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The impact of human resource management on the innovativeness of public hospitals in Poland

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Abstract

The aim of this article is to determine the impact of human resource management on the innovativeness of public hospitals. The study was based on the results of empirical research conducted in 8 public hospitals operating in two provinces in Poland in 2014. Results indicate that in the opinion of the respondents there is a relationship between examined practices of human resource management and the innovativeness of public hospitals. The practices include: the selection of open to change and creative personnel (SO), encouraging staff to develop and share information (ED) and the presence of an incentive system that rewards achievements of innovative employees (SR).

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Keywords: Human resource management; Innovativeness; Public hospitals; Poland.

Introduction

Both theory and practice of management increasingly indicate that innovativeness is as an essential feature of development of modern organizations. It should be emphasized that innovativeness is a key success factor not only in the private sector, but also in the public sector. Public hospitals, just like entrepreneurs, must constantly seek innovative ways to ensure their survival. At the same time the innovativeness of hospitals is much more complex, especially in the context of human resources. The high professional diversity of specialists working in hospitals, which reflects different skills and specializations, requires an appropriate approach to selection and maintenance of these resources, also considering the innovativeness. That is why it is more and more frequently emphasized that the

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critical factor of the development of innovativeness is human resource management, which by means of appropriate practices can define and modify the appropriate skills, abilities and attitudes of staff (Laursen, 2002).

However, in the literature on the relations between human resource management and innovativeness in organizations, not many publications are related to public hospitals. Therefore, the aim of this paper is to fill this gap by examining the impact of selected human resource management practices on the innovativeness in examined hospitals. The article presents the results of empirical research conducted in 8 hospitals representing 2 provinces in Poland. The paper presents research problems concerning the determination of the impact of the three HRM practices on the innovativeness in hospitals, i.e.: the selection of open to change and creative personnel (SO), encouraging employees to develop and share information (ED) and the presence of an incentive system that rewards achievements of innovative employees (SR). In an empirical analysis the Kruskal-Wallis test was used (Kruskal-Wallis ANOVA Rank test).

1. Review of the literature

1.1. The essence of innovativeness

A clear definition of innovativeness is extremely difficult due to the multidimensional approaches of researchers, reflecting a complex nature of this phenomenon. One of the first attempts to define innovativeness was made by Hurt, defining this phenomenon as a willingness to change (Hurt, Joseph and Cook, 1977). Berthon presented innovativeness as a set of personnel features such as openness, entrepreneurship, willingness to change and the ability to innovate and be creative (Berthon, Hulbert and Pitt, 1999). Goldsmith and Hofacker recognize innovativeness both as an attitude and behavior (Goldsmith and Hofacker, 1991). On the other hand, many authors define innovativeness as openness and willingness to engage in new ideas, experimentation and risk taking (Hurley and Hult, 1998; Blake, Neuendorf and Valdiserri, 2003; Menguc and Auh, 2006). Generally, the innovativeness in this publication is defined as openness and willingness of an organization to adopt any new behavior. In this context, a critical element of creating the innovativeness is human resource management as a tool for shaping appropriate attitudes and behavior of staff.

1.2. Human resource management and innovativeness

Considering the fact that the modern development trend of an organization is firmly based on the paradigm of innovativeness, an interest in practices aimed at directing human resource management to innovativeness is increasing. Numerous relations between HRM and innovativeness are reflected in studies by many authors (Searle and Ball, 2012; Pocztowski, 2013; Tan and Nasurdin 2010; Chen and Huang 2009; Shipton, Fay, West Patterson, and Birdi, 2005; Darroch and McNaugton, 2002; Jackson Schuler, 1995; Nonaka and Takeuchi, 1995; Hedlund, 1994; Sparrow, Schuler, and Jackson, 1994; Galbraith, 1984; Katz and Kahn, 1978). The results of cited studies indicate that the pro-innovative HRM practices often include: a focus on recruitment of creative and open to change staff, emphasis on training and development or motivating employees to innovative activity and rewarding for innovativeness. It is important for organizations to send signals necessary to facilitate the change in a way of thinking and taking action of employees so that personnel are interested in new ideas and knowledge, and undertaking new challenges.

