THE SPECIFIC SUITABLE METHODS FOR DEVELOPING OF PSYCHOPHYSICAL FITNESS AND DECISION-MAKING SKILLS OF MANAGERS

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Abstract: The experiment consisted of testing the effects of the complex physical and psychological load in the context of the ability of subsequent visual attention and mental concentration. Measurements took place before and after passing the method. Eighteen managers attended. Participants could sign out at any time. The program was designed to identify the desired attributes of individuals able to adapt to a dynamically changing environment. Their organism is more resistant to fatigue, exhaustion and is capable of rapid regeneration. Such properties occur in approximately 20% of individuals. The result of the experiment is dividing participants into four groups with similar performances using diagnostic methods and then selecting several individuals with suitable potentials.

Keywords: psychophysical condition, sweat lodge, increased stress, cognitive performance.

1 Introduction

The management of organization within all particular areas create conditions supporting command activities. For commanding, the main group of particular management areas are control, leadership and human resources development. Nevertheless, all of management areas have long been pointed out that in addition to the expertise and technical skills of commanders and managers in terms of knowledge and skills in specific areas of work and in addition to relating to leadership and communication with people. Also, there is possible to define a trend that emphasizes the qualities and potentials related to mental and other specific aspects of individuals working in leadership (command and management) positions comes to the fore.

Newly, the framework is being created| according to orientation on people capable of commitment with their victory focus and work within a value. Key area is the possibility of self-realization, personal responsibility, and strong point in themselves (principles and values) and, last but not least, an orientation towards people capable of teamwork and synergies (Hroník, 2008, p. 25).

Indications of manifestations of this trend can be found, for example, in some competencies or in conceptual skills that refer to personal mastery and systems thinking (Senge, 2007), to conceptual and complex thinking (Robbins and Coulter, 2004; Hroník, 2008) or to mental maturity, and fitness (Ullrich and Pokorný, 2012; Kiyosaki, 2016).

Experience shows that it is not possible to equate the level of quality of mastery in a professional profession with the quality of holding a managerial position by a given individual in this professional system. This is one of the reasons why Cognitive Management works with the term professional manager and leader as a specific category that is not tied to any professional profession (Ambrozová et al., 2016).

As follows from the analysis of trends in the development of the current security environment, the partial selected outputs in the requirements for personal qualities of commanders, professional managers and leaders are as follows:

- Network literacy and IT management, competence for using the potentials of modern communication and information technologies for networking, information, knowledge and their sharing, creating and organizing relationships and processes (proactivity, speed, critical, creative, systemic and contextual thinking).
- Ability to cognitively manage the change of conditions and the development of relationships, in terms of mental mobility in decision-making and acting in different environments or situational conditions (decision-making under uncertainty, uncertainty and risk, solving analytical problems, heuristics, etc.).
- Demands for the personality of the individual, resulting from the constantly changing conditions of the professional and personal environment, in terms of the ability to maintain, cultivate and develop psychophysical and mental condition.

In connection with the above, a professional manager for the current security environment could be characterized as an individual who has:

- appropriate qualities of abilities (competencies) for effective decision-making and correct action, creation, organization, cultivation and development of relationships and processes in the human system and its environment, in terms of respect and responsibility for the environment, individuality and activity of each individual;
- meta-skills, in the sense of reflected experience. Meta skills can be seen as the personal qualities of managers that relate to emotions, attitudes, attention, mindfulness and reflection;
- mental maturity, which concerns the levels of quality and the way of cognition, decision-making, acting and leading.

A significant limitation of natural potentials is biological determination, the innate constitution of man, his psychophysical arrangement, structure and activity of the nervous system and its functions (e.g. peculiarities of human experience processing), sensory organs, pre-programmed behavior (instincts) and heredity (Nakonečný, 1998, p. 109). Humans' natural potentials are essentially psychophysical dispositions that individuals naturally own. Physical (biological, physiological) and mental processes and properties cannot be separated. The connection of the psyche to the nervous system, especially to the brain, is a generally accepted postulate (Říčan, 2010). Thus, natural is by its nature neither genetic, hereditary, nor innate, nor just the effect of the environment, culture, social status, etc., usually combined.

