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MOTIVATION FOR PHYSICAL ACTIVITY IN CZECH SENIORS

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SUMMARY

The present study focuses on motivation to physical activity in Czech seniors from a social cognitive perspective. The researched sample consisted of 254 Czech older adults (average age 68.1 years), who were administered a battery of questionnaires measuring their self-rated participation in physical activity and related motivational constructs (e.g., perceived self-efficacy, perceived social support, self-regulation strategies such as goal setting, planning, self-monitoring).

Physical activity was significantly associated with self-efficacy (especially self-efficacy for lifestyle physical activity) and social support, although the respondents perceived a low level of support and did not report actively seeking additional support. Participants asserted that they predominantly set exercise goals but used low-quality goal setting strategies. Also, they mentioned relatively high level of self-regulation strategies related to perceived importance of physical activity (such as perceiving exercise as a priority, goal setting and seeking reinforcements), on the other hand they seemed to lack some self-regulation strategies related to actual enactment of physical activity. In general, the relationship between self-regulation strategies and physical activity was relatively low which suggests that physical activity of our respondents has been motivated mostly by external or habitual factors.

Key words: seniors, motivation, physical activity, self-efficacy, social support, self-regulation

INTRODUCTION

Sufficient and regular physical activity is generally considered an essential health behavior in older age, with documented benefits for physiological and mental functioning and quality of life of older adults (Leveille et al., 1999; Netz et al., 2005; Kramer et al., 2003; Laurin et al., 2001; Fox, 1999). Various studies have shown that participation in physical activity in older adults is influenced by a number of variables: social and cultural factors

(such as social support), environmental determinants (such as opportunity or availability of recreational facilities), demographic factors (such as education and socioeconomic status), biological determinants (such as BMI) and, importantly, personal determinants, most prominently one's motivation (Humpel et al., 2002; Wendel-Vos et al., 2007; McAuley et al., 2001, Trost et al., 2002).

One prevalent contemporary psychological approach explains motivation for physical activity from the perspective of social cognitive theory which suggests that changes in people's behavior are co-determined through the interaction of personal and environmental factors (Bandura, 1997). The key mediating mechanisms in this interaction are cognitive beliefs (namely, self-efficacy and outcome expectations) and self-regulation skills (Bandura, 1997, McAuley et al., 2003, McAuley et al., 2006, McAuley et al., 2011). Self-efficacy is defined as a belief a person has in his or her capacity to carry out a course of action and it is considered as one of the most consistent determinants of various aspects of health behavior. Self-regulation is usually defined as personal regulation of goal directed behavior (e.g. physical activity) and includes various strategies such as goal setting, seeking reinforcements and social support, self-monitoring, or various corrective self-reactions (Umstatter et al., 2009). It is important to note that individual motivational variables, such as self-regulation or self-efficacy are significantly related to external social factors, e.g. social support or social capital (McAuley et al., 2003; Satariano, McAuley, 2003).

In the Czech context, a limited number of studies explored the reasons why seniors engage in physical activity. Those studies that do exist have mostly focused on environmental and demographic factors as correlates of physical activity but did not examine social cognitive factors related to participants' physical activity (Zavázalová et al., 2007, Pelcová et al. 2008, Slepíčka, Slepíčková, 2002a, 2002b).

In the present article we attempt to expand the current research on physical activity in Czech seniors by focusing on motivational, social cognitive constructs related to their participation in physical activity. The main goals of our study were to (1) describe the extent to which Czech seniors report using different motivational and social cognitive strategies; (2) explore which motivational and social cognitive strategies are related to physical activity; and (3) examine which motivational and social cognitive strategies differentiate between active and non-active Czech seniors.

METHOD

Participants

The sample in the study consisted of 254 Czech older adults, all between 60 and 84 years of age (average age was 68.1 years) who lived in diverse contexts (metropolitan area, a medium sized city, and a district town). The respondents were recruited from various social and educational programs aimed at seniors, senior clubs, universities of the third age and similar organizations offering social activities for seniors. We contacted the participants through institutions organizing these activities and asked them to fill a questionnaire. The return rate of the questionnaires was about 50%. Most of the participants were women (77.3%), had above average education (54.5% finished high school, 35.3% finished

university), most earned less than 20 000 Czech crowns per month, and had average BMI of 26.4.

