

## *Personality, spirituality and their relation to well-being in physicians of various specialties<sup>1</sup>*

### BACKGROUND

Based on the available literature, four hypotheses were formulated: the group of physicians differs from the control group in terms of personality traits and the level of Spirituality (H1); specific personality traits in physicians predict the level of particular components of Spirituality (H2); Spirituality is a predictor of Well-Being (H3); considering the specialties that physicians have as well as Spirituality, they will differentiate this group according to the level of the sense of Well-Being (H4).

### PARTICIPANTS AND PROCEDURE

The aim of the present study was to compare and test the relations between personality and spirituality and between spirituality and well-being in physicians of various specialties (internists, pediatricians, neurologists, surgeons, and emergency medicine specialists) ( $n = 100$ , control group  $n = 93$ ).

### RESULTS

Our research confirmed most of the hypotheses, also showing how important it is to differentiate between

physicians of different specialties. We found that physicians differ from the control group in terms of Extraversion and Openness, but do not differ according to Spirituality (H1). The most frequent predictor of spirituality proved to be Agreeableness, followed by Openness and Conscientiousness (H2). Contrary to assumptions in the present study (H3), spirituality is not a predictor of Satisfaction With Life in physicians, but according to Basic Emotions it is, including with regard to the specialties physicians have (H4).

### CONCLUSIONS

Generally, we found a relationship between Spirituality and Basic Emotions as a part of well-being, although the obtained results indicated a different pattern in the groups of neurologists and surgeons.

### KEY WORDS

well-being; physicians; spirituality; personality traits

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## BACKGROUND

Human spirituality plays an extremely important role, particularly in times of rapid changes and universal globalization. It can become a weapon in the battle against stress (Pargament, 1997; Koenig, 1997; Krok, 2009, 2014a, 2014b) or a signpost in the quest for meaning (Frankl, 1975; Popielski, 1994; Emmons, 1999; Park, 2013; Skrzypińska, 2014) and in building satisfaction with life (Wulff, 1997; Skrzypińska, 2002; Skrzypińska & Atroszko, 2015). Undoubtedly, it can be treated as one of the dimensions of personality (Emmons, 1999; Piedmont, 1999; MacDonald, 2000; Skrzypińska, 2014), including when the occupation variable is taken into account: manager, physician, artist, or a member of the clergy (Skrzypińska & Atroszko, 2015). In the light of the above literature, what may seem to be an interesting problem is the contribution of spirituality to personal well-being (cf. Streib & Hood, 2016). The type of career path chosen by the individual may be significant to building satisfaction, since it is linked with specific personality traits (McCrae & Costa, 2003; Skrzypińska & Atroszko, 2015). Some representatives of professional groups have a special ethos and respect, generated by the association with serving other people and working in special conditions. Representatives of the medical world certainly do enjoy such respect. We are therefore interested in their spirituality and well-being, which may be significant to their relationship with the patient and to coping in stress-inducing situations. For this reason, the aim of the present study is to investigate the relations of personality with spirituality and satisfaction in physicians of various specialties.

### PERSONALITY AND SPIRITUALITY

It was not until the beginning of the 20<sup>th</sup> century that researchers started to look at spirituality in the context of personality (Allport, 1950). For a long time they sought associations between those variables that play a key role in process of building the sense of meaning in life (Park, 2013). Especially Emmons (1999), analyzing spiritual strivings, observed their significance to the overall picture of personal strivings. Other researchers (Emmons, 1999; Piedmont, 1999; MacDonald, 2000; Skrzypińska, 2002, 2008, 2014) see Spirituality as the sixth dimension of personality. And indeed, as shown by Heine, Proulx, and Vohs (2006), we do possess an innate tendency to seek meaning in life, which gives direction to our plans and actions. In fact, none of the Big Five dimensions of personality – considered separately – can be regarded as responsible for the emergence of this tendency. Further arguments seem to be the human need for transcendence (Piedmont, 1999) and motivation to go beyond the existing reality into the world

