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THE PHYSICAL SELF-CONCEPT AND WORKOUT IN FITNESS CENTRES

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SUMMARY

Exercise in fitness centres is very popular leisure activity. This article offers results of research focused on Physical Self Perception changes in the group of fitness centres visitors caused by regular fitness training. This psychological benefit of fitness is one of the main topics of modern Sport and Exercise Psychology. Physical Self Perception change is conceived as a possible mediator of Total Self change. 100 people, 50% men and 50% woman who regularly visit fitness centres created the experimental group. We used Czech version of the test Physical Self Perception Profile (author Fox, 1990) by Tomešová (Tomešová, 2003, Tomešová, 2005) for diagnostic. Change of Physical Self-Concept was found out; the most important positive change was measured in Strength and General Physical Self-Worth factors. These results were compared with results of validity study made by Tomešová (Tomešová, 2003) which was done on a group of PE student and a group of non-athlete students. We found out the higher average values in Strength and General Physical Self-Worth factors than took Tomešová in the both groups of her study. On the opposite side, we found out the lower average values in Sport factor in comparison with results of Tomešová. It can be the cause of the fact that the main aim of fitness isn't any sport performance, but health-related fitness, body shape and body composition.

Key words: fitness, fitness training, exercise psychology, physical self, physical self perception profile

INTRODUCTION

The aim of this study is to analyze the influence of the workout in fitness centres and the associated lifestyle on Physical Self-Concept. Fitness in this work is understood as the workout in fitness centres, whose content is to exercise with free weights and exercise machines for strength, aerobic activity supplemented by the special nature of the trainers, a compliance regime, including the use of dietary supplements, and overall lifestyle. The aim of this activity related to bodybuilding is the development of a general fitness,

improvement of posture, improvement of physique together with the effects on improving the health and development of strength (Bulva, in Kolouch, 1990).

Problem of Self-Concept is one of the main topics of Exersise Psychology (Weinberg, Gould, 1995). Physical Self as a part of Total Self (see below mentioned Multidimensional Model of Self) is the object of interest of many specialists considering body to be the main means of Self-expression and interaction with the world, and it is for them the key to understanding the Total Self. Moreover, the body is understood to be a significant sociological entity.

Theory relating to Physical Self results from understanding of Total Self. James is considered to be the first psychologist to create the Self-Concept theory. In his Principles of Psychology he for the first time distinguished two basic aspects of Self: I-Self as a subject, the one who recognizes, the active representative responsible for construing Me-Self, organizing and interpreting our experiences and practice (James, in Tomešová, 2005).

Multidimensional Hierarchical Factor Model comprises all previous models of Self-Concept. It anticipates the general factor on the top of hierarchy as well as one-dimensional model with general factor. The model can be questioned in such cases, when correlation among individual factors of Self-Concept approaches to factor reliabilities or when correlation consistently approaches to null. Elasticity of the model enables to test various structures of Self-Concept (Marsh, Hattie, in Tomešová, 2005).

Physical Self-Concept started to be studied as determining or motivating agent of behaviour and as a component contributing to a great degree to Self-Respect, mental health and well-being. Change in Self-Concept is understood as intermediary of change of Total Self-Concept , study of which is in last years object of interest of psychologists and which includes relating constructs for example Self-Respect that is understood to be an indicator of emotional well-being (Tomešová, 2003, Nakonečný, 1995).

Significant notion in theories dealing with Physical Self-Concept is Body Image, or perceiving of the body – "Attitudes of individuals to appearance, structure and movement of their bodies, respect to and satisfaction with their bodies" (Ostrow, 1990).

For clinical practice results of studies on relation of Physical Self-Concept and Self-Respect to different index figures of life adjustment are very significant. Perceived physical competence was significantly connected with absence of neurotic symptoms, symptoms of non-adjustment and personality disorders of adolescent men (Sonstroem, 1976). Fox (1977) as well emphasises influence of Physical Self-Concept on behaviour of individual and on sense of well-being. The way how a person perceives his body and what is his relation to it, determines his Physical Self and as well as his relation to physical activities, sports, his body weight, to presentation of his personality and the way how he copes with difficult life situation for example serious disease.

First "Psychological model of participation in physical activities" was based on the theory of Self-Respect which says, that people make the effort so that they could "think the best "about themselves. They tend to consider any perceived success, ability or positive attribute as a basis for sustenance or increasing of Self-Respect.

