Original article

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Is the palliative medicine specialist unique among medical practitioners? A comparative study of the personality of specialists in palliative medicine, surgery, anaesthesiology and general practice

Abstract

Background. The medical profession is very often connected with high levels of job stress and the risk of its negative consequences concerning the mental and physical health of medical practitioners, as well as the quality of help they deliver. The aim of the study was to evaluate whether there is a specific personality profile for medical practitioners in palliative care and whether it is different from the personality profile for other specialists and from norms adequate to age and sex.

Material and methods. A sample of 302 medical practitioners took part in the study: 79 with specialization in palliative medicine or at a final stage prior to specialization; 84 specialists in general practice; 74 surgeons and 65 anaesthetists. Each participant was asked to complete a sociodemographic questionnaire and NEO-FFI Inventory. The level of personality traits for medical practitioners from the above mentioned specializations was marked.

Results. In comparison with normal values, palliative medicine specialists had significantly lower levels of neuroticism but significantly higher for extraversion and openness to experience. What is more, extraversion, openness to experience and agreeableness differed in specialists in palliative medicine from other medical practitioners.

Conclusion. The results shed some light on biologically determined and relatively constant personality traits in medical practitioners choosing to work in a particular specialization.

Key words: personality, palliative medicine, NEO-FFI Inventory

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Introduction

One of the most important questions in the field is, in what way does the experiencing of job-related stress and the well-being of medical practitioners depend on their individual predisposition and in what way are they the result of a stressful job? McManus and co-workers point out that we tend to explain the overwork of medical practitioners by inappropriate work conditions, which is not correct [1]. In their opinion, we should consider how it is possible that, among many burnt out or stressed specialists, there are those who experience fulfilment and satisfaction from their job. It emerges that depending on the characteristics of a particular specialization and the people working within it, the burnout syndrome may have a different range and manifest itself in various ways [2–5]. Excessive overwork, lack of autonomy, routine, bad relations with superiors, uncertainty about career development, financial limitation or lack of equipment are stress factors typical for most kinds of jobs [6]. However, work on a hospital ward or in an outpatient clinic is connected with some specific stressors for the medical profession, such as: contact with ill and suffering people, responsibility for patients' lives, dealing with decisions at critical moments or being with patients when they are dying [7, 8]. Long-lasting contact with patients, lack of autonomy or insufficient support are the most frequently occurring stressors pointed out by medical practitioners which, in addition to some administrative barriers at work, may gradually lead to stress, symptoms of depression, addiction, absence, or, at the end, readiness to give up the job [9, 10].

In our study we tried to find an answer to the following question: is there a specific personality profile for palliative medicine specialists (PAL) which is different from that of other medical specialists, such as anaesthetists (AN), surgeons (SUR) or general practitioners (GP)? Differences in the roles of professional medical practitioners were the major criteria for choosing these groups of specialists. Numerous studies conducted outside Europe have shown high levels of stress, job burnout syndrome scales and other related disorders among GP and AN [2, 11]. In contrast, SUR and PAL specialists achieved lower results in the emotional and psychical parameters connected with overwork and showed high job satisfaction [3, 4, 12]. Van Dierendonck and Soler [5, 13] underline the lack of such data for the European population and postulate the necessity for empirical research among medical practitioners from particular specializations.

Material and methods

The study was conducted from January 2005 to June 2006 in several Polish cities: Bydgoszcz, Warsaw, Krakow, Opole, Inowrocław and Płock. In order to gather sociodemographic data and information about job characteristics for the researched medical practitioners, we created our own questionnaire. Personal traits were measured by the Polish version on NEO-FFI by Costa and McCrae [14]. The Polish adaptation was made by Bogdan Zawadzki, Jana Strelau, Piotr Szczepaniak, Magdalena Śliwińska [14] and validated according to Polish requirements. The inventory explores basic individual differences among people based on five main scales. Each of them accords to one factor from the Big Five: neuroticism (N), extraversion (E), openness to experience (O), agreeableness (A), and conscientiousness (C). Neuroticism defines a susceptibility to experience negative emotions such as: anxiety, embarrassment, dissatisfaction, anger, a sense of guilt, sensitivity to experiencing psychological stress. Extraversion describes the quality and the quantity of social interactions, level of activity, energy and ability to experience positive emotions. Openness to experience describes the tendency of the individual to seek and value life experience positively, tolerance to new things and cognitive interest. Agreeableness is the attitude towards other people, interpersonal orientation (altruism, antagonism) revealed in emotions, thoughts and behaviour. Conscientiousness describes an attitude to work (its organization), persistence and motivation in action.

