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Pilates: the Impact of Targeted Physical Activity on the Psychomotor Functions in Middle-aged Women

Abstract. The main aim of the article is an attempt to determine the importance of a targeted form of physical activity, i.e. Pilates, on psychomotor functions in women who practice this method. It seems important to search for appropriate, socially recognized values which promote health and are conducive to a health-oriented lifestyle, especially among women in middle adulthood. The study was based on a natural experiment involving 40 middle-aged women who participated in Pilates classes from the beginning of October 2013 to the end of September 2014. The one-year Pilates programme was found to have a significant impact on improving the participants' health awareness. The study indicates an improvement in elements of physical fitness, especially in the first (known as enthusiastic) stage of participation (from October 2013 to April 2014). Over the course of the year, significant differences were found in the measurements of all the selected elements of physical fitness. The greatest progress was recorded in body flexibility. It can be concluded that targeted exercises improve physical fitness, particularly body flexibility, contribute to reducing low back pain, thereby improving the quality of life.

Keywords: pilates, physical fitness, quality of life, middle adulthood

1. Introduction

The current trends of civilization highlight the growing importance of the quality of life, physical fitness and mental balance. Nowadays, the basic, often intuitive, assumption behind many forms of physical activity, such as Pilates, is to stimulate our psychophysical well-being. Targeted use of specific forms of physical exercise (or a suggestion to do so) can contribute to a significant health improvement.

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Study results can therefore confirm the usefulness of a selected form of activity as a health-promoting behaviour, especially in the area of early prophylaxis.

Nowadays, more and more attention is paid to the psychological aspects of training. In particular, coaches and athletes strongly believe that the psychological preparation of an athlete is a key determinant of victory or defeat. According to Nowicki [2010], the most important psychological skills include the ability to concentrate, build self-confidence and control emotions. Thanks to psychological or mental training, concentration, self-control and self-confidence determine the effective functionality of an athlete. Mental training is defined as a set of psychological methods and exercises/techniques, which, thanks to their systematic and long-term impact, lead to improved concentration, control over emotions and greater mental endurance in stressful situations [Nowicki 2010].

At the beginning of the twentieth century, a young German, Joseph Pilates, developed a method of exercise based on the belief that a healthy body is a combination of physical fitness and positive thinking. The essence of Pilates classes is to follow certain rules: control and concentration, breathing, core stability, accuracy and fluidity of movements. In Pilates classes, special attention should be paid to controlled and effective breathing. This method places great emphasis on conscious breathing to achieve a state of tranquillity, concentration, more effective learning and relaxation of the pelvis [Gavin 2006].

Pilates is an exercise system based on a holistic approach to health. The method mainly influences the flexibility of the joints and muscles, teaches the ability to move and stretch at an even pace. Additionally, it positively affects the nervous system [Ellswoth 2011]. It is an excellent relaxation method. Pilates classes significantly reduce tension and everyday stress related mainly to the fast pace of life [Ellswoth 2011]. Such classes improve mood and concentration [Mazur, Marczewski 2011].

The main aim of the article is to determine the influence of a targeted form of physical activity, i.e. Pilates, on the psychomotor functions in women who practice this method. It seems important to search for appropriate, socially recognized values which promote health and are conducive to a health-oriented lifestyle, especially among middle-aged women.

Żołądź [2003] claim that after the period of development, which is characterized by the highest increase in biological efficiency, beginning with the age of about 30, people start to age [cited after Górski 2012]. This process involves a gradual deterioration of many life functions on many levels, such as physical, mental and social. In addition, there is a decrease in the body's ability to sustain physiological loads, such as long-term effort, to fight off infections, heal from injuries and maintain homoeostasis. Harwas-Napierała and Trempała [2004] claim that this period is characterized by a highly individualised development. It is also the beginning of menopause. This period of life is associated with higher mor-

tality due to natural causes, such as e.g. cardiovascular diseases as well as many problems related to the ageing process, which are caused by both social and psychological factors. Therefore, middle adulthood seems to be an interesting period in human life from the point of view of research on health-related behaviours. It is a time when one should ensure that they remain efficient and functional when they reach old age and take up physical activity in a deliberate and conscious manner.