The model contains two hypotheses relating to Self-Respect:

(1) Hypothesis of skill development (the way from external behaviour/success to improvement of Self-Respect): improvement of overall body fitness results in improvement of perceived body competence, which is connected with growth of Self-Respect.

(2) Hypothesis of Self-development (the way from Self-Respect to congruent external behaviour): perceived physical competence results in increased interest in sport activities and these two variables enable to predict participation in body activity (Tomešová, 2005).

In many other studies skills development hypothesis was tested. Aspiration to explain how effect of physical training generalize into global Self-Respect is implied by the model "Workout and Self-Respect" (Sonstroem, Morgan 1989). The model is based on perceived physical competence and Self-Acceptance which are considered to be the basis for Self-Respect. Basis of the model is impartial assessment of physical performance which can be improved by training. The first variable in the area of Self-Concept is physical Self-Efficacy relating to specific performance which should be connection between physical performance and its representation in the mind of individual. The model supposes close connection between Self-Efficacy and physical competency.

Upgrading of the previous model represents EXSEM, the model which uses multidimensional questionnaire of Physical Self-Concept developed by Fox and Corbin (1989). This questionnaire enabled substitution of one-dimensionally perceived physical competency by multidimensional profile. PSPP spectrums are able to distinguish excercising and non-excercising persons, the main predictor both at men and women is physically perceived form. Moreover spectrums are able to distinguish exercising persons according to the level of participation in physical activity and to distribute physically active individuals (American students) according to the type of activity, women into group "sportswomen" whose sport competence is connected with playing ball games and group "excercising" who connect physical form with aerobic activity and fitness. Men are distributed into group "body-builders" who connect strength, physical form and attractiveness with bodybuilding and fitness and group "sportsmen" where perceived sport competency was connected with playing ball games (Fox, Corbin, 1989).

Fox's research (1990) show that with general Self-Respect in all parts of Physical Self-Concept most correlates physical appearance. According to Fox it is possible to generalize results of previous studies relating to influence of workout on Self-Concept and Self-Respect as follow:

a) Workout can improve Physical Self-Respect and other important components of Self-Concept for example body image. 78% of studies show significant changes.
b) However, the change of Self-Respect by workout is not automatic, it is possible to say, that it occurs in some workout programs and at some people.
c) Positive effects are more significant at children and at middle-aged adults.
d) Positive effects can be expected both at women and at men, more significant can be at women because they originally have lowered Self-Respect.
e) People with primary low Self-Respect (women, people with moderate depression disabled, overweight) should theoretically have the biggest profit of doing sport or exercise.
f) Self-Concept can be influenced by different kind of exercise, but the biggest improvement according to previous studies can be expected at aerobic activities (running, aerobics, circle training) and body building, by means of this activity the biggest changes were achieved in the shortest time period. Most of the studies used programs with three times a week frequency; length of training unit more than 60 minutes, intensity of the training is mentioned only rarely.

g) There are some abnormalities, especially among excessively and heavily training women and sportsmen who have to keep low weight, which is a pre-requisite for their top sport performance (Davis, 1997 in Tomešová, 2005; Soenstroem, 1997 in Tomešová, 2005). These activities probably increase Self-observance, body centrality and Self-criticism. Satisfaction with own body, acceptance of own body is not at these people improved even though they successfully manage to decrease their body weight or improve their body form (Tomešová, 2005). Macková (2003) as well presents generally worse physical Self-Concept at adult women who do not do any sports and at adolescent girls with intensive but excessive physical activity.

Generally, we can say that improvement of Self-Concept is not an automatic result of participation in a sport activity. It is impossible to say if positive Self-Concept is determinant or result of participation in a sport activity or a workout. It is highly probable that there is concurrent influence when perceived improvement of Self-Concept increases motivation for the following workout.

Such activities as the fitness have a special position in expected effect of Physical Self-Concept change. Comparing to other physical activities development of physical skills is not primary aim but it is body appearance and its composition with sense of competency to change body, at the same time the main contents is bodybuilding activities, result of which is increasing of muscular tone. Combination of these two factors led to realization of the study, the aim of which was specific effect of change in Physical Self Perception influenced by the fitness.

PROBLEM

Primary aim of fitness attendants is not sport performance itself. Their motivation structure consists of "aesthetic" motives (desire to decrease or increase body weight, form body), health motives (increasing body form itself), psychological or social motives. Knowledge of motivation for fitness is necessary to take into account when we asses influence of fitness on Physical Self-Concept. Verifying of this influence on the group of fitness centre attendants in the Czech Republic is the main aim of the study.