1.3. The specificity of public hospitals in Poland

In the context of the aim of the paper, it is important to clarify the specificity of public hospitals operating in Poland. It should be emphasized that the objectives of public hospitals are numerous, multidimensional and often difficult to reconcile, for example equality, justice and effectiveness. In public hospitals, organizational structures are characterized by a high formalization, low flexibility and strict decision-making procedures (Sulkowski, Seliga 2012). At the same time the issue of cultural diversity cannot be ignored, resulting from the functioning of various professional groups (subculturs). For example, nurses and doctors form unique and very separate subcultures which reflect their participants own problems in these professional communities (Morgan and Ogbonna, 2008). The

differences in the mentality of these groups are so important that they often complicate the management of these subculturs (Palthe, Kossek, 2003).This in turn can cause serious problems in relation to risk-taking and development of innovativeness in hospitals.

2. Methodology

In the context of the aim of the paper, the survey conducted in 2014 in 8 public hospitals operating in two provinces in Poland (the selection of hospitals was intentional, resulting from the fact that only these organizations have agreed to participate in the study). The employment in selected hospitals ranged from 70 to 100 employees (doctors, nurses and managers) in each, generally covering 640 employees in both provinces. At the same time the majority of employees were nurses and midwives (about 70%). Doctors accounted for ca. 20%, managers for ca. 10%. The total of 467 questionnaires were analyzed, of which more than half were filled by nurses and midwives (285 in total). Another survey comprised mainly of doctors (100 surveys) and the management staff referred to further in the report also as managers (including: directors and their deputies, managers, clinical directors and ward sisters - 82 questionnaires). The adoption of such a group of respondents was caused by the specificity of organizational culture in public hospitals where medical professions dominated.

Based on theoretical assumptions resulting from the analysis of literature the following hypotheses were formulated:

H1:There is a relationship between the selection of open to change and creative staff and the innovativeness of examined hospitals.

H2:There is a relationship between encouraging staff to develop and share information and the innovativeness of examined hospitals.

H3: There is a relationship between the presence of an incentive system to reward innovative achievements of employees and the innovativeness of examined hospitals.

To verify the research thesis, it was decided to carry out an analysis of variance (ANOVA) comparing whether respondents' opinions regarding innovativeness of a hospital significantly differed from each other depending on the assessment of examined human resource management practices (verification of hypotheses: H1, H2 and H3). The answers given by respondents were coded on a seven-grade ordinal scale (1 to 7) with respect to the variable examining innovativeness in hospital and a nominal scale ("there is", "there is not", "no opinion") in relation to variables describing the HRM practice. These variables are a part of the research survey. In the case of innovativeness variable, respondents were examined whether or not the hospital is innovative. On the other hand, in relation to variables on HRM practices the respondents' attitudes were examined to the following statements: "In the process of personnel selection openness to change and creativity plays an important role" (SO), "Employees are encouraged to develop and share information" (ED) and "In the hospital, there is an incentive system that rewards achievements of innovative employees" (SR). However, due to the ordinal nature of the variables and being aware of non-compliance with the assumptions of classical analysis of variance (the lack of normality in subgroups due to the ordinal nature of the data, heterogeneity of variance) Kruskal-Wallis test was performed (Kruskal-Wallis ANOVA rank test). The calculations in the study were made using STATISTICA 10. The Cronbach Alpha index for estimating reliability for studied variables was quite high, as it was 0.79. It also should be noted that the removal of each of the variables did not raised the index value (Cronbach Alpha index with one variable removed was: for innovativeness - 0.77, selection of open to change and creative employees 0.71; encouraging staff to develop and share information 0.71; the presence of an incentive system to reward innovative achievements of employees 0.74).

3. Results

In the first place the study assessed the level of innovativeness in hospitals. The data indicate that the lowest average concerning the assessment of the level of innovativeness in hospitals for all respondents was 4.6. Managers assessed innovativeness the best (4.83), and the doctors the lowest (4.29). The average for nurses and midwives was generally similar to the average for all ratings (4.67). In respect to the above responses H-statistic = 5.317 (with 2 degrees of freedom) and the significance level of 0.070. At the significance level of 0.1 the null hypothesis can be rejected and it can be concluded that respondents' answers regarding the assessment of the level of innovativeness of

hospitals differed significantly. Therefore, in further deliberations in addition to determining differences in assessment of innovativeness for the whole population also the answers for certain occupations were taken into account. Then, using ANOVA it was decided to check whether the assessment of respondents concerning the selection of open to change and creative staff affects the assessment of the level of innovativeness (Table. 1).

