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USE OF YOGA EXERCISES ACCORDING TO THE SYSTEM YOGA IN DAILY LIFE © DURING THE RECONDITIONING STAY OF EMPLOYEES OF THE IRONWORKS

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Abstract

During a reconditioning stay, yoga exercises can have health benefits for ironworks employees who suffer from the risk of hard physical work, noise, heat, dust and vibration. The aim of the work was to find out the satisfaction of the participants of the reconditioning stay during the 7 days of the stay and after the inclusion of yoga exercises among the procedures. Using a non-standard entry and exit questionnaire, with 11 questions closed, 2 open questions, we evaluated the satisfaction during the reconditioning stay of 79 subjects with the health program (passive and active procedures) and yoga against back pain according to the System Yoga in Daily Life ©. 92.21% of subjects rated participation in the reconditioning stay as a benefit. After the reconditioning stay, the back pain was relieved. In the cervical spine the pain intensity changed from 5.1 to 3.3 p < 0.0001, in the thoracic spine from 4.4 to 2.6 p = 0.0063 and in the lumbar spine from 5.2 to 3.0 p < 0, 0001. Of the active procedures, 20.25% would choose yoga exercises against back pain from the System Yoga in Daily Life ©. 72.36% of respondents would prefer relaxation, 27.63% breathing exercises - pranayama and 13.16% exercises - asanas. Yoga exercises according to the System Yoga in Daily Life © are recommended to be included as standard as one of the active procedures within reconditioning stays.

Keywords

Reconditioning stay, System Yoga in Daily Life ©, Yoga against back pain

INTRODUCTION

Yoga comes from India, the first written records date back 4 thousand years ago. Rishi Patanjali divided yoga into 8 levels: moral principles (1st yama, 2nd niyama), physical exercises (3rd asanas), breathing exercises (4th pranayama), sensory withdrawal (5th pratyahara), concentration (6th dharana), meditation (7th dhyana), complete self-realization (8th samadhi). In the West, yoga is understood more as a set of physical exercises - asanas that help develop flexibility, strength, fitness and vitality. The yoga teacher Paramhans Swami Maheshwarananda contributed significantly to the promotion of yoga in Europe with his System Yoga in Daily Life ©, which has been well known in Slovakia and the Czech Republic for 50 years. This yoga system has detailed and systematically connected all traditional yoga techniques into units with gradually graded difficulty. The composition, sequence, dosing, preparation of individual techniques are sophisticatedly arranged, which gives this system high efficiency and safety. The uniqueness is that it is suitable for the needs of Western people. It is designed for all ages,

including pensioners and children. Some publications are being developed for different diagnoses: Yoga against back pain, Yoga against joint pain, Yoga for diabetics, Yoga for women, Yoga against high blood pressure and so on.

Yoga against back pain

Yoga exercises against back pain from the System Yoga in Daily Life © are appropriately chosen traditional yoga techniques while respecting the latest medical knowledge in the treatment and prevention of spinal diseases. It is a set of techniques of relaxation, yoga breathing, physical exercises and pranayama.

Relaxation teaches how to relax mentally and physically and reduce tension throughout the body or locally in stiff painful muscles. It has a great benefit for the psycho-hygiene of today's man. Proper breathing is essential in yoga, so its practice begins at the beginning. Without proper breathing, yoga would be just a normal exercise. We divide physical exercises into preparatory, exercises for everyone - sarva hita asanas, which prepare the body for more demanding positions – asanas (Maheshwarananda, 2000a). Sarva hita asanas regulate muscle imbalance, strengthen individual parts of the body and, with the help of open and closed chains, prepare us for more coordinating exercises up to the level of asanas. The individual parts of the exercise are grouped so as to relax the typically shortened muscles and strengthen the typically weakened muscles. They mobilize the spine, thus maintaining full range of motion and developing balance skills. A separate group in yoga are breathing techniques - pranayama. It is a conscious control, regulation of the breath, while using breathing through one nostril. It begins with the simplest pranayana technique "Nadi shodhan grade 1", after 3 months of regular practicing, it is transferred to the pranayama technique "Nadi shodhan grade 2". It is followed by "Nadi shodhan grade 3", which is an alternating breathing technique, called in orogin Anulomaviloma.