Measures

As we aimed to explore what motivational strategies are predominantly used by Czech seniors, we considered questionnaire survey as the most appropriate methodological background for the study. We used several questionnaires to obtain self-reported estimates of physical activity and assess the respondents' motivation to physical activity represented by various self-regulatory constructs, perceived self-efficacy and perceived social support. As a measure of physical activity we used The Leisure Time Exercise Questionnaire (LTEQ) (Godin, Shephard, 1985) and Physical Activity Survey for the Elderly (PASE) (Washburn et al., 1993). PASE covers broad range of physical activities including physical activity related to leisure, work and household. LTEQ focuses on leisure physical activity and covers four levels of intensity (strenuous, moderate, mild, sitting). Both questionnaires are considered as valid and reliable instruments for measuring physical activity in older adults.

As a measure of motivation we used several questionnaires covering a range of social cognitive motivational constructs. We used the following scales: Lifestyle Physical Activity Self-Efficacy Scale (LSE) (Elavsky, McAuley, 2007) assessing the level of confidence that sufficient physical activity will be a part of one's lifestyle during the following six months; Barriers Self-Efficacy Scale (BASE) (McAuley, 1993) measuring the belief in one's capacity to overcome various barriers of physical activity; Exercise Planning and Scheduling Scale (EPS) and Exercise Goal-Setting Scale (EGS) (Rovniak et al., 2002) assessing motivational strategies such as planning and goal setting; Social Support for Exercise (SSE) (Sallis et al., 1987) that captures perceived social support in physical activity from friends and family; Physical Activity Self-Regulation (PASR) measuring a range of motivational constructs related to self-regulation (Umstätt et al., 2009). All used methods were translated from English for the purpose of the study and supplemented by back-translation to ensure the accuracy of the translation; they also showed sufficient level of reliability in our study (Cronbach alfa = 0.77–0.99).

All used scales (with exception of self-efficacy scales) were 5 point Likert scales with 1 representing "never" and 5 representing "very often". The self efficacy scales (LSE and BASE) were ten points scales in which respondents expressed in tens of percents a degree of their belief that they would continue engaging insufficient physical activity during the next six months.

Data Analysis

The data obtained from these measures were processed by the SPSS (ver. 19.0) statistical software. We used descriptive statistics (mean, median, st. deviation) to describe the relative preference of various motivational strategies in our sample (goal 1). To address goal 2, we correlated the motivational constructs and self-reported measures of physical activity using Spearman's coefficient and conducted multiple regression analysis to evaluate unique contribution of each factor to explained variance in physical activity. To address goal 3, we

compared motivation strategies implemented by the physically active and physically non-active group by independent two-sample t-test. We used recommendations of World Health Organization (WHO, 2011) as a criterion in dividing the sample into physically active and non-active groups.

Results

The use of motivational strategies for physical activity (descriptive statistics)

In Table 1, we present the average scores that our participants endorsed on the respective motivational scales. In general, the seniors participating in the study rather believed that they would be able to participate in sufficient physical activity during the next six months (for an average LSE score of 60%); on the other hand, they rather did not believe that they would sustain sufficient physical activity when facing various obstacles (for an average BASE score of 40%). Interestingly, respondents mostly asserted that they did set exercise goals (they scored high on the PASR subscale “Goal-setting”) but the quality of the goal setting practices (such as setting both short term and long term exercise goals or analyzing the progress towards goals) seemed to be low judging from the scores low on the EGS scale. According to the scores on PASR “Social support” subscale, respondents in the study only rarely sought social support. They also perceived receiving low levels of support from family and friends, scoring on average 2.5 on the 5-point SSE scales. As reflected in PASR “Reinforcement” subscale, the most prevalent motivational strategy in our sample was reinforcement seeking, such as focusing on positive emotions or health benefits of exercise. Also commonly used strategies were self-monitoring (i.e. participants focused on things that helped them to be active) and time management (such as reserving specific times for physical activity).