Hypothesis 1: we suppose change in Physical Self-Concept by influence of regular workout in a fitness centre.

Hypothesis 2: we suppose specific change in Physical Self-Concept in comparison with results of Tomešová validation study (Tomešová, 2003) carried out with group of the students FTVS UK and with the group of students who do not do any sports.

METODOLOGY

Research was carried out with the group of 100 tested persons. Group consisted of individuals who workout in a fitness for at least 1 year and did not suffer from serious chronic health diseases. Group consisted of 50% of men and 50% of women.

Following relevant variables were observed in the group: age of tested person, sex, education (basic, vocational, secondary, university), kind of job (physically minimally demanding job, physically medium demanding job, physically demanding job), status, number of children, frequency of training in a fitness centre and length of period of physical activity. Body characteristics of tested persons were observed as well.

Observation was carried out in four fitness centre in Prague. Choice of tested persons was random, common attendants of fitness centre who fill given criteria were addressed, and then those who agreed with participation in research. For diagnosis of Physical Self-Concept the Test Physical Self Perception Profile was used. Its author is Kenneth R. Fox. Manual of the test was translated and its Czech version including validation study was processed by Eva Tomešová (Tomešová, 2003). It consists of five six-item spectrums (resulting score is between 6 and 24): perceived sport competency (SPORT), improvement of physical form and workout (COND), physical attractiveness of the body (BODY), physical strength and muscles (STREN) and general physical Self-Worth (PSW). First four spectrums were created for measuring of perception of Physical Self-Concept specific sub-domains; the fifth one is aimed on measuring of general physical Self-Respect. This questioner is amended by another one, called Perceived Importance Profile, which reflects importance individually attributed to various factors (below marked as SPORT D, COND D, BODY D, and STREN D). Physical Self Peception Profile provides multidimensional presentation of Self-assessment of an individual person in various visible elements of physical domain, resulting from contemporary ideas of research in Self-Respect (Tomešová, 2003).

To receive demographic data tested persons were presented with short questionnaire set up for the purpose of the study. Both those questioners were presented to tested persons by the author of the study at personal meeting in the fitness centre which they attended, before their regular training unit. Collected data were processed by statistic program NCSS. For the specification of statistically important difference between observed group and results of the Tomešová study we used two-choice t-test with equality of spread. As reference data for assessing results of this study data collected by Tomešová (Tomešová, 2003) in group of students of FTVS UK and in group students who do not do any sports in validation study of this test were used.

RESULTS

1. Characteristics of tested population

10% of questioned participants considered their jobs to be physically demanding, the rest part of questioned participants considered their jobs to be moderately (45%) or minimally (45%) physically demanding. The biggest part of questioned participants (55%) had secondary education, 24% of participants had vocational training, 18% of participant were participants with university or college education and 3% of participant only had basic nine year education.

Table 1. Age distribution of observed group of population

Age (in years)			
	Generaly	**Men**	**Women**
Average	29.49	29.7	29.28
Median	29	30	28.5
Minimum	17	17	18
Maximum	52	52	51

Average age of questioned participants was 29.5 years. The youngest participant was 17 and the oldest was 52 years old.

52% of participants were married, 38% single and 10% of participants were divorced. 45% of questioned participants are childless, 31% of participants have one child, 20% of participants have two children and 4% have three children.

Table 2. Time period of regular workout in a fitness centre (in years)

Time period of regular workout (in years)		
Number of years	**Frequency of participants**	**Percentage**
1	40	40
2	33	33
3	14	14
4	9	9
5	3	3
8	1	1

Questioned participants attended a fitness centres on average for 2.1 years (median of observed group is 2 years). 40% of questioned participants stated that they attend fitness centres regularly for at least one year, 33% for two years, 14% for three years, 9% for four years, 3% for five years and one participant for eight years.