This training of the respiratory system is systematic and the intensity increases gradually (Maheshwarananda, 2000b, c, d). It's happening to slow down the breath and the body adapts to a slightly hypometabolic state, improves the stability of the internal environment with major changes in the external environment. Slowing down your breath in itself means saving energy in terms of a better metabolic economy. During pranayama, pressure conditions change, resistance in the airways increases (closing of the nostril) and increases overpressure and underpressure compared to natural breathing. There is an increase of the minute volume in cardiac output without increasing its work (Votava, 1988). Pranayama relieves stress and stabilizes the autonomic functions of the body (Bhimani, Kulkarni, Kowale, Salvi, 2011).

OBJECKTIVE AND RESEARCH QUESTIONS

From July to October 2020, we used the entry and exit questionnaires to evaluate satisfaction with the reconditioning stay in Tále in the Low Tatras and Yoga exercises against back pain according to the System Yoga in Daily Life ©.

Research Questions

1. What is the satisfaction with the reconditioning stay of the employees of the ironworks?
2. Which procedures do they prefer?

3. What is your satisfaction with yoga exercises?

METHODOLOGY

Employees of Železiarne Podbrezová a.s., who according to § 11 of the Act of the National Council of the Slovak Republic no. 124/2006 Coll. on safety and health at work in order to prevent occupational diseases met the criteria of exposure to factors of the working environment of the 3rd and 4th categories, chemical factor (dust, solid aerosol), vibration, physical activity, heat load and noise. They must not show signs of acute illness or communicable disease. The aim of the stay was to compensate for unfavorable working conditions and to prevent possible damage to health. An average of 19 probands took part in one tour. All were provided with a program-controlled health regime, accommodation and all-day meals. The length of stay was 7 days, starting on Monday morning and ending on Sunday with lunch. Before starting the stay, everyone was examined by a doctor of rehabilitation medicine.

During their stay, everyone completed a classic massage 2x, paraffin hand wrap 2x, wellness 2x, swimming pool and Finnish sauna 6x, Nordic walking 3x, cardio fitness 6x, SM system 2x, back school 1x, exercise in the pool 2x, yoga against back pain from the System Yoga in Daily Life © 2x, music therapy and aromatherapy 6x. The yoga exercise lasted 60 minutes, on Tuesdays and Thursdays, and included proper breathing exercises for 8 minutes, preparatory yoga exercises - sarvahita asanas and back pain asanas 35 minutes, relaxation 10 minutes, pranayama - nadi sodhan level one 7 minutes. The lesson was led by a physiotherapist who was trained in yoga in rehabilitation according to the Yoga System in Daily Life ©.

SUBJECTS

In total 79 subjects completed the reconditioning stay, 88.61% (70) of them were males and 11.39% (9) females. The age of the subjects ranged from 26 to 62 years, the average age of the subjects was 46.34 ± 9.71 years, the median age was 49 and the mode age was 50 years. The weight of the subjects ranged from 60 to 120 kg, the average weight of the subjects was 88.20 ± 15.19 kg, the median and mode reached 90 kg. The height of the subjects ranged from 156 to 200 cm, the average height of the subjects was 176.90 ± 8.15 cm, the median was 177 cm, the mode was 180 cm. The minimum value of BMI of subjects was 19.88, maximum 41.09, average value 28.15 ± 4.40 cm, median value was 27.70, mode 32.27. Subjects worked an average of 23.39 ± 11.28 years. The length of years worked ranged from 4 to 45 years, the median length of practice was 23 years, the mode 30 years, see Figure 1.

Graph 1 Number of years worked in ironworks

Statistical Analysis

The data were processed in MS Excel 2016 and in the XLSTAT statistical program. We calculated descriptive statistics of some data and presented them in graphical form, in the form of box graphs. We expressed the frequency of respondents' answers in absolute and relative numbers, and in questions 2 and 3 of the input questionnaire as well as in question 3 of the output questionnaire, we displayed them in graphical form, with Venn diagrams.

We performed the testing in the XLSTAT statistical program. We verified the statistical significance in the differences of relative frequencies by the test of agreement of two shares and also by the test of agreement of k - shares with the Marascuilo procedure as a post hoc test. In testing the significance of the differences in the values of the average pain intensity before and after the reconditioning stay, we used a paired t - test with respect to the normality of the data. In connection with age and reduction of pain intensity and number of years worked and reduction of pain intensity, we used Student's two - sample t - test in the testing. We verified the normality of the data with the Shapiro - Wilk test. We tested at a significance level of 1% or 5%.

