

HEALTH BENEFITS OF THE SYSTEM “YOGA IN DAILY LIFE” IN OVERWEIGHT CONTROL

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Abstract:

The scientific master system Yoga in Daily Life is authored by Paramhans Swami Maheshwarananda, who is a living descendant of a long line of respected yogis. While completely true to the authentic tradition of classic Yoga, it is designed to meet the needs of our modern times. It is a holistic system of health, encompassing the science of body, mind, consciousness and soul. The design of this System offers gradual and steady development, regardless of the practitioner's age or physical condition. It is open to everyone. Regular and dedicated practice of Yoga in Daily Life will reap many benefits. All techniques have clear, guided, step-by-step instructions of the exercises with special instruction for specific health conditions. Among them are: Relaxation, Asanas, Pranayama, Meditation. All techniques effectively compensate physical and psychical tension, lack of movement, i. e. main factors of the post-modern life style initiated stress and an overload on nervous system. Negative consequences of the physical and psychical stress and tensions in the post-modern society are mainly nervous lability, sleeplessness, body changes and overweight. “Yoga in daily life” systematic training may include an individual's ability to enjoy life and procure a balance between life activities and efforts to achieve psycho-somatic resilience. In presented study the application and evaluation of yoga training in participants with overweight is reported. The aim of the study was to accomplish significant changes in overweight reduce of participants after the practice of training in the “Yoga in daily life system”. 400 volunteers (175 males, 225 females) in three age intervals (adolescents, middle age, seniors) participated in the study procedure. Before and after the interventional yoga program the participants were investigated in somatic and psychological tests, e.g. BMI, measuring of diameters of 10 skin folds with calipers, body-impedance, ultrasonic detection of abdomen, self-perception gamut, and the list of open sentences. Significant changes in the reduction of diameters of 10 skin folds were recorded in female and male ES after the yoga intervention. But in all age male ES were found the lower weight reducing and BMI decreasing compared to female ES. Analyses of self-perception after the yoga training in female ES and male ES documented same shift from anxiety to state fair, from depressive moods to vitality, from wrathfulness to humility, from fatigue to force and energy, from confusion and uncertainties to self – respect and self-esteem. Statistics analyses in the study declare that yoga may be beneficial in overweight management in females and males. Regular practice of yoga training for a minimum of 3 months helped in successful weight reducing in analysed sample.

Key words: Yoga training, System “Yoga in Daily Life”, Overweight reduction, Age specifics, Gender specifics.

1 Introduction

The increasing prevalence of obesity is a major public health concern, since obesity is associated with several chronic diseases. Research in economics has provided important insights as to how technological progress reduced the relative price of food and contributed to the increase in obesity (Brettschneider 2007). It is found that obesity decreases the well-being of individuals who report limited self-control, but not otherwise. Self-esteem has a strong relation to happiness. Low self-esteem is more likely than high to lead to depression under some circumstances. Self-esteem mitigates the effects of stress. It is known that keeping weight down not only helps to reduce risk for coronary heart disease, but man also feel that their appearance is greatly enhanced if they are looking trim and in shape. Maybe the most important point is that exercise can be fun and enjoyable, something to look forward to, not something that makes the participant cringe (Berger, Pargman, & Weinberg 2002).

Hormonal imbalances caused by poor diet, stress, dirty environment and the lack of movement causes fat storage. For the overweight reducing only diet modification is not enough. It is required a number of changes, in daily life. Storing fat in certain, so-called “problematic parts“, usually caused of an imbalance in the activity of glands and the entire hormonal system. In particular, it is the imbalance of the hormone insulin production, which regulates blood sugar. Too much sugar received from food makes insulin for constant activity. If this occurs in the long term, to stop the cell to function properly, which causes a release of more insulin than needed and excess of glucose

in the bloodstream causes the fat starts saving particularly in the hips and abdomen Low thyroid function can then for storing fat on the sides of the back and also for fatigue and depression. This endocrine gland controls the rate of metabolic process. Accumulation of fat on the underside of the arm is caused by declining testosterone levels in women of middle age. The breakdown of fat in these areas is therefore a need to increase testosterone levels and focus on strengthening his arm.

The human nervous system is generally best activated by move. A motion, especially moderate, guided and controlled throughout, is of considerable therapeutic value at any age (e.g. Górný 1998). It shows the state of the nervous system, its inherent structure and level of development. As a psychosomatic system, yoga has a favourable influence not only on the physical level, but it favourably effects the psychical and social development of a personality, too. New experience and feelings connected with relaxation, controlled rhythm of breathing and slow motion represented a wholly new quality of motion experience.