Connatural management focuses on identifying, recognizing and developing these natural potentials. It considers them in the following aspects so that the natural potentials:

- They are the gods, the individuals themselves and the system as a whole. They are constantly present and are not obvious in the first place.
- It forms the source environment of human abilities and skills and thus the basis of his mental, psychophysical, personal and social dimensions.
- They appear in the form of qualities of abilities and skills in a situational context (subtle skills).
- - They cannot be acquired or created by learning, nor by education, but they can be discovered, recognized and developed both intuitively, randomly, by situational connection of an individual's natural potential and the influence of the environment, and consciously, purposefully, intentionally.

2 Benefits of methods working with alternating load and attention

The authors point to considerable overlap in areas such as the prevention of certain mental and physical illnesses, group and individual therapeutic work, stress reduction and mental hygiene, strengthening physical health (Laukkanen et al., 2015; Kukkonen-Harjula et al., 1989; Laukkanen et al., 2016; Wilson,

2003), and improving the quality of life. (Schiff, Pelech, 2008; Smith, 2005; Colmant, Merta, 1998; Aung, 2006) This method has been successfully tested in social problems, alcoholism, drug addiction or as part of therapies in Canadian correctional facilities (Grobsmith and Dam, 1990; Waldram 1997; Waldram et al., 2006; Matamonasa-Bennett, 2015).

The significant role of these methods, which include sweating, increased to limiting psychophysical stress and sets of various stressors or deprivations, inducing altered states of consciousness, can also be important in the context of improving communication, professional intuition, confidence, discipline, personality integrity support or natural spiritual perception. . This can be observed and traced in the traditional practices of different nations almost all over the world. (Aaland, 1978; Bruchac, 1993; Van Gennep, 1997, Eliade, 1997).

For our experiment, these aspects have a complementary character and we deliberately do not deal with them in this article. In order to be able to quantify and statistically process the results, it was necessary to deliberately narrow this range. We focused mainly on whether the effect of the methods will lead to different reactions within the psychophysical condition of individuals and cognitive performance, before and after participation for a possible comparison (Ambrozová et al., 2016).

3 Methodological approach

3.1 Diagnostic methods for design chosen abilities and competencies

To assess the effects of the development program, suitable diagnostic methods were selected. Participants' personality profiles for this experiment were not evaluated. However, in the subsequent research, this information could be important especially with regard to the temperament of the participants' personalities.

- Methods of psychophysical diagnostics

1. Polar Team - continuous monitoring of heart rate changes and their trends. Measuring the body's response to stress stimuli.
2. Max Pulse Medicore - plethysmographic method of examination of an individual's stress profile and diagnosis of heart rate variability.

- Methods of psychological diagnostics

1. Numerical rectangle (CO) - non-verbal performance test of optical perception, respectively visual attention and speed. (Dolezal, Kuruc, Senka, 1992)
2. Attention test (D2) - time-limited test of selective attention and mental concentration. (Brickenkamp, Zillmer, 2000)
3. Disjunctive reaction time (DRČ II.) - focused on measuring perceptual alertness, speed and accuracy of reactions to visual stimuli. (Vonkomer, 1992)
4. Decision-making in time stress (RČS) - a method mapping the complex performance of an individual in stressful conditions. (Komárková, Osecká, 1993)
5. D48 Domino (D48) - a non-verbal intelligence test focusing on fluid intelligence - the potential ability to learn and solve problems. (Svoboda, 2010, p. 55)

3.2 Chosen statistic methods

The data were processed using cluster analysis, which deals with methods and algorithms that combine data with similar properties into a cluster. It tries to organize the obtained data into meaningful structures, about the creation of taxonomies. Cluster analysis is a data analysis tool that sorts different objects into clusters so that the similarity of two objects belonging to one group is maximum, while the similarity to objects outside this cluster is minimal. By clustering, it is possible to find relationships between objects without further explanation or interpretation. In other words, cluster analysis finds a structure between objects without explaining why they exist. (Lukasová, Šarmanová, 1985) Cluster analysis was used in the experiment to be able to classify participants into performance-related groups.

The program was designed to identify benefits for the profession that require manager-leader attributes that appear in approximately 20% of individuals. (Ullrich, 2017 p. 63) These individuals are able to adapt to a dynamically changing environment and their body is better able to withstand fatigue, exhaustion and is able to regenerate quickly. It consisted of four steps, which are described in following items:

- Ex ante measurements to obtain input data

1. Autonomic nervous system using Max Pulse Medicore, determining the level of physical and mental stress, the state of regeneration of the organism.
2. Levels of mental condition (ČO, D2, DRČ II., RČS, D48).

