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Evaluation of Leadership Competencies of Executives in Lithuanian Public Health Institutions

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Summary. *Background and Objective.* Lithuanian and international public health experts emphasize the importance of leadership in public health. The aim of this study was to explore the self-assessed level of leadership competencies of executives in Lithuanian public health institutions.

Material and Methods. Data were collected in a cross-sectional survey of executives of Lithuanian public health institutions in 2010. The total number of returned questionnaires was 55 (response rate, 58.5%). Respondents were asked about their competencies in leadership, teamwork, communication, and conflict management. The evaluation was carried out by analyzing the answers provided in the survey, which used a 5-point rating scale. In addition, the Belbin Team-Role Self-Perception Inventory and the Thomas-Kilmann Conflict Mode Instrument were used.

Results. The results showed that respondents were reserved or limited in their individual capacities through this evaluation of their leadership competencies. The mean score was 3.47 (SD, 0.71). Skills in competency areas of communication, teamwork, and conflict management were scored higher (3.73 [SD, 0.67], 3.73 [SD, 0.62], and 3.53 [SD, 0.63], respectively). Most of executives preferred to choose action-oriented roles (76.2%). The most common role was “implementer” (69.1%). “Avoiding” (52.7%) was the most common conflict solving strategy. The results showed that 89.1% of executives wanted to improve teamwork; 83.6%, leadership competencies; 81.8%, communication; and 80.0%, conflict management.

Conclusions. The study results suggest that the executives of Lithuanian public health institutions evaluate their leadership competencies moderately. These results indicate the value of leadership training for public health executives.

Introduction

There has been the ongoing health system reform in Lithuania for 20 years. In 1991, the Lithuanian Parliament (Seimas) approved the “National Concept of Health for Lithuania” (1). This core political document underlined the main elements in the development of a new health care system in which a significant role has been delegated to the public health sector. In spite of many different activities and initiatives, the public health sector received considerably less attention than the medical care sector (2, 3). Significant transformations in the public health sector started only in 2002, when the law on public health became the statute (4). This political blueprint separated the levels of public

health care provision: state and municipality. The state public health care is provided via a state public health service and subordinate territorial public health care institutions, i.e., public health centers. These institutions are mainly responsible for public health administration, safety control, etc. Public health care in municipalities is provided by public health bureaus, which are responsible for the delivery of public health services in the community. By the end of 2011, there were 10 public health centers and 33 public health bureaus in Lithuania (5). In this new network, new functions raised many challenges for public health specialists and executives across the country. These changes caused a rapid development of training in public health and public health management (6). However, these new public health challenges also required new leadership approaches (7).

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Researchers usually define leadership according to their individual perspectives and the aspects of the phenomena of most interest to them (8). Consequently, there can be many and varied definitions of leadership. In this study, we have identified with and used the Northouse's definition of leadership: "a process whereby an individual influences a group of individuals to achieve a common goal" (9). This definition emphasizes the following main elements of leadership: 1) it is a process; 2) entails influence; 3) occurs within a group of setting or context; and 4) involves achieving goals that reflect a common vision. We could not find a specific definition related to leadership in the context of public health. However, many authors stress the uniqueness of leadership in this area. According to Rowitz, public health leadership includes a commitment to the community and the values it stands for (10). Grainger and Griffiths argue that public health leaders differ from leaders in other sectors as they are required to balance corporate legitimacy, whilst also existing outside the corporate environment (11). Kimberly suggests that in a flatter, more distributed, and collaborative world, we will require a new generation of leaders in public health with new mindsets, an appetite for innovation and interdisciplinary collaboration, and a strong dose of political savvy (12). Koh concludes that a public health leader must be the transcendent, collaborative "servant leader" who knits and aligns disparate voices together behind a common mission, pinpoints passion and compassion, promotes servant leadership, acknowledges the unfamiliarity, ambiguity, and paradox, communicates succinctly to reframe, and helps understand the "public" part of public health leadership (13). The most recent study has emphasized that public health leaders are exceptional "networker-connectors" capable of "putting the pieces of the jigsaw together;" they combine administrative excellence with a strong sense of professional welfare and actively develop the profession, articulate its shared values, and build for the future (14). This short discussion on the definition of public health leadership revealed that most of the authors agree on the presence of Northouse's leadership elements in public health leadership. However, they emphasize that public health leadership has specific characteristics such as a servant approach and community and specific orientation to public health values, which make it unique and very important in the public health sector.