Research findings in studies of influence of physical inactivity on the human organism show us, that in muscles with different functional roles across different joints and even muscles across the same joint, may respond differently to unloading, and this should be taken into account in rehabilitation programs after any disuse intervention, which should primarily focus on postural muscles, but should not overlook the non-postural muscles (Pišot et al. 2008). Unfortunately Czech Republic in the number of obese forged a leading position throughout Europe. The problem “obesity” is really

growing in Czech Republic. 21% of men and 31% of women are obese. When we add overweight and obesity, we arrive at an alarming number of women 68% and even 72% of men. The incidence of obesity and overweight in Czech Republic is higher than the European average. Compared to the rest of Europe is in Czech men in particular, greater prevalence of obesity in women have a lower incidence of overweight and a higher incidence of obesity (Kornatovská, Bláha, Hill 2015).

By weight reducing in 5 – 10 % patient reaches health progress (Asikainen et al., 2003; Raju, Prasad, Venkata Raman, Murthy, & Reddy 1997). Various attempts such as physical exercises (Khare & Kawathekar 2002) and dietary modifications (Berg et al., 2003; Djousse, Arnett, Coon, Province, Moore, & Ellison 2004) and combined diet and exercise trials (Stefanick, Mackey, Sheehan, Ellsworth, Haskell, & Wood 1998) have been performed to control the lipid content of the blood in efforts to treat and prevent coronary artery disease. A study conducted on patients with angina and coronary risk factors (Mahajan, Reddy, & Sachdeva 1999) showed a positive response in lipid profile after 4-14 weeks of yogic practices, while another study conducted on subjects with mild to moderate hypertension reported that yoga can play an important role in risk modification for cardiovascular diseases (Damodaran, Malathi, Patil, Shah, Suryananshi, & Marathe 2002; Maheshwarananda 2001, 2006). In view of previous research observations, the present research was undertaken to study the effect of yoga training on overweight control and reducing of overweight.

2 Objectives

Objectives were defined in 3 coherent steps:

1. To develop and apply a manageable intervention yoga exercise program for individuals with overweight in 3 different age samples;
2. To evaluate significant somatic changes in overweight reduce of participants after the yoga practice.
3. To explore differences in tested parameters between female and male samples.

3 Methodology

3.1 Participants

400 volunteers (175 males, 225 females) in the three age groups (130 adolescents in age: 22.1 ± 1.8 , 140 middle age adults in age: 42.2 ± 6.2 , 130 seniors in age: 70.1 ± 6.3) started the procedure in experimental and control groups. 336 volunteers (153 males, 183 females) in the three age groups (102 adolescents in age: 21.9 ± 1.9 , 122 middle age adults in age: 41.9 ± 7.3 , 112 seniors in age: 69.5 ± 5.4) absolved the whole procedure of the research project – from them 176 volunteers (78 males, 98 females) in the Experimental Sample (ES) and 160 volunteers (75 males, 85 females) in the Control Sample (CS). The volunteers were selected for the study from the South Bohemia region in Czech Republic.

3.2 Ethical considerations

Participants were informed about the purpose of the study and how data

would be used. It was emphasized that participation in this study was voluntary and participants were free to withdraw at any time. The information revealed by the participants was kept confidential and only group data were reported. The scope and objectives of the present study were explained to the subjects and their written consent was a necessary condition for participation in the research project.

3.3 Methods

Before and after the interventional program ES and CS participants were investigated in somatic and psychological tests under supervision of internists and psychologists.

Somatic

- Body high (cm), body weight (kg), Body Mass Index (BMI - $\text{kg}\cdot\text{m}^{-2}$) - (Scale and Altimeter SECCA 703);
- Measuring of diameters of 10 skin folds with calipers (Harpenden Skinfold Caliper);
- Ultrasonic detection of abdomen organs – lipid of liver, spleen, pancreas (Measuring technique of Internal medicine clinic was used by specialists);
- Ultrasonic detection of abdomen – diameter of abdomen fat with and without sound pressing on abdomen wall (Measuring technique of Internal medicine clinic was used by specialists);

Psychological

- Self-perception gamut POP (Válková, Bortoli, Robazza, 1995) observed the self-efficacy

effect, self-esteem on a real (contemporary) and ideal (future) level;

- Open sentences (Válková, 2001) analysed changes in values and self-esteem;

Intervention

Intervention was realized in ES groups in coherent cycles. Interventional yoga programs proceed in groups of 12 - 15 clients maximally. Once per week a meeting and a training procedure were provided. Here clients learned, what have to do at home every day. Every two weeks the intervention exercise program was changed. Training time presented exercise unit of 90 minutes and after 45 minutes discussion and recommendations. The training consisted from physical yoga exercises – yoga sets, (was used training program of moderate yoga exercises – “Sarvahitaasanas” and asanas from the System Yoga in daily Life – Maheshwarananda, 2001, 2006), breath exercising, relaxation techniques, concentration techniques, Self - Inquiry meditation to support Self-Esteem by clients, individualization (tuition, counsel according to particular specifics), lectures (ethics, life philosophy, stress management, nutrition and drink regime, prevention of the difficulties respective to age specifics).