Table 3. Frequency of workout (number of training units per week)

Frequency of workout (number of training units per week)		
Number of training units per week	**Frequency of participants**	**Percentage**
2	35	35
3	50	50
4	12	12
5	2	2
6	1	1

50% of questioned participants attend fitness centre 3 times a week, 35% twice a week, 12% of participants four times a week, two participants five times a week and one participant six times a week. The participants of observed group attend fitness centre on average 2.8 times a week (median of the group is 3). Average body height of the men in observed group was 176.5 cm (minimal height was 159 cm and maximal height was 192 cm), average height of women in the group was 168.8 cm (minimal height 156 cm and maximal height 180 cm). Average body weight of men was 79.3 kg (minimal weight 64 kg and maximal weight 100 kg), average body weight of women was 61.8 kg (minimal weight 49 kg and maximal weight 72 kg).

2. Results of the test PSPP

Results are shown in a transparent chart, where there are for comparison results of study carried out by Tomešová (Tomešová, 2003) and further in the text there is a survey of differences between results of this study and Tomešová study. This test is well-known used method, but authors warn against comparing results at members of various nations and cultures, because socio-cultural influence has important role in Physical Self-Concept. This is the reason why the study does not contain comparison with foreign studies but with Tomešová validation study, which was carried out with two groups of participants, the first one was a group of student of FTVS UK in Prague and the other one was a group of student who do not do any sport. In the first group there were 83 men and 112 women, in the other group there were 40 men and 30 women.

Table 4. Resuls of the test PSPP

Item and spectrum averages and standard deviations of PSPP								
Spectrum	**Men**				**Women**			
Number of item	**Group A (average)**	**Standard deviation**	**Group B (average)**	**Group C (average)**	**Group A (average)**	**Standard deviation**	**Group B (average)**	**Group C (average)**
SPORT	15.66	1.89	19.30*	14.28*	14.20*	1.59	17.83*	15.07
1	1.96	0.49	3.20*	2.32*	1.82*	0.39	2.96*	2.53*
6	2.34	0.77	3.13*	2.76*	2.22	0.74	2.87*	2.43
11	3.24	0.59	3.39	2.52*	3.04*	0.53	3.19	2.67*
16	2.30	0.65	3.04*	2.20	2.14	0.70	2.62*	2.10
21	2.64	0.85	3.11*	2.33	2.54	0.76	2.88*	2.66
26	3.18	0.75	3.43*	2.62*	2.44*	0.73	3.33*	2.67
COND	18.96	1.46	18.81	14.98*	17.56*	1.57	17.97	15.10*
2	2.68	0.47	2.83	2.35*	2.66	0.56	2.57	2.34*
7	3.42	0.50	3.18*	2.32*	3.30	0.46	3.05*	2.40*
12	3.40	0.49	3.20*	2.68*	2.94*	0.55	3.05	2.68*
17	3.22	0.55	3.41*	2.70*	3.18	0.60	3.47*	2.83*
22	3.28	0.54	3.08*	2.35*	3.02*	0.47	2.95	2.37*

Item and spectrum averages and standard deviations of PSPP								
Spectrum	**Men**				**Women**			
Number of item	**Group A (average)**	**Standard deviation**	**Group B (average)**	**Group C (average)**	**Group A (average)**	**Standard deviation**	**Group B (average)**	**Group C (average)**
27	2.96	0.57	3.10	2.58*	2.46*	0.76	2.88*	2.50
BODY	16.38	1.41	16.16	15.65*	15.16*	1.27	15.06	16.57*
3	3.06	0.42	2.65*	2.70*	2.90*	0.51	2.52*	2.90
8	2.60	0.81	2.77	2.65	2.14*	0.78	2.40*	2.73*
13	2.74	0.78	3.06*	2.83	2.58	0.78	2.79	2.93*
18	2.06	0.51	2.22	2.10	2.10	0.54	2.29*	2.47*
23	3.12	0.48	2.84*	2.83*	3.00	0.61	2.69*	2.93
28	2.80	0.57	2.61*	2.55*	2.44*	0.86	2.38	2.60
STREN	19.14	1.39	15.90*	14.20*	17.10*	1.59	15.90*	14.83*
4	3.60	0.49	2.69*	240*	3.60	0.53	2.93*	2.73*
9	3.72	0.45	2.64*	2.35*	3.66	0.48	2.80*	2.53*
14	3.08	0.70	2.40*	2.35*	2.54*	0.73	2.29*	2.30
19	2.86	0.50	2.82	2.40*	2.10*	0.51	2.64*	2.53*
24	2.98	0.62	2.72*	2.38*	2.72*	0.61	2.74	2.40*
29	2.90	0.65	2.64*	2.33*	2.48*	0.76	2.50	2.33
GPW	19.24	1.44	17.90*	15.70*	18.20*	1.31	16.30*	15.23*
5	3.24	0.52	3.04*	2.60*	2.94*	0.42	2.95	2.47*
10	3.30	0.58	3.24	2.98*	3.18	0.52	3.14	2.83*
15	3.12	0.59	2.93*	2.52*	2.60*	0.61	2.63	2.57
20	3.09	0.49	3.12	2.80*	3.12	0.66	2.78*	2.80*
25	3.14	0.57	2.66*	2.48*	3.16	0.65	2.47*	2.47*
30	3.36	0.60	2.70*	2.33*	3.20	0.67	2.36*	2.10*