Table 1. Motivation for physical activity

	Mean	Median	St. deviation
Lifestyle physical activity self-efficacy (LSE)	60.4676	60.0000	33.73870
Exercise as Displaced Priority (EPS)	3.5262	3.5000	1.02849
Exercise Planning and Scheduling (EPS)	2.5475	2.3333	1.22499
Quality Goal-Setting Practices (EGS)	2.1950	2.0000	1.05121
Barriers Self-Efficacy (BASE)	41.9419	40.0000	24.34890
Self-monitoring (PASR)	2.7225	3.0000	1.24704
Goal-setting (PASR)	3.1897	3.5000	1.13384
Social support (PASR)	2.1667	2.0000	1.05102
Reinforcement (PASR)	3.5625	4.0000	1.10365
Time management (PASR)	3.0727	3.0000	1.11514
Relapse prevention (PASR)	2.3950	2.5000	1.12536
Social Support for Exercise (SSE) – family	2.5409	2.3571	.70122
Social Support for Exercise (SSE) – friends	2.6607	2.4286	.79949
Social Support (SSE) – overall	2.6069	2.4643	.60125

Note: self-efficacy scales in percent, all other on Likert-type scales ranging from 1 (never) to 5 (very often)

Motivational and social cognitive influences on physical activity (Spearman correlations and multiple regression)

On the basis of the pattern of observed bivariate correlations, both the total PASE and LTEQ scores demonstrated fairly consistent correlations across a number of the motivational and social cognitive variables. The PASE was significantly associated with all variables except for scores on the exercise planning and scheduling, exercise as displayed priority, self-monitoring, and social support from family scales. The LTEQ was associated with all but self-monitoring, goal-setting (PASR), social support (PASR), and social support from friends (SSE) (see Table 3). The associations between LTEQ subscores and the motivational and social cognitive variables were more varied and largely nonsignificant for minutes spent in light and vigorous leisure activity. Minutes spent in moderate intensity leisure physical activity were associated with lifestyle self-efficacy, quality goal setting practices, and all social support scores on the SSE scale. The most consistent correlate of physical activity across the different measures of physical activity was lifestyle self-efficacy.

Table 2. Physical activity and social cognitive variables – Spearman correlations

	PASE	LTEQmets	LTEQ vigorous minutes	LTEQ moderate minutes	LTEQ light minutes
Lifestyle physical activity self-efficacy (LSE)	.290**	.320**	ns	.294**	.208**
Exercise as Displaced Priority (EPS)	ns	.158 [†]	ns	ns	ns
Exercise Planning and Scheduling (EPS)	ns	.222**	ns	ns	ns
Quality Goal-Setting Practices (EGS)	.181**	.163 [†]	ns	.175 [†]	ns
Barriers Self-Efficacy (BASE)	.208**	.212**	ns	ns	ns
Self-monitoring (PASR)	ns	ns	ns	ns	ns
Goal-setting (PASR)	.208**	ns	ns	ns	ns
Social support (PASR)	.149 [†]	ns	ns	ns	ns
Reinforcement (PASR)	.183**	.163 [†]	ns	ns	ns
Time management (PASR)	.194**	.180 [†]	ns	ns	ns
Relapse prevention (PASR)	.218**	.171 [†]	ns	ns	ns
Social Support for Exercise (SSE) – family	ns	ns	ns	.200 [†]	ns
Social Support for Exercise (SSE) – friends	.206**	.255**	.238	.252**	ns
Social Support (SSE) – overall	.208**	.229**	ns	.250**	ns

Note: * = result significant on 0.05 level, ** = result significant on 0.01 level

Subsequently, we conducted multiple regression analysis regressing separately each of the physical activity scores on the motivational and social cognitive variables. Because the SSE scores for family and friends were highly correlated as were the PASR goal setting and self-monitoring scales ($r > 0.7$), to avoid problems with multicollinearity and potential

suppression effects these variables were entered as a sum for a total social support score and a total goal-setting/self-monitoring score. Overall, the motivational and social cognitive variables predicted significantly PASE score ($F(11.138) = 2.185, p = .018$; explaining 14.8% of variance in PASE); LTEQ score ($F(11.126) = 2.152, p = .021$; explaining 15.8% of variance in LTEQ); and LTEQ minutes in moderate intensity activity score ($F(11.79) = 2.134, p = .027$; explaining 22.9% of variance in LTEQ moderate minutes). The regression coefficients and unique contributions of all variables to variance in physical activity are presented in Table 3. As can be seen, the primary predictors of total PASE and LTEQmets were self-efficacy beliefs (lifestyle self-efficacy for both, and barriers self-efficacy for PASE only). For minutes spent in moderate intensity activity, however, the primary unique predictor were better quality goal-setting practices but, curiously, less use of time management strategies.

