

Determinants of sense of coherence among managerial nursing staff

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Abstract

Introduction. The sense of coherence is a tool for confronting the challenges posed by life. It constitutes a general human orientation, which is expressed through the conviction that outside stimuli can be explained; there are resources allowing people to cope with the coming challenges which are perceived as a worthwhile involvement. The sense of coherence is created based on three correlated elements: a sense of comprehensibility, a sense of manageability, and a sense of meaningfulness.

Objective. The aim of this study is to establish the level of the sense of coherence among nursing managers, to compare the results with the sense of coherence found in other groups of nursing employees, and to define whether the independent variables under research influence the sense of coherence.

Materials and methods. This research was conducted in 2010 – 2011 on a group of 310 functional nurses working for selected medical units in the Pomeranian area of Poland. Literature analysis, diagnostic questionnaires and evaluation methods using a self-assessment scale were used in this research. The author's survey questionnaire and life-orientation questionnaire SOC₂₉ were applied.

Results. Functional nurses have a higher sense of coherence than that seen within the majority of nursing groups. A change in the level of sense of coherence is possible through education: obtaining a Master's Degree in Nursing substantially raises the global sense of coherence and the sense of meaningfulness, whereas undergoing qualification courses significantly improves the sense of manageability among the respondents.

Conclusions. Sense of coherence evaluation among future managers is a worthwhile solution. A high level of the sense of coherence among nurses can be created through their education.

Key words

sense of coherence, comprehensibility, manageability, meaningfulness, managerial nursing staff

INTRODUCTION

The sense of coherence has been the subject of numerous researches. It is the main tool used by a human being to confront the challenges posed by everyday life [1, 2]. A strong connection between the sense of coherence and the feeling of general well-being has been proved many times. The role of sense of coherence in social health, seen as the ability to perform certain functions and roles in life [3], including the managerial role, is less obvious.

Aaron Antonovsky, who created the concept of salutogenesis, studied the factors guiding human abilities to cope with difficult situations and named them comprehensive immunity resources. Later, he described the rule through which the functioning of the resources could be explained, calling it 'global life-orientation' or 'the sense of coherence'. A strong sense of coherence enables us to activate the correct resources and use them effectively in a difficult situation [1].

According to Antonovsky, the sense of coherence is a general human life-orientation, which he characterised as being relatively stable, but also prone to change. This sense is expressed through the conviction that the stimuli coming from both the inside and the outside, have a fixed structure,

are predictable and explainable; there are resources enabling us to manage those stimuli which are seen as worth the effort and engagement [1, 4].

The sense of coherence (SOC) is divided into three interconnected elements: the sense of comprehensibility, the sense of manageability, and the sense of meaningfulness. The sense of comprehensibility is cognitive-related and describes the level at which the inside and outside stimuli are received as clear, organised and cognitively meaningful. The sense of manageability, which is the second element of sense of coherence, is competence and describes the extent to which people regard their resources as fit for the challenges brought by the stimuli. The next element building the sense of coherence is the sense of meaningfulness, which is a motivational conviction that the engagement and dedication to challenges in life are worthwhile [1, 4].

These three elements of the sense of coherence are inherently connected; however, the correlations are not always complete. The necessary condition for a strong sense of coherence is a strong sense of comprehensibility. It is not possible to perceive oneself as having sufficient resources to manage difficult situations when the challenges of the situation remain unrecognised. A strong sense of comprehensibility does not guarantee successful management, but motivates the pursuit of it. A person with a strong sense of comprehensibility and manageability will not understand the resources, and without the necessary motivation will lose control over them. Therefore, it seems that effective activity depends on the sense

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of coherence as a whole, although the motivational aspect remains the most important. Without motivation, even high levels of comprehensibility and manageability prove to be weak. The second most important consideration is the sense of comprehensibility, as manageability is dependent upon understanding. The sense of manageability is necessary, for without it the motivation to cope disappears; however, in the differentiation of the elements it is relegated to the third position [1, 3].

