MOTIVATION OF MANAGERS FOR PROSTATE CANCER PREVENTION MEASURES

MOTIVACIJA RUKOVODITELJA ZA MJERE PREVENCIJE RAKA PROSTATE

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Abstract: *Population of managers is showing great motivation for conducting medical procedures related with prostate cancer prevention. Average response of managers, for agreed medical interventions, was 96.7%, while the response in control group of non-managerial population was 82.71%. It was confirmed that the diffferences of average PSA values between the group of managers and non-managerial group are not statisticaly significant . Managerial lifestyle is not a risk factor for prostate diseases, but, responsability for own health can be an indicator of a way to motivate population for cooperation in preventive actions.*

Key words: *prevention, prostate, managers*

Sažetak: *Rukovoditelji su izuzetno motivirani za medicinske postupke vezane uz prevenciju raka prostate 96.7% rukovoditelja pristalo bi na medicinske intervencije,dok je odgovor kontrolne grupe koja je obuhvaćala osoblje koje nije uposleno na rukovoditeljskim pozicijama bio 82.71%Potvrđeno je da je razlika PSA vrijednosti između dvije skupine statistički neznatna. Stil života rukovoditelja nije rizični faktor za bolesti prostate. Ipak odgovornost za vlastito zdravlje može biti pokazatelj načina na koji se može motivirati stanovništvo na suradnju u preventivnim akcijama.*

Ključne riječi: *prevencija,prostata,rukovoditelji*

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1. Introduction

Prostate cancer is third most common type of cancer, and also third by its mortality rate. It rarely affects men younger than 50 years of age, while its incidence increases with every following decade. Family history of prostate cancer, usage of alcoholic drinks, and certain types of diet, are known as risk factors for prostate cancer (Cookson, 2001). Concerning the high incidence and mortality rates, different options for screening are being found, in order to reduce morbidity and mortality on a wide base (Kessler, et. al., 2003). Known and available methods are digitorectal and transrectal examination, ultrasonography and laboratory tests for determing the level of prostate specific antigen (PSA) (Pound, et. al. 1999).
Besides total PSA, it is possible to determine the level of free PSA (FPSA), and the free to total PSA ratio. FPSA<10% of total PSA is generally considered as an indication for prostate biopsy, while FPSA<25% of total PSA level indicates on presence of a pathological process in the prostate, and requires regular controls and observation (Epstein, et. al. 1994). Early prostate cancer detection is not being conducted systematically as a screening method, yet it is being performed within systematic preventive checkups for defined gropus or individuals. Managarial population is exposed to numerous rsik factors for cardiovascular diseases, therefore, they are a group which performes such checkups (Harris, et. al. 2002).
Within those checkups PSA level tests are being regulary performed, without regard of their age, since managers conduct systematic checkups within the prevention of most common diseases (cardiovascular diseases, hypercolesterolemy, hyperglycemia, thyroid hormone level etc. As well as preventive methods for most common types of cancer: haemocult test for faecal occult blood test , PSA level, spyrometry, ultrasonography). Besides the managerial population, number of people of other occupations, who want to perform preventive checkups, is increasing. Those are mostly people which do not wish to perform the tests in regular health care system with long waiting lists, or they are groups of people whose firms, sport clubs, or insurance companies direct them to checkups. Men who are older than 50 years of age need to perform PSA level test on every checkup (Smith, et. al. 2003). Managers usually perform systematic checkups voluntarily, and they pay them themselves, while the rest of population conduct them as an obligatory procedure. The checkups are paid by someone else, and they consider them as needless or imposed.

2. Aim

To determine the proportion of managerial motivation to perform preventive measures for prostate cancer, compared to the motivation of non-managerial population.

3. Methods

Men older than 50 years of age, who performed a preventive checkup during one year, and to whom had been discovered PSA level greater than 4.0µg/l were chosen.