of abstract ideas, which serve to build new qualities, for example in art or literature. Therefore, in the present study we will adopt the definition of Spirituality as self-fulfillment in striving to build meaning in life and happiness and in the pursuit of ultimate concerns using one's cognitive, emotional, and behavioral resources, which is sometimes accompanied by peak experiences (Skrzypińska, 2012, 2014). From the methodological point of view, and with the above components included, Spirituality constitutes an attitude towards life and towards the sacred. Thanks to the power of motivation, this attitude is generated from the cognitive patterns assimilated and formed in the cognitive system. Thanks to personality itself – its values, preferences, views, and the need to search for meaning in life – contents develop in the spiritual sphere, followed by plans and specific action tendencies, which is reflected in the Threefold Nature of Spirituality model (TNS; Skrzypińska, 2014). This process plays a special role at the threshold of adult life, when a particular life path is chosen, and, together with it, a specific profession.

### PERSONALITY AND LIFE/CAREER PATH

We define life path as the totality of intentional professional and nonprofessional human activities, occupying a considerable proportion of time and aimed at the realization of the strivings and goals one has set oneself in life, including self-realization (Skrzypińska & Atroszko, 2015). The choice of professional career path as an element of the life path carries many consequences, and therefore it has to be a conscious decision, linked with the individual's personal characteristics that predispose him or her to that particular path. It seems that particularly work with people, devoting oneself to them, and helping them in need requires a special approach oriented towards others, towards their world, and towards their specific hierarchy of values.

Holland (1992) rightly observed that the choice of profession is not a narrow or superficial matter but a form in which the entire human personality is expressed as well as a chance for its development. Dawis and Lofquist (1984) as well as Super, Savickas, and Super (1996) also stressed that every profession requires specific personality traits. The research conducted by Pervin and John (1999) as well as by Costa and McCrae (2003) shows that people with specific traits choose specific professions and function better in them than in others; for instance, people with a high level of extraversion will more often choose professions that require many social contacts than people with a high level of introversion. They will cope better in those professions, too. People with a high level of openness to new experience are more satisfied with artistic occupations, requiring curios-

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ity, creativity, and independent thinking. Conscientiousness is related to satisfaction in every profession, and Agreeableness does not differentiate in this matter.

The *dynamic equilibrium model* of well-being presented by Headey and Wearing (1991) revealed the components of it divided into “stocks” (social background, personality, and social relations) and psychic income flow (positive and negative occurrences in everyday life). Their pattern seems almost complete, but if we consider Spirituality as a dimension of personality, the picture of well-being will be better developed.

The results of previously conducted research, comparing physicians, managers, and members of the clergy (Skrzypińska & Atroszko, 2015), show that personality and Spirituality – as a dimension of personality – allow one to predict career paths, and so-called religious attitude (a component of Spirituality, understood by Heszen-Niejodek and Gruszczynska, 2004, as a relationship with a higher power) is the best predictor of the choice of professional career path. The results of a higher level of well-being seemed quite obvious in this case. The profession that seems particularly interesting in this context is that of a physician, due to its broad spectrum of specialties and the devotion it requires as well as due to its exceptional social utility. As such, this group probably differs from the control group in terms of personality traits and the level of Spirituality (H1). It can also be supposed that specific personality traits in physicians predict the level of particular Spirituality components (H2). Finally, among physicians, Spirituality is a predictor of Well-Being (H3); moreover, additionally considering the specialties that physicians have as well as Spirituality, they will differentiate this group according to the level of the sense of Well-Being (H4).

## PARTICIPANTS AND PROCEDURE

In order to investigate the above hypotheses, we used the following methods and techniques assessing personality, Spirituality and Satisfaction With Life:

