

# INFLUENCE OF PHYSICAL ACTIVITY ON THE PERSONALITY OF THE ELDERLY

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**Abstract:** *Senior citizens benefit greatly from physical activities. Not only do they contribute to the senior's physical condition, but they also help them to stay mentally fit. In Czech Republic a tradition of active lifestyle is established supported by a physical training organization "Sokol". In our study, we observed Influence of physical activity on the personality of the Groups of senior men and women, actively participating or not participating in regular group physical training in Sokol organisation. The personality factors of seniors older than 60 and 75 years measured by questionnaire personality factors "NEO five-factor personality inventory (NEO-FFI)".*

**Key words:** *Seniors, active lifestyle, physical training, Sokol organisation, personality factors.*

## 1 Introduction

European and American societies have to face a dramatic population growth of those living 20 years or more beyond retirement. Hence, it must be acknowledged that current medical care is adding years to life. People who enter into retirement have varying health conditions. The needs of seniors and their demands for further living differ significantly from one individual to the next. Current health conditions of senior citizens are affected by genetic predispositions, life conditions and care invested in personal health throughout the course of life (Šmídová et al., 2009). A part of the population is already weary of life, has difficulties with health owing to previous unhealthy lifestyles, and feels tired and burnt-out in relation to active life roles (Možný, 2010). Generally, ideas about relaxation take on a passive form (sitting in front of TV with a beverage). A frequent motif of such complaints by seniors is feeling obsolete and excluded from society. Psychologists discuss leaving life roles developed in theories of disengagement. Leading seniors to autarchy is currently one of the main psychological problems. Resigned senior citizens represent a social issue. Society should rally support for active lifestyles of senior citizens for as long as possible (Hošek 2010).

Development of a person is within the process of socialization. Human personality is formed under a constant and mutual acting of genetics and external, environmental conditions. It features individuality, uniqueness, organization and integrity. We can further observe certain consistent and stable behaviour (Nakonečný, 2009). Satisfaction with life (which determines the quality of life) is, among the aged, mainly affected by a senior citizen's personality traits and their lifetime experiences in managing situations they encountered and had to confront, either successfully or not. A number of senior citizens live their lives not only actively, but also productively to the ages of 70 or 75 years, and some even to the age of 80 and over. They have comparable needs and similar interests as the adult population (Hátlová et al., 2010).

Physical activities contribute to the overall fitness of senior citizens, not just physically but also in managing mentally and socially trying situations. Seniors whose lives involve regular physical activity benefit in that their senior period is more like an extension of their middle age. When more significant symptoms of older age appear, they are unable to manage their restrictions very actively.

### **Unavoidable changes of older age.**

The period of older age brings an overall deterioration of health that is acknowledged by way of the body: how it feels in general, its appearance, functionality and dubiousness while moving. Subjective living of one's own body and satisfaction with it, is strongly associated with self issues, self-assessment and experiencing a state of well-being (Hošek, 2010). At this stage of life, health is interpreted as a preservation of self-sufficiency, not as the absence of disease. Psychological and physiotherapeutic literature focuses in detail on the theme of disregarding cognitive functions with a related decrease of efficiency and change in emotive functions. Cognitive functions are excluded despite the fact that their decrease is among the dominant symptoms of ageing.

### **Sport activity as social support**

Physical activity itself does not make a lifestyle but often contributes significantly to lifestyle (Mareš, 2013). In rural Czech Republic a tradition of active lifestyle is established supported by a physical training organization “Sokol”, (Sokol was set up as the first Czech physical training organization in Austria-Hungary at the time of political liberalization of the 1860's upon the initiative of Miroslav Tyrš and Jindřich Fugner). In the past, physical training at Sokol had always been associated with social involvement. The organization used to have,

and still has in some cases, the tendency not only to keep a good quality physical training program, but also social awareness of Czech culture and sociability. Senior “Sokols” over the age of 75 are a unique, historic and cultural group whose lifetime physical activity used to blend together with historical situations and their position in society (childhood during the conditions of the Czechoslovakian Republic between the Wars; early adulthood stigmatised by dogmatic persistence of national solidarity during World War II; middle-class position in post-war society during Communist control).

## **2 Objective, Research problem**

In conducting our study, we took into consideration the fact that, in the Czech Republic, no standardized solution has been presented of an independent group of senior population in terms of personality factors. We acknowledge that our study only presents a diagnostic finding of the state of a senior population's personality, and does not offer any real solutions. However, good diagnosis provides stable footing to further the process of opting for certain interventions.