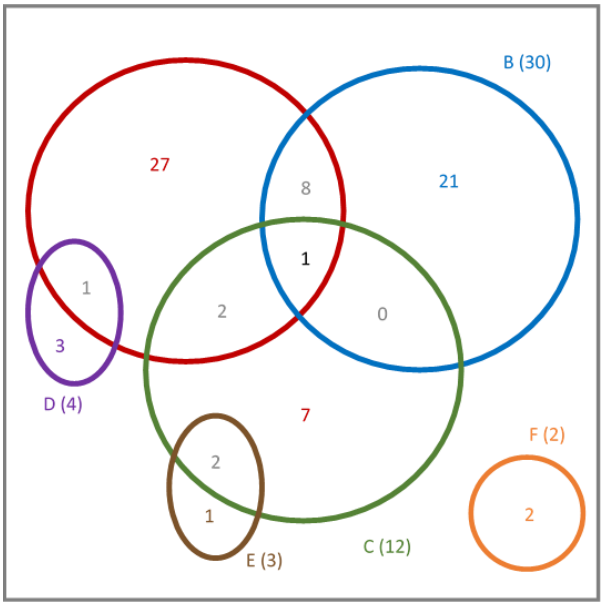
RESULTS AND DISCUSSION

RESULTS

In our group in the entry questionnaire before the reconditioning stay, 91.14% (72) of the subjects assumed that the reconditioning stay would be beneficial for them.

In the open-ended question, "What do you expect from a reconditioning stay"? In their answers they stated: A - rest from work 39, B - relaxation 30, C - regeneration 12, D - improvement of health 4, E - relief of pain 3, F - nothing 2. Some subjects also mentioned a combination of these options and absolute abundance we present the choices of their answers in graph no. 2. 4 subjects did not answer the question at all.

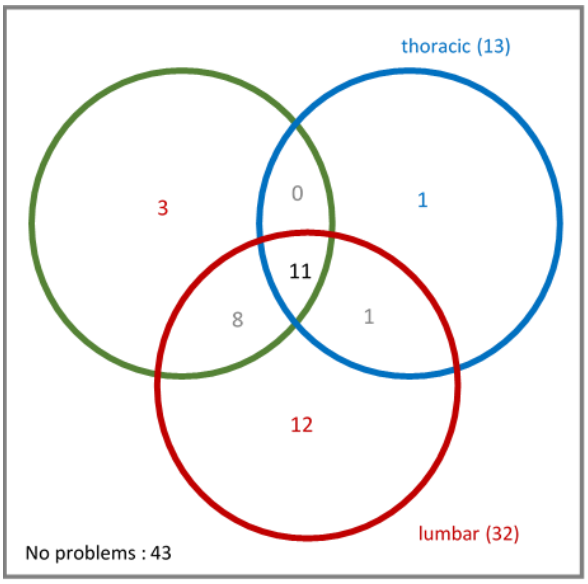
Graph 2 What do you expect from a reconditioning stay ?



A - rest from work, B - relaxation, C - regeneration, D - improvement of health, E - relief of pain 3, F - nothing

To the question “Do you have back pain?“ 54.43% (43) answered they do not have a problem with any area of the spine, 27.85% (22) have problems with the cervical spine, 16.46% (13) with a thoracic spine and 40.51% (32) with a lumbar spine, several of them have them in several sections at the same time graph no.3.

Graph 3 Do you have back pain ?



The difference in the numbers of participants who have problems in the three areas of the spine is statistically significant (test of agreement to proportions, χ^2 = 11.2778; χ^2 krit = 9.2103; p = 0.0036) due to a significant difference in the percentage of respondents having problems with a lumbar region (40.51%) and those who have thoracic problems (16.46%). This is indicated by the result of the Marascuilo procedure in this test, which as a post hoc test we compared the significance of the differences in relative frequencies in pairs with each other (0.2405> 0.2101) Table 1.