Statistics

Statistics analysis of results were made using Correlation coefficient evaluation, Man-Whitney method, one-way ANOVA with repeated measures and Data mining - 3 methods – classification with algorithm JRip, classification with tree J48 and selective algorithm Best First.

P-values of less than <0.05 were considered significant.

3.4 Procedure

Ultrasonic detection of abdomen organs (proportion of liver, spleen, and pancreas) as well as ultrasonic detection of abdomen and diameter of abdomen fat were drawn between 7 am to 8.00 am. On this day of data collection the subjects were asked to abstain from the yogic practices. The following investigations were carried out after - high, weight, BMI, measuring of diameters of 10 skin folds. The above parameters were estimated before commencement of the study (Input Data) and in the end of intervention yoga practice (Output Data). Also psychometric input and output investigations were provide before end after intervention yoga program.

4 Results and discussion

4.1 Somatic Results

Before the intervention the significant differences between ES and KS in all age groups of volunteers were not found. After the intervention in all age groups of ES the significant differences in weight reduce were found.

Adolescents - men & women

Bigger differences in the weight reduce were found out in the female adolescents EC compared to male

adolescents ES. The average weight decrease did 2kilograms per month in female adolescents ES and 1.3kilograms per month in male adolescent ES. In female adolescents ES was found out significant difference in the weight reduce compared to female adolescents CS, when $F(2.54) = 21.613$, $p = 0.005$ and in the BMI decreasing from 27.1 on 24.8, when $F(2.54) = 59.551$, $p = 0.005$. The significant differences were also ascertained in the reduction of diameters of 10 skin folds in female adolescents ES compared to CS. The significant differences were also found out in the sum of 10 skin folds ES compared to CS female adolescents - $F(2.54) = 208.20$, $p = 0.005$. In the female adolescents ES was ascertained any significant difference compared to male CS in reduction of skin folds No. 3, 4, and 5. In all others skin folds were significant differences ascertained. Also in the case of the sum of 10 skin folds was the significant difference ascertained - $F(2.43) = 132.68$, $p = 0.005$ (Figure1).

In adolescents CS – female and male – the significant differences in weight reduction, BMI changes and in the reduction of diameters of 10 skin folds were not found. From the mentioned results it follows, that interventional program had positive effects in the overweight reduction in ES of male and female adolescents. The smaller weight decrease in male adolescents was probably evocated due a growth of muscular masses. We can come to a conclusion, that anabolic processes by male adolescents proceed faster than in the female adolescents.

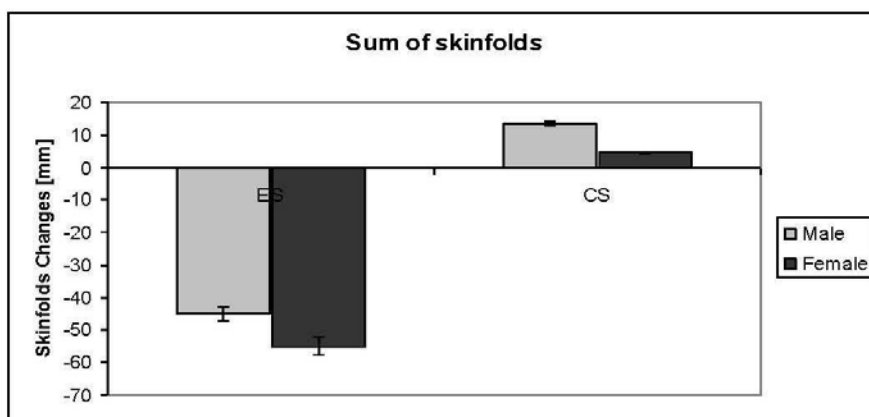


Figure 1 Changes in sum of skin folds after intervention yoga program in Male + Female Juniors (N = 102, ES = 52, CS = 50)

Men & women middle - aged

From the results of male and female ES and CS the significant discrepancy between input and check out BMI is perceptible, in case of CS not. In female

ES results is shown a positive fall of the BMI from 28.9 on 26.8, - F (2.60) = 48.811, p=0.005. The weight reduces decreased in women ES in 1.83kilograms per month.

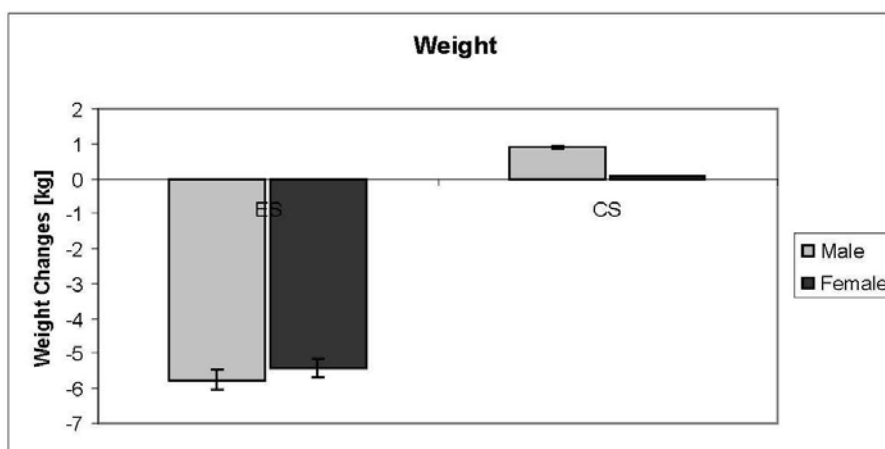


Figure 2 Changes in weight after intervention yoga program in middle aged Male+Female ((N = 122, ES = 66, CS = 56)