This article gives you an overview of the personality factors of seniors older than 60 and 75 years measured by questionnaire personality factors “NEO five-factor personality inventory (NEO-FFI)”.

**The objective of the thesis** was to record the effect of lifestyle associated with regular physical activity carried out within a social atmosphere in relation to personality factors according to NEO FFI, as a presumption of active living during mature old age.

In order to fulfil the objective of the thesis and answer the research problem, we defined the below study questions and hypotheses.

**Scientific question:** How does lifestyle contribute to the structure of personality in terms of NEO-FFI factors (according Hřebíčková, M. & Urbánek, T. 2001).

### **Hypotheses:**

H1) Lifestyle will manifest itself in composition of the senior's personality.

H2) In male and female personalities of seniors who regularly, and throughout their lifetimes, participate in physical activity within a social atmosphere, we find the personality traits openness, friendliness and conscientiousness, higher than found in other groups.

H3) In male and female personalities of seniors who regularly, and throughout their lifetimes, participate in physical activity within a social atmosphere, neuroticism will be lower than found in other groups.

### **3 Methodology**

#### **Method: NEO five-factor personality inventory (NEO-FFI).**

The validity of the five-factor personality model has been repeatedly confirmed by researches conducted in Europe and North America. Scales of established adjectivity are applied, based on lexical studies and classic personality tests. The Big Five is a consequence of coincidence: sophisticated statistic procedures and basal similarity of languages. It is deduced that, within language, there is a concentrated human experience which captures what we call personality (Cermak in Hrebickova, 2001, p. 6). The general lexical hypothesis (Galton 1884; Klages, 1926; Goldberg, 1993; according to Hřebíčková, 1997) is based on the presumption that the most substantial individual differences are concentrated and preserved in language. The most important dimensions, derived in the aforementioned manner, form the five-factor personality structure which was named Big Five by Goldberg (Goldberg, 1993; according to Hrebickova, 1997). He followed studies that historically dealt with this problem: Galton, 1884; Baumgartenova, 1933 ; Cattell ,1943; 1947 ; Norman, 1963 ; Digman, 1981; 1986 ; Goldberg, 1990 ; Costa, McCrae, 1992 ; Hendriksova, 1997; (see Hřebíčková, 1997).

Within the Czech Republic, studies validating the Big Five ideas have been conducted in the Czech language by the Academy of Sciences of the Czech Republic since 1992. The outcome is a standardized psycho-diagnostic method of the NEO five-factor personality inventory. Hrebickova, M., Urbanek, T., Testcentrum, Prague 2001 1<sup>st</sup> edition. In the entire group of probands, statistically significant relations between sexes are found.

#### **Ethical problems**

Probands took part in the study upon their own consent. All examined people were fully and legally capable .

#### **Study organization**

From 2007 to 2013, we conducted an individual examination of seniors over the age of 60 and 75 using the NEO FFI method. The examination was single; in terms of performance – non-performance of physical activities, blind. The lecturers who conducted the study passed a training course in the NEO FFI method application.

The study group consisted of 195 seniors; 58 men and 137 women ranging in age from 60 to 96 who were not diagnosed with dementia. They live in senior houses, with families or independently. The selection of people was determined by their will to testify. This was reflected in the number of probands of individual groups the study was focused on.

- a) Members of the Czech Sokol Community districts (46 men and 137 women).

b) People who do not regularly attend any organized physical activity lessons, or do not perform any regular physical activity (12 men and 27 women).

Groups of probands were evaluated separately in view of sex due to different life experiences and roles. This is the reason why we state our results separately for men and women. The questionnaires were administered during the probands' free time; with those who exercised, at the end of their training hours, or at collective meetings. We present the collected data in a form in which we can compare them with the general studies (mean values) conducted via NEO FFI questionnaire, standard in the Czech Republic (Hřebíčková, 2001). We state the mean values by low number of probands in some groups. With the overall growing level of uncertainty experienced, the level of closeness and willingness to testify increases. We would also like to point out the effect of physical activity that blended all aspects of life together with historical events and social position in society. Senior Sokols over the age of 75 are a unique historical and cultural group.

#### **4 Results and discussion**

The set of all experiment groups featured insignificant age variances. Groups of Sokol male and female seniors had similar symptom levels of NEO FFI personality factors compared to the adult population measured by Hřebíčková (Hřebíčková & Urbánek, 2001).