How can leadership be developed among public health specialists? Although intensive debates exist in the literature on need for the development of leadership competencies for public health specialists (15–18), Lithuanian researchers have not been very active in this field. To the best of our knowledge, only 3 works have been published in this area to

date. A study by Kalėdienė examined the training needs of health managers (19). However, that study involved the members of the Lithuanian Association of Health Care Management and focused more on management rather than leadership. Olekaitė interviewed public health specialists from the Kaunas Public Health Center. She investigated self-reported skills in teamwork, conflict management, and communication (20). However, that study was carried out in one public health institution and involved all public health staff. The most recent study investigated the opinion of Lithuanian public health students regarding the need of "Public Health Leadership" course in public health study programs (21). The findings of the study revealed that the majority (84.9%) of students expressed a wish to study leadership. However, the study investigated the attitudes of undergraduate students, but not of public health specialists or executives. This brief overview argues that the leadership competencies of executives of Lithuanian public health institutions have not been previously investigated.

Therefore, the aim of this study was to explore the self-assessed level of leadership competencies of executives in Lithuanian public health institutions.

Material and Methods

This research was based on a cross-sectional study. Questionnaires were distributed to all executives (chief executive officers, their deputies, and heads of territorial branches) of all Lithuanian public health institutions (public health centers and public health bureaus) in March–April 2010. The total number of eligible respondents at the time of this study was 94. Questionnaires were sent by mail to all eligible respondents. All respondents were informed about the aims and process of the study. The total number of returned questionnaires was 55 (response rate, 58.5%).

Permission from Kaunas Regional Research Ethics Committee was not required, as this study did not fall into the category of biomedical studies and therefore did not require research approval.

In this research project and paper, we have defined competencies as "the combination of technical knowledge, skills and behaviours" (22).

The original study questionnaire was developed by our research team. It was based on the several references, which emphasize the need of strong communication, teamwork, and conflict management competencies for public health managers (9–11, 15, 18).

Questionnaires were structurally divided into 2 sections. The first covered questions on self-evaluated leadership competencies. The second section included the specific scales for the evaluation of selective leadership competencies: the Belbin Team-

Role Self-Perception Inventory and the Thomas-Kilmann Conflict Mode Instrument.

Self-evaluated leadership competencies were measured according to answers in the following Likert scale-based statements: "I have the communication competencies necessary for an executive of this organization," "I have the conflict management competencies necessary for an executive of this organization," "I have the teamwork competencies necessary for an executive of this organization," and "I have the leadership competencies, which are necessary for an executive of this organization." Each item was scored on a 1–5-point scale, where 1 indicated that a respondent "totally disagrees" and 5 indicated that a respondent "totally agrees."

The Belbin Team-Role Self-Perception Inventory is a questionnaire of 56 statements, and is widely used to measure the respondent's predominant role in teamwork. Respondents were asked to distribute 10 points (weights) among the items in each group of statements. Points are distributed according to the strength of executives' belief that the items most accurately reflect their behavior. A special score sheet was used to calculate scores for each team role (*completer, monitor evaluator, resource investigator, implementer, plant, team worker, shaper, specialist, coordinator*), with the highest score denoting the executive's preferred primary team role. These roles are sorted into 3 broader categories: action-oriented, people-oriented, and thought-oriented. A

summary of these roles can be seen in Table 1 (23).

The Thomas-Kilmann Conflict Mode Instrument assesses an individual's behavior in conflict situations. This instrument has 30-paired statements. Respondents choose the statement which best reflects their behavior/emotions in relation to a conflict. The instrument measures the predominant conflict management styles of the respondent on 5 indices (*avoiding, accommodating, competing, compromising, and collaborating*). A summary of these styles is presented in Table 2 (24).