The significant positive changes in the reduction of diameters of 10 skin folds were recorded in female ES in all of skin folds, exception the folds No. 8, 9, 10. General sum of 10 skin folds diameters in the female ES is however significantly

lower than in female CS - F (60) = 48.811, p = 0.005. In the male ES the positive weight reduces did in average BMI from 31.1 on 28.9. The average weight decrease did in male ES 1.4kilograms per month. Results document that interventional

program had again positive effects on overweight or obesity reduction in the middle - aged male and female ES. In male and female CS the significant weight

reduce, BMI decrease and the reduction of diameters of 10 skin folds was not found – see Figure 2, 3, 4.

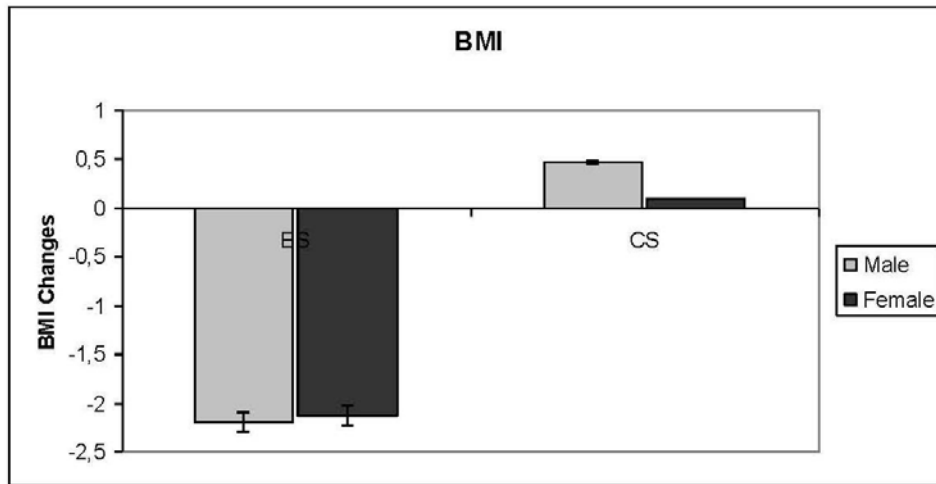


Figure 3 Changes in BMI after intervention yoga program in middle aged Male+Female (N = 122, ES = 66, CS = 56)

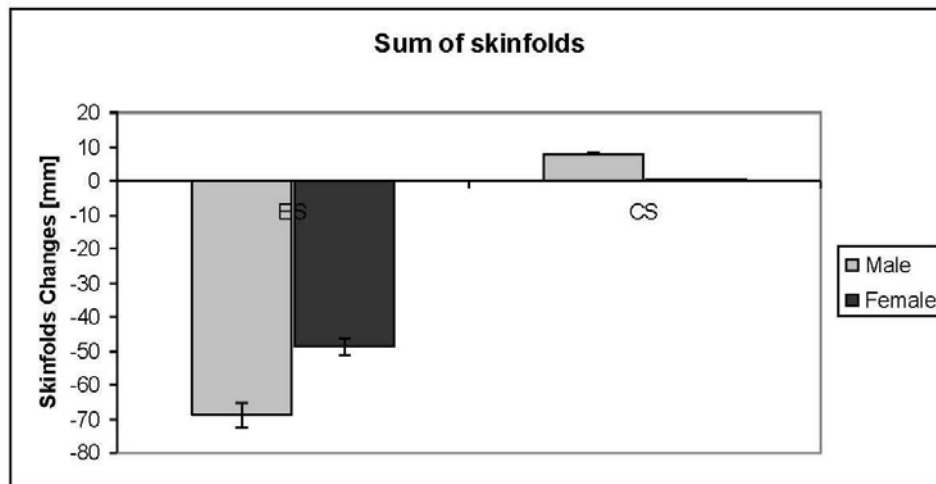


Figure 4 Changes in Sum of Skin folds after intervention yoga program in middle aged Male+Female (N = 122, ES = 66, CS = 56)

Senior men & women

In the three months interventional program the average weight decrease about 1.7kilograms per month was recorded in the male seniors EC. It is a significant difference compared to male seniors CS F (2.41) = 38.799, p = 0.005. Positive fall of

the BMI from average funds 31.7 on 29.85 is also a significant in male seniors ES compared to male seniors CS - F (2.41) = 39.505, p = 0.005. Positive significant fall in the reduction of diameters of 10 skin folds in male seniors EC compared to male seniors CS was ascertained only in the diameters reduction of skin folds No.