Statistics

The analysis of personal traits based on NEO-FFI includes means (M) and standard deviations (SD). The following statistical analyses were carried out: t-Student's test and one factor analysis of variance (ANOVA) (for differences of the means). If F was statistically significant ($p < 0.05$), differences between groups were evaluated using post-hoc RIR-Tukey's for unequal group size. There are no norms for medical practitioners in NEO-FFI, which is why all statistical analyses were carried out on unprocessed results, described for human population including age and sex. We made an assumption of 5% error in inference and statistical significance $p < 0.05$. Calculations were carried out using Statistica 6.0 for Windows.

Table 1. Characteristics of the study group

Group	PAL	SUR	GP	AN
n	**79**	**74**	**84**	**65**
Sex (%)				
M (n = 158)	29	77	44	63
F (n = 144)	71	23	56	37
Marital status (%)				
Unmarried man /unmarried woman (n = 38)	22	5	12	11
Married (n = 253)	72	92	86	86
Widower/widow (n = 11)	6	3	2	3
Age (%)				
Younger ≤ 40 years (n = 301)	59	38	43	63
Older > 41 years (n = 217)	41	62	57	37
Practice (%)				
Younger ≤ 15 years of experience (n = 305)	53	41	45	69
Older > 16 years of experience (n = 213)	47	59	55	31

PAL — specialists in palliative medicine; SUR — surgeons; GP — general practitioners; AN — anaesthetists; M – males; F – females; n – number

Results

Characteristics of studied groups

A sample of 302 medical practitioners took part in the study. The experimental group consisted of 79 medical practitioners working in palliative medicine (PAL): 44 (66%) already had a specialization and 35 (44%) were at the final stage of a specialization prior to exams. In Poland, palliative medicine is recognized as a sub- specialty, so each PAL practitioner already had a basic specialization. In our study, 50 (63%) participants were in general medicine, 11 (14%) in anaesthesiology, 6 (7%) in medical oncology, 4 (5%) in general practice, 3 (4%) in surgery, 3 (4%) in chest medicine, 2 (3%) in neurology. Fifty-eight (73%) PAL specialists worked in a stationary hospice or hospital palliative care department, 18 (23%) in an outpatient clinic. However, all of them were also employed elsewhere. Few participants (4%) indicated home care served by a hospice as the main affiliation.

The control group consisted of 223 medical practitioners including 84 GP, 74 SUR and 65 AN. Table 1 contains sociodemographic data of the studied population.

There were considerable differences in sex distribution between specialties. In PAL, 71% were women while only 23% in surgery and 37% in anaesthesiology. Groups differed in marital status. Most medical practitioners were married. The highest percentage of married people was seen among SUR (92%) and the lowest in PAL (72%). The largest groups of those younger in age and in medical practice were among AN (63% and 69%, respectively) and PAL (59% and 53%, respectively). More detailed analysis of professional experience showed that the least number of people with practice shorter than 5 years were in GP and PAL. For PAL, this is probably as a result of the necessity to undertake a basic specialization; for GP we may assume that many of them previously worked as generalists without specific training for primary care (in Poland general practice as a separate specialty was launched only in 1999).

Both groups, experimental (PAL) and control (AN, GP, SUR), were homogeneous. All doctors participating in the study had a full-time job.

Personality characteristics of researched medical practitioners based on the Big Five model

Results from the experimental group (PAL) were compared with the control group (SUR, AN, GP), as well as with the normal values adequate to age and sex (Table 2, 3). The following juxtaposition shows that in each Big Five factor there are statistically relevant differences of means between groups. SUR in comparison with other medical practitioners had relatively low levels of neuroticism. PAL had the highest levels of extraversion and openness to experience and mean values for these two factors in NEO-FFI are significantly higher than those achieved by GP and AN. Besides, PAL is characterized by the highest level of agreeableness and the difference to SUR shows the statistical significance. By contrast, SUR has a significantly higher parameter of conscientiousness compared with PAL, the latter achieving the lowest results of this variable amongst all the groups. To compare results obtained by PAL with norms suitable to age and sex [14], the t-Stu-

Table 2. Mean values in NEO-FFI for medical practitioners of different specializations