Male Sokol members had lower levels of *Neuroticism* (lowest of all the study groups) and *Openness*; and higher levels of *Friendliness* and *Consciousness*. The extent of *Extroversion* was comparable. In this group, we anticipated a high level of tendency to actively control and live their lives by their own ideas; this was confirmed. As for Sokol women, we detected lower levels of *Extroversion and Openness*; and slightly higher *Neuroticism, Friendliness and Consciousness*. The measured values ranged between values detected in the adult population and in a group of women who did not regularly participate in any organized activity, and did not exercise regularly. We presume that, despite their age, the women of these groups actively participate in the run of household, families or the environment in which they live.

##### **Discussion of measured values in individual spectra:**

##### **Neuroticism (N)**

The scale investigates individual differences in emotional stability and instability. The scale further investigates how increased intensity of emotions are experienced (Hřebíčková, Urbánek, 2001).

*Men Sokol:* The groups of men manifested a moderate trend towards a lower score than it is measured in a regular population. It can be anticipated that their awareness of their own qualities facilitates to cope well with the reduction of physical strength.

*Men non-exercising:* Group of men manifested a trend towards a higher level of neurotic instability than measured in groups of Sokol men. Seniors at this age are usually more unstable due to a general reduction of physical strength (results of clinical observations). They no longer represent “who they used to be” and their self-assessment reduces significantly.

*Women:* All the studied groups of women manifested an increase to mental instability despite their active lifestyle. With gradual loss of their physical attractiveness and thus of their social standing – in their view – their self-confidence goes down. They believe that if they stop participating in managing the household, their position will drop. Therefore, the active of them trying to keep their health.

### **Extroversion (E)**

Sociability, fellowship and openness to social stimulation. Extroverts are usually more self-confident, active, energetic and positive. They look for situations that bring them excitement. Introversion is the opposite of extroversion. Introverts are rather reserved, independent and individual. Their self-restraint is affected by the desire to remain independent (Hrebickova, Urbanek, 2001).

*Men (Sokol):* We consider it an important finding that these men do not differ significantly from the adult male population. This gives evidence of their active approach to experiencing your life knowing possibilities of effect on ongoing situation

*Men non-exercising:* A significantly higher level of introversion and closeness was found.

*Women:* In all groups of observed women we noted a trend towards introversion, isolation and loneliness which was highest in non-exercising women.

### **Openness (O) towards new experiences**

People described as “open” have an animated imagination, are sensitive to esthetical stimuli, and are responsive to inner feelings; they prefer diversity, are curious, have independent judgement, and often act unconventionally. They are interested in acquiring new knowledge and experiences (Hrebickova, Urbanek, 2001). A tendency to reduced openness to new stimuli was observed in all groups. This is a significant change in personality factors. We consider that this corresponds with totally deteriorated flexibility in stimuli processing, and creation of defences in behaviour.

### **Friendliness – amicability (P)**

This is a dimension of personality between egocentrism and the tendency to help the others. Various forms of altruism, compassion-and the willingness to help or even to sacrifice themselves for another have both positive and negative aspects. It not only depends on personality presumptions but, to a great extent, on education and positively perceived values of society. It does not change in an explicit manner. It also depends on self-assessment and -evaluation of one's own situation (Hřebičková, Urbánek, 2001). The tendency in higher levels of amicability was observed in groups of exercising Sokol men and women 75years, compared to other groups. This activity is a form of defense against the expected low acceptability. We believe that they actively prepare a better position for their own acceptance. This can be, to a lower extent, observed in groups of non-exercising men and women. Those actively exercising are probably more focused on their own personality, and view relating amongst their neighbourhood as a low priority. They realize that they become more and more dependent on relationships.

### **Conscientiousness (S)**

A tendency to maintain self-control, control of external stimuli. This area has its positive and negative aspects. It investigates the relation to work and to fulfilling obligations (Hrebickova, Urbanek, 2001). All observed groups of men and women featured a tendency to increase their level of conscientiousness; higher in exercising Sokol men and women. The higher rate of careful preparation is certainly caused a decline in the quality of cognitive processes. The higher level of conscientiousness can be considered as a form of self-defense against failures in behavior. Exercising Sokol senior men and women are more active in this particular effort. This can be, to a lower extent, observed in groups of non-exercising men and women.

## **5 Conclusions**

In our study, we observed groups of senior men and women, actively participating or not participating in regular group physical training. Despite their active lifestyle, active Sokol trainees deal not only with health but also with social problems of old age.

The study implies that senior citizens exercising at Sokol have a higher tendency to actively participate in their current life, compared to other groups of seniors. The investigated sets with a low number of probands allow us to merely guess at the personalities of individuals who regularly train or not. The trends observed in the studied groups of seniors convinced us of the necessity for more extensive studies in this area.

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