Table 3. Physical activity and social cognitive variables – multiple regression

Model	PASE		LTEQmets		LTEQminmod	
	R2	Standardized Coefficients	R2	Standardized Coefficients	R2	Standardized Coefficients
		Beta		Beta		Beta
Lifestyle physical activity self-efficacy	.083	.289*	.058	.242*	.031	.175
'Exercise as Displaced Priority'	.001	.024	.004	-.061	.001	.027
'Exercise Planning and Scheduling'	.004	.060	.001	-.034	.000	.013
'Quality Goal-Setting Practices'	.038	.195	.007	.083	.070	.265*
Barriers Self-Efficacy	.015	.123*	.038	.195	.009	.094
sum of GOALSET and SELFMON	.051	.225	.001	-.032	.041	-.202
'Social support PASR'	.000	.022	.000	-.017	.005	-.072
'Reinforcement PASR'	.001	.032	.009	.094	.009	-.096
'Time management PASR'	.034	.184	.023	-.151	.103	-.321*
'Relapse prevention PASR'	.000	.005	.003	.053	.058	.241
Social Support Overall	.000	.008	.005	.069	.026	.160

Note: * = result significant on 0.05 level

Comparison of physically active and non-active seniors (independent two sample t-test)

When comparing the scores on motivational scales between the groups of physically active and non-active participants (see Table 4), we observed the highest proportional difference in the self-efficacy scores, especially in lifestyle physical activity self-efficacy. In other words, active respondents possessed significantly stronger beliefs that they would be able to sustain sufficient physical activity during the next six months and, they also believed significantly more that they would be able to sustain sufficient physical activity when facing various environmental, social and motivational obstacles. Relatively high differences were also observed in scales of self-monitoring and relapse prevention; i.e. physically active participants monitored their physical activity more, focused on things

Table 4. Comparison of physically active and non-active seniors

	Active /non-active	N	Mean	Mean difference	Std. Deviation
Lifestyle physical activity self-efficacy (LSE) **	Active	94	69.8050	16.13	30.13409
	Non-active	110	53.6788		35.13788
Exercise as Displaced Priority (EPS)	Active	96	3.6224	.17	1.01054
	Non-active	99	3.4461		.99924
Exercise Planning and Scheduling (EPS)*	Active	99	2.7365	0.36	1.26811
	Non-active	99	2.3830		1.14329
Quality Goal-Setting Practices (EGS)*	Active	96	2.3672	0.3	1.04412
	Non-active	102	2.0676		1.06291
Barriers Self-Efficacy(BASE)**	Active	96	46.4181	9.12	23.54666
	Non-active	102	37.3026		23.06405
Self-monitoring (PASR)*	Active	94	2.9734	.48	1.17173
	Non-active	106	2.4858		1.26200
Goal-setting (PASR)*	Active	98	3.3622	.32	1.12098
	Non-active	109	3.0413		1.11207
Social support (PASR)	Active	95	2.1789	.1	.90188
	Non-active	104	2.0769		1.11209
Reinforcement (PASR)*	Active	97	3.7062	.31	1.06005
	Non-active	109	3.4037		1.12932
Time management (PASR)	Active	97	3.2268	.25	1.06561
	Non-active	106	2.9717		1.15229
Relapse prevention (PASR)*	Active	96	2.6563	.45	1.14090
	Non-active	105	2.2143		1.07832
Social Support for Exercise (SSE) – family**	Active	80	2.7165	.32	.85103
	Non-active	96	2.3954		.51521
Social Support for Exercise (SSE) – friends**	Active	77	2.8582	.32	.77744
	Non-active	94	2.5367		.79612
Social Support (SSE) – overall**	Active	80	2.7958	.33	.65972
	Non-active	98	2.4677		.51332

Note: * = result significant on 0.05 level, ** = result significant on 0.01 level

that helped them to be active and strived to avoid situations that would hinder their participation in physical activity.

On the other hand, the active and non-active groups did not significantly differ in their scores on the EPS subscale of giving priority to exercise and PASR subscales of time management and seeking social support. In both groups, the strategies of giving priority to exercise and time management related to physical activity were rated quite highly, possibly indicating that both active and non-active participants recognized the importance of participating in physical activity. In contrast, both groups scored low on the social

support seeking scale and the active group did not seek more social support which may indicate that the respondents' approach to physical activity was predominantly individualistic, although the active group actually perceived more obtained support for exercise from family and friends.