NEO-FFI		ALL	PAL (1)	SUR (2)	GP (3)	AN (4)	RIR Tukey's test
N							
F = 5.05	M	18.36	19.97	17.09	20.36	20.92	2–3, 4
p = 0.01	SD	7.53	7.57	7.52	6.72	8.11	
E							
F = 3.35	M	27.75	30.35	28.24	25.60	26.75	1–3, 4
p = 0.05	SD	6.48	5.86	6.20	5.92	7.00	
O							
F = 4.5	M	28.97	30.66	28.64	27.93	26.65	1–3, 4
p = 0.01	SD	5.57	5.33	5.61	5.14	5.48	
A							
F = 4.31	M	30.60	31.84	29.20	31.63	30.49	1–2
p = 0.01	SD	5.47	5.64	5.24	5.30	5.15	2–1, 3
C							
F = 4.11	M	34.05	32.71	35.64	33.89	32.92	1–2
p = 0.02	SD	6.47	5.60	6.73	6.02	7.01	

PAL — specialists in palliative medicine; SUR — surgeons; GP — general practitioners; AN — anaesthetists; M — mean; SD — standard deviation; N — neuroticism; E — extraversion; O — openness to experience; A — agreeableness; C — conscientiousness; Tukey's test: 1–2 — means statistically significant difference between group 1 (PAL) and 2 (SUR); 1–3, 4 — means statistically significant differences between group 1 and 3 (GP) and 4 (AN)

Table 3. Comparison of mean values for PAL specialists to mean values for population, including age and sex (t-Student's test)

NEO-FFI	Means		Test t	p
	PAL (n = 79)	Normal values		
N	19.97	21.94	**–2.23**	**0.03**
E	30.35	27.03	**4.97**	**0.000**
O	30.66	25.37	**8.73**	**0.000**
A	31.84	31.20	0.99	> 0.05
C	32.71	32.75	–0.07	> 0.05

PAL — specialists in palliative medicine; N — neuroticism; E — extraversion; O — openness to experience; A — Agreeableness; C — Conscientiousness; n — number

dent test was used (Table 3). Analysis showed that the level of neuroticism in this group is significantly lower (t = –2.23; p < 0.03), while levels of openness to experience and extraversion are higher (p < 0.0001) than the norms for the population. Agreeableness and conscientiousness do not differentiate PAL specialists from the norms suitable to age and sex, which means that these two traits are at an average level, characteristic for the population.

Discussion

The results shed some light on biologically determined and relatively constant personality traits for medical practitioners choosing to work in palliative care.

There was a relevant differentiation in their personality traits regarding norms adequate to age and sex, as well as for medical practitioners from other specializations. It can be concluded that in comparison with norms achieved for the population, PAL specialists had significantly lower results in neuroticism and higher in extraversion. A high level of extraversion also distinguishes PAL from other specialists. These two dimensions of the Big Five, neuroticism and extraversion, are the basis of individual factors determining the ability to cope with stress [14]. Results for PAL indicate higher than average emotional stability, resistance to psychological stress, and a reduction of the tendency to give up or to react with anxiety in difficult situations. Extraversion, engagement, life optimism and life satisfaction may also play an important and positive role, not only at work. It looks as if PAL specialists are equipped with personal resources that both help them in effective confrontation with problems and in dealing with them. It should be stressed that such a high level of extraversion may also determine a tendency to dominate in interpersonal contacts, exhibit a need for competition over cooperation, and an awareness of confidence in personal competence [14]. These traits may certainly help to deal with stressful situations, although they may have a less advantageous impact on contacts with co-workers or patients.

Openness to experience is another important resource for PAL specialists. This dimension distinguishes PAL specialists from other doctors and it also exceeds the normal values adequate to age and sex. This may indicate a higher than average level of intellectual skills, competence, and creativity amongst PAL specialists. This may also point to the openness to experience and other people as an effective predictor of job interests [15]. Even though agreeableness is at an average level regarding the

general norms, it nevertheless achieves the highest results in comparison with other studied specialists. This may suggest an increased tendency of PAL to gentleness, submissiveness and cooperation — features that harmonize with this occupation — helping to establish good relations with patients and providing them with support. We paid attention to the fact that PAL specialists have a relatively low level of conscientiousness. This value is close to the normal values adequate to age and sex but lower than for other studied specialists (especially SUR). Conscientiousness is very often named as typical for medical practitioners or medicine students, essential in long and requiring medical studies [2]. A high level of conscientiousness is related to the need for achievement and ambition. We may assume that medical practitioners who choose PAL are motivated by reasons other than a scientific career or satisfying job needs.

What is a PAL specialist like? First of all, they are characterized by extraversion and openness to experience. We may add agreeableness to these features. Extraversion and openness to experience provide an opportunity to make unconventional decisions supported by knowledge. In addition, apart from having the features of a "leader", they can listen, be empathic and "touch" their own and the patient's inner life, which may help in following the patient's progress and establishing a deeper dialogue. Thus we can say that PAL specialists are flexible people. At the very least, our study suggests such a portrait.

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