Growing up through long-lasting attachment to specific people, social roles and work, preserves past experience which influences the shape of one's sense of coherence. Of interest seems to be the possibility of coherence being deliberately and intentionally changed. Given the fact that it is created at all the stages of human life and through experience, it should be accepted as a fixed construct which could be modified through proper activity. The substantial majority of changes, due to both single or long term experience, are relatively unstable, and the person returns to his inherent average level of sense of coherence. What is intriguing then, seems not to be the activity aimed at the change to what is experienced – which is impossible – but the training aimed at searching for those situations that enhance the sense of coherence, or strong and long-term influence on the trainee's situation, which should strengthen the sense of coherence [1].

In the surrounding world, where balance and peace are constantly lost, it is extremely important to educate and establish an influence in a way that creates a strong sense of coherence; this especially concerns not only cognitive and emotional resources connected with assessment and attitudes, but also with interpersonal relations – undoubtedly created at the university level. In stressful situations, which are seen as undermining all pursuits, we activate mechanisms to control emotions and, therefore, continue effective functioning [3]. This is why creating a strong sense of coherence is crucial to the effective management of people.

OBJECTIVES

The study is aimed at describing the level of coherence at the managerial nursing level, making a comparison of results with other levels, and finding out if age, education, additional qualifications, working experience, position at work, the level of management and job characteristics influence its level.

MATERIAL AND METHODS

The study was conducted in a group of 310 nurses in managerial positions in selected medical units within the Pomeranian area of Poland. Permission from the unit and respondents was obtained. The condition for inclusion was to be employed as nursing staff at a managerial level.

Literature analysis with traditional content techniques, a diagnostic questionnaire with a survey technique and methods of evaluation based on a numeric scale for qualities through self-assessment, were used for this study. Research methods included the author's survey questionnaire for the determination of independent variables, and a life-orientation questionnaire SOC-29 (adapted from the 1993 version) [1].

The study used statistical methods with a central tendency measurement technique, variable measurements

and tests for statistical relevance. The data was analysed using STATISTICA version 9.0 software. The relevance of differences between groups was measured with t-Student, U Mann-Whitney and Kruskal-Wallis tests. The relationships between the variables were defined against correlation analysis. This was performed when factors for correlation according to Spearman were calculated. In all calculations, the level of relevance was $p < 0.05$.

RESULTS

The study included 310 people, 301 (97.1%) of whom were women and 9 (2.9%) were men. The average age of respondents was 45.7 ± 6.7 (scope 25–64 years, median 46). Details of the educational background among respondents are presented in Table 1; additional qualifications are specified in Table 2.

Table 1. Details of educational background in researched group

Level of education	n	%
Secondary medical school – total	92	29.7
5 – year Medical secondary school	49	15.8
2 – year Vocational medical school	34	11
2.5 – year Vocational medical school	9	2.9
Bachelor's studies in nursing	69	22.3
Master's studies in nursing – total	122	39.3
Complimentary master's studies in nursing	47	15.1
Master's studies in nursing	75	24.2
University education – other type	27	8.7
Postgraduate studies / from all groups/	18	5.8

n=310

Table 2. Details of additional qualifications in respondents

Type of postgraduate studies	n	%
Specialisation course	117	37.7
Qualification course	174	56.1
Specialist course	94	30.3

n=310 (some respondents have completed more than one course)

The average working experience among respondents was 24.7 ± 7.2 years (scope 2–43 years; median 25). Average working experience at managerial level was 8.8 ± 6.7 years (scope 1–32 years; median 7). Job characteristics for respondents are shown in Table 3.

Table 3. Details of working positions in researched group

Working position	n	%
Strategic managers	26	8.4
Deputy head in nursing	5	1.6
Head nurse	7	2.3
Clinical nurse and midwife manager or deputy	6	1.9
Other strategic	8	2.6
Operational managers	284	91.6
Ward nurse	150	48.4
Head of nursing care	6	1.9
Ward nurse deputy	73	23.6
Supervising or coordinating nurse	55	17.7

n=310



The average level of sense of coherence in the researched group was 147.00 ± 20.47 (scope 92–191; median 147), and the average level of sense of comprehensibility among the respondents was 48.06 ± 9.51 (scope 15–74; median 47). The average value of sense of manageability in respondents was 52.62 ± 8.13 (scope 27–69, median 53), and the average value of sense of meaningfulness in the researched group was 46.04 ± 6.33 (scope 29–56; median 47).