- Sweat hut

1. 4 cycles of psychophysical exercise after 40 minutes. At the same time, participants are affected by social deprivation, thermal discomfort, sensory deprivation at the physical, mental and emotional levels.
2. There is a 15-minute pause between individual cycles, where the load is reduced, emotions are released (heat dissipation from the sweat hut). However, participants remain in place (do not leave the sweat hut).
3. Continuous measurement of heart rate changes and their trends using the Polar Team.

- Controlled relaxation

1. For a period of 30 minutes after a 30-minute break, when the participants dried themselves and prepared for relaxation. The pause also serves as a space to balance the autonomic nervous system after exercise.
2. Participants are instructed to lie down and perceive the instructions of the guide. The goal is not to fall asleep, but to work (relax) with conscious attention. This leads to cultivation and rest on the psychophysical level of the individual.
3. Continuous measurement of heart rate changes and their trends using the Polar Team.

- Ex post measurements to compare results

1. Autonomic nervous system using Max Pulse Medicore, determining the level of physical and mental stress after exercise, the state of regeneration of the organism.
2. Levels of mental condition (ČO, D2, DRČ II., RČS, D48).

4 Results

4.1 Results of heart rate measurement

Figure 1 shows a cycle of 4 rounds of load 2 of selected participants4, to which each reacted differently. Data were scanned using sensors monitoring the heart rate - Polar Team heart rate sensor. For a more comprehensive evaluation, it is necessary to compare the measurement of heart rate together with the personality profile of the participant and the results of psychological tests of the individual's competence in relation to the selected competencies of the manager. Furthermore, the state of the autonomic nervous system before and after exercise. Subsequently, it can be recommended appropriate methods for further development.

It is interesting that in a very short time the organism gets into a high load, when the heart rate of the participants ranged between 140 - 160 beats / min. The dotted box indicates the total length of the program. From about 19:30 there is a significant decrease in heart rate due to controlled relaxation. Whether and to what extent the organism really rests can be determined by further measurements of the autonomic nervous system using Max Pulse Medicore.

Another interesting feature is the visual comparison of the heart rate graphs in Fig. 1, while we can notice the similarity of the trend, but there are also significant differences. Each organism will react differently. In Fig. 1 it is possible to see that the trend of the load is not nearly as obvious as in Fig. 1 above. At the same time, we could argue that the participant in Fig. 1 below

had more difficulty in managing the load, because the curve is very fluctuating - out of a coherent state. When the load subsides, the organism returns very slowly to rest mode, is unable to relax and continues to become exhausted. By using the sweat hut method, it is possible to very quickly and effectively simulate the increased psychophysical burden and thus create an environment with the attributes of a crisis environment, which should be used in the preparation and development of managers and leaders.

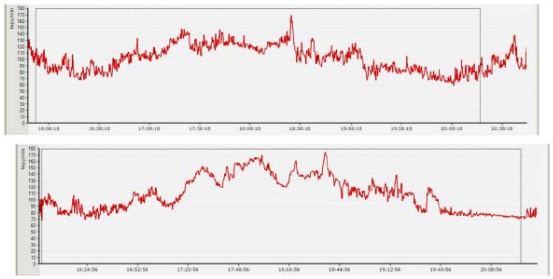

Figure 1. Comparison of the heart rate of 2 participants during the program (measured by Polar Team)

4.2 Results of measurement of the level of mental condition

Before and after the training, participants received a battery of psychological tests designed to capture the differences in the cognitive performance of individuals, which is necessary for the performance of the profession in difficult conditions. The authors focused on optical perception, attention, speed of reaction, concentration, correctness of reactions to visual stimuli or the ability to solve problems.

All 18 participants completed the tests, but the results of the 18th respondent are not complete, so this respondent is missing in the cluster analysis.

The results of measuring the level of mental condition and numerical characteristics of pre- and post-exercise performances are given in Table 1 and Table 2.

