical activeness on the life quality among over 60. Wpływ aktywności ruchowej na jakość życia kobiet po 60. roku życia

**Summary**
The process of ageing is a physiological phenomenon, which influences negatively the functioning of human organism. The type of alterations varies among each organism and the changes occur with different frequency among different persons. They result in the decrease of various organ functions and systems as well as in the decrease of activeness. The presence of physical activeness in early life stages and its continuation by elderly people can delay the decrease of physical activeness and significantly influence the improvement of life quality. The aim of this work was indicating if the physical activeness significantly influences the improvement of life quality among women over 60. The study was performed at randomly selected women in a fitness centre, at a swimming pool and a centre of culture in the age group of 60 -74 years. A questionnaire consisting of three parts was used as a research tool. The first part consisted of questions concerning age, weight, education, place of residence, the second part included questions related to lifestyle, availability of sport equipment, ways of spending free time and preferred sport. Satisfaction with Life Scale (SWLS), adapted by Juczyński, consisting of five statements and seven suggested answer versions was used in the third part of the questionnaire. All results were presented in tables and statistically analysed in the programme IBM SPSS Statistics version 20.0. The analysis proves that in this study group the influence of physical activeness on the life quality is not statistically significant.

**Key words:** life quality, physical activeness, ageing

**Streszczenie**
Proces starzenia chociaż jest zjawiskiem fizjologicznym negatywnie wpływa na funkcjonowanie organizmu. Zakres zmian jest zindywidualizowany i zmiany postępują w różnym tempie u różnych osób. Efektem jest postępujący spadek wydolności różnych narządów i układów oraz spadek sprawności. Rozpoczynana wcześnie w życiu i kontynuowana przez starsze osoby rekreacyjna aktywność sportowa może spowalniać spadek sprawności i wydolności oraz znacząco wpływać na poprawę jakości życia. Celem niniejszej pracy było wykazanie czy aktywność fizyczna istotnie wpływa na poprawę jakości życia u kobiet po 60. roku życia. Grupę badawczą tworzyły kobiety w wieku 60-74 lat, wybrane losowo w ośrodku fitness, na basenie, domu kultury. Jako narzędzie badawcze zastosowano kwestionariusze ankietowe składające się z trzech części. Pierwszą część stanowiły pytania metryczkowe (wiek, masa ciała, wykształcenie, miejsce zamieszkania), druga część obejmowała zagadnienia dotyczące stylu życia,

dostępności obiektów sportowych, sposobu spędzania wolnego czasu, formy uprawianej aktywności fizycznej, część trzecią część stanowiła Skala Satysfakcji z Życia (SWLS) adaptowana przez Juczyńskiego, składająca się z pięciu stwierdzeń i sugerowanych 7 wersji odpowiedzi. Wszystkie otrzymane wyniki odpowiedzi zestawiono w tabelach i poddano analizie statystycznej za pomocą programu IBM SPSS Statistics version 20.0. Z analizy wyników wynika, że w badanej grupie kobiet wpływ aktywności ruchowej na poziom satysfakcji z życia nie jest istotny statystycznie.

**Słowa kluczowe:** jakość życia, aktywność ruchowa, starzenie się

## Introduction

Life quality has been widely explained by many authors. It mainly concerns good physical, mental and social feeling. Pleasing life quality is a set of fulfilled conditions, such as satisfied needs and goals, which consequently constitute overall satisfaction in many areas of life.

Good health, happy family life, satisfying job, safety and welfare are the most significant values that positively influence life quality. Although, every person can create his subjective and individual hierarchy of conditions which influence the life quality, there are some elements that are universal and equally determining for all people, to which belong appetite, desire, sleeping or the need for procreation. It also includes the need for physical activeness that is the capacity to function in everyday life as well as recreational sport. Undoubtedly, physical activeness improves health, which has been confirmed by numerous studies, and empirically by human's ancestors, who had to possess and prove great physical activeness in order to survive. The need for is rooted in human's nature. The older people become, the worse become functions of organs and systems in an organism and the less is physical activeness, which have negative results elderly people are more prone to injuries and diseases. Every form of physical activeness, individually adjusted to the condition of an organism moderates the decrease of activeness and efficiency and significantly influences the life quality.

## Aim of the study

The aim of the study was presenting if the increase in physical activeness among women over 60 has a significant influence on their life quality and showing which forms of physical activeness are preferred and their frequency.