Explanation:
Group A – group observed in this study – see Specification of observed group
Group B – group observed in Tomešová validation study (Tomešová, 2003), the group consisted of 83 men and 112 women, all of them students of FTVS UK in Prague
Group C – group observed in Tomešová validation study (Tomešová, 2003), the group consisted of 40 men and 30 women, nobody of them does any sport
* results with this mark in groups B and C are results in which there was in comparison with group A on 95% level of importance by two-choice t-test with equality of spread found out statistically important difference
* results with this mark in groups A women are results in which there was in comparison with group A men on 95% level of importance by two-choice t-test with equality of spread found out statistically important difference

All results are presented in points. Span of spectrums at individual questions is 1–4 and then 6–24.

From the presented results of the observed group follows that in all factors women achieved lower average rate, the biggest difference is at the factor of strength (by 2.04 lower at women).

Comparison of the established results of the PSPP test and the result of the study of Tomešová (2003):

a) Men

- Factor SPORT: the average of the observed group was 1.38* higher than in group C, while a 3.64* point lower than in group B in Tomešová study.
- Factor COND: the average of the observed group was 0,15 points higher than in group B and 3.98* point higher than in group C in Tomešová study.
- Factor BODY: the average of the observed group was 0.22 points higher than in group B and 0.73* points higher than in group C in Tomešová study.
- Factor STREN: the average of the observed group was about 3.24* point higher than in group B and 4.94* point higher than in group C in Tomešová study.
- Factor GPW: the average of the observed group 1.34* point higher than in group B and the 3.54* point higher than in group C in Tomešová study.

The above overview shows that the greatest differences were found in the last two factors, STREN and GPW, where averages of the observed group were significantly higher than the averages for group B and C in Tomešová. The other observed factors we measured group averages close to averages in the study group B in Tomešová study, i.e. the group of the students of the Faculty of Physical Education and Sports of Charles University. These results show a specific effect of fitness, which is reflected in higher values of the two factors mentioned above. Only by a factor of SPORT, the measured values were closer to group C in Tomešová, which is probably due to the fact that fitness is an activity not leading to the development of specific sport skills, it is aimed at changing the body appearance and fitness in general, therefore the measured values are lower than for students of Faculty of Physical Education and Sports, who are more focused on the development of various sports skills than one's own attractiveness and body appearance.

b) Women

- Factor SPORT: the average of the observed group was of 3.63* points lower than the average in group B study Tomešová and 0.37 points lower than the average for group C.
- Factor COND: the average of the observed group was pursued by 0.41 points lower than the average for the group B Tomešová and 2.46* points higher than in group C.
- Factor BODY: the average of the observed group was 0.1 points higher than in group B while 1.41* point lower than in group C in Tomešová study.
- Factor STREN: the average of the observed group was about 1.20* point higher than in group B while 2.27* point higher than in group C in Tomešová study.
- Factor GPW: the average of the observed group was 1.9* points higher than in group B while 2.97* point higher than in group C in Tomešová study.

The above overview shows that the greatest differences were, similarly, in women as in men found in the last two factors, STREN and GPW, which averages of the observed groups were higher than groups B and C in Tomešová. Similarly, averages for the other studied factors were close to averages in group B, i.e. the averages of the students of Faculty of Physical Education and Sports of Charles University in the Tomešová study except

factor SPORT, where we observed that the average of the group was even lower than the average in group B and C.