3,4,5,6 - $F(2.41) = 51.461$, $p = 0.005$. Ultrasonic investigation ascertained, that at the end of the interventional yoga program a light reducing of a left hepatic part was found and a significant reduction of the abdominal wall thickness in EC compared to CS as well - $F(4.39) = 96.461$, $p = 0.005$. The abdominal wall sickness was measured variable perhaps 3cm below navel, partly quite freely without any pressing of the ultrasonic sound and then with an expressive pressure of the sound till that already was not possible to realize a higher compression. Female seniors ES get to the end of yoga program to reducing of abdominal wall thickness below the navel. The reduction of weight significantly correlates with the abdominal wall thickness. In male and female seniors CS any significant changes in the weight reduction, BMI reduction and reduction of diameters of 10 skin folds in the end of the interventional period were not ascertained. There were also changes of spleen and liver. In ES after intervention size of spleen was discrete reduced and also liver

decreased, esp. left part of liver. But the differences between ES and CS are not significant in the tests. From Figures 5 and 7 results that after intervention program the weight in ES expressively decreased and one way ANOVA can be used. By CS Input/output was no significant difference found, by ES Input/output was found the significant difference in weight reduce $F(1, 59) = 186.54$, $p = .05$. There was a significant reduction in the levels of sum of 10 skin folds in ES after intervention program $F(1.59) = 313.27$ $p = 0.05$, see Figure 8.

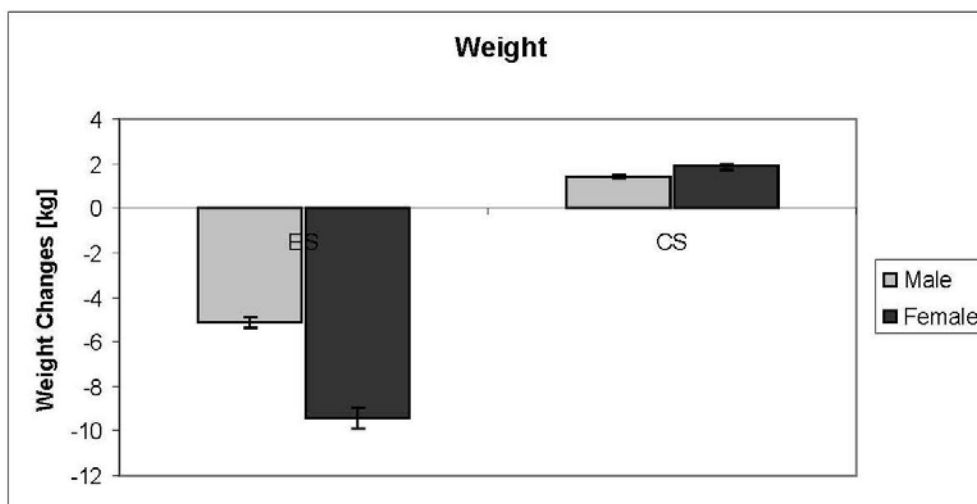


Figure 5 Changes in weight after intervention yoga program in Male + Female Senior (N = 112, ES = 58, CS = 54)

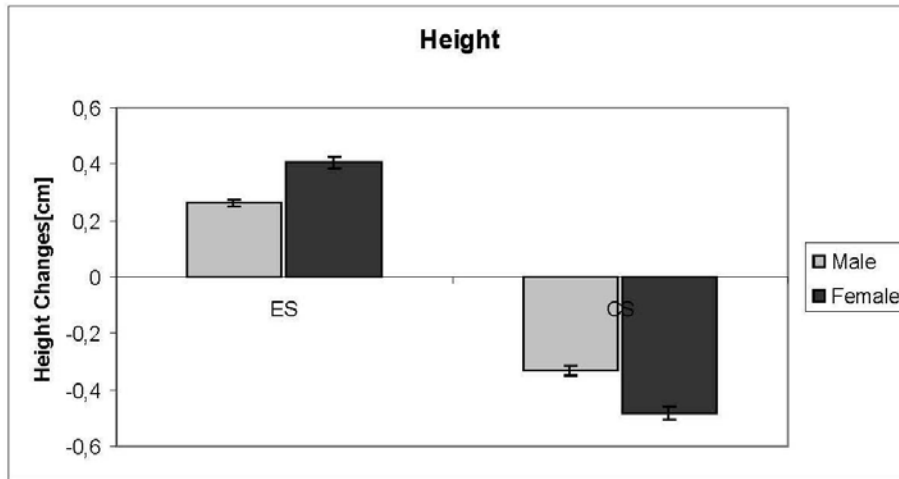


Figure 6 Changes in height after intervention yoga program in Male+Female Seniors (N = 112, ES = 58, CS = 54)