Table 1. Results of measuring mental condition

ID	Domino		RČS		D2		DRČ		ČO	
	B	A	B	A	B	A	B	A	B	A
1	30	32	18	18	193	203	36	43	18	20
2	30	31	21	23	212	172	45	42	24	0
3	37	38	23	27	132	140	40	39	20	21
4	30	32	16	17	147	156	40	42	16	22
5	30	30	24	23	189	216	49	59	18	19
6	26	29	19	19	110	138	43	42	12	19
7	24	21	11	15	121	140	28	28	15	0
8	33	35	16	19	209	188	28	29	22	24
9	31	36	20	24	203	184	54	50	18	22
10	25	24	13	17	173	169	41	52	11	12
11	26	27	14	13	122	128	24	19	15	15
12	35	41	25	25	188	196	54	59	19	23
13	21	22	17	14	141	129	50	42	15	20
14	26	24	21	18	108	141	30	28	12	16
15	30	32	13	15	166	186	43	44	18	19
16	26	18	15	18	137	143	39	17	22	21
17	32	30	17	15	128	137	30	42	16	19
18	31	30	X	X	120	145	47	52	15	22

Table 2. Descriptives of measuring mental condition

	Domino		RČS		D2	
	B	A	B	A	B	A
Mean	29.1	29.6	17.8	18.8	156	162
Median	30	30	17	18	144	151
Std. deviation	4.05	6.07	4.08	4.16	36.1	27.8
Variance	16.4	36.9	16.7	17.3	1303	775
Minimum	21	18	11	13	108	128
Maxinum	37	41	25	27	212	216
	DRČ		ČO			
	B	A	B	A		
Mean	40.1	40.5	17	17.4		
Median	40.5	42	17	19.5		
Std. deviation	9.16	12.2	3.6	6.99		
Variance	83.9	149	12.9	48.9		
Minimum	24	17	11	0		
Maxinum	54	59	24	24		

Source: own work by authors

The percentage point difference of the results from the measurements before and after the load is shown in Fig. No. 2.

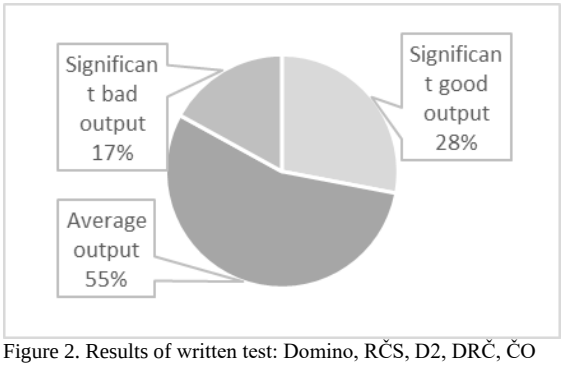

Figure 2. Results of written test: Domino, RČS, D2, DRČ, ČO

The average performance after exercise was given by 10 individuals. The average performance was considered to be the results where the overall deterioration, resp. improvement after exercise in the range from -14% to 10%. Significantly good performance after exercise was given by 5 individuals who achieved an improvement of more than 10% after exercise. Significantly poor performance after exercise was given by 3 participants who deteriorated by more than 14%.

In conclusion, it can be argued that 15 individuals out of a total of 18 were able to perform equally well or better. Using cluster analysis, it was possible to divide the participants into similar groups according to the test results. The results of the cluster analysis are shown using the Dendrogram in Figure 3.

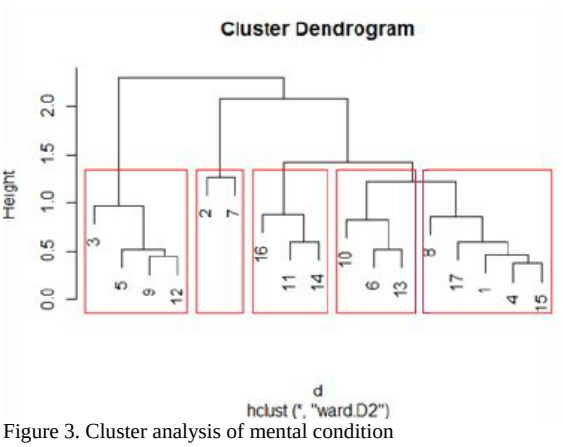

Figure 3. Cluster analysis of mental condition

- 1st group 1 (3,5,9,12)

1. high Domino value before and after exercise
2. high value of RČS before and after load
3. high value of D2 after load

- 2nd group (2,7) - zero points from CO.
- 3rd group (11,14,16)

1. low Domino value after load
2. low value of DRČ before and after load

- 4th group 4 (6,13,10)

1. low Domino value before load
2. low value of CO before load

- 5th group (4,15,1,17,8) - average to slightly above average values.