Table 5. Test results of the Profile of perceived importance

Item and spectrum averages and standard deviations of PSPP								
Spectrum	**Men**				**Women**			
Number of item	**Group A (average)**	**Standard deviation**	**Group B (average)**	**Group C (average)**	**Group A (average)**	**Standard deviation**	**Group B (average)**	**Group C (average)**
Sport D	5.20	0.78	6.22*	4.68*	5.92*	1.10	6.13	5.17*
1	2.06	0.68	3.04*	2.18	2.46*	0.76	2.99*	2.37
5	3.14	0.67	3.18	2.50*	3.46*	0.65	3.16*	2.80*
Cond D	3.62	0.97	6.12*	5.45*	4.00*	0.93	6.13*	5.33*
2	2.00	0.70	3.07*	2.80*	2.44*	0.64	2.91*	2.60
6	1.62	0.57	3.05*	2.65*	1.56	0.61	3.21*	2.73*
Body D	4.88	0.96	5.66*	5.03	3.92*	0.90	5.68*	5.40*
3	2.96	0.64	2.78	2.73	2.18*	0.72	2.80*	2.97*
7	1.92	0.63	2.88*	2.30*	1.74*	0.63	2.88*	2.43*
Stren D	3.92	0.94	5.55*	4.65*	5.02*	0.98	5.15	4.23*
4	2.18	0.66	2.87*	2.33	2.92*	0.60	2.57*	2.67
8	1.74	0.66	2.69*	2.35*	2.10*	0.65	2.58*	1.97

Legend:
Group A – our reference file – see the Characteristics of the reference file
Group B – the reference file in the validation study Tomešová (Tomešová, 2003), the set consisted of 83 men and 112 women, all were students of Faculty of Physical Education and Sports of Charles University in Prague
Group C – the reference file in the validation study Tomešová (Tomešová, 2003), the set consisted of 40 men and 30 women, were all students, non-athletes
* such marked values in group B and C are those for which it was compared with the file at 95% level of significance by the double-selection t-test with equal variances and it showed a statistically significant difference
* such marked values in Group A women, which was compared with a set of men and 95% significance level double-selection t-test with equal variances and it showed a statistically significant difference.
All values are given in points. For individual questions there is the range of scales 1–4, by the ranges, then 6 to 24
In the test of PPI were also found differences between men and women: the first two factors Sport D and Cond D, averages were higher in females, the largest difference was recorded as the PSPP of the last factor Stren D, the average for women was higher by 1.1 point. Only in the third factor Body D was the average in women lower, by 0.96 points.

In both tests, the standard deviation corresponded with an adequate range.
Comparison of our findings in PPI test results and results of the study Tomešová (2003):

a) Men

- Factor Sport D: the average of our reference file was by 1.02* points lower than in group B and 0.52* point higher than in the file C in Tomešová study.

- Factor Cond D: the average of our reference file was 2.5* points lower than in group B and 1,83* points lower than in group C in Tomešová study.
- Factor Body D: the average of our reference file was 0.78* points lower than the average group B and 0.15 points lower than in group C in Tomešová study.
- Factor Stren D: the average of our reference file is about 1.63* points lower than in group B and 0.73* points lower than in group C.

The above overview shows that in most of the factors of the test the Profile of Perceived Importance were averages of our reference file closer to group C in Tomešová, a perception of "non-athletes", which is probably in some factors the already mentioned the specifics of an activity that is not primarily focused on sports performance . The Factor Cond D, the average value of our reference file was lower than the value of group B and C in Tomešová. We assume that this difference (as with some other factors such as Body D) may be caused by the fact that the monitored group increased its long-term fitness due to regular exercise and this condition can then lead to a reduction in perceived importance. Similarly, it is for the factor Stren D.

b) Women

- Factor Sport D: the average of our reference file was 0.21 points lower than the average in group B while 0.75* point higher than in group C in Tomešová study.
- Factor Cond D: the average of our reference file was about 2.13* point lower than the average group B and 1.33* points lower than in group C in Tomešová study.
- Factor Body D: the average of our reference file was pursued by 1,76* points lower than the average in group B and 1.48* point lower than in group C in Tomešová study.
- Factor Stren D: the average of our reference file was pursued by 0.13 points lower than the average in group B while 0.79* point higher than in group C in Tomešová study.

The above overview shows that the factors Sport D and Stren D average point values of these scales of our reference file get closer to averages of group B in Tomešová, so female students from the Faculty of Physical Education and Sports of Charles University, the remaining two factors, Cond D and Body D, are averages of point values for these scales of our reference file lower than in groups B and C in Tomešová. The interpretation of these differences seems to be for the purposes of this study misleading and above all it would require a higher number of tested subjects.