Tab. 1 Compared the significance of the differences in relative frequencies in pairs

Marascuilo procedure:

Contrast (α = 0,01)		Value	Critical value	Significant
|p(cervic.)-p(thor.)	-	0,1139	0,1986	No
|p(cervic.)-p(lumb.)	-	0,1266	0,2270	No
|p(thor.)-p(lumb.)	-	0,2405	0,2101	Yes

The numbers, subjects who have problems with the lumbar spine (40.51%) and those who have problems with the cervical spine (27.85%) do not differ statistically significantly from each other (0.1266 < 0.2270). And the percentages of participants who have problems with the cervical (27.85%) and those who have problems with the thoracic region (16.46%) of the spine (0.1139 < 0.1986) do not differ significantly.

Output questionnaire

The respondents had a statistically significant reduction in back pain in all three areas after the reconditioning stay, see Table 2.

Tab. 2 Pain intensity before and after reconditioning stay

Intensity of pain	before	after	n	p
Cervical spine	5,07 ± 2,43	3,27 ± 2,19	15	p < 0,0001
Thoracic spine	4,38 ± 1,85	2,63 ± 2,50	8	p = 0,0063
Lumbar spine	5,15 ± 2,41	2,95 ± 1,67	20	p < 0,0001

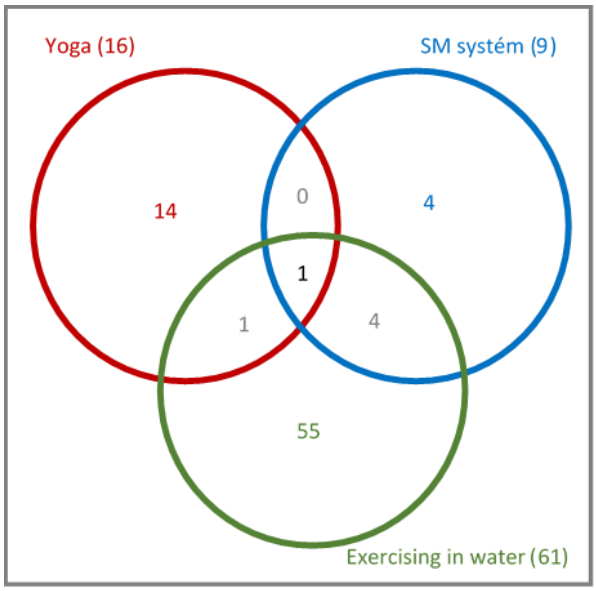
By testing, we verified the statistical significance of differences in the age of subjects who had a significant reduction in pain intensity and the age of respondents who did not have spinal problems. In the cervical spine, the pain was eliminated in the participants at the average age of 49.20 ± 9.04 and they had no problems at the age of 42.59 ± 9.73. The average age of participants with a significant reduction in cervical spine pain is statistically higher than the average age of subjects who did not have problems with this spine (Student's two-tailed t-test: t = 2 1410; tkrit = 1. 6896; p = 0.0197). In the thoracic spine, probands had altered pain at a mean age of 50.91 ± 9.88 and no pain at 42.59 ± 9.73. The average age of participants with a significant reduction in chest pain is statistically more significant than the average age of subjects who did not have problems with this spine (Student's two-tailed t-test: t = 2.1960; tkrit = 1. 7056; p = 0.0186). In the lumbar spine, pain in a subject with an average age of 47.57 ± 9.72 and pain in the age of 42.59 ± 9.73 are alleviated. The average age of participants with a significant reduction in pain in the lumbar spine is statistically significantly higher than the average age of subjects who did not have problems with this spine (Student's two-tailed t-test: t = 1 6860; tkrit = 1. 6794 ; p = 0.0494).

By testing, we verified the statistical significance of participants difference according to years worked and the presence of back pain. In the area of the cervical spine, there was a decrease in pain in subjects with average years of work 27.80 ± 11.70, no pain during their years of work 18.47 ± 8.84. The average number of years worked by subjects with a significant reduction in cervical spine pain is statistically more significant than the number of years worked by subjects who did not have problems with this spine (Student's two-sample t-test: t = 2 6967; tkrit = 2.4377; p = 0.0053). In the thoracic spine, there was a decrease in pain in participants with an average number of years of 28.09 ± 12.49 and no pain after 18.47 ± 8.84 years of service. The average number of years worked by subjects with a significant reduction in pain in the thoracic spine is statistically higher than the average number of years worked by subjects who did not have problems with this spine (Student's two-sample t-test: t = 2 3918; tkrit = 1,756; p = 0.0121). In the lumbar spine, pain decreased after working average years 24.47 ± 12.09 and no pain after working 18.47 ± 8.84 years. The average number of years worked by subjects with a significant reduction in pain in the lumbar spine is statistically more significant than the average number of years worked by subjects who did not have problems with this spine (Student's two-sample t-test: t = 1 7889; tkrit = 1,6794; p = 0.0402).