Material and methods

The research was conducted at randomly selected 50 women in the age group of 60-70 in the fitness centre, swimming pool and gymnastic room in the culture centre. The surveyed come from Hajnówka and in neighbourhood regions. The author questionnaire was used as an investigation tool. The first part consisted of questions concerning age, weight, education, place of residence, the second part included questions related to the lifestyle, availability of sport equipment, ways of spending free time and preferred sport. It consisted of 16 questions: 14 of them were multiple choice questions and 2 of them were open questions with the possibility to write your own answer. Satisfaction with Life Scale (SWLS), adapted by Juczyński (Juczyński, 2009) was used in the third part of the

questionnaire. The SWLS is suitable for an individual and group study among healthy and diseased adults. It consists of five statements. The surveyed assess how each of the statements relates to their lifestyle. Each marked answer has its own point scale. The sum of all points gives the general result that presents the level of general satisfaction with life of a polled person. The average time of completing the questionnaire: 2 minutes.
The scale consists of these 5 following statements:

1. In many respects my life is very satisfactory.
2. My life conditions are very satisfactory.
3. I am satisfied with my life.
4. I achieved the most important goals in my life.
5. If I could start my life again, I would not change almost anything.

The statements were assigned 7 possible responds:

1 – I completely disagree.
2 - I disagree.
3 – I rather disagree.
4 – Neither I disagree nor agree.
5 – I rather agree.
6 – I agree.
7 – I completely agree.

The results were presented in tables and statistically analysed by the mean of the programme IBM SPSS Statistics version 20.2.

**Analysis of results**

The scientific hypothesis was proving the existence of relation between physical activeness and satisfaction with life: the more frequent physical activeness, the better individual assessment of life quality. In order to prove the relation the results of answers about the frequency of physical activeness were analysed. The grading scale was 1 to 4 points for each marked answer (tab.1).

Tab. 1.The frequency of chosen physical activeness

| Frequency of chosen physical activeness: | Number of answers | % |
|---|---|---|
| • everyday (4 points) | 4 | 8 |
| • several times a week (3 points) | 22 | 44 |
| • rarely (2 points) | 17 | 34 |
| • hardly ever (1 points) | 7 | 14 |

The results of general score of the SWLS questionnaire were also analysed. The questioned women chose the following answers to the presented statements (Tab. 2-6):

Tab. 2. In many respects my life is very satisfactory

| In many respects my life is very satisfactory: | Number of answers | % |
|---|---|---|
| • I completely disagree. | 4 | 8 |
| • I do not agree. | 5 | 10 |
| • I rather disagree. | 18 | 36 |
| • Neither I disagree nor agree. | 15 | 30 |
| • I rather agree. | 7 | 14 |
| • I agree. | 1 | 2 |
| • I completely agree. | 0 | 0 |

Tab. 3. My life conditions are very satisfactory

| My life conditions are very satisfactory: | Number of answers | % |
|---|---|---|
| • I completely disagree. | 2 | 4 |
| • I do not agree. | 6 | 12 |
| • I rather disagree. | 13 | 26 |
| • Neither I disagree nor agree. | 16 | 32 |
| • I rather agree. | 11 | 22 |
| • I agree. | 2 | 4 |
| • I completely agree. | 0 | 0 |

Tab. 4. I am satisfied with my life.

| I am satisfied with my life: | Number of answers | % |
|---|---|---|
| • I completely disagree. | 0 | 0 |
| • I do not agree | 0 | 0 |
| • I rather disagree. | 11 | 22 |
| • Neither I disagree nor agree. | 18 | 36 |
| • I rather agree. | 16 | 32 |
| • I agree. | 4 | 8 |
| • I completely agree. | 1 | 1 |

Tab. 5. I achieved the most important goals in my life

| I achieved the most important goals in my life: | Number of answers | % |
|---|---|---|
| • I completely disagree. | 0 | 0 |
| • I do not agree | 3 | 6 |
| • I rather disagree. | 4 | 8 |
| • Neither I disagree nor agree. | 19 | 38 |
| • I rather agree. | 20 | 40 |
| • I agree. | 4 | 8 |
| • I completely agree. | 0 | 0 |

Tab. 6. If I could start my life again, I would not change almost anything

| If I could start my life again,<br>I would not change almost anything: | Number of answers | % |
|---|---|---|
| I completely disagree. | 3 | 6 |
| I do not agree | 4 | 8 |
| I rather disagree. | 13 | 26 |
| Neither I disagree nor agree. | 19 | 38 |
| I rather agree. | 9 | 18 |
| I agree | 2 | 4 |
| I completely agree. | 0 | 0 |

Analysing both variables, the frequency of chosen physical activeness and individual assessment of life quality, the Pearson correlation result between variables: $r \approx 0{,}26$, with $p \approx 0{,}069$ was received.