2. Material and methods

The following study was based on a natural experiment whose aim was to diagnose the effectiveness of Pilates classes during one-year observation of a selected group of women. Referring to Kuński [2003], who determined the stages of introducing middle-aged people to full and effective use of the benefits resulting from undertaking a specific form of physical activity, the participation was divided into an initial (enthusiastic) and sustained stage. Women's participation in the first stage, which lasted 6 months, was therefore described as enthusiastic, and after a year of observation – as sustained and conscious.

In order to examine the effects of the programme, an attempt was made to diagnose what changes occur in terms of physical fitness, self-esteem and self-control skills during the classes after the enthusiastic stage (after 6 months of participation) and after entering the stage of sustained participation (after one year).

A total of 143 women volunteered and 80 met the following criteria for inclusion: being a woman of middle age (in the absence of clear criteria for defining this period or consensus in the literature as to the specific age bracket, following the classification used in psychology, middle adulthood was defined as the years from 35/40 to 55/60), living in Nowy Dwór Mazowiecki, with good health (no infectious or chronic diseases), not participating in other organized classes during the experiment, without previous experience with Pilates.

Two groups were randomly selected:

– experimental group (40 women),
– control group (40 women).

The women included in the study were informed about its aims, methods and expected results. They voluntarily agreed to participate. For the purposes of this article, only women from the experimental group – participating in Pilates classes – were considered.

Respondents from the experimental group waged 47.6±10.48. Most of the respondents had secondary education (56%) and higher education (36%). Most of them were married (69%) with two children (36%) or one child (33%).

Table 1. Selected test procedures from the Adult Eurofit Physical Fitness Test

Measurement	Test procedure	Justification
1. Trunk muscle strength: dynamic sit-up test [Oja, Tuxworth 1995: 56].	The examinee lies on the floor on her back, knees bent at about 45°. The tester holds the examinee's feet down. The first 5 repetitions are performed with the arms straight so that the fingers reach the knees. The next 5 repetitions are performed with the arms crossed over the chest and the elbows contacting the knees. During the last 5 repetitions, the elbows touch the knees once the hands move behind the head. The 5 repetitions at each level must be performed with no pause and there should be no rest period between the series: there should only be enough time to change the baseline position [Oja, Tuxworth 1995].	Studies by Winand Osiński [2003] view the measurement of trunk muscle strength as an important indicator of low back pain. Additional studies [Osiński 2003, have confirmed the importance of trunk flexor and extensor muscle endurance and strength in the incidence of back pain.
2. Flexibility: sit and reach test [Oja, Tuxworth 1995: 61].	The test can be performed twice. The examinee sits on the floor with her legs stretched out straight ahead, the soles of the feet placed flat against the side of a box. The tester stays beside with their hands on the examinee's knees to make sure that her knees are not bent during the test. With her hands, the examinee moves a slat along a scale on the top of the box as far as possible and maintains this position for 2-3 seconds [Oja, Tuxworth 1995].	Measurements of both strength and flexibility are directly linked with health-related fitness (H-RF concept) [Grabowski, Szopa 1991]. Limited spinal mobility co-occurs with the risk of low back pain [Osiński 2003]. In the Eurofit for adults test the sit and reach test to measure flexibility is treated as a universal control for the available tests that measure this component. Moreover, Eurofit for adults highlights a direct link between low scores and low back pain [Oja, Tuxworth 1995].
3. General balance: single leg balance test [Oja, Tuxworth 1995: 63].	The examinee stands on one leg with her eyes closed. The test measures the number of times that the examinee touches the floor with her foot during 30 seconds. The lower this number, the better the balance. The timer is on as soon as the examinee catches her balance; when she loses it, the timer is stopped and the examinee tries to continue the test with no delay [Oja, Tuxworth 1995].	The importance of balance is most pronounced in women in their senior years due to the elevated risk of osteoporosis. Poor motor fitness is often a significant risk factor associated with increased numbers of falls and serious complications of femur fractions [Osiński 2003; Oja, Tuxworth 1995].

Source: own elaboration.