There were 51 of them. A control group of 51 men - non managers, older than 50 years of age, with PSA values greater than 4.0µg/l, was formed. Only those men, who had found they have higher PSA level for the first time, and who had never been treated from any prostate disease, could be included in the study.
Depending on obtained PSA level values, for all study participants, additional measures were advised: control prostate ultrasonography, and after that: prostate biopsy, prostate ultrasonography and PSA control after 6 months; prostate biopsy; surgical intervention. All possibilities, and requirements of additional medical procedures, were identically explained to both groups. The terms were reserved on the same quality level and in the same health institution for all. There is no evidence of stress, or something else linked to managerial job, being a risk factor for prostate diseases, so the response for suggested medical procedures was an indicator of participants motivation to perform prostate cancer prevention measures.

4. Results

PSA level	4,1-6,0	6,1-8,0	8,1-10,0	10,1-12,0	>12,0	Average
Managers	32	10	6	2	1	6,23
Control	37	9	3	1	1	6,17

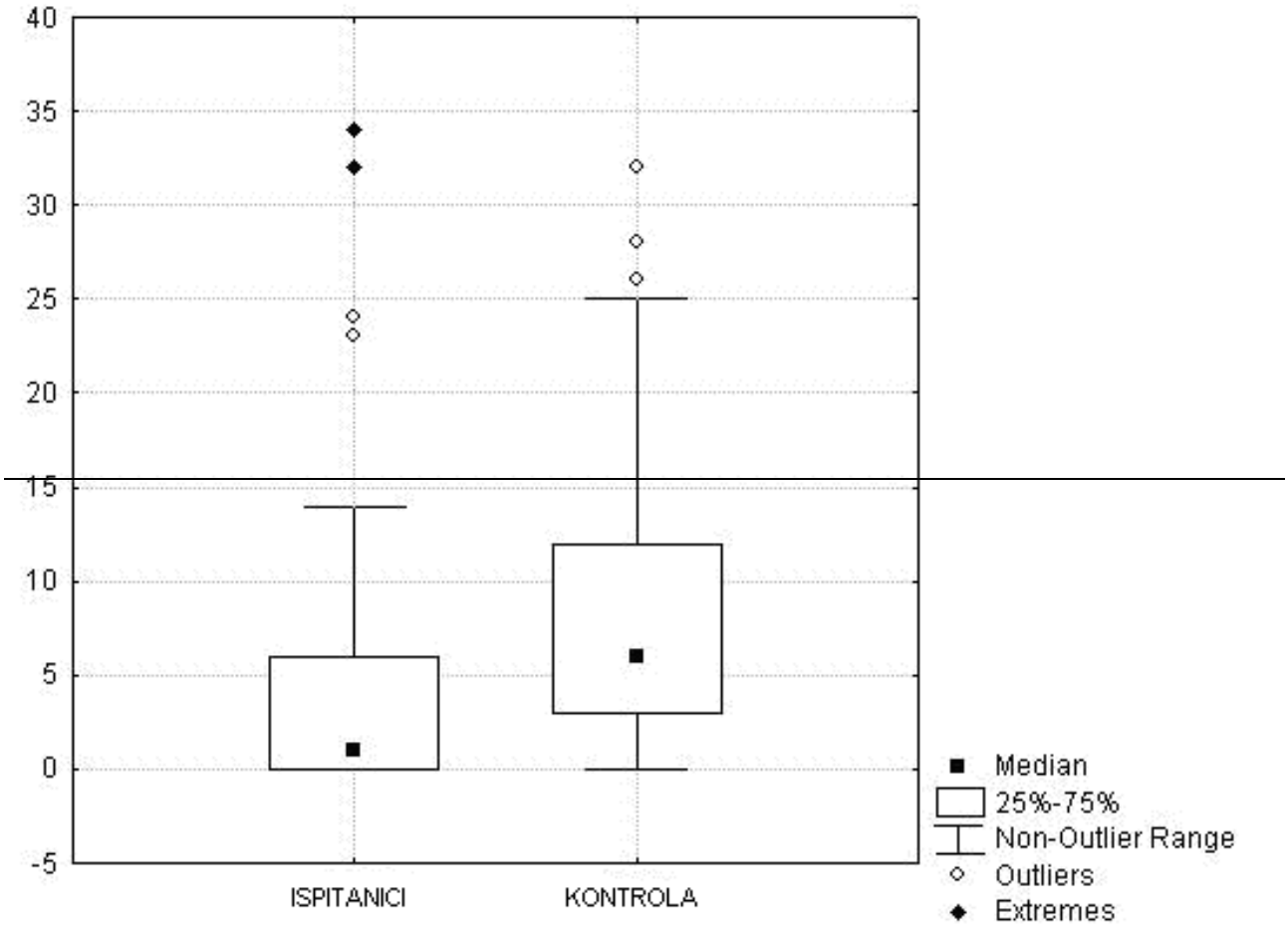
Table 1. PSA level values in µg/l.