DISCUSSION

At present, there is an increasing emphasis on physical activity as a part of “active” or “positive” aging within the Czech context (Hasmanová-Marhánková, 2010; Holmerová et al., 2006; Ministry of Labour and Social Affairs, 2008; Uhlíř, 2008; Zavázalová et al., 2008). However, widespread call to exercise has not been so far accompanied by corresponding research of the reasons why Czech seniors engage in physical activity. In the present study, we attempt to bring insight into motivation of Czech older adults to participate in physical activity from the social cognitive perspective.

The results showed that self-efficacy (i.e. a belief that one would be able to sustain sufficient level of physical activity in the future) was probably the most important motivational factor related to physical activity in our sample. Respondents demonstrated rather high level of lifestyle self-efficacy overall, there was the highest proportional difference in lifestyle self-efficacy between the active and non-active group and also the highest (and most consistent) correlations between life-style efficacy and measures of physical activity out of all motivational factors. Somewhat lower impact (but still one of the highest of all studied motivational variables) was observed in barriers self-efficacy (i.e. a belief that one would be able to overcome obstacles related to physical activity in the future). There was significant difference between active and non-active participants in this variable, as well as one of the strongest correlations between barriers self-efficacy and physical activity of all studied motivational variables.

Our findings about the importance of self-efficacy for the seniors' participation in physical activity are supported by other studies. Conn (1998) found that self-efficacy had one of the strongest direct effects on exercise behavior in older adults. McAuley et al. (2003) showed that self-efficacy has also long-term impact on physical activity, as it was significantly related to exercise during an 18-month follow-up of an exercise program. Self-efficacy also plays an important mediating role between physical activity and some of its outcomes. For example, it is often found that self-efficacy mediates the relationship between physical activity and satisfaction with life or measures of health-related quality of life in older adults (McAuley et al., 2006; Elavsky et al., 2005). The relationship between physical activity and self-efficacy seems to be bidirectional. For instance, self-efficacy of seniors who had participated in an exercise program significantly declined during the following nine months without exercise but rapidly returned to the previous level after the program commenced again (McAuley et al., 1993). At the same time, individuals with low levels of self-efficacy are less likely to be sufficiently active and less likely to take part in exercise programs (McAuley & Blissmer, 2002).

These results may have important practical implications. According to Bandura (1997), self-efficacy is predominantly formed by direct (mastery) or vicarious experience with an activity. Therefore, participation of previously non-active seniors in various sporting

programs might not only directly influence their well-being but it may also enhance their belief that they are capable of physical activity and positively influence their motivation to exercise in the future.

Social support represents another important motivational factor related to participation in physical activity in our sample. Although the overall perception of social support was small, we observed significant difference in perceived social support between the active and non-active groups and significant correlations between physical activity and perceived support, especially from friends. The importance of social support for participation in physical activity seems obvious, as it is often mentioned in other studies as a key factor enabling participation in physical activity in older adults (Brawley, Rejeski, 2003, Booth et al., 2000). We, however, noticed a significant obstacle to social support in our sample – the participants did not seem to seek it. Seeking of social support was a motivational strategy with the lowest scores both in the group of physically active and non-active participants (which did not significantly differ in this aspect). Also, there was almost no correlation between this variable and any measure of physical activity which may suggest that Czech seniors only rarely employ this motivational strategy and their support depends mostly on internal beliefs (such as self-efficacy) and external circumstances. We can expect that the lack of this skill may present a significant obstacle to ongoing participation in physical activity. Therefore, sporting programs for seniors should not only directly provide social support but also foster social networking and encourage seniors to independently organize social support for themselves.

Seniors in our study mostly asserted that they set exercise goals considered an important part of self-regulation skills related to physical activity (Umstadt, 2009; Shilts, Horowitz, Townsend, 2004). However, they did not seem to employ corresponding hi-quality goal setting strategies such as monitoring the progress toward goals or setting both short- and long-term goals. This may suggest that although Czech seniors usually set general exercise goals (for example that they would exercise), they do not employ effective and specific goals that are more likely to be met.