The women were healthy, not pregnant, did not suffer from any chronic disease and did not take any medications on a permanent basis. Many of them, however, complained of back pain, especially low back pain, which was most frequently caused by sedentary work. The experimental group participated in Pilates classes for one year. The classes took place twice a week and lasted 60 minutes each. All exercises were performed on mats. In the first week of the classes, the women underwent physical fitness measurements with the use of selected tests from the Eurofit Fitness Test Battery for Adults (flexibility, core muscle strength and overall balance). Detailed procedures for the selected tests are presented in Table 1. After 6 months (end of the enthusiastic stage), measurements were carried out in the experimental group comprising 39 women (n = 39). At this stage, in addition to selected fitness tests, the author used her own questionnaire concerning subjective feelings during classes. The questions addressed aspects of self-assessment and self-control:

– subjective feelings about the impact of a given form on well-being
– selected elements of physical fitness of the examined women, as well as the frequency of their participation in the selected form of physical activity.

In the final stage of the study, after completion of the whole programme, progress was examined in the experimental group, in which 37 women remained (n = 37). Selected physical fitness tests were used, as well as the author's own questionnaire concerning subjective feelings during classes.

The following statistical tests were used in the study: the Wilcoxon signed-rank test and the Chi-square test for independence. All calculations were made using Statistica 10 software package.

3. Results

3.1. Impact of Pilates exercises on selected elements of physical fitness

Progress in the experimental group was analysed during one-year participation in Pilates classes.

After one year, statistical differences were observed in the experimental group in all three tests. Significant increases in the results were observed in the measurements of flexibility and strength of the core muscles. Detailed data are presented in Table 2.

During the experiment, there was an mid-term measurement of physical fitness in the experimental group (April 2014). Analysis of the collected data indicated that the highest increases in average results occurred after the first six

Table 2. Changes in physical fitness in the experimental group – after the end of the programme (from October 2013 to September 2014)

Test	Unit of measurement	October 2013 (mean±SD)	September 2014 (mean±SD)	Accuracy of *p* value
Flexibility	Reach [cm]	5.65±5.94	13.03±6.03	0.000***
Core muscle strength	Number of repetitions [–]	10.83±3.59	14.73±1.15	0.000***
General balance	Number of repetitions [–]	1.74±1.80	0.56±1.13	0.0002***

Wilcoxon matched-pairs test; *** $p < 0.001$

Source: own elaboration.

Table 3. Changes in physical fitness in the experimental group from October 2013 to April 2014

Test	Unit of measurement	October 2013 (mean±SD)	April 2014 (mean±SD)	Accuracy of *p* value
Flexibility	Reach [cm]	5.65±5.94	10.31±6.13	0.000***
Core muscle strength	Number of repetitions [–]	10.83±3.59	13.92±2.36	0.000***
General balance	Number of repetitions [–]	1.74±1.80	0.67±1.07	0.0002***

Wilcoxon matched-pairs test; *** $p < 0.001$

Source: own elaboration.

Table 4. Changes in physical fitness in the experimental group from April to September 2014

Test	Unit of measurement	October 2013 (mean±SD)	April 2014 (mean±SD)	Accuracy of *p* value
Flexibility	Reach [cm]	10.31±6.13	13.03±6.03	0,000000***
Core muscle strength	Number of repetitions [–]	13.92±2.36	14.73±1.15	0,000003***
General balance	Number of repetitions [–]	0.67±1.07	0.56±1.13	0,000419***

Wilcoxon matched-pairs test; *** $p < 0.001$

Source: own elaboration.

months of classes, from October 2013 to April 2014, i.e. the period of enthusiastic participation. Statistical differences were observed in all three tests (Table 3).

Statistically significant changes in the period from April to September 2014 were observed in two tests: flexibility and core muscle strength. There were no statistical differences in the assessment of general balance (Table 4).

3.2. Subjectively perceived effects of Pilates on health according to the studied women

In the study, the conscious need for regularity increased with the time spent participating in the classes. During the enthusiastic period, significantly more women (62%) declared that they participated in the classes regularly thanks to the group with whom they practised. During the period of sustained participation, significantly more women (89%) stated that they did not need additional incentives to maintain regularity.

The respondents, both during the period of enthusiastic and sustained participation (50%), said that participation in organised activities encouraged them to continue on their own after the end of the programme. There were no statistical differences between the declarations.