1. *NEO-FFI Personality Inventory* (Costa & McCrae, 1992; Cronbach's  $\alpha = .62$ ), Polish version by Zawadzki, Strelau, Szczepaniak, and Śliwińska (1998). The questionnaire measures personality traits included in the popular five-factor model known as the Big Five. Its items are 60 self-report statements, whose accuracy with regard to themselves participants rate on a five-point scale. These items make up five scales, measuring, respectively: Neuroticism, Extraversion, Openness to Experience, Agreeableness, and Conscientiousness.
2. *Self-Report Questionnaire* (SRQ) (Heszen-Niejodek & Gruszczynska, 2004; Cronbach's  $\alpha = .91$ ), consisting of 20 items, measuring the level of Spirituality and its components, namely: *Religious Attitude* (understood as internal religiosity: religious experience, their significance in everyday life, their influence on moral choices and behavior, attitude towards God), *Ethical Sensitivity* (high position of ethical values in the hierarchy of values, taking care to act in accordance with them, inclination to engage in ethical reflection), and *Harmony* (seeking harmony with the world, inner peace, and coherence of different forms of one's activity). Answers are given on a scale from 1 (*strongly disagree*) to 5 (*strongly agree*). Motivation of selection of the SRQ are its good parameters, checked many times (e.g. Skrzypińska & Chudzik, 2012 – especially Cronbach's  $\alpha$ ). Moreover, this scale assesses not only the religious (intrinsic meaning) aspect of Spirituality, but also its wider scope: harmony (in relation to nature, the world) and ethical sensitivity (in relation to other people).
3. *Scale of Spiritual Transcendence* (STD; Piotrowski, Skrzypińska, & Żemojtel-Piotrowska, 2013; Cronbach's  $\alpha = .91$ ), based on Piedmont's theory. It measures Spiritual Transcendence defined, with Piedmont (2010), as going beyond one's mortal existence. It comprises two subscales: *Transcendence Proper* (close to the understanding of human religiosity, e.g., “I pray or meditate to attain a higher level of spiritual awareness”) and *Spiritual Openness* (comprising positively evaluated aspects of spirituality, sometimes also mentioned as virtues associated with it: not judging others and respect towards them, satisfaction with what life brings, as well as tolerating ambiguity and contrary points of view; unrelated to religiosity; e.g., “The world is interesting thanks to having so many contradictions in it”). It consists of 22 items with a response scale from 1 (*strongly disagree*) to 4 (*strongly agree*). This scale was selected regarding its genesis based on Piedmont's theory, which is well-known and cited in psychological literature related to religiousness and spirituality.
4. *Satisfaction With Life Scale* (SWLS; Diener, Emmons, Larson, & Griffin, 1985; Cronbach's  $\alpha = .84$ ), Polish version by Juczyński (2001). This instrument measures general Satisfaction With Life – its five items have a deliberately nonspecific character. Responses are given on a scale from 1 (*strongly disagree*) to 7 (*strongly agree*). The rating of Satisfaction With Life is the outcome of comparing one's own situation with the standards one has established. The result of the measurement is a general index of Satisfaction With Life.
5. *Basic Emotions Scale* (Wojciszke, Krut, Chwojnica, & Mierzejewska, 1997, as cited in: Skrzypińska, 2002; Cronbach's  $\alpha = .81$ ); a scale measuring six basic emotions: positive (love, joy) and negative (sadness, fear, shame, anger). Participants rate

the frequency of 24 experienced types of the above emotions on a scale from 1 (*never*) to 7 (*always*).

The definition of satisfaction with life that we adopted was taken from Andrews and Withey (1976), Diener (1984), as well as Headey and Wearing (1991). According to these researchers, it can be understood as the cognitive evaluation of contentment with life and as the proportion of positive and negative emotions.

## PARTICIPANTS

In the sample of 193 participants, 100 people were physicians and the others constituted the control group. All the physicians taking part in the study came from Gdańsk and Warsaw. They were asked randomly to participate in this research. The control group consisted of people from Gdańsk, Ostrołęka, and Siedlce. Their level of education was comparable to physicians (mostly academics). During recruitment, we took gender proportions into account (56% women).

Mean age (*M*) was 39.80 years (*SD* = 11.80) in the group of physicians and 34.20 years (*SD* = 11.68) in the control group.

The analyzed criterion sample was selected according to the criterion of being a physician, with a distinction between specialties; it consisted of 20 internists (20%), 21 pediatricians (21%), 21 neurologists (21%), 18 surgeons (18%), and 20 emergency medicine specialists (20%). The representatives of the control group performed various professions.

A majority of the participants were Catholics (91.40%); 5.60% indicated no religion, 0.90% indicat-

ed other religions, 0.90% declared agnosticism, 0.40% were Jehovah's Witnesses, and the others (0.80%) showed indecision. Probably due to the high level of homogeneity in the groups in terms of religion, the denominational variable will not differentiate the participants.