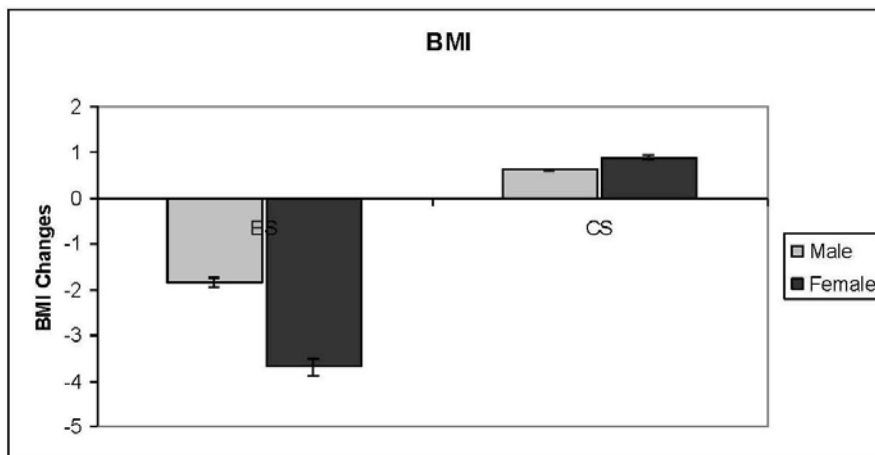


Figure 7 Changes in BMI after intervention yoga program in Male+Female Seniors (N = 112, ES = 58, CS = 54)

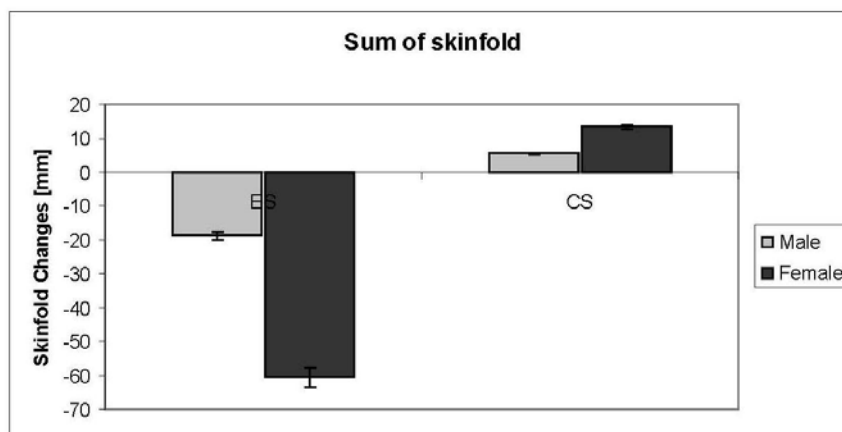


Figure 8 Changes in Sum of Skin folds after intervention yoga program in Male+Female Seniors (N = 112, ES = 58, CS = 54)

4.2 Psychological changes

Participants of all age groups had positive relation to yoga training e.g. to intervention program. They come to practice optionally. They exercised with interest and were grateful. The atmosphere was positive and often full of humour. The program was adapted to the possibilities of each type of groups and individuals, e.g. in the beginning of program seniors exercised on chairs and in second half of program they practiced on yoga mattes. Most frequent subject of talks with trainer was health, family and food. Significantly more often than adolescents, middle-aged adults and seniors wanted talk about worries and suffer. Often topic was problematic cardiovascular and respiratory system and bad function of these systems; above all it was discussed cardio problems and diabetes.

Self-perception analyses declare self-efficacy effect, self-esteem on a real (contemporary) and ideal (future) level. In adolescent ES participants yoga techniques showed a multivariate effect in the domain of self-concept. There was a decrease which characterizes a reduction of discrepancy between self-perception and the ideal image of one's own person. This change indicates the shift in the perception of one's own person to self-control and stability, which leads to a common feeling of subjective contentment, subjective feeling of psychical health and "well-being". In adolescent ES yoga training had a positive influence in higher self-esteem and positive attitude to the surrounding world ($F_{131} = 24.49$; $p = 0.001$). Self-perception changes manifested in shift: heavy – >light, tired – >full of energy, rough – >tender, difficult – >easy. Similar positive changes heavy – >light, tired – >full of energy were caused in ES of adults

and seniors. In ES of seniors “real” level – factor 1 $F_{120} = 13.029$, $p = 0.001$, factor 3 $F_{120} = 5.569$, $p = 0.001$, factor 4 $F_{120} = 35.34$, $p = 0.001$,

In senior ES were found significant differences in gender roles in psychological tests. Preparing the yoga interventional program it was necessary to solve a question of the co - education by exercising in a group. Significant different attitudes were found in ES of seniors between female and male participants. Women were not against co-educative yoga training. In the opposite men preferred to practice separately in men groups only. It seems that overweight or obesity is for male participants very stressful. In this context it was very useful to use relaxation in training, to keep self-harmonious and positive access to all. After pass program the participants of all age groups felt better in the mental state. Especially group of male seniors was after interventional program very mentally well-balanced. Interesting is, that at the beginning seniors wish be more rough, than delicate. Perhaps they thought that they are more respected in such kind of role.