The respondents also declared that maintaining regularity had a very high impact on health. No statistical differences were found between the declarations of the women surveyed.

The respondents in both periods of participation (enthusiastic and sustained) noticed the biggest impact of Pilates on improving physical fitness and increasing energy levels during the day. There were no statistical differences between declarations in each period. As the programme continued, during the period of sustained participation the women reported a greater improvement in the psychological area, including such effects as better functioning in their immediate environment (family, work, friends), reduced tension and stress and increased positive emotions. Statistically significant differences at $p < 0.05$ were observed between the declarations of the respondents in the two periods.

51% of women in the period of sustained participation reported a significant increase in self-esteem during the one-year programme, compared to 15% of respondents in the period of enthusiastic participation. Statistically significant differences at $p < 0.05$ were observed between responses collected in each period.

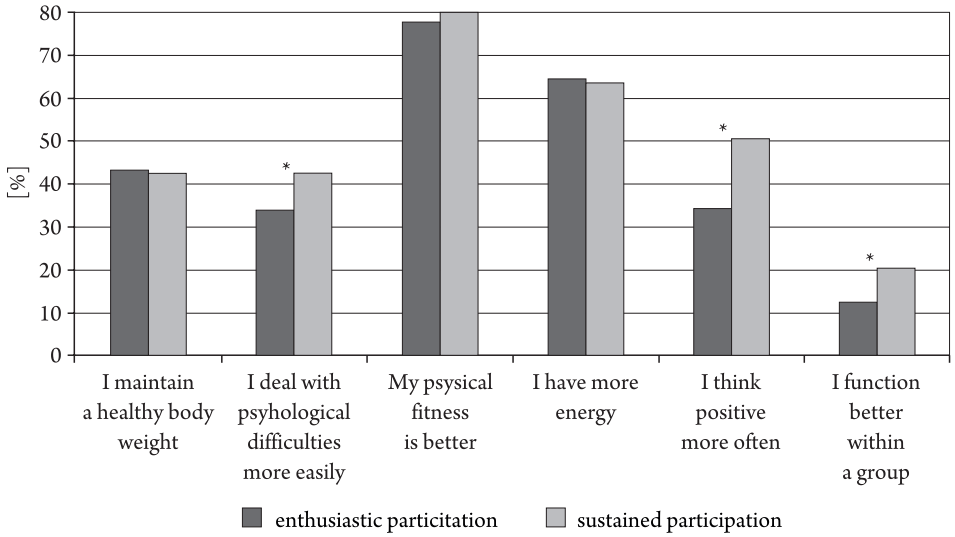
The respondents also expressed their opinions as to the psychological benefits of Pilates. The women from the period of enthusiastic and sustained participation said that they had started to treat their own health as an autotelic value. No statistical differences were noticed between declarations collected in each period. However, the women in the period of sustained participation more often

reported that the participation in the Pilates programme had a positive impact on this aspect and had changed their lifestyle. The respondents declared that they recognized the positive value of physical activity, coped better with everyday life by efficiently solving problems, and noticed everyday successes more frequently. Statistically significant differences at $p < 0.05$ were observed between the declarations collected in each period. Detailed information is presented in Chart 1.

The respondents in the period of enthusiastic and sustained participation also confirmed the importance of regular participation, which was associated with a higher probability of achieving the expected results. No statistically significant differences were noticed between the two periods. When it comes to issues related to the skilful performance of subsequent movement tasks, the conviction that the exercises have an impact on one's well-being and health and that practising Pilates is of importance for health reasons, women in the period of sustained participation that were much more convinced in their declarations than in the period of enthusiastic participation. Statistical differences of $p < 0.05\%$ were noted between the declarations. Detailed data are presented in Table 5.

During the programme, the respondents defined the influence of Pilates on the perception of changes in the level of the tested motor skills. Women in the period of sustained participation more often mentioned flexibility, muscle endurance and strength as the abilities which were most affected by Pilates. Statistically significant differences at $p < 0.05$ were observed between the two periods. The

Chart 1. Perceived influence of Pilates on health (%) – respondents' declarations



Chi-squared test, * $p < 0.05$.

Source: own elaboration.