Description	Invited	Responded
Managers	51	49
Control group	51	40

Table 2. Response to first control checkup and prostate ultrasonography test.

Description	Control ultrasonography in 6 months		Prostate biopsy		Surgical intervention	
Status	Invited	Responded	Invited	Responded	Invited	Responded
Managers	40	36	8	8	1	1
Control	31	24	8	6	1	1

Table 3. Response to additional medical interventions.



Picture 1. Box and whisker plot diagram of variables defined as response to additional medical procedures (Managers and Control group)

Average PSA level in manager group was 6,23 µg/l ($p>0.05$). All participants were invited to ultrasonographic prostate control. Managers responded in 96.07%, while the control group had a response of 78.43%. Managers responded in 90% to additional medical procedures, and control group made a 77.42% response. All managers responded to prostate biopsy (100%), and 75% of control group participants. When it came to surgical intervention, all responded (100% all). All indicators, except the response to surgical intervention, showed a statistically more significant response of managers than the control group (picture 1.).

5. Discusion and conclusion

Results of average PSA levels in the group of managers compared to those of the control group did not show statistically significant differences, and that way, they confirmed the hypothesis how the managerial life and work style is not a risk factor for prostate diseases. Great differences are seen in response to the invitation for additional medical procedures, though the information of why the additional procedures are needed, and which risks avoiding these procedures holds, was provided equally to all of the participants. Everyone was given an even chance of making those procedures without waiting on lists. Managers accepted such possibility

and showed a high level of consciousness when it comes to their health (overall average response equals 96.07%). A great deal of control group participants (average of 17.29%) have not taken the advantage of the offered option, and that way could not be able to proceed with the required diagnostics for their illnes. We can come to the conclusion that managers have, in their line of work, learned how, to responsibly behave to all tasks, and to their own health. Also, they have discovered, that they themselve need to takeover the initiative, and responsibility when it comes to important decisions in their lives. This can be clearly seen in the fact, that they have all responded to very important medical interventions, such as prostate biopsy, and surgical interventions.

Acquired results can be usefull when considering required interventions in the community, in order to increase the motivation for response to planned medical interventions, especially to those which are being implemented on a national level, and those which are reffering on prevention of the most common diseases.

6. References

Cookson, M.M. (2001). Prostate cancer: screening and early detection, *Cancer Control* 8(2): 133-40

Epstein, J.I.; Wals, P. C. & Carmichael, M. (1994). Pathologic and clinical findings to predict tumor wxtent of nonpalpable (stage T1c)prostate cancer, *JAMA 271*(5): 368 -74

Harris, R. & Lohr, K.N. (2004). Screening for prostate cancer: an update of the evidence for the U.S. Preventive Services Task Force, *Ann Intern Med* 237 (11): 917 – 29

Hrvatski zavod za javno zdravstvo, *Hrvatski zdravstveno-statistički ljetopis*, Zagreb

Kessler, B. & Albertsen, P. (2003). *The natural history of prostate cancer*, Urologic Clinics of Noth America 30(2): 219 – 26

Pound, C.R.; Partin, A.W. & Eisenberger, M.A. (1999). Natural history of progression after PSA elevation following radical prostactectomy, *JAMA* 281/17: 1591 – 7

Smith, R.A.; Cokkinides, V. & Eyre, H. J. (2003). *American Cancer Society Guidelines for the Early Detection of Cancer*, 2003, CA Cancer J Clin 53: 27 – 43,

Steinberg, G.D.; Carter, B.S. & Beaty, T.H. (1990). Family history and risk of prostate cancer, *Prostate* 17 (4): 337 – 47

Md. National Cancer Institute (2002). *Surveillance, Epidemiology, and End Results, Bethesda*, October 14