DISCUSSION

Fox (1997) states that Physical Self-Concept measured by multidimensional questionnaires is usually lower in women than in men. Tomešová (2003) has also found out that male students of Faculty of Physical Education and Sports of Charles University in her study had a better Physical Self-Concept than female students of the above mentioned Faculty of Charles University, as well as in Fialová (2001), but using different diagnostic method. The same result we reached in this study, men achieved higher average values in all PSPP factors.

This study is the first study performed in the Czech Republic targeted on visitors to fitness centres. This activity is a typical activity for which we can expect a positive effect on

Physical Self-Concept, however this activity is different in comparison with "traditional" sports, therefore we can assume specific effect of this activity, which was proved in the results of this study. Workout in fitness centre offers the opportunity to influence the appearance within the meaning of weight loss, to increase lean body mass and body shaping, physical exercises are used to reach these goals, especially strengthening and adjustment of diet and overall lifestyle, it is therefore associated with the overall lifestyle whose effect is not only the required change of the physical appearance, but also improvement of health, increase of physical and mental endurance and other benefits mediated by these changes.

Not in all cases, we can talk about the benefits of the workout in the fitness centres. It is often sought by individuals whose motivation is particularly the problematic Physical Self-Concept, with those the test results of the applied test could be misleading and what might seem like a positive effect, might actually be a sign of existing or potential pathology in relation to their own body and physical activity, therefore, in the planned further research a design of specific diagnostic techniques focused on this area would be beneficial.

The reference group was made up of Prague fitness centres visitors, the question arises whether the above-mentioned socio-cultural factors can play in the perception of the body such a serious role that could affect the results of the test as a whole. We have also not analyzed because of the small number of tested persons, the factor of age, which also plays a very important role in the Physical Self-Concept. The study group consisted of persons with demonstrated adherence to this activity, another question then arises, of how much different was their Physical Self-Concept before the start of the exercises from the average population and the extent to which the measured values were the actual effect of the activity. This is related to another important fact, that that effect is subject to regularity and long-term implementation of the given activity. The persistence of motivation, respectively the possibility of its influence, is one of the most serious problems of fitness practice. The commercialization of this area is associated with the promotion showing the unreal effects of fitness training on losing body weight and body appearance is a frequent cause of the resignation of visitors to the fitness centres.

It would be convenient to mention here the comparison with results of similar investigations on the topic of the possibilities of influencing the Physical Self-Concept by physical activity. Lots of investigations were carried out and many of them used the same diagnostic methodology as in our investigation. The largest among these researches was focused on a specific group of people, both age (especially teens), as affected by disabilities, such as obesity, diabetes, eating disorders and others, and given the specificities of the diagnostic method used, this comparison would not be relevant. Unfortunately, the available databases failed to find a study aimed at visitors of the fitness centres (even if this succeeded, the comparison would again be complicated by the wide use of the marking of fitness centre). With the exception of study Tomešová, we could not get any results of other studies conducted among the Czech population, and because the authors themselves warn against trans-cultural comparison of the results of the survey using a questionnaire applied, we can only say that the comparison with the results of validation study Tomešová confirmed the referred ability of the questionnaire to distinguish trained individuals from untrained people as well as the ability to distinguish physically active individuals by type of activity, i.e. activities for which a major role is played by perceived physical competence and activities that are associated with good physical condition and appearance.

CONCLUSION

Changes in Physical Self-Concept through the influence of fitness workout and the associated lifestyle are obvious. Our results proved hypothesis no. 1, that the Physical Self-Concept is changing under the influence of fitness as well as hypothesis no. 2, that the change in Physical Self Perception of visitors to fitness centres with proven adequate adherence and corresponding persistence of motivation corresponds with the specifics of this leisure activity, whose primary goal is not a sport performance as such, but fitness, strength, appearance and body composition and preservation of health. The greatest differences were found in terms of two factors, strength and general physical Self-Worth, where we watched a group of men and women and both groups reached higher average values in comparison with athletes and non-athletes in the validation study from Tomešová and, conversely, the average values were lower by a factor of Sport, which is probably due to the specifics of the aforementioned activities. Differences between men and women in our monitored group indicate worse physical Self perception in women, where we recorded a lower average in all factors, the highest average difference was observed in the strength factor (about 2.04 points lower for women). The results of the test the Profile of Perceived Importance were compared with the results from Tomešová study were closer to the group C – the perception of non-athletes, which is at some factors already mentioned again due to the specifics of an activity that is not primarily focused on sport performance.