## PROCEDURE

The research was conducted with the participants' consent. The respondents were given a battery of questionnaires prepared in accordance with the principle of randomization to avoid the effect of the order of completion. The study took about 40 minutes; the participants were asked to answer all the questions. To ensure the standardization of the research procedure, the respondents were informed about the conditions of the study, namely, about the unlimited time and about the way of giving answers. The calculations were performed using the SPSS 21 package. We applied Students's *t*-test, with the homogeneity of variance in both groups checked by means of the Levene test. Multiple regression analyses were conducted to assess predictors of well-being.

## RESULTS

### DIFFERENCES IN PERSONALITY AND SPIRITUALITY

The first step taken to test the hypotheses was a general comparison of the group of physicians with the control group in terms of differences in personality traits, including the Spirituality dimension (H1). It turned out that the two groups differed significantly in Extraversion,  $t(191) = -2.68, p = .008$ , and Openness,  $t(191) = 1.97, p = .049$  (Table 1). The control group scored higher on Extraversion compared to physicians and much lower on Openness.

Further testing the first hypothesis (H1), we established that the two groups of participants did not differ significantly in the level of Spirituality (Table 2).

The above results only partly confirm the hypothesis (H1): physicians differ from the control group in the levels of Extraversion and Openness, but there are no differences between these groups in the level of Spirituality or its specific components.

### PERSONALITY TRAITS AS PREDICTORS OF SPIRITUALITY

Next, we made an attempt to determine the personality predictors of Spirituality (H2) in physicians. We took into account and tested the traits from the Big Five model, which is illustrated in Tables 3-8. Because Spir-

Table 1

*Comparison of physicians and the control group in terms of the Big Five Personality Traits (1 – physicians, 2 – control group)*

Personality dimensions	Group	<i>n</i>	<i>M</i>	<i>SD</i>
Neuroticism	1	100	5.02	2.11
	2	93	5.57	2.19
Extraversion**	1	100	5.42	2.23
	2	93	6.23	1.90
Openness*	1	100	5.57	2.15
	2	92	5.01	1.75
Agreeableness	1	100	4.98	2.19
	2	93	5.02	1.96
Conscientiousness	1	100	5.51	1.84
	2	93	5.98	1.87

Note. \*\* $p < .01$ , \* $p < .05$ .

Table 2

Comparison of physicians and the control group in terms of the level of spirituality components (1 – physicians, 2 – control group)

Spirituality as a dimension	Group	n	M	SD
Spirituality (overall)	1	100	3.49	0.47
	2	93	3.47	0.71
Religious Attitude	1	100	3.25	0.75
	2	93	3.33	1.07
Ethical Sensitivity	1	100	3.96	0.58
	2	93	3.85	0.67
Harmony	1	100	3.26	0.70
	2	93	3.23	0.81
Transcendence Proper	1	100	2.29	0.53
	2	93	2.48	0.62
Spiritual Openness	1	100	3.00	0.41
	2	93	3.01	0.46

Table 5

Explanation of the ethical sensitivity dependent variable in the group of physicians

Trait	$F(4, 95) = 6.48$ $p < .001$ $R = .46$ $R^2 = .21$		
	$\beta$	$t$	$p$
Conscientiousness	.42	3.85	< .001
Neuroticism	.35	3.19	.002
Agreeableness	.22	2.42	.017
Openness	.21	2.29	.024

Table 7

Explanation of the transcendence proper dependent variable in the group of physicians

Trait	$F(1, 98) = 16.99$ $p < .001$ $R = .38$ $R^2 = .15$		
	$\beta$	$t$	$p$
Openness	.38	4.12	< .001

Table 3

Explanation of the spirituality dependent variable in the group of physicians

Trait	$F(1, 98) = 8.76$ $p < .001$ $R = .29$ $R^2 = .08$		
	$\beta$	$t$	$p$
Agreeableness	.29	2.96	.004

Table 4

Explanation of the religious attitude dependent variable in the group of physicians

Trait	$F(2, 97) = 15.67$ $p < .001$ $R = .49$ $R^2 = .24$		
	$\beta$	$t$	$p$
Neuroticism	.46	5.15	< .001
Agreeableness	.25	2.82	.006