The results of psychological tests show that the group of participants 4, 15, 1, 17 and 8 had average to slightly above average values for all attributes. The group of respondents 3, 5, 9 and 12 had an increased value in the potential to learn and solve problems after the complex psychophysical load and shows good mental concentration.

4.3 Results of measurement of psychophysical condition

The measurement was performed at the level of the autonomic nervous system (ANS) using Max Pulse Medicore, which evaluates the stress profile of the individual using the plethysmographic method. Data were evaluated for stress scores, ANS activity, fatigue index, ANS balance, body stress, mental stress, and stress resistance. The measurement results and numerical characteristics are given in Table 3.

Table 3. Results of measuring the psychophysical condition of participants

	Stress score		ANS activity		Fatigue index	
	B	A	B	A	B	A
Mean	47.7	55.7	2.2	1.9	2.0	1.8
Median	49.0	54.0	2.0	2.1	2.0	1.8
Std. deviation	11.6	11.6	0.6	0.5	0.7	0.5
Variance	134.4	135.4	0.4	0.2	0.4	0.3
Minimum	22.0	39.0	1.1	1.0	0.6	0.6
Maxinum	67.0	78.0	3.5	2.6	3.0	2.3
	Balanced ANS		Physical stress		Mental stress	
	B	A	B	A	B	A
Mean	2.2	2.1	1.4	1.8	1.2	1.5
Median	2.8	2.1	1.3	1.5	1.2	1.
Std. deviation	0.9	0.6	0.6	0.8	0.8	0.6
Variance	0.8	0.3	0.4	0.6	0.6	0.4
Minimum	0.6	0.7	0.4	0.9	0.1	0.2
Maxinum	2.9	2.8	2.5	3.4	3.2	2.4
	Endurance					
	B	A				
Mean	1.6	1.2				
Median	1.3	1.2				
Std. deviation	0.7	0.5				
Variance	0.5	0.2				
Minimum	0.6	0.2				
Maxinum	3.2	1.8				

Source: own work by authors

The percentage point difference of the results from the measurements before and after the load is shown in Fig. No. 4.

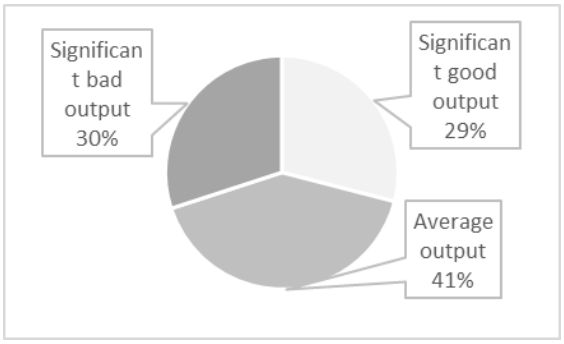

Figure 4. Results of measuring psychophysical condition level

The average performance after exercise was given by 8 individuals. The average performance was considered to be results where the overall deterioration or improvement after exercise was in the range from -55% to 4%. Significantly good performance after exercise was given by 5 individuals who achieved an improvement of more than 4% after exercise. Significantly poor performance after exercise was given by 4 participants, who deteriorated by more than 55% after exercise. Using cluster analysis, it was possible to divide the participants into similar groups according to the test results.

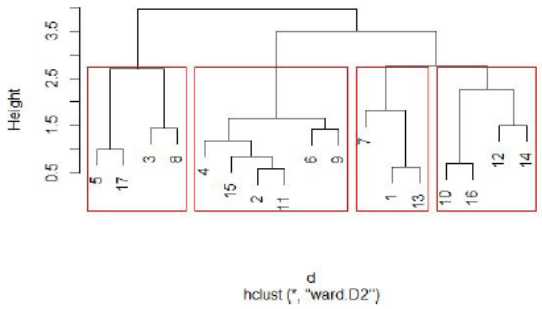

Figure 5. Cluster analysis of psychophysical condition

Breakdown of the effect of the sweat hut and relaxation into individual categories of the stress profile in relation to related groups according to the measured results:

- 1st group (5,17,3,8)