Table 5. Perceived impact of Pilates classes on health (%) – respondents' declarations

Likert scale	Only systematic action will bring the expected results	I'm pretty good at performing various motor tasks		My exercises significantly affect my well-being and health		Participation in the selected form of exercise has a positive impact on health	
	enthusiastic and sustained participation	Participation					
		enthusiastic	sustained	enthusiastic	sustained	enthusiastic	sustained
Strongly disagree	1	0	0	0	0	3	0
Disagree	0	11	0	3	0	3	0
Neither agree or disagree	0	8	6	13	0	11	6
Agree	27	61	37	47	25	53*	14
Strongly disagree	72	21	57*	37	75*	32	81*

Chi-square test; * $p < 0.05$

Source: own elaboration.

respondents from both periods also reported an improvement in body coordination and balance – without significant differences between the declarations.

During the programme, the participants had an opportunity to observe the changes that took place in their bodies during the exercises. Women in both periods of participation observed greatest differences in the ability to contract certain muscles and control breathing. There were no statistically significant differences between declarations. The respondents in the period of sustained participation significantly increased their awareness of pelvic function. There were statistically significant differences at $p < 0.05$ between the declarations.

An important aspect of Pilates classes is their effect on health. The respondents in the period of sustained participation reported experiencing a significant improvement in health during the programme. There were statistically significant differences at $p < 0.05$ between the declarations.

The respondents took part in Pilates classes mainly because they helped them to maintain both physical and mental health and remain efficient and functional in old age. In the period of sustained participation, 70% of the respondents reported choosing Pilates classes because of their impact on health, claiming that these classes improved their health were conducive to efficiency and functional-

ity in old age. On the other hand, 29% of women in the period of enthusiastic participation indicated that these classes made them feel better. However, they emphasized that there are many other forms of activity which bring biopsychosocial benefits. There were statistically significant differences between the declarations

The respondents declared that participation in Pilates classes encouraged them to change their lifestyle so as to enjoy better health. Significantly more respondents in the period of sustained participation indicated that they had started to pay more attention to mental comfort (59% in the group of sustained participation, 28% in the group of enthusiastic participation) and that they had reduced their consumption of stimulants (24% in the group of sustained participation, 5% in the group of enthusiastic participation). Statistically significant differences of $p < 0.05\%$ were found between the declarations. Women in both periods of participation stated that they had also started to pay attention to proper diet (29%) and adequate amount of sleep (22%). There were no statistically significant differences between responses.

4. Discussion

The author's study showed that the participation in a one-year Pilates programme had a significant impact on increasing the women's health awareness. 91% of the respondents pointed out that the possibility of achieving expected results through regular participation was important for their sense of health. As a result of participating in the programme, health had become an autotelic value for 59% of the respondents. However, an increase in health awareness was more noticeable in the sustained participation group. 70% of women in this group reported choosing Pilates classes for health reasons. Although both groups reported a positive impact of Pilates on their perceived physical fitness, significantly more women in the sustained participation group reported an improvement in the psychological area (functioning in different social groups, coping with everyday difficulties). The author's observation of the group also confirmed that over time the respondents were more willing to participate in the classes, especially as a result of the positive changes they had noticed in terms of physical fitness and reduction of low back pain. The respondents also claimed that they enjoyed the classes which, apart from purely motor aspects, bring certain social benefits. By participating in a homogeneous group, the respondents had made friends they could socialise with in other contexts. Regular participation in the classes was also a welcome break from everyday life and the routine of professional work and household duties. The classes became something natural, voluntary and were an opportunity for them to focus only on themselves. The respondents also noticed that regular physical activity yielded many benefits, especially during middle adulthood.