Data were coded and analyzed with the SPSS (version 13.0) using descriptive statistical analysis methods. Differences between groups were assessed by using the two-tailed Student *t* test for continuous variables and *z* criteria for categorical variables. Continuous variables were presented as mean and standard deviation. Differences in results at the $P < 0.05$ level were considered statistically significant.

Results

Of the 55 respondents (mean age, 45.87 years; SD, 10.24) in our study, 40 (72.7%) were men and 15 (27.3%) were women. Other respondents' characteristics are presented in Table 3.

The respondents self-evaluated their leadership competencies at reserved or limited levels. The mean score was 3.47 (SD, 0.71). Meanwhile, the leaders competencies in communication, teamwork, and

Table 1. Belbin's Team Roles

Group of Roles	Role	Brief Description
Action-oriented	Completer-finisher Implementer Shaper	Ensures thorough, timely completion Puts ideas into action Challenges the team to improve
Cerebral	Monitor-evaluator Plant Specialist	Analyzes the options Presents new ideas and approaches Provides specialized skills
People-oriented	Resource investigator Team worker Coordinator	Explores outside opportunities Encourages cooperation Acts as a chairperson

Table 2. Thomas-Kilmann Conflict Management Styles

Conflict Management Style	Definition
Competing	Pursuit of own concerns at the other person's expense, using whatever power seems appropriate to win. <i>Assertive and uncooperative</i>
Collaborating	Attempting to work with the other person to find a solution that fully satisfies the concerns of both. <i>Assertive and cooperative</i>
Compromising	The object is to find an expedient, mutually acceptable solution that partially satisfies both parties. <i>Intermediate in both assertiveness and cooperativeness</i>
Avoiding	One does not immediately pursue own concerns or those of the other person or address the conflict. <i>Unassertive and uncooperative</i>
Accommodating	Neglecting own concerns to satisfy concerns of the other person. <i>Unassertive and cooperative</i>

Table 3. Social, Demographic, and Professional Characteristic of Respondents

Characteristic	Value
Sex	
Male	40 (72.7)
Female	15 (27.3)
Age	
<39	17 (32.7)
40–49	14 (26.9)
50–59	17 (32.7)
>60	4 (7.7)
Type of institution	
Public health centers and their territorial branches	34 (61.8)
Public health bureaus	20 (36.4)
No. of employees per institution, mean (SD)	23.48 (28.21)
Recent work experience in years, mean (SD)	10.54 (12.67)
Position	
Director/deputy director	31 (56.4)
Head of territorial branch	24 (43.6)
Background	
Public health/epidemiology/hygiene	20 (36.4)
Medicine	18 (32.7)
Management/economics/law	5 (9.1)
Other	12 (21.8)
Degree in the field of management	
Yes	19 (34.5)
No	36 (65.5)

Values are number (percentage) unless otherwise indicated.

Table 4. The Distribution of Respondents in the Study Identified by Belbin's Team Roles

Group of Roles	N (%)
Action-Oriented	
Completer-finisher	2 (3.6)
Implementer	38 (69.1)
Shaper	2 (3.6)
Total	42 (76.3)
Cerebral	
Monitor-valuator	4 (7.3)
Plant	2 (3.6)
Specialist	0 (0)
Total	6 (10.9)
People-Oriented	
Resource investigator	0 (0)
Team worker	4 (7.3)
Coordinator	3 (5.5)
Total	7 (12.8)

conflict management were scored higher (3.73 [SD, 0.67], 3.73 [SD, 0.62], and 3.53 [SD, 0.63], respectively). There were no statistically significant differences ($P>0.05$) observed in comparing the answers between different respondents groups in terms of sex, age, background, and position.

Table 5. The Distribution of Respondents in the Study Identified by Thomas-Kilmann Conflict Management Style

Conflict Management Style	Men (n=40)	Women (n=40)	Total (n=55)	z (P)
Avoiding	11 (73.3)	18 (45.0)	29 (52.7)	2.04 (<0.05)
Compromising	2 (13.3)	14 (35.0)	16 (29.1)	1.88 (NS)
Competing	1 (6.7)	3 (7.5)	4 (7.3)	0.10 (NS)
Collaborating	1 (6.7)	3 (7.5)	4 (7.3)	0.10 (NS)
Accommodating	0 (0)	2 (5.0)	2 (3.6)	1.45 (NS)

NS, not significant.