Table 1. Results of analysis of variance for the compilation of innovativeness evaluations with the selection of open to change and creative staff (SO), in total and by professional groups

Position	Degrees of freedom	H statistics	p level
Total	2	72,486	0,000
Managers	2	15,440	0,000
Doctors	2	16,680	0,000
Nurses/midwives	2	38,673	0,000

The results show that people who confirmed the presence in hospital of the practice of the selection of open to change and creative personnel, perceive differently the level of innovativeness, their ratings are higher. This applies both to answers of all respondents, regardless of the affiliation to individual professional groups (average ratings are presented in Fig.1). The distribution of the data shows that managers who confirmed the presence in hospital of the practice of selection of open to change and creative personnel (SO) assessed the level of innovativeness in hospital higher than those who did not perceive such a practice.

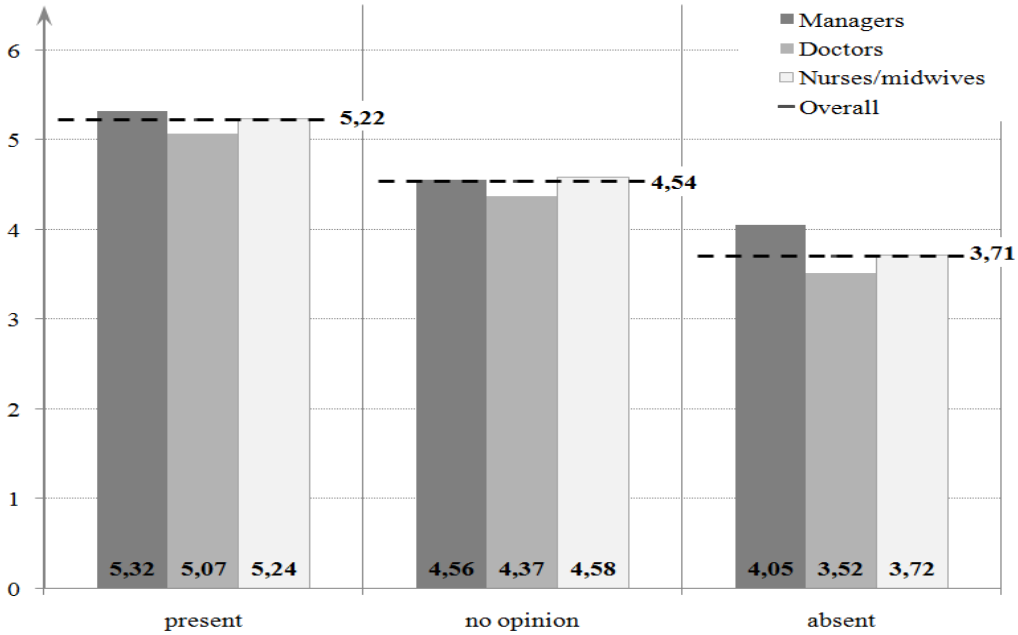

Fig. 1. Average ratings of the level of innovativeness for indicating different responses regarding the selection of open to change and creative personnel (SO), overall and by professional groups.

At the same time managers having no opinion on the selection of employees did not differ significantly from the responses of other occupational groups. The situation was similar with regard to doctors. However, their assessments of the level of innovativeness were in any case lower than the responses of other occupational groups. Nurses answers regarding innovativeness showed significant differences regardless of indicated options for personnel selection practices.

Similar results were obtained in examining the analysis of variance that assessed the level of innovativeness in

hospitals in relation to the practice of encouraging staff to develop and share information (ED) (Table 2).

Table 2. Results of analysis of variance for the compilation of innovativeness assessment of HRM practices on encouraging staff to develop and sharing of information (ED), overall and by professional groups

Position	Degrees of freedom	H statistics	P level
Overall	2	59,445	0,000
Managers	2	18,844	0,000
Doctors	2	27,003	0,000
Nurses/midwives	2	22,707	0,000

By analysing these results it can be seen that respondents who confirmed the occurrence of practices in hospital to encourage staff to develop and sharing of information (ED), higher assess the level of innovativeness. This trend is common irrespective of the affiliation to individual professional groups. Average response regarding the assessment of innovativeness is shown in Fig. 2. As it is clear from the data distribution, the level of innovativeness in relation to the ED practice was assessed the lowest by doctors. In their opinion innovativeness assessment was significantly lower in the case of indicating the variant that any form of incentives for the development and sharing of information “does not exist”. In case of managers, significantly higher ratings on innovativeness were related to respondents who indicated the existence of incentives for the development and sharing information.