The existence of correlations between global sense of coherence and its elements was confirmed. No correlation between the age of respondents and the sense of coherence was reported. The statistical test showed statistically significant differences in SOC (statistical value in Kruskal-Wallis test 9.04; $p=0.029$) and sense of meaningfulness (statistical value in Kruskal-Wallis test 12.82; $p=0.005$) depending on the educational background. *Post hoc* tests showed that the global sense of coherence ($p=0.026$) and sense of meaningfulness ($p=0.002$) were significantly lower among people who graduated from secondary medical school, in comparison to respondents with an MA in Nursing. Descriptive statistics for SOC and meaningfulness depending on education are presented in Table 4 and 5.

Table 4. Descriptive statistics for global sense of coherence (SOC) depending on educational background

Level of education	n	average	median	minimum	maximum	SD
Secondary medical school	92	143.33	141.5	106	187	20.97
Bachelor's studies in nursing	69	145.26	144	93	183	20.05
Master's studies in nursing	122	150.97	152	92	191	20.5
Other master's studies	27	146.07	149	118	176	17.44
Postgraduate studies / from all groups/	18	153.67	159.5	115	187	18.35

n=310

Table 5. Descriptive statistics for sense of meaningfulness depending on educational background

Level of education	n	average	median	minimum	maximum	SD
Secondary medical school	92	44.41	45	29	56	6.52
Bachelor's studies in nursing	69	45.86	46	30	56	6.68
Master's studies in nursing	122	47.47	48.5	32	56	5.73
Other master's studies	27	46.33	46	34	56	5.8
Postgraduate studies / from all groups/	18	47.44	49.5	37	55	5.22

n=310

The test showed no statistically significant differences in sense of comprehensibility (statistical value in Kruskal-Wallis test 5.37; $p=0.147$); sense of manageability (statistical value in Kruskal-Wallis test 7.34; $p=0.062$) depending on educational background.

Respondents who had completed qualification courses had a significantly higher sense of manageability (statistical value in U Mann-Whitney test 10117.00; $p=0.029$). Descriptive statistics of manageability depending on the course are presented in Table 6.

Table 6. Descriptive statistics for sense of manageability depending on completing qualification courses

Qualifications	n	average	median	minimum	maximum	SD
No course	136	51.46	52	27	66	8.16
Qualification course	174	53.67	54	31	69	7.9

n=310

No statistically important differences appeared in the SOC (statistical value in U Mann-Whitney test 10739.50; $p=0.163$), neither in the sense of meaningfulness (statistical value in U Mann-Whitney test 11520.50; $p=0.554$), nor in the sense of manageability (statistical value in U Mann-Whitney test 11391.50; $p=0.574$) depending on completion of qualification courses. The level of the sense of coherence did not change if the respondents completed specialist or specialising courses.

No statistically significant differences between general working experience and managerial working experience between respondents and sense of coherence were observed.

No statistically significant differences in SOC (statistical value in Kruskal-Wallis test 10.61; $p=0.157$) were observed; neither in sense of comprehensibility (statistical value in Kruskal-Wallis test 6.87; $p=0.443$), nor in the sense of manageability (statistical value in Kruskal-Wallis test 10.84; $p=0.146$), or in sense of meaningfulness (statistical value in Kruskal-Wallis test 7.72; $p=0.358$), depending on the position at work.

Statistical tests showed that the SOC median level was significantly higher among people who were employed as strategic managers (statistical value in U Mann-Wallis test -2.74; $p=0.006$); the same applied for the average level of meaningfulness (statistical value in t-Student test -2.04; $p=0.042$), and for the sense of manageability median level (statistical value in U Mann-Whitney test 2.57; $p=0.010$) and sense of meaningfulness median level (statistical value in U Mann-Whitney test -2.2; $p=0.027$). Descriptive statistics for SOC, comprehensibility, manageability and meaningfulness depending on the level of employment are presented in Table 7.