In general we observed surprisingly weak relationship between physical activity and self-regulation strategies. It seems that external or internal belief strategies, such as social support and self-efficacy have more important effect on physical activity in our sample. On the other hand, we observed significant differences between active and non-active group in some of the self-regulation strategies (most prominently in self-monitoring and relapse prevention) which suggests that there may be an indirect relationship between self-regulation strategies and physical activity. This finding is supported also by other studies. For example, McAuley et al. (2011) found that indirect effect of self-regulatory processes on physical activity was mediated by self-efficacy.

Of all researched self-regulation strategies, we observed the highest scores in the strategies related to being aware of the importance of physical activity (such as reinforcement seeking, setting general goals or giving priority to exercise) in our sample. It may suggest that, in general, Czech seniors are aware of health and emotional benefits of physical activity but they may lack motivational strategies related to actual enactment of physical activity, such as ability to set high-quality goals and seek social support. Therefore, exercise programs for seniors should not only emphasize the importance of physical activity but also focus on the development of self-regulatory skills related to actual execution of physical activity.

Limitations of the study

When discussing the results of our study, it is necessary to consider its limitations. The main limitations stem from the used methods. Self-reported questionnaires of physical activity capture only subjective estimation of physical activity which may be influenced by recall bias and social desirability and differ from objective measures such as pedometers or accelerometers. Even so, self-report measures of physical activity represent a practical and feasible approach, and all measures used in the study have been validated for use in older adults. Subjective evaluation of physical activity may also better reflect perceived exerted effort and more accurately capture the relative level of individual respondents.

Similarly, the implementation of motivational scales has also some limitations. Above all, the respondents must conform to pre-determined concepts and it is possible that their reasons for participation in physical activity may be different; especially when we consider that the questionnaires have been adapted from the US context. To eliminate this constraint it would be appropriate to follow up with a qualitatively oriented study focusing directly on the experience of Czech seniors with physical activity.

Another limitation stems from our sample. The analysis of demographic variables shows that our sample consists predominantly of women and people with above-average education. Therefore, our results apply mostly to this sub-population of older adults.

CONCLUSIONS

In the present study we focused on various motivational characteristics and their relationships with participation in physical activity in a sample of Czech older adults. It seems that self-efficacy represents the most important motivational factor. Also social support seemed to have an important impact, although the actual level of perceived support was low and the participants themselves did not actively seek additional support. Participants also asserted that they set exercise goals but did not use hi-quality goal-setting practices. Relatively high level in some of the self-regulation strategies suggests that respondents recognized the importance of physical activity but they might be lacking in self-regulation strategies that could help them in actual implementation of physical activity. In general, there were weak correlations between physical activity and self-regulation strategies which suggest that the participation of our respondents in physical activity has been motivated mostly by habitual and environmental factors.

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MOTIVACE K POHYBOVÉ AKTIVITĚ U ČESKÝCH SENIORŮ

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SOUHRN

Cílem předkládané studie je prozkoumat některé důvody účasti v pohybové aktivitě u českých seniorů z perspektivy sociálně kognitivní teorie. Výzkumný vzorek tvořilo 254 českých seniorů a senierek ve věku mezi 60–84 lety (průměrný věk 68,1 let), kterým byla administrována baterie dotazníků zjišťující jejich účast v pohybové aktivitě a s ní související motivační proměnné (vnímanou sebe-účinnost, vnímanou sociální podporu, sebe-regulační strategie jako stanovování cílů, plánování, sebe-monitoring a další). S pohybovou aktivitou nejvýznamněji souvisela vnímaná sebe-účinnost, významný vztah byl pozorován také u vnímané sociální podpory, přestože respondenti uváděli její nízkou úroveň a sami se jen málo podíleli na jejím vyhledávání. Respondenti udávali, že si obvykle stanovovali cíle týkající se cvičení, avšak při dosahování těchto cílů podle svých slov neužívali efektivní seberegulační strategie. Respondenti zmiňovali relativně vysokou úroveň některých sebe-regulačních strategií spojených s vnímáním důležitosti pohybové aktivity, v menší míře udávali užití sebe-regulačních strategií spojených přímo s prováděním pohybové aktivity. Obecně byl pozorován pouze nízký vztah mezi sebe-regulačními strategiemi a pohybovou aktivitou, což naznačuje, že respondenti byli motivováni spíše vnějšími či habituálními faktory.

Klíčová slova: senioři, motivace, pohybová aktivita, vnímaná sebe-účinnost, vnímaná sociální podpora, sebe-regulace

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