In women, both in middle and late adulthood, the health-related and psychological benefits of engaging in a physical activity are important. Systemic and physiological changes associated with the pre-menopausal period, increased susceptibility to stress factors, excessive workload and household chores result in less leisure time and reduced physical activity. These factors affect the psychophysical condition of women and may have a negative impact on their self-esteem. Because women in the pre-menopausal and menopausal period experience not only bothersome somatic symptoms, but also – and equally often – emotional imbalance, decreased sense of physical attractiveness and decreased self-esteem, it seems necessary to provide them with holistic help. It should mainly aim at improving physical and mental well-being and improving the quality of life in the main areas of life such as family, work and social life [Bąk-Sosnowska, Skrzypulec-Plinta 2012]. Szczepańska et al. [2009] demonstrated that self-assessment in relation to mental as well as physical health is decreasing with age. Turosz and Pacholczak [2001] suggest that active women, who participate in fitness club activities, are characterized by high self-esteem. These women also have a positive attitude towards the professional sphere, are better at coping with stressful situations and are more successful in interpersonal contacts, as team players and members of society. They also have a positive attitude towards themselves and others. They are more positive about their chances of completing their tasks, which increases their task-related motivation, which in turn helps them to achieve their goals. Hence, physically active people prove their ability to achieve their goals, to show initiative and creativity. Other authors emphasize that, regardless of motivations for undertaking physical activity, women achieve their intended goal, which gives them physical and mental strength, while the resulting satisfaction allows them to enjoy their professional and family life. On the other hand, women who do not exercise tend to suffer from greater nervousness and irritability and lower self-esteem [Turosz, Pacholczak 2001]. The author's own research also confirms the influence of Pilates on higher self-esteem. This was particularly noticeable during the period of sustained participation (51%). As regards key determinants of health, women from the experimental group most often mentioned the importance of exercise and maintaining appropriate body weight. All these aspects may have been contributed to the fact that health awareness of the respondents increased along with the duration of the programme.

The growing social awareness has a significant impact on lifestyle. Women increasingly take up physical activity with a view to improving their health and quality of life. Żarów and Matusik [2005] confirm that physical activity has a significant impact on women's health (maintenance or improvement of well-being, improvement of motor fitness). Studies involving women aged from 42 to 70 confirm the significance of physical activity as an important element of health-promoting behaviours, due to the benefits in terms of health, prevention, rehabil-

itation and the therapeutic value [Wilk, 2005]. Wilk [2005] indicates that study participants, through regular exercises, significantly improved their motor skills, reduced stress and improved the quality of life, thanks to the positive emotions that physical activity gives. Additionally, it may contribute to mood enhancement. People who exercise notice not only changes in physical fitness, but also an increase in energy levels and a decrease in muscle tension [Myrna-Bekas, Lisowska 2009]. Although the healthy lifestyle fashion is on the rise, not all studies indicate the need for systematic, daily physical activity. According to the study by Zapała, Kowalczyk, Lubińska-Żądło [2015], working-age women tend to undertake physical activity once or twice a week. Walking is the most preferred form of physical activity. Only 8% of women report engaging in physical activity every day. Among rural residents the habit of physical exercise is much less frequent. Although studies indicate low levels of exercise, most female respondents, those living in cities as well as those from rural areas, regard their level of physical activity as fairly typical. The promotion of a healthy lifestyle among adults is important for successful aging. Goszczyńska [2020] argues it is necessary to make employers aware of the inevitability of population aging and to present health promotion as a tool of limiting its negative effects. The author's research indicates that the promotion of a proper lifestyle by employers (e.g. regular exercise) is an effective tool for improving the health of older workers (aged 55 and older). Research results indicate that organizations that employ older workers have the highest awareness of the aging process and its consequences, and they also see the point of investing in the health of their employees. In addition, they are more willing than companies which do not employ people over the age of 55 to analyze the health needs of all their staff, regardless of age, and have been more committed to health promotion in recent years, and implement such activities more intensively.

The author's study indicate an improvement in physical fitness, especially in the first (enthusiastic) stage. During the year-long Pilates programme, significant differences were found in the measurements of all the selected elements of physical fitness. The greatest progress was recorded in body flexibility. A similar observation was made by Segal, Hein and Basford [2004], i.e. improvement in body flexibility was observed already after a two-month period. Respondents also reported positive changes in body posture and flexibility and alleviation of morning stiffness. Phrompaet et al. [2011] also observed a significant impact of Pilates on body flexibility, especially in the lumbar spine. Çakmakçi [2011] found that regular Pilates training sessions significantly improved body flexibility even among obese adult women after only eight weeks.