Table 7. Descriptive statistics for global sense of coherence (SOC), comprehensibility, manageability, meaningfulness depending on management level

Management level	n	average	median	minimum	maximum	SD
SOC						
strategic	26	157.23	161	120	183	15.76
operational	284	146.07	146	92	191	20.62
comprehensibility						
strategic	26	51.81	51,5	37	64	7.31
operational	284	47.87	47	15	74	9.6
manageability						
strategic	26	56.77	57	47	67	5.79
operational	284	52.33	52	27	69	8.17
meaningfulness						
strategic	26	48.65	50,5	32	56	5.67
operational	284	45.87	47	29	56	6.31

n=310

SOC – global sense of coherence

Statistical tests showed no statistically significant differences in SOC (statistical value in Kruskal-Wallis test 29.21; $p=0.084$); neither in the sense of comprehensibility

(statistical value in Kruskal-Wallis test 22.06; $p=0.337$), nor in the sense of manageability (statistical value in Kruskal-Wallis test 31.06; $p=0.054$), or in the sense of meaningfulness (statistical value in Kruskal-Wallis test 25.43; $p=0.186$), depending on the characteristics of employment.

Statistical tests showed no significant relationships between employment based on acquired additional qualifications and SOC (statistical value in U Mann-Whitney test 11236.50; $p=0.552$); neither in the sense of comprehensibility (statistical value in U Mann-Whitney test 11629.00; $p=0.928$), nor in the sense of manageability (statistical value in U Mann-Whitney test 10868.50; $p=0.286$) and sense of meaningfulness (statistical value in Kruskal-Wallis test 11452.50; $p=0.751$).

DISCUSSION

There have been many studies concerning the sense of coherence for various occupations, including nurses. However, there has never been any research of this kind among nursing staff at the managerial level.

Polish research shows that the working environment for nurses is full of stress which results from difficult situations [5]. Stress at work negatively influences employees' effectiveness. However, analyses conducted in palliative care in England show that stressful work does not inevitably lead to burnout, and individual resources are an important factor preventing the negative influence of stress at work. The sense of coherence is crucial among the resources [6].

Research among nurses in hospitals in Łódź, Poland, confirms that nurses with a higher level of coherence were less affected by occupational and emotional burnout, and were better able to assess the effectiveness of their actions [2]. Similar results were obtained among nurses at the Children's University Hospital in Kraków [7] and The University Hospital in Bydgoszcz [8, 9], both in Poland.

Those facts have also been confirmed through study among Greek nurses, who proved resistant to occupational burnout owing to their high SOC [10]. Research carried out in Hong Kong revealed lower stress levels for people with a high sense of coherence [11], and analyses of Japanese nurses showed higher levels of SOC as being helpful in maintaining balance between private and professional life [12]. Similar research among nurses in Lithuania and unemployed nurses in Finland showed that lower levels of coherence were connected with a negative self-evaluation of health [13, 14]. Similar results confirming that occupational burnout is connected with lower levels of coherence were obtained from nurses in the Republic of South Africa and in Norway [15, 16]. References show that a high level of coherence means better ability to deal with difficult situations [15, 16, 17, 18].

Study at the Children's University Hospital in Kraków showed a sense of coherence at the level of 130.79 ± 8.9 ; comprehensibility as 44.85 ± 7.91 ; manageability as 46.66 ± 8.88 and meaningfulness at the level of 39.28 ± 8.1 [7]. Research carried out among nursing staff at University Hospital in Bydgoszcz revealed that average levels for the parameters were: SOC – 134.2 ± 20.42 ; comprehensibility – 46.0 ± 7.54 ; manageability – 47.2 ± 8.43 ; meaningfulness – 40.98 ± 7.24 [8]. In studies concerning nurses from Bydgoszcz, the results were: SOC – 129.35 ± 11.32 ; comprehensibility – 51.24 ± 5.77 ; manageability – 42.54 ± 6.08 ; meaningfulness – 35.55 ± 4.73 [19]. Consecutive research in Bydgoszcz showed:

SOC – 134.24 ± 19.55 ; comprehensibility – 44.456 ± 9.19 ; manageability – 47.24 ± 8.2 ; meaningfulness – 42.44 ± 5.95 [20] and SOC – 136.46 ± 21.43 ; comprehensibility – 43.43 ± 6.82 ; manageability – 44.69 ± 9.15 ; meaningfulness – 48.3 ± 8.99 [21].