Spirituality of physicians

Table 6

Explanation of the harmony variable in the group of physicians

Trait	$F(3, 96) = 9.77$ $p < .001$ $R = .48$ $R^2 = .23$		
	$\beta$	$t$	$p$
Extraversion	.27	2.60	.011
Agreeableness	.23	2.53	.013
Conscientiousness	.23	2.27	.026

Table 8

Explanation of the spiritual openness dependent variable in the group of physicians

Trait	$F(3, 96) = 25.98$ $p < .001$ $R = .67$ $R^2 = .45$		
	$\beta$	$t$	$p$
Openness	.47	6.13	< .001
Conscientiousness	.41	5.41	< .001
Agreeableness	.21	2.77	.007

ity is a highly complex sphere, regression analysis for the predictors of this variable was performed using two independent questionnaires, with a division into scales (the Self-Report Questionnaire, the Scale of Spiritual Transcendence) and subscales/factors.

The results of the study show that personality traits are significant predictors of overall Spirituality, but there are differences between groups in this respect – except in the case of the Introversion–Extraversion dimension, where a certain stable tendency is visible (no differentiation).

The first variable we tested was overall Spirituality. As illustrated in Table 3, Agreeableness is the trait that explains this variable.

Next, we decided to check which personality traits predict Religious Attitude as a component of Spirituality as defined by Heszen-Niejodek, meaning belief in God and a relationship with Him. Table 4 shows that Neuroticism and Agreeableness are the best predictors of this element of the spiritual domain.

The next predicted variable was the second component of Spirituality – Ethical Sensitivity. It turned out that as many as four personality traits predict it – all traits except Extraversion (Table 5).

Thus, as regards personality traits, the best predictor of the Ethical Sensitivity variable in physicians is the co-occurrence of Conscientiousness, Neuroticism, Agreeableness, and Openness.

The Harmony variable as an element of Spirituality can be explained in the group of physicians by the co-occurrence of Extraversion, Agreeableness, and Conscientiousness (Table 6).

The explanation of the Transcendence Proper dependent variable from the next instrument – the Scale of Spiritual Transcendence – made it possible to identify Openness to Experience as the predictor variable (Table 7).

The last variable from the above scale that we took into account – Spiritual Openness – is explained by the co-occurrence of Openness to Experience, Conscientiousness, and Agreeableness (Table 8).

The results presented above support a positive answer to the question about personality predictors of Spirituality (H2). However, this picture differs depending on the component analyzed; the trait that predicts Spirituality and its components the most often (in the case of five out of eight analyzed Spirituality components) is Agreeableness, followed by Openness and Conscientiousness (both explaining three components).

As a preliminary test of hypotheses H3 and H4 (using a one-way ANOVA), we performed a comparison of physicians in terms of the level of Spirituality and its components as well as Well-Being and its components, and checked whether specialty is a differentiating variable (Tables 9 and 10).

As can be seen in Table 9, there are significant differences in the sample between physicians of differ-

ent specialties in terms of the mean level of all variables describing Spirituality.

The highest level of overall Spirituality was found in neurologists (3.73), and the lowest in emergency medicine specialists (3.13). Neurologists, surgeons, and pediatricians scored above the mean, while internists and emergency medicine specialists scored below it.

As regards the Religious Attitude variable, surgeons, internists, and neurologists scored the highest mean (3.55-3.44), while pediatricians scored the lowest (2.88). Above the mean are surgeons, internists, and neurologists; below the mean are pediatricians and emergency medicine specialists.

The physicians who scored the highest mean on Ethical Sensitivity were also internists (4.21), and emergency medicine specialists had the lowest mean scores (3.28). Above the mean: internists, pediatricians, neurologists, surgeons; below the mean: emergency medicine specialists.

The highest level of Harmony was found in neurologists (3.69), and the lowest in internists (2.67). Above the mean: neurologists, pediatricians, surgeons; below the mean: internists, emergency medicine specialists.

As regards Transcendence Proper, surgeons had the highest mean score (2.63) and neurologists had the lowest (1.90). Above the mean: surgeons, pediatricians; below the mean: internists, neurologists, emergency medicine specialists.

The group that scored the highest mean on Spiritual Openness was pediatricians (3.39), and the group with the lowest mean score was emergency medicine specialists (2.51). Above the mean: pediatricians, neurologists, surgeons; below the mean: internists, emergency medicine specialists.