Tab. 7. Correlation of variables: the frequency of physical activeness and satisfaction with life

| Correlations | | Frequency of physical activeness | Satisfaction with life |
|---|---|---|---|
| Frequency of physical activeness | Pearson Correlation | 1 | 0,259 |
| | significance (bilateral) | | **0,069** |
| | N | 50 | 50 |
| Satisfaction with life | Pearson Correlation | 0,259 | 1 |
| | significance (bilateral) | **0,069** | |
| | N | 50 | 50 |

The results indicate a weak relation between two variables (Tab. 7). It follows that the physical activeness influences the life quality of surveyed persons to a small extent. Positive result proves that an increment of one variable influences the increase of the other variable: the more frequent physical activeness, the highest satisfaction with life quality. However, with the significance constituting 0,069 it can be stated that this relation is not statistically significant in the analysed group.

According to the analysis of the questionnaire, most of the surveyed assess their life quality as average (Tab. 8).

Tab. 8. The assessment of life quality

| Life quality: | Number of answers | % |
|---|---|---|
| • very good | 9 | 18 |
| • average | 36 | 72 |
| • less than average | 5 | 10 |

Approximately 40% of the surveyed women feel the need of physical activeness (Tab. 9)

Tab. 9. The need of physical activeness

| Feeling the need of physical activeness | Number of answers | % |
|---|---|---|
| • yes | 21 | 42 |
| • no | 5 | 10 |
| • to a small extent | 24 | 48 |

The polled women spend their free time most frequently doing their housework or cultivating a garden (Tab.10).

Tab. 10.The form of spending free time

| Form of spending free time: | Number of answers | % |
|---|---|---|
| • watching television | 5 | 10 |
| • reading books | 11 | 22 |
| • housework | 27 | 54 |
| • cultivating a garden | 7 | 14 |

If the women opt for a form of physical activeness, they choose walking and bicycling with the highest frequency (Tab.11).

Tab. 11. The form of preferred physical activeness

| Form of preferred physical activeness: | Number of answers | % |
|---|---|---|
| • walking | 27 | 54 |
| • dancing | 1 | 2 |
| • bicycling | 14 | 28 |
| • gymnastics | 4 | 8 |
| • swimming | 4 | 8 |
| • jogging | 0 | 0 |

Among most of the polled there are no contraindications to start physical activeness (Tab.12):

Tab. 12.Existance of contraindications to start physical activeness

| Contraindications to start physical activeness: | Number of answers | % |
|---|---|---|
| • existence | 6 | 12 |
| • no existence | 44 | 88 |

The most frequent reason to start physical activeness that was given by women was the need for weight reduction and doctor's recommendation (Tab.13).

Tab. 13. Reasons to start physical activeness

| Reasons to start physical activeness: | Number of answers | % |
|---|---|---|
| • improvement of the physical function | 8 | 16 |
| • reduction of weight | 14 | 28 |
| • doctor's recommendation | 10 | 20 |
| • improvement of look | 3 | 6 |
| • improvement of mood | 9 | 18 |
| • better sleep | 6 | 12 |

**Discussion**

Life quality can be described on the basis of a group of similar, accepted cryteria. According to WHO, life quality of people is difined through the prism of their individual perception of the position in life, in the world of culture and through the prism of value system that surrounded people depending on their plans, expectations ans standards (Buss, 2000). Life quality is understood as good physical, mental and social feeling .According to Wells (1989), life quality is mainly the individual perception of good mental

attitude and satisfaction with life and the ability to function in everyday life. Farquhar (1995) similarly defines the concept of the life quality. Other authors (Flanagan, 1978) describe it as the ability to achieve goals whereas others (Franken, 2005) states that life quality is the difference between hopes, expectations and experiences of an individual (Bańka, 2005). The quality of life is influenced but such elements as: physical activeness, described as ability to function in an everyday life and practise sport, positive feeling and assessment of the future (Franken, 2005; Gieremek, 2007).