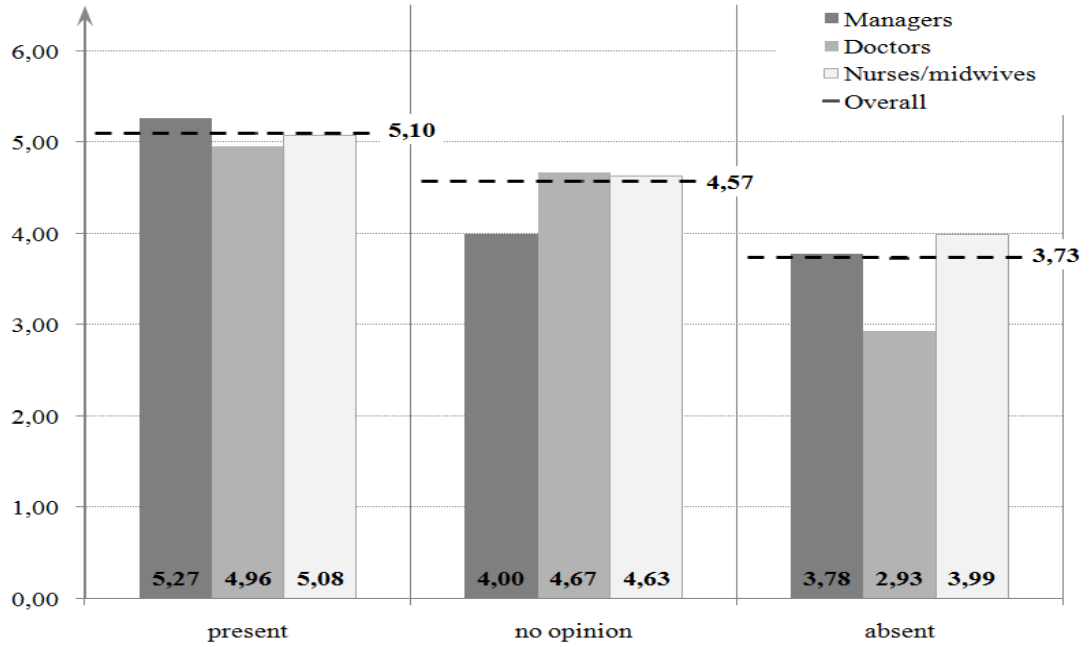

Fig. 2. Average ratings for the level of innovativeness regarding encouraging staff to develop and share information, overall and by professional groups

The lowest assessment of innovativeness was pointed by managers who also had no opinion with respect to the occurrence of ED practice. In case of nurses and midwives significant differences in the assessment of innovativeness are noticeable only in the case of persons in relation to the ED practice indicated a variant of answer "present" or "absent".

The last practice subject to verification in combination with innovativeness was the presence in hospital an incentive system to reward innovative achievements of employees. Results of Kruskal-Wallis test are shown in Table 3.

Table 3. Results of analysis of variance for innovativeness assessment taking into account the incentive system that rewards the achievement
of innovative employees (SR), overall and by professional groups

Position	Degrees of freedom	H statistics	p level
Overall	2	58,600	0,000
Managers	2	20,224	0,000
Doctors	2	11,528	0,003
Nurses/midwives	2	27,289	0,000

In the case of the above analysis, as in the two previous, relevant differences in the assessment of innovativeness, regarding the practice (SR) are also present, both in relation to the total number of employees, as well as by professional groups. Average ratings of innovativeness, along with the individual groups are shown in Fig. 3.