To the question "Which procedures would you prefer?" 88.61% (70) of participants would prefer passive procedures (massage, paraffin, etc.), 17.72% (14) of participants would prefer active procedures (SM system, System Yoga in Daily Life, exercise in water). The percentage of subjects who would prefer passive procedures is statistically significantly higher than the percentage of respondents who would prefer active procedures p < 0.0001. The largest percentage of participants, 77.22% (61) expressed interest in exercising in water, 20.25% (16) in yoga and 11.39% (9) of subjects in the SM system. The percentage of subjects interested in exercising in water is statistically significantly higher than the sum of the numbers of participants interested in both remaining procedures p < 0.0001. Several

subjects also expressed interest in several procedures at the same time Figure 4.

Figure 4 Which procedures would you prefer?



72.36% (55) of respondents liked relaxation to yoga practice, 13.16% (10) of respondents liked exercise - asanas and 27.63% (21) breathing concentration exercises. The percentage of respondents who liked relaxation (72.36%) is statistically significantly higher than the percentage of respondents (13.16%) who like exercise - asanas (0.5921> 0.1951) and is statistically significantly higher than the percentage respondents (27.63%) who liked pranayama (0.4474> 0.2202). The percentage of respondents who like exercises - asanas and those who like breathing concentration exercises - pranayama, are not statistically significant others (0.14471 < 0.1951). This follows from the results of the Marascuilo procedure in the test of agreement to the proportion, by which we verified the statistical significance of the difference, the subjects answered in question 5 of the output questionnaire table 3.

Tab. 33 Marascuilo procedure in the test of agreement to the proportion

Contrast (α = 0,01)	Value	Critical value	Significant
|p(relaxation - p(asanas)|	0,5921	0,1951	Yes
|p(relaxation) - p(pranayama)|	0,4474	0,2202	Yes
|p(asanas) - p(pranayama)|	0,1447	0,1951	No

To the question “How is yoga different from other exercises?" Participants answered differently. According to them, its differences from other exercises are reflected in the way of breathing during exercise, in exercises, in positions during exercise, in the difficulty of exercise, in the possibilities of relaxation, relaxation and silence, peace of mind. They claim that exercise is a comprehensive exercise for the body and that yoga also has a good effect on the psychic. 2 participants claimed that they were no different, 8 subjects could not comment on the question, but 47 subjects did not answer the question at any time.

The percentage of subjects who continued to practice yoga (47.37%) and those who did not continue in yoga (52.63%) did not differ statistically significantly (test of agreement of two shares, z = - 0.6489; skrit = -1 6449; p = 0.2582). As many as 47.37% of subjects continued by practicing yoga, a value that does not differ statistically significantly from the value of 50 percent (two-part agreement test, z = -0.3441; skrit = -1 6449; p = 0.3654) and significant result.

In the output questionnaire after the reconditioning stay for 92, 21% (73) of the subjects the stay met their expectations.

DISCUSSION

According to § 11 of the Act of the National Council of the Slovak Republic no. 124/2006 Coll. on safety and health at work in order to prevent occupational diseases of workers who are exposed to factors of the working environment of the 3rd and 4th category, chemical factor (dust, solid aerosol), vibration, physical activity, heat load and noise must be provided with reconditioning stay by the employer in order to compensate for unfavorable working conditions and the previous possible occurrence of damage to health. Reconditioning stays used procedures from rehabilitation and balneology. We include yoga exercises in therapeutic physical education, in contrast to the standard methods used, they also have psychosomatic effects. It is it is consistent with Krejčí & Kornatovská (2017) indicated that yoga influences on increasing of the functional ability of human psyche and resistance to environmental stress. Especially for seniors with disability physical activity becomes a part of therapy and prevention of pathological processes.