Specific definitions indicate that life quality is related to health (Health Related Quality of Life, HQRL). They are definied by individual assessment of your condition, effects of disease sympthoms or the disease. According to these definitions mentioned hereabove, good health is described as tha lack of limitations in everyday life as well as physical activeness (Shipper, 1990). Thus, the problem of apllying suitable exercises in order to slow the sympthoms of body ageing becomes crucial. The process of ageing diminish the efficiency of different systems and organs. Line decrease in efficiency among humans begins at the age of 30 and lasts until the end of their lives (Górski, 2003). The pace of efficiency decrease is various and determined by objective factors, e.g. the health condition. The previous life style and elements such as: diet, body weight, substances such as alcohol and cigarettes and the lack of physical activeness or low physical activeness (Fish, 1999) have significant influence. The previously research (Farquhar, 1995; Kozdroń, 2010) proves that the most frequent factors that stimulate to physical activeness are: overweight osteoporosis and development of degenerative changes of joints. Physical activeness is significant in the preventive medicine of cardiovascular diseases (Jaskólski, 2006) in the preventive medicine of metabolic disorders such as diabetes and hyperlipidemia (Kowalik, 2001) as well as in the prevention of musculoskeletal disorders, e.g. pain in lumbar vertebrae. Authors (Gieremek, Nowotny, 2007) hilight that low physical activeness at a young age negatively influences attempts to physical activation of erderly people. Among the erderly even low physical activeness causes stress that dimishes organism resistance to overloads (Dmowska, 2010). Thus, various forms of physical activeness that motivate and do not cause big tiredness are worth promoting. The research carried out by Duda (2008), Zając-Kowalska (2011) proves that among the polled women in the age group of 60 - 69 years the majority (86,6%) prefers walking as a form of physical activeness; 49% of the surveyed apart from walking do also gymnastics, 41,4% - ride a bicycle, 15,1% - go swimming, 7,6% - do nordic walking, 5,7% - do aerobics and less than 2% - except for walking also go jogging. There are factors that influence the efficiency of physical activeness: duration, frequency and intensity. It is accepted that a training session should last 30 minutes with the frequency of three times a week and the intensity of a training session should result in the pulse rate that constitutes 130 beats per minute. Some of the authors (Kuński, 2000) claim that a shorter, 10-15 minutes, but everyday training sessions are more efficient. In the annual studies conducted by Rezner and Janiszewski (in: Kozdroń, Leś, 2010) in 100 members of a population in the age group of 60 - 68 it was tested if physical activeness influences th decrease in psychoemotional stress and cognition. It was found that after a programme of physical activeness the resistance to psychoemotional stress improved. The subjects struggled better with everyday life problems. Kozdroń i Leś (2010) proved a statistically positive influence on the mood improvement among women in the age of

50 - 88, who were participants of a two-week recreation camps in Poland. The women participated in gymnastic exercises and walking sessions. Physical activeness is crucial among elderly people not only due to the fact that it enables them to function in everyday life but also do everyday activities, such as: hygienic activities, preparing food and eating, the control of physiological functions and independency in physical activeness (walking). Being concerned about their health and not being accustomed to physical activeness, elderly people reduce their physical activeness to minimum. They are afraid of falling down and consequently afraid of injuries and bone fractures. Low physical activeness causes negative changes in motor organs, the coordination and movement precision deteriorates. As a result of hypokinesia, organism dysfunctions escalate, the frequency of some diseases increases that eventually leads to the general physical disability and dependency on other people. Hence, the life quality impairs (Wieczorkowska-Tobis, 2010).

**Conclusion**

1. Most of the surveyed assess their life quality as average.
2. Vast majority of the women choose walking as the most preferred form of physical activeness.
3. Among the surveyed the most frequent reason to start physical activeness was is the need of weight reduction.
4. There is no significant relation between physical activeness and life quality among the questioned group of women. Seemingly, the fact that the surveyed treat life quality as a feature of life and not a state of life may be the reason.
5. For most of the women there are no medical contraindications against physical activeness.
6. Treating life quality as a life feature and not a state of life by the studied group of women may be the reason for no significant relation between physical activeness and the quality of life.

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