Workout in fitness centres in our country has recently become increasingly popular leisure activity with many benefits. The most important of these include the change of Physical Self-Concept, which is a mediator of changes in the Total Self-Concept with all its consequences, both in behavioural and emotional sphere of personality. Further research in this area could be focused on the design of specific diagnostic methods and on the construction of a model of the psychological benefits of fitness.

REFERENCES

FIALOVÁ, L. (2001). *Body image jako součást sebepojetí člověka*. 1. vyd. Praha : Karolinum.

FOX, K. R. (1997). *Physical Self : From Motivation to Well-Being*. USA : Human Kinetics.

FOX, K. R.; Corbin, CB. (1989). The Physical Self-Perception Profile – Development and Preliminary Validation. *Journal of Sport & Exercise Psychology*, 11, 4, 408–430.

FOX, K. R. (1990). *The Physical Self-Perception Profile Manual*. DeKalb, IL: Northern Illinois University Office for Health Promotion.

KOLOUCH, V.; KOLOUCHOVÁ, L. (1990). *Kondiční kulturistika*. 1. vyd. Praha : Olympia.

MACKOVÁ, Z. (2003). *Šport ako duševný zážitek*. 1. vyd. Bratislava : Univerzita Komenského.

NAKONEČNÝ, M. (1995). *Lexikon psychologie*. 1. vyd. Praha: Vodnář.

OSTROW, A. C. (1990). *Directory of psychological tests in the sport and exercise sciences*. Morgantown, WV: Fitness Information Technology.

SONSTROEM, R. J. (1976). The validity of self-perceptions regarding physical and athletic ability. *Medicine and Science in Sports*, 8, 126–132.

SONSTROEM, R. J; MORGAN, W. P. (1989). Exercise and self-esteem: Rationale and model. *Medicine and Science in Sports*, 51, 685–694.

TOMEŠOVÁ, E. (2003). *Profil tělesného sebehodnocení*. Praha : FTVS UK.

TOMEŠOVÁ, E. (2005). *Tělesné sebepojetí a sebeúcta: Mezikulturní převod a validizace profilu tělesného sebepojetí (disertační práce)*. Praha : FTVS UK.

VANĚK, M. (1984). *Psychologie sportu*. 2.vyd. Praha : Státní pedagogické nakladatelství.

WEINBERG, R. S.; Gould, D. (1995). *Foundations of Sport and Exercise Psychology*. USA: Human Kinetics.

TĚLESNÉ SEBEPOJETÍ A CVIČENÍ VE FITNESS CENTRECH

DANIELA STACKEOVÁ

SOUHRN

Cvičení ve fitness centrech je oblíbenou volnočasovou aktivitou. Práce přináší výsledky studie provedené na skupině návštěvníků fitness center, jejímž cílem bylo sledování změny tělesného sebepojetí vlivem pravidelného cvičení ve fitness centru. Toto téma je velmi aktuální pro současnou psychologii sportu. Změna tělesného sebepojetí je chápána především jako prostředník možné změny celkového sebepojetí. Sledovanou skupinu tvořilo 100 osob, 50 % žen a 50 % mužů pravidelně dlouhodobě navštěvujících fitness centrum. Pro diagnostiku byla použita česká verze testu Physical Self Perception Profile Kennetha R.Foxe (Fox, 1990) Profil tělesného sebehodnocení zpracovaná Evou Tomešovou (Tomešová 2003, Tomešová 2005). U sledované skupiny byla zjištěna změna tělesného sebepojetí, nejvýznamnější pozitivní změny byly ve faktorech Síla a Všeobecná tělesná sebeúcta. Při srovnání výsledků této studie s výsledky validizační studie Tomešové (Tomešová, 2003), provedené na skupině studentů tělesné výchovy a sportu a na skupině studentů nesportovců, byly u sledované skupiny zjištěny vyšší hodnoty ve faktorech Síla a Všeobecná tělesná sebeúcta ve srovnání s oběma skupinami ve studii Tomešové, naopak nižší průměrné hodnoty byly zjištěny u faktoru Sport. To svědčí pro specifický vliv dané aktivity, jejímž cílem není sportovní výkon, ale kondice, vzhled těla a jeho kompozice.

Klíčová slova: fitness, cvičení ve fitness centrech, psychologie pohybových aktivit, tělesné sebepojetí, profil tělesného sebehodnocení

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