Yoga includes various yoga techniques, in our work we used relaxation, yoga breathing exercises, physical exercises - sarva hita asanas and asanas and breathing concentration exercises - pranayama technique Nadisodhana level 1. The methodical exercise was from the book Yoga against back pain from the System Yoga in Daily Life ©. The author of this yoga system is Paramhans Swami Maheshwarananda, who has been active in Slovakia and the Czech Republic for more than 50 years. Krejčí & Hornof (2016) documented, that the activities of the Czech Association Yoga in Daily Life are focused specifically to human health promotion, humanitarian activities, to environment protection, tolerance promotion, to liberty and respect among religions, cultures and people, and to world peace protection. The Czech Association “Yoga in Daily Life” is the biggest yoga association in Czech Republic. Its activities are organized in 26 regional associations active in 108 cities and villages of the Czech Republic.

Reconditioning stays are popular with ironworks employees, which is also true of the entrance questionnaire, where 91.14% (72) of participants expected a benefit from the stay. Their expectations were dominated by rest from work n = 39,

relaxation n = 30, regeneration n = 12, improvement of health n = 4 and relief of pain n = 3. The most numerous responses such as rest from work, relaxation and regeneration confirmed the goal. Even in such difficult conditions as prisons, yoga is recommended for its favourable effects on prisoners (Auty, Cope, Liebling, 2017).

After the reconditioning stay, the painful spine was removed. In the cervical spine the pain intensity changed from 5.1 to 3.3 $p < 0.0001$, in the thoracic spine from 4.4 to 2.6 $p = 0.0063$ and in the lumbar spine from 5.2 to 3.0 $p < 0$, 0001 see table no. 1. The average age of participants with a significant reduction in spinal pain was statistically significantly higher than the average age of participants who did not have spinal problems. Despite the older age of the subjects, they experienced statistically significant pain relief as a result of their stay. Also, the average number of years worked, subjects with back pain were statistically significantly higher than the average number of years worked by participants who did not have back problems. This speaks to a significant effect of the stay on participants who have more years of service and back pain. Evidence suggests benefit of yoga in midlife adults with non-specific chronic LBP for short- and long-term pain and back-specific disability (Goode, Coeytaux, McDuffie, 2016). According Oriňáková (2019) practicing Yoga against Back Pain program from the yoga system "System Yoga in Daily Life" has positive effect on reducing pain and improving quality of life in patients with low back pain. It can be considered as a good therapeutic tool for the solving of the back pain and locomotor system disorders.

It is well known that patients prefer passive procedures for rehabilitation and spa treatment. This was also confirmed in our group, where 88.61% (70) of subjects would prefer passive procedures (massage, paraffin, etc.) compared to active procedures 17.72% (14) (SM system, yoga, exercise in water), $p < 0.0001$. Of the active procedures of the largest percentage of subjects, 77.22% (61) expressed interest in exercising in water, 20.25% (16) in yoga and 11.39% (9) in the SM system. Several subjects also expressed interest in more procedures at the same time, see Figure 4. Of the yoga techniques, 72.36% (55) subjects liked relaxation, 27.63% (21) breathing concentration exercises - pranayama and 13.16% (10) exercises - asanas. The difference between yoga and other exercises of the evaluating participants varies, namely in the way of breathing during the exercises, in the difficulty of the exercises, in the possibility of relaxation, relaxation and silence, peace of mind. Krejčí (2013) demonstrated a similar results of an intervention study in teachers, where mastering of relaxation state in monitored teachers led to easier learning of motor skills significant for their individual movement regime. In accordance with this, we can discusse that mastering of the relaxation leads to homeostazis optimization and positive influences in circadian rhythm.

Our participants claimed that the exercises are comprehensively practiced by the body and, in addition, yoga has a good effect on the psyche. As many as 47.37% of subjects continued by practicing yoga, which is a value that does not differ statistically significantly from the value of 50 percent $p = 0.3654$. What is a significant result due to the fact that almost 50% will be interested in this exercise in people who have never practiced so before, is a great success.

In the output questionnaire after the reconditioning stay for 92, 21% of subjects the stay met their expectations.