Evaluation of “Open sentences” in a pivot table Man-Whitney $p = 0.05$ concludes that ES and CS seniors in opposite to ES and CS adolescents and middle age adults prefer in life good health, peace in the world, satisfaction. Seniors reflected own life and problem of death. They discussed if life has a sense, how to live in this world. They thought much, if life, which till now they had, was correct or bad what about made badly in health context. After intervention it was documented on base of Man-Whitney $p = 0.05$ results a pregnant impact and positive influence of yoga program in ES seniors on

their state of mind to piece. In ES adolescents and middle age adults after intervention program evaluated pivot table Man-Whitney $p = 0.05$ shows significant change in tendency to be independent and active, e.g. traveling, trips. Among frequent wish belonged to fly by air plane and actively relax in outdoor, to go out in nature. This fact is related to decreasing of overweight and obesity, improvement flexibility bodies and tonic ability after interventional yoga program and to have open way to new sports activities, walking etc. After interventional yoga program evaluation through pivot table Man-Whitney $p=0.05$ occurred in ES of all age groups in category "Achievement".

4.3 Discussion

Participants in all age groups accepted interventional yoga program very positively. Program was realized in all of its planned range. Very favourite was relaxation. After completion of program could all ES participants anonymously in written form express, how they liked yoga program. With negative standpoint to yoga exercising we did not meet at all. Seniors expressed, that exercising them enrich life, that they felt better in mental, social but also in physical health. For some it was the only one possibility in week to have exercise training with expert guiding. Frequent expressions were in context of pains elimination that yoga was for seniors as a beneficial medicine, esp. in case of pains in back and joints. For adolescents in ES the intervention yoga program helped to be aware of healthy life style and general way of living. The participants were used to a completely different conception of exercises. New experience

and feelings connected with relaxation, controlled rhythm of breathing and slow motion represented a wholly new quality of motion experience for them. Positive changes were caused by a close connection and inner experience of exercises. A conscious inwardness of every motion and realization of the body part leads to the significant state improvement in a relative short period of time. We should agree with statement that application of the intervention of yoga program would be very useful in people with disabilities, especially in the context of psycho-somatic emancipation of person with different kinds of disability (Bolach 2014; Kornatovská, Bláha, Hill 2015).

The effect of yogic exercise on body mass showed a significant decrease in fat fold thickness is in agree with the study (Khare & Kawathekar, 2002), which suggested that yoga exercises and breathing exercises cause mobilization of fat deposits. The research has been carried out on the psychosomatic and psychosocial effects of a special yoga program the methodical range of exercises from the system "Yoga in Daily Life" (Maheshwarananda, 2001, 2006). Practicing produces changes on a physical level that can bring about changes in the psyche or in interpersonal relations, e.g., relief of unnecessary physical tension and social adaptation, and also changes in self-concept (Krejčí, 2013). Negative thoughts and worries are the main cause of the unstableness of the neural system. Clear mind, mental well-being, positive thinking and inner satisfaction that overcome negative attributes and thoughts, all this is the objective of practicing yoga. An important means is the special kind of technique of gradual self-searching meditation. Such self-search of one's self is connected to the

sub-consciousness where sportsmen hide and keep wishes, fears, complexes and stereotypes in their thoughts and behaviour. The category “Achievement” detected tendency to prove, to finish something, to learn something new, to manage self. This fact exemplifies how the higher or renew self-esteem evokes significantly life style changes.

The success in these exercises lies in the fact that they physiologically influence body and mental functions. Provided one exercises consciously and coordinates breathing with relaxation, the harmony of body and mind is developed, health is strengthened and one has a better feeling of well- being and this leads to the successful performance. Yoga, with its large scope of methods, can be practiced by anyone.

As well as in adolescent’s results in middle aged men the lower weight reduce was constant in male ES compared to female ES. It can be discuss that anabolic processes supported by regular exercising of men get on faster thanks present testosterone and manifests in the growth of muscular masses. Such results are very positive. These changes are desirable. A preservation and growth of the muscular masses in middle age has a great importance for the correct functions of man organism.

Very interesting changes were found out in height by seniors in ES. Probably stretching effects and corrective impulses during yoga training result high improvement. It correlates with participants subjective feelings of comfort after training because spine cord was stretched, fixed and relaxed, see Figure 6. According to results of gamut POP, all participants in senior age would like to be bodily and mentally fit. Seniors in ES did

not have after the intervention yoga program problems with regulation of their breath and strove breathe deeply and avoid superficial breathing.