As the above data show, emergency medicine specialists scored below the mean on all variables describing Spirituality, whereas surgeons and neurologists scored above the mean on all of these variables except Transcendence Proper.

Next, we checked whether physicians of different specialties differed in terms of the Satisfaction With Life they experienced, which is presented in Table 10.

As can be seen, the group with the highest mean score on Satisfaction With Life was pediatricians (5.69), and the group with the lowest mean score (3.72) was internists (Table 10). Pediatricians, surgeons, and neurologists scored above the mean, whereas internists and emergency medicine specialists scored below it.

As regards the Positive Emotions variable, it was also pediatricians who had the highest mean score (5.96), and internists again who had the lowest (4.29). Pediatricians and neurologists scored above the mean, while internists, surgeons, and emergency medicine specialists scored below it.

The group with the highest mean score on Negative Emotions was surgeons (3.37), and the group with the

Table 9

*Differences in the level of spirituality between physicians of different specialties*

		<i>n</i>	<i>M</i>	<i>SD</i>	<i>F</i>	<i>p</i>	
Spirituality	1	20	3.44	0.39	5.77	< .001	<i>Spirituality of physicians</i>
	2	21	3.50b	0.29			
	3	21	3.73c	0.30			
	4	18	3.66d	0.41			
	5	20	3.13bcd	0.67			
	Overall	100	3.49	0.47			
Religious Attitude	1	20	3.44	0.81	3.44	.011	
	2	21	2.88a	0.41			
	3	21	3.44a	0.36			
	4	18	3.55	0.99			
	5	20	2.99	0.87			
	Overall	100	3.25	0.76			
Ethical Sensitivity	1	20	4.21a	0.31	12.92	< .001	
	2	21	4.10b	0.45			
	3	21	4.05c	0.43			
	4	18	4.17d	0.41			
	5	20	3.28abcd	0.71			
	Overall	100	3.96	0.59			
Harmony	1	20	2.67a	0.42	8.09	< .001	
	2	21	3.52a	0.85			
	3	21	3.69ac	0.38			
	4	18	3.26a	0.70			
	5	20	3.12c	0.64			
	Overall	100	3.26	0.71			
Transcendence Proper	1	20	2.21a	0.27	6.87	< .001	
	2	21	2.52b	0.42			
	3	21	1.90bc	0.52			
	4	18	2.63acd	0.57			
	5	20	2.21d	0.58			
	Overall	100	2.29	0.54			
Spiritual Openness	1	20	2.99a	0.39	21.88	< .001	
	2	21	3.39ab	0.23			
	3	21	3.00bc	0.23			
	4	18	3.12bd	0.26			
	5	20	2.51abcd	0.39			
	Overall	100	3.00	0.42			

*Note.* 1 – internists, 2 – pediatricians, 3 – neurologists, 4 – surgeons, 5 – emergency medicine specialists;  
 Letters a, b, c, d indicate a significant difference between the marked means for  $p < .001$ , and in the case of Religious Attitude – for  $p < .01$ .

Table 10

Differences in the level of satisfaction with life between physicians of different specialties

		<i>n</i>	<i>M</i>	<i>SD</i>	<i>F</i> (4, 95)	<i>p</i>
Satisfaction	1	20	3.72a	0.91	18.56	< .001
	2	21	5.90ab	0.48		
	3	21	4.57ab	0.58		
	4	18	4.59ab	0.99		
	5	20	4.28b	0.74		
	Overall	100	4.58	0.99		
Positive Emotions	1	20	4.29a	0.10	12.86	< .001
	2	21	5.96ab	0.58		
	3	21	5.45a	0.46		
	4	18	4.92b	0.88		
	5	20	4.94b	0.92		
	Overall	100	5.13	0.96		
Negative Emotions	1	20	3.04a	0.38	17.57	< .001
	2	21	2.38ab	0.26		
	3	21	2.14ac	0.40		
	4	18	3.37bc	0.81		
	5	20	3.02bc	0.71		
	Overall	100	2.77	0.70		

Note. 1 – internists, 2 – pediatricians, 3 – neurologists, 4 – surgeons, 5 – emergency medicine specialists; for  $p < .001$ . Letters a, b, c, d indicate a significant difference between the marked means.

lowest mean score was neurologists (2.14). Scores were above the mean in the case of internists, surgeons, and emergency medicine specialists, and below the mean in the case of pediatricians and surgeons.