The Belbin Team-Role Self-Perception Inventory was used to measure a dominant role in team working (Table 4). The results show that most of Lithuanian public health executives prefer action-orientated roles (76.2%). Other roles were considerably less preferred. The most common role was *implementer* (69.1%). There were no statistically significant differences ($P>0.05$) observed comparing answers between different respondents groups in terms of sex, age, background, and position. However, we have observed some tendency that cerebral roles were more prevalent among executives who did not have qualifications in management compared with respondents who had formal management qualifications (13.9% and 5.3% respectively, $P>0.05$).

The Thomas-Kilmann Conflict Mode Instrument helped identify and evaluate which conflict management style was preferred amongst the study respondents. The results indicated that *avoiding* (52.7%) was the most common conflict solving strategy (Table 5). Our analysis showed that this type of conflict management was more prevalent among men than women (73.3% and 45.0% respectively, $P<0.05$). Other statistically significant differences were not observed.

The results showed that the executives were willing to improve their individual competencies: 89.1%, wanted to improve teamwork; 83.6%, leadership competencies; 81.8%, communication; and 80.0%, conflict management. We asked the executives to specify communication-related competencies, which needed to be improved. The results revealed that the executives preferred to have training and skills development in social communication (89.1% of respondents), group facilitation (83.6%), and assertiveness (72.7%) (Fig.). The most desired way for the improvement of skills was participation in capacity building courses (67.3%), seminars (20.0%), and distance learning courses (7.3%).

Discussion

Before discussing the results of the study, the certain important methodological issues require explanation.

First, the study response rate was not sufficient to represent the target population. According to sample size calculations, 76 respondents were needed to achieve a 95% confidence level. The specificity of our sample limited our possibilities to interview

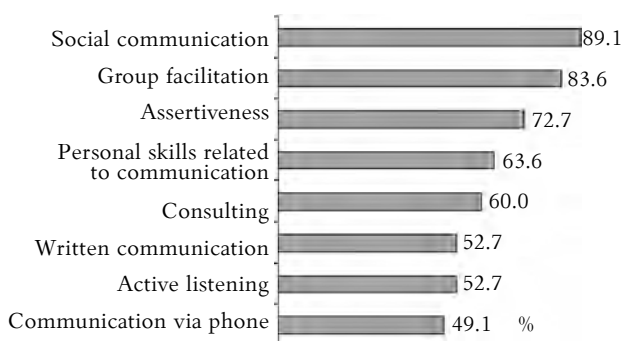


Fig. The proportions of respondents in this research study who wanted to improve leadership skills/competencies in selected areas

more respondents and to achieve the needed confidence level. However, we believe that these findings provide a relevant picture for executives' working in Lithuanian public health institutions.

Second, the results were possibly limited in part by the use of evaluation techniques. Considerable parts of results were based on self-evaluation by the respondent executives. An optimal way to evaluate leadership skills is to use an appropriate 360° evaluation (such as the Leadership Practices Inventory by Kouzes and Posner) (25). We decided on a different approach and to evaluate not the entire leadership process, but particular skills/competencies and any need for improvement in those identified areas.

The self-evaluated leadership skills measures used in this study were devised by the research team. Whilst results indicate that these metrics are helpful, there are no validation data available, which brings reliability and validity into question. Further, without validation data, there are no normative scores to compare this group of executives against.

Finally, we have not used sophisticated methods of statistical analysis. Our choice was determined by our sample size and aim of the study. More advanced statistical methods (such as logistic regression) would not have been useful because of the small sample size. However, we think that the presented statistical analysis is relevant to achieve the aims of this study.

Lithuanian public health executives chose the role of *implementer* in working in teams most commonly. According to Belbin, the *implementer* is open to suggestions of other team-members; to turn those suggestions into actions; is efficient and self-disciplined; and is ready to take on jobs, which everyone else avoids and dislikes. However, this particular role in a team is somewhat inflexible and can be slow to respond to new possibilities (23, 26). *Implementers* typically oppose new ideas and if tensions arise due to new risk-taking ideas, they will not try to find integrative solutions to such tensions.