Analyses of results declared problem of adherence on eating. Night eating syndrome is characterized with stress and with poor results at attempts to lose weight. Mastering in relaxation on different levels is an important part of overweight management. The results of study (Pawlow, O’Neil, & Malcolm, 2003) indicated that 20 min of a muscle relaxation exercise significantly reduced stress, anxiety and after practicing these exercises daily for a week, subjects exhibited lowered stress, anxiety, fatigue, anger, and depression on Day 8 and were associated with significantly higher a.m. and lower p.m. ratings of hunger, and a trend of both more breakfast and less night-time eating. Participants expressed also that they found friends in yoga training and that it fact helped them much. This strategy was the main point of proposed research. Lone knowledge how to take care about health is not very much effective. Much more perspective is to force of self-efficacy and self – respect and independence of people. The postulate is here the statement that only the man, who respects Self, can be really motivated to do something useful for own health.

Very specify in yoga training were corrections of movement stereotypes and synchrony of breath and movement. Yoga movement is relaxed, slow, conscious controlled, coordinated with breathing process. Improving of elasticity and presumed and tested support of metabolic and endocrinology system is benefit for healing of overweight. From this view we can speak about re-educative effect of yoga exercises on body structure. System of

breathing exercises improves cardiopulmonary capacity, improves of tissue aerobic saturation and hypoxia adaptability of tissues. It results in improvement of venous recovery, establishment of correct breath rhythm and in reduction of body and mental tension (Raju, Prasad, Venkata Raman, Murthy, Reddy 1997).

5 Conclusions

Presented results defined significant changes in male and female. In experimental samples were found out discrepancies between input and check out BMI, in control samples not.

In female ES results show a higher fall of the BMI then in male ES. The significant positive changes in the reduction of diameters of 10 skin folds were recorded in female and male ES. In all age male ES was found the lower weight reducing and BMI decreasing compared to female ES. It can be suggested that anabolic processes supported by regular exercising of men get on faster thanks present testosterone and will manifest in the growth muscular masses in male ES. It means that preservation and growth of the muscular masses in any age has a great importance for the correct functions of male organism in overweight management.

After interventional yoga program realization ES participants were able to use separately compensatory and relaxation techniques to negotiation mental fatigue and stress in their everyday life and to be considerate to contiguous people.

Benefits of yoga techniques like physical, breathing and relaxation exercises seem to be effective in a training process, especially for significant positive

changes in overall self-perception and self-efficacy. System “Yoga in Daily Life” (Maheshwarananda, 2001, 2006) represents an effective complex of methods and techniques for versatile relaxation and for deeper encounter with one's self, with one's own soul, for concentration on the performance. That is why athletes and coaches should know it and use it in their practise.

Findings of study declare that after interventional yoga program and relaxation development were analyzed deepen knowledge in the area of healthy life style and value orientation of seniors. After interventional yoga training program and relaxation development in all age ES groups were found positive changes in opinions and attitudes in meanings interpersonal characteristics of self-efficacy, self - control and self - esteem.

Positive changes in mood states correlate with tests results. Analyses of results brought significant changes in negative emotive factors of gamut POP, as is shift from anxiety to state fair, from depressive moods to vitality, from wrathfulness to humility, from fatigue to force and energy, from confusion and uncertainties to assured and self - respect. On the base of presented results yoga training could be very useful like method improving self-control, self-esteem and mental condition generally in overweight and obesity management.

On the base of principles of the System “Yoga in daily life” we created main recommendations applied in of the presented research project:

- The main determinant of the effective overweight reduction is to master properly the relaxation. The stress hormone cortisol has a

negative influence on the function of the thyroid gland. Also important are adequate sleep habits. Art of the relaxation and daily stress reducing is an important asset of yoga, which significantly contributes to weight loss, especially the reduction of fat in the abdomen. In addition, if a person is cool and calm, decreases at him appetite to very calorie meals.

- Very helpful and important part of the System "Yoga in daily life" presents the plan of moderate exercise training cycles (sarvahittaasanas and asanas), which reduces stress. It is hardly recommended to practice every day, but never up to physical overloading.
- To develop love as much as possible (in the sense of "Agape, Caritas) presents the other benefit for health life. From the view of the overweight reduction is good to know that in the state of love (Bhakti) level of testosterone is increasing and makes stability in psycho-somatic level. Stress and lack of movement (typical long sitting in the post-modern life style) suppresses the production of testosterone.
- On the level of testosterone has a negative impact many refined carbohydrates (sugar, white flour). The system "Yoga in Daily Life" recommends lacto-vegetarianism. It helps to man habits to eat more fruit, vegetable, whole grains and to reduce or to avoid of sugar, foods made from white flour, of the alcohol, drinking coffee, painkillers and of the drinks containing

chemical preservatives - named habits bring great benefits for liver functions and for whole metabolic cycle, including hormonal harmonizing.

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