In earlier self-conducted research, the findings concerning sense of coherence were: SOC – 145.02 ± 21.17 ; comprehensibility – 47.65 ± 8.98 ; manageability – 51.74 ± 8.86 ; meaningfulness – 45.63 ± 6.69 [22]. Own analyses showed that the researched group of functional nurses presented levels of coherence as follows: SOC – 147.0 ± 20.47 ; comprehensibility – 48.06 ± 9.51 ; manageability – 52.62 ± 8.13 ; meaningfulness – 46.04 ± 6.33 . All the results are significantly higher those in cited studies. The functional nurses surveyed had a higher level of sense of coherence and its elements than the average findings for divisional nurses. Only the group surveyed by Małgorzata Basińska presented higher levels in the sense of meaningfulness than the group of functional nurses.

Own studies revealed that there was no relationship between age, working experience, work specificity, occupation, employment based on additional qualifications acquired, and the sense of coherence. Respondents who did complete qualification courses had significantly higher levels of coherence. Own earlier studies also showed no correlation between age, working experience, work specificity and postgraduate studies. University graduates had a higher level of coherence than those who had completed a secondary level of education [22]. Research carried out by Bogumiła Urbańska and Krystyna Kurowska among nurses in Bydgoszcz showed no relationship between the sense of coherence and place of work, and position and educational background. Age proved to be the diversifying factor – older respondents had a lower global sense of coherence and sense of manageability [19]. Research into nurses in Finland showed no relation between SOC and age, educational background and experience [14].

Aaron Antonovsky accentuated the continuity of SOC, claiming it was relatively stable but possible to change through major life events and professional activity, which can increase its strength. Following Antonovsky's claim, it is believed that development of the sense of coherence continues until the age of thirty [23].

Own study showed that there are statistically significant differences in the sense of coherence among respondents depending on educational background. Global sense of coherence and sense of meaningfulness are significantly lower for people who graduated from secondary nursing school, in comparison to holders of an MA in Nursing. It is especially interesting that own studies showed no statistically significant differences in the sense of coherence among people who graduated from departments other than nursing.

Research into a group of Canadian workers, devised by Peter Smith, produced an interesting result, that stability in the sense of coherence can be influenced by changes in the professional hierarchy [24]. This can be explained using results obtained through own study into the differences in the sense of coherence among nurses with secondary and higher educational backgrounds. Over the last couple of decades in Poland, obtaining a Master's Degree in nursing resulted in hierarchical changes – whether it was a formal promotion or a change in perception by colleagues and supervisors.

SOC has educational value and if brought to higher levels in the process of academic education among nurses, significantly influences task completion in managerial positions.



Own studies showed there are statistically significant changes in the values for a global sense of coherence and its elements, depending on the level of management; they were significantly higher among strategic managers. Lack of research into the issue does not allow any comparison of own findings with those of other authors.

Following a managerial career is connected with difficult situations and the feeling of stress. A manager has to be able to deal with such situations to be effective [25]. A sense of coherence is a very important resource as defence against the destructive influence of difficult situations. In the process of education, it is extremely important to create an experience that is coherent, understandable, and builds a sense of coherence in future managers, so that they can deal with real challenges.

Studies concerning the sense of coherence among managerial nursing staff can be used as a reference in the recruitment of nursing managers on a regular basis.

CONCLUSIONS

1. The sense of coherence among functional nurses is higher than values presented in nursing groups researched by other authors, which is very promising concerning its importance in dealing with difficult situations.
2. In the light of the presented study, it seems that the change in the sense of coherence is possible through education: graduating from the Master's level of studies in nursing significantly raises a global sense of coherence and sense of meaningfulness among nursing managerial staff. Completion of qualification courses significantly improves the levels of manageability among managers in the nursing subsystem.
3. Sense of coherence evaluation among future managers is a worthwhile solution. A high level of sense of coherence can be created among nurses through their education.

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