1. high value of stress score after exercise
2. low value of ANS activity after exercise
3. low value of fatigue index after load
4. high value of physical stress after exercise
5. low value of resistance after load

- 2nd group (2,11,15,4,6,9)

1. low pre-exercise stress score
2. high value of fatigue index before load
3. low value of physical stress before exercise
4. high value of load resistance

- 3rd group (1,13,7)

1. high value of ANS activity after exercise
2. low value of fatigue index before load
3. high value of fatigue index after load
4. low value of ANS balance before load
5. similar values of physical stress before and after exercise
6. low value of mental stress before exercise

- 4th group (10,16,12,14)

1. high pre-exercise stress score
2. high value of physical stress before exercise

The decrease in the total stress score (summary indicator) occurred in group No. 4, which consisted of 4 individuals. The remaining participants had an increase in stress scores. In individuals No. 14 and 16, ANS was activated at the same time. In subjects 1, 3, 6, and 13, a significant effect was noted in the area of leveling the ANS level, ie sympathetic and parasympathetic. This is an important indicator of the psychophysical balance after the program compared to the

previous imbalance that was the baseline. Overall, there was an increase in physical stress by 21% and mental stress by 20%. This result confirms that the method is able to simulate an environment with increased psychophysical load.

5. Conclusions

The psychophysical dimension concerns the interaction of bodily and mental processes, states and phenomena. It focuses on an individual's ability to work with change, cope with workload and stress. In addition, it relates to emotional resilience, which consists, among other things, in how quickly a person can regenerate after increased stress, or agitation. The basis is continuous monitoring of changes in heart rate and their trends. At the same time, these data are monitored in situations of cognitive and mental stress, e.g. in testing attention, memory, or in situations of decision-making and acting, with the predominance of some of the modalities of stress (mainly in mental, physical, social ways).

The quantity and quality of an individual's mental performance and trend, in changing (non-standard) conditions, is also due to the ability to immerse themselves in the solution situation and to penetrate (affect) quickly and accurately the essence of the problem or task (RČS solution parameter). Also the ability to correctly apply a relatively simple algorithm over a longer period of time (solution parameter d2).

Using the sweat hut method, it is possible to very quickly and effectively simulate the increased psychophysical load and thus create an environment with attributes of the crisis environment, which can be used in the preparation and development of psychophysical condition of managers and leaders. Overall, there was an increase in physical stress by 21 % and mental stress by 20 %. Despite this, 15 participants managed to perform equally well or better in cognitive performance tests. With the help of cluster analysis, it was possible to classify participants into performance-like groups and observe detailed relationships between them. The compiled program consisting of methods of sweat hut and controlled relaxation is offered as an interesting supplement in the preparation and development of selected competencies for people moving in a demanding environment, showing increased mental and physical stress, instability of the environment and the need to solve complex, complex tasks typical of leaders. workers, managers and leaders.

Literature:

1. Aaland, M. (1978): *Sweat: The illustrated history and description of the Finnish sauna, Russian bania, Islamic hammam, Japanese mushi-buro, Mexican Temescal, and American Indian & Eskimo sweat lodge*. San Bernardino (CA): Borgo Press. ISBN 0809540231
2. Ambrozová, E., Koleňák, J., Ullrich, D., Pokorný, V. (2016): *Kognitivní management*. 2.vyd. Brno: Key Publishing. ISBN 978-80-7418-254-9
3. Aung, S. (2006): The sweat lodge healing experience: an integrative medical perspective. *The Rose+Croix Journal*, 3, 1-27.
4. Brickenkamp, R., Zillmer, E. (2000): *D2 test pozornosti*. Praha: Hogrefe-Testcentrum. ISBN 80-86471-00-4
5. Bruchac, J. (1993): *The native American sweat lodge: history and legends*. Freedom, CA: Crossing Press. ISBN 089594636X
6. Colmant, S. A., Merta, R. J. (1999): Using the sweat lodge ceremony as group therapy for navajo youth. *The Journal for Specialists in Group Work*, 24(1), 55-73. 10.1080/01933929908411419
7. Doležal, J., Kuruc, J., Senka, J. (1992): *Číselný obdl'žnik*. Bratislava: Psychodiagnostika.
8. Eliade, M. (2000): *Šamanismus a nejstarší techniky extáze*. Praha: Argo. ISBN 80-72-03-1-53-8
9. Grobsmith, E. S., Dam, J. (1990): The revolving door: Substance abuse treatment and criminal sanctions for native American offenders. *Journal of Substance Abuse*, 2(4), 405-425. 10.1016/s0899-3289(12)80002-2
10. Hroník, F. (2008): *Manažerská integrita*. Brno: Motiv Press. ISBN 978-80-904133-0-6.
11. Kiyosaki, R. T. (2016): *8 základních lekcí vojenského výcviku pro podnikatele*. Hodkovičky: Pragma. ISBN 978-80-7349-605-0.
12. Komárková, E., Osecká, L. (1993): *Rozhodování v časovém stresu*. Brno: Středisko psychologických služeb.
13. Kukkonen-Harjula, K., Oja, P., Laustiola, K., Vuori, I., Jolkkonen, J., Siitonen, S., Vappatalo, H. (1989): Haemodynamics and hormonal responses to heat exposure in a Finish sauna bath. *European Journal of Applied Physiology*, 58, 543-550. 10.1007/BF02330710
14. Laukkanen, T., Khan, H., Zaccardi, F. (2015): Association between sauna bathing and fatal cardiovascular and all-cause mortality events. *JAMA Internal Medicine*. 175(4), 542-550. 10.1001/jamainternmed.2014.8187
15. Laukkanen T., Kunustor, S., Kauhanen, J., Laukkanen, J. A. (2016): Sauna bathing is inversely associated with dementia and Alzheimer's disease in middle-aged Finnish men. *Age Ageing*, 46(2), 245-249. 10.1093/ageing/afw212
16. Lukasová, A., Šarmanová, J. (1985): *Metody shlukové analýzy*. Praha: Státní nakladatelství technické literatury.
17. Nakonečný, M. (1998). *Základy psychologie*. Praha: Academia. ISBN 80-200-0689-3.
18. Robbins, S. P. Coulter, M. K. (2004). *Management*. Praha: Grada publishing, ISBN 80-247-0495-1.
19. Říčan, P. (2010). *Psychologie osobnosti: obor v pohybu*. Praha: Grada publishing. ISBN 978-80-247-3133-9.
20. Schiff, J., Pelech, W. (2008): The Sweat Lodge Ceremony for Spiritual Healing. *Journal of Religion & Spirituality in Social Work: Social Thought*, 26(4), 71-93. 10.1300/J377v26n04_04
21. Senge, P. (2007). *Pátá disciplína: teorie a praxe učící se organizace*. Praha: Management Press. ISBN 978-80-7261-162-1.
22. Smith, D., P. (2005): Sweat Lodge as Psychotherapy: Congruence between Traditional and Modern Healing. In *Integrating Traditional Healing Practices into Counseling and Psychotherapy*. United States, SAGE Publications, 196-209.
23. Svoboda, M. (2010): *Psychologická diagnostika dospělých*. Praha, Portál. ISBN 978-80-7367-706-0
24. Ullrich, D., Pokorný, V. (2012). The possibilities of comprehensive approach and the specifics of the training managers to fulfill tasks in the challenging environment and crisis management. In: *Recent advances in Energy, Enviroment and Economic Development*. France, Paris: WSEAS. ISSN 2227-4588.
25. Ullrich, D. (2017): *Kompetence velitele – leadera*. Univerzita Obrany Brno, Habilitační práce.
26. Van Gennep, A. (1997): *Přechodové rituály: systematické studium rituálů*. Praha, Nakladatelství Lidové noviny. ISBN 80-7106-178-6
27. Vonkomer, J. (1992): *Disjunktívny reakcný cas II (DRC- II)*. Bratislava: Psychodiagnostika.
28. Waldram, J., B. (1997): *The way of the pipe: aboriginal spirituality and symbolic healing in Canadian prisons*. Orchard Park, NY, Broadview Press. ISBN 1551111594.
29. Waldram, J., B., Herring, A., Young, T. (2006): *Aboriginal health in Canada: historical, cultural, and epidemiological perspectives*. Buffalo, University of Toronto Press. ISBN 9780802085795
30. Wilson, K. (2003): Therapeutic landscapes and First Nations peoples: an exploration of culture, health and place. *Health Place*, 9(2), 83-93. 10.1016/s1353-8292(02)00016-3

Primary Paper Section: A

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