The results of other studies indicate that Pilates can have a significant impact on the quality of life by producing a range of benefits. Bernardo [2007] argues that Pilates can bring many benefits to people who seek effective training without negative consequences for their joints and muscles. The author also believes

that Pilates is very effective in that it engages many muscle groups. This effect becomes significant when pain or illness makes intensive training impossible. According to Lange et al. [2000], three categories of beneficial effects of Pilates classes can be considered: physiological improvements, psychological improvements and acquisition of the ability to effectively learn the right body posture and motor skills. Studies by Mazur and Marczewski [2011] confirm the effectiveness of Pilates in relation to the subjectively perceived benefits of practising this method. Just three months into the programme, the participants noticed a decrease in pain and an increase in concentration. Kava et al. [2010] also suggest that participation in Pilates classes improves everyday life and work performance. Respondents indicated that after participating in regular Pilates training sessions, they noticed reduction in pain, less fatigue and workload/effort while playing instruments. Tudor et al. [2013] confirm the effectiveness of a 16-week Pilates training for adults, especially as regards body balance, strength and endurance of the abdominal muscles and strength of the upper limbs.

Pilates classes, by increasing body flexibility, muscle strength and endurance, reducing excess body fat, and alleviating spine pain, significantly increase life satisfaction, improve general health and satisfaction with life. This is confirmed by Vad, Bhat and Tarabichi [2007] and Cruz-Ferreira et al. [2011], who indicate that a short, 6-month programme significantly improves life satisfaction, appearance, ability to function in society, health status, general self-esteem and perception by other people. Participants in Pilates classes (both a short programme of 3 months and a long programme of more than one year) point to an improvement in general and mental health, quality of life and general functioning [Dias Vieira et al. 2010. This is confirmed by the study conducted by Gokhan et al. [2014], suggesting that a six-week Pilates programme is an effective tool in reducing weight, body fat, especially around the abdomen, biceps and triceps. Singh N. and Singh V.K. [2014] also confirm that a 12-week Pilates programme can have a significant impact on body composition, especially on body fat (%), total and lean body mass.

5. Conclusions

To sum up, it can be stated that the study was intended not only to show the effectiveness of Pilates classes in the area of physical fitness and, consequently, on perceived quality of life, but also to raise awareness of the broader benefits of active participation in physical activities. It can therefore be concluded that targeted exercises certainly improve physical fitness, in particular flexibility of the body, reduce low back pain and thus improve the quality of life. In addition,

they improve body awareness, teach how to achieve internal balance and harmony. They also influence the social sphere by helping participants spend their free time efficiently, thereby transmitting appropriate patterns of behaviour to their families.

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Pilates – wpływ ukierunkowanej formy aktywności fizycznej na aspekty psychoruchowe kobiet w okresie średniej dorosłości

Streszczenie. Celem głównym artykułu jest próba określenia wpływu ukierunkowanej formy aktywności fizycznej – pilates na aspekty psychoruchowe uczestniczek zajęć prowadzonych tą metodą. Zdaniem autorki istotne wydaje się poszukiwanie wartości uznawanych społecznie za

sprzyjające zdrowiu i warunkujące styl życia ukierunkowany na zdrowie, szczególnie wśród kobiet w okresie średniej dorosłości. W pracy zastosowano eksperyment naturalny. Przebadano 40 kobiet w okresie średniej dorosłości, które od początku października 2013 r. do końca września 2014 r. uczestniczyły w zajęciach pilates. Na podstawie badań można stwierdzić, że udział kobiet w rocznym programie zajęć pilates wpłynął znacząco na poprawę ich świadomości prozdrowotnej. Badania wskazują na poprawę elementów sprawności fizycznej, szczególnie w pierwszym (tzw. entuzjastycznym) okresie uczestnictwa w eksperymencie (od października 2013 r. do kwietnia 2014 r.). Podczas rocznego programu zajęć pilates stwierdzono istotne różnice w pomiarze wszystkich wybranych elementów sprawności fizycznej. Największe postępy odnotowano w gibkości ciała. Można stwierdzić, że ukierunkowane ćwiczenia na pewno poprawiają sprawność fizyczną, szczególnie gibkość ciała, wpływają na zmniejszenie dolegliwości bólowych dolnego odcinka kręgosłupa, przez co polepszają jakość życia.

Słowa kluczowe: pilates, sprawność fizyczna, jakość życia, średnia dorosłość