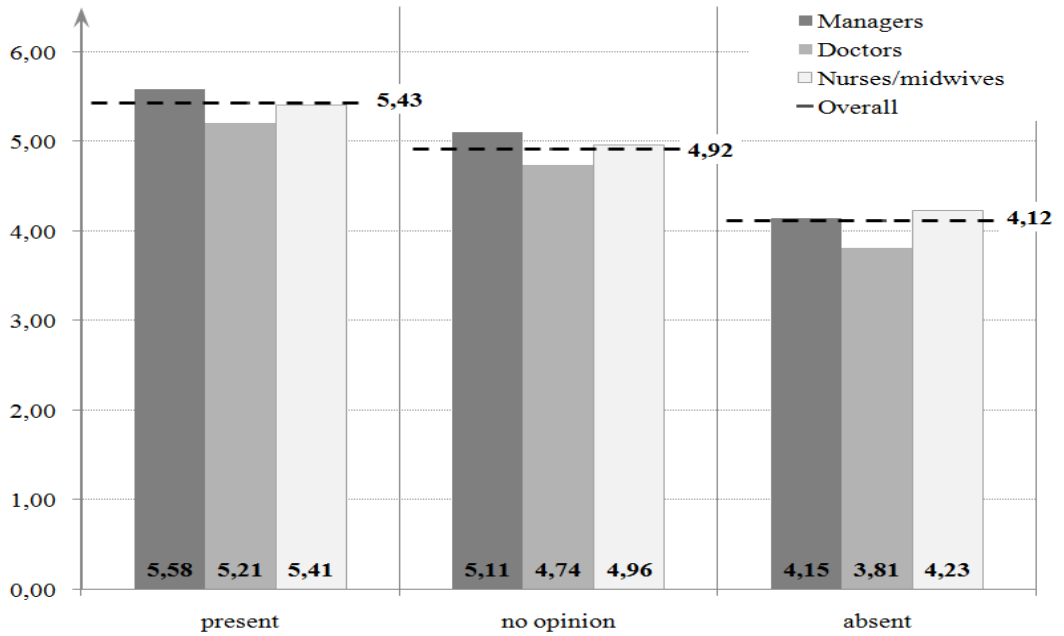

Fig. 3. Average ratings of the level of innovativeness for indicating different responses regarding the incentive system rewarding innovative achievements of employees (SR), overall and by professional groups

The distribution of the data shows that in the case of the entire population of respondents, differences in the opinion apply to all three variants of answers related to the incentive system, "present", "absent" and "no opinion". In the case of doctors and managers differences in the assessment of innovativeness can only be observed in the opinions of people indicating that the SR practice is "present" or "does not exist". At the same time, respondents indicating the presence of the incentive system higher assessed innovativeness from those that have not indicated its presence. With regard to nurses and midwives, the assessment of innovativeness is significantly lower for those indicating the lack of the SR practice.

Conclusions and limitations

In summary it can be concluded that the hypothesis formulated in this paper confirmed the existence of relationships between the selected human resource management practices and innovativeness in hospitals. At the same time it is worth pointing out to small differences in opinions of individual professional groups (subcultures) of

surveyed hospitals. What is interesting is the fact that managers and nurses in regard to the presence of all three HRM practices, i.e.: the selection concerning openness to change and creativity of personnel (SO), encouraging staff to develop and share information (ED) and the presence of an incentive system that rewards achievements of innovative employees (SR), higher assessed innovativeness in hospitals than the doctors. At the same time, doctors assessed innovativeness the lowest in relation to the practice of encouraging staff to develop and share information, at the same time pointing to the absence of this practice. Managers have given similar opinions, which may prove to assign, both by doctors and managers, the largest role to this practice in raising the level of innovativeness. On the other hand, nurses and midwives assessed the level of innovativeness the lowest when referring to the practice of personnel selection regarding the openness to change and creativity of candidates, while pointing to the lack of it. Therefore, it can be concluded that the adoption of certain practices of HRM explains the level of innovativeness in public hospitals. In particular, it concerns the selection of appropriate personnel, encouraging the development and information sharing or rewarding innovative achievements. At the same time, despite the recognition of significant results, the studies are not free from limitations. First of all, there are significant differences between numbers of respondents in groups, which influenced the results (but it was not possible to gain more questionnaires from limited groups such as doctors and managers in each hospital). In addition, the survey covered only two provinces and selected hospitals. Sampling was not random, which is largely linked to a serious aversion of medical community for this type of study. Being aware of these limitations, it appears that the results obtained may, however, provide guidance to chief executives of other hospitals in relation to the need for greater focus on directing HRM practices to innovativeness of these organizations, especially that the medical staff is certainly a key resource. At the same time, the scope of research should be broaden to other HRM practices, such as the assessment of innovative activities and the creation of pro-innovativeness staff working conditions, to create a model of innovativeness-oriented human resources management for public hospitals.

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