In Germany a number of hospitals, yoga is already part of a multimodal tre a t m e n t approach and delivered by physical therapists or members of other health professions within inpatient integrative medicine treatment, integrative oncology, or multimodal pain treatment (Cramer, 2018). However in UK, in 2017, yoga's inclusion in healthcare is gradually becoming commonplace, and this may prov i d e a beacon for the rest of the world. The reasons for this evolving adoption of therapeutic yoga are not dissimilar from trends in other nations. The burgeoning field of yoga research supports its efficacy as a cost-effective, preventive and complementary treatment for a host of non-communicable diseases, while the increased economic burden of long-term conditions is overwhelming healthcare services and their budgets (Mason, Schnackenberg, Monro, 2017). Use yoga exercises according to the System Yoga in Daily Life © during reconditioning stays, in rehabilitation and spa should be the standard, regeneration and prevention of diseases should be supported. Yoga as a prevention against diseases of civilization and occupational diseases appears to be an effective tool.

CONCLUSION

92.21% of subjects rated participation in the reconditioning stay as a benefit. After the reconditioning stay, the back pain was relieved. In the cervical spine the pain intensity changed from 5.1 to 3.3 $p < 0.0001$, in the thoracic spine from 4.4 to 2.6 $p = 0.0063$ and in the lumbar spine from 5.2 to 3.0 $p < 0, 0001$. 88.61% (70) of subjects would prefer passive procedures (massage, paraffin, etc.), 17.72% (14) of respondents would prefer active procedures (exercise SM system, System Yoga in Daily Life©, exercise in water). Of the active procedures, 77.22% (61) of subjects expressed interest in exercising in water, 20.25% (16) in yoga and 11.39% (9) in the SM system. Of the yoga exercises, 72.36% of respondents would prefer relaxation, 27.63% breathing exercises - pranayama and 13.16% exercises - asanas. According to the respondents, yoga has a comprehensive effect on the body and good on the psyche. As many as 47.37% of subjects would continue to practice yoga, with all but one practicing yoga for the first time. Yoga against back pain according to the System Yoga in Daily Life ©, we recommend including it as one of the active procedures within reconditioning stays.

REFERENCES

Auty, K.M., Cope, A., Liebling, A. (2017). A Systematic Review and Meta-Analysis of Mindfulness Meditation in Prison. Int J Offender Ther Comp Criminol. 61(6):689-710. doi:10.1177/0306624X15602514.

Bhimani, N.T., Kulkarni, N. B., Kowale, A., Salvi, S. (2011). Effect of Pranayama on stress and cardiovascular autonomic function. Indian J Physiol Pharmacol. 55 (4): 370-7.

Cramer, H. (2018). Yoga Therapy in the German Healthcare System. International Journal of Yoga Therapy. No. 28: 133.

Krejčí, M. (2013). Self-transformation process in wellness and health education. Procedia Social and Behavioral Sciences, 2(3),706-719.

Krejčí, M. & Hornof, D. (2016) Participation of the Czech Association Yoga in Daily Life in Health Promotion in Czech Republic. Acta Salus Vitae, 4 (2): 34-51.

Krejčí, M., & Kornatovská, Z. (2017). Yoga applications in persons with disabilities. In: E. Bolach, & A. Kawczynski (Eds.).

Adaptacyjna aktywnoscz fizyczna. [Adapted physical activity]. Wroclaw: AWF, 104-127.

Maheshwarananda, P.S. (2005a). The System Yoga in daily life. 2nd ed. Vienna: Ibera, p. 33.

Maheshwarananda, P.S. (2005b). The System Yoga in daily life. 2nd ed. Vienna: Ibera, p. 52.

Maheshwarananda, P.S. (2005c). The System Yoga in daily life. 2nd ed. Vienna: Ibera, p. 136.

Maheshwarananda. P.S. (2005d). The System Yoga in daily life. 2nd ed. Vienna: Ibera, p. 163.

Mahéšvaránanda - Bucher, H. 2016. Jóga proti bolestem v zádech. [Yoga against back pain]. 2nd Ed. Bratislava: Vishwaguruji Publishing House.

Mason, H., Schnackenberg, N., Monro, R. (2017). Yoga and Healthcare in the United Kingdom. International Journal of Yoga Therapy.27: 121-126.

Oriňáková, E. (2019). Yoga as a suitable method for a solving of low back pain. Acta Salus Vitae. 7(1): 23-28.

Votava, J. (1988). Jóga očima lékařu. [Yoga from the doctor´s point of view]. Praha: Avicenum.

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