As team roles refer to the way in which individuals interact with one another while performing a task in a team, team building activities based on members' team role preferences may determine the way in which the conflict is handled in a team and how successfully the conflict is solved. Consequently, as the conflict is unavoidable in work of teams, looking at the conflict managing styles is a fundamental issue in our understanding of high performing teams. The results of this study indicated that *avoiding* was the most common conflict solving strategy. The *avoiding* style is related to low concern for oneself and low concern for others. This style is related with withdrawal behavior, hiding disagreement, and sidestepping confrontations with the other party involved in the conflict. The *avoiding* style may also be used when there is a lack of awareness of interdependency and it may hide a lack of interest (27). One possible explanation for the frequent use of this mode of conflict resolution may relate to a sense of powerlessness.

Our results suggest that the avoiding style was more common for men than women. This is different to the literature reporting a dominating opinion that women are more likely to take their partner's interest into consideration, preferring more compromising and tactful strategies whereas men prefer competitive, unyielding, and aggressive strategies (28). However, some studies support our findings that men were more likely to choose avoidance as a conflict management style (29).

If a work team is embedded in a conflict where avoiding behavior is predominant, aggressive feelings are hidden, and speaking destructively behind peoples' backs is a frequent behavior, then *completer-finisher*, *implementer*, or *team worker* roles may be dominating in team communication and decision-taking. In these circumstances, *coordinators* (dominant, trusting, extrovert, mature, positive, self-controlled, self-disciplined, and stable) and *shapers* (abrasive, anxious, arrogant, competitive, dominant, edgy, emotional, extrovert, impatient, impulsive, outgoing, and self-confident) should act by speaking out in an effort to unlock the situation (30).

Our study revealed that there was a significant imbalance in the preferences of team roles and conflict management for Lithuanian public health executives who participated in the study. According to Belbin, it can be that teams that have an imbalance of team roles may not function as well as teams that contain a broader balance of team roles amongst members (23). Further, the dominance of avoidant conflict management styles amongst executives can result in poor functioning and outcomes of team/work group (24).

The results of this study have theoretical as well as practical implications. In the context of the wide-

spread and extensive use of teamwork in organizations, knowing the existing team role preferences and conflict managing styles should help team members analyze, compare, and understand differences on both task and emotional dimensions and improve teamwork. Further research is needed to investigate the relationship between an individual preference of team role and styles of managing interpersonal conflict in the context of Lithuanian public health institutions.

A significant practical implication of our research on leadership competencies in this setting is related to the development of the list of core leadership competencies in public health leadership roles and the associated development of academic training programs. The Association of Schools of Public Health in the European Region (ASPHER), together with European partners (University of Maastricht, the Netherlands; Lithuanian University of Health Sciences, Lithuania; Sheffield Hallam University, United Kingdom; Medical University of Graz, Austria) and Griffith University (an associated partner in Australia), has launched the Erasmus project "Leaders for European Public Health (LEPHIE)." The LEPHIE partnership seeks to bridge the gap between current academic programs and the continuing education needs for the future. The goal of the LEPHIE is to create a world class, blended-learning study program on Leadership in European Public Health. By blending an EU-centric competencies framework, ICT-based education, and cross-cultural experience, this continuing education program will prepare participants to be leaders and innovators (31). As Lithuania participates in this project, it could be expected that this new distance learning-based course will contribute to the improvement of

the leadership competencies of Lithuanian public health executives.

Conclusions

The study results suggest that executives in Lithuanian public health institutions evaluate their leadership competencies positively, but not highly. Further, there appears to be imbalances in team working roles and conflict management competencies amongst public health executives who took part in the study. Despite the limitations of this pilot study, these results give strong indications that public health executives in Lithuania have identified needs and a willingness to engage in training in leadership. Such training should include a focus on team leadership, effective communication, and the constructive management of conflict.

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Statement of Conflict of Interest

The authors state no conflict of interest.

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