The above data reveal that Satisfaction With Life is the highest in pediatricians and the lowest in internists as well as emergency medicine specialists.

#### PERSONALITY AND SPIRITUALITY AS PREDICTORS OF WELL-BEING

The third hypothesis (H3) about Personality and Spirituality as common predictors of Well-Being among physicians was partly confirmed, as shown by multiple regression.

Contrary to assumptions, Satisfaction With Life reported by the physicians was not a predictor of Spirituality if we analyzed it with division into groups of specialties (H4).

On the other hand, Positive Emotions differentiate doctors' groups apart from representatives of *Emergency Medicine*. In the case of *Internists* analysis of regression indicated Extraversion ( $\beta = .76$ ), Conscientiousness ( $\beta = .50$ ) and Spirituality ( $\beta = .43$ )

as predictors of Positive Emotions – they explain 95% of variance,  $F(6, 13) = 42.67$ ,  $p < .001$ . However, among *Pediatricians* only Spirituality itself ( $\beta = .20$ ) explains 83% of variance of Positive Emotions,  $F(6, 14) = 12.10$ ,  $p < .001$ . For *Neurologists* Spirituality did not appear as a predictor, but Extraversion ( $\beta = .89$ ), Neuroticism ( $\beta = -.46$ ) and Conscientiousness ( $\beta = -.54$ ) did and represented 87% of variance,  $F(6, 14) = 15.60$ ,  $p < .001$ . In the group of *Surgeons* Openness ( $\beta = .81$ ), Conscientiousness ( $\beta = -.44$ ) and Spirituality ( $\beta = .46$ ) explained 82% of variance of Positive Emotions,  $F(6, 11) = 8.19$ ,  $p = .002$ .

According to Negative Emotions, in the case of *Internists* not personality traits but Spirituality explains them negatively ( $\beta = -.86$ ) [67% of variance;  $F(6, 13) = 4.40$ ,  $p < .010$ ]. It is interesting that Agreeableness ( $\beta = -.86$ ), Conscientiousness ( $\beta = .34$ ) and Spirituality ( $\beta = .64$ ) are responsible for 82% of variance of Negative Emotions among *Neurologists*,  $F(6, 11) = 8.19$ ,  $p = .002$ , where also a positive relationship can be noted between Spirituality ( $\beta = .51$ ) and Negative Emotions in the group of *Surgeons* (80% of variance),  $F(6, 11) = 7.23$ ,  $p = .003$ . There were no significant results among *Pediatricians* and representatives of *Emergency Medicine*.

## DISCUSSION

### DIFFERENCES IN PERSONALITY AND SPIRITUALITY

Human spirituality is a complex phenomenon (cf. Streib & Hood, 2016), which reveals its complexity also in comparisons within various professions. Physicians proved to be no exception. Most of our hypotheses were confirmed, though one of them was confirmed only partly. As expected, in the course of testing the first hypothesis (H1), we found that physicians differ from the control group in terms of Extraversion and Openness. Physicians are more introverted and more open to experience. Indeed, this appears to be an indispensable package of traits contributing to concentration, logical thinking, and at the same time imagination and action orientation (McCrae & Costa, 2003). Intuitively, it could seem that low Neuroticism and high Conscientiousness should be included in this package. Yet, they were not, which may simply suggest that a certain level of Introversion and Openness is a precondition of success in the profession of a physician.

Unfortunately, the second part of the first hypothesis was not confirmed – physicians did not differ in terms of Spirituality level from the control group. Previous research (Skrzypińska, 2002) suggested a trend for medical students to believe in the activity of a higher power in human life considerably more strongly than students of other science or language and literature majors; such a belief constitutes the cognitive basis for the functioning of the spiritual sphere. However, belief in the objects constituting its element is not the only component. In the present study, spirituality was approached much more broadly, which may have changed the expected trends. The obtained result can also be explained by referring to what other authors report. Curling, Lantos, Roach, Sellergren, and Chin (2005) explored physicians' spirituality as well. They compared the level of Spirituality in physicians and in a control group and found that physicians and individuals from the control group had a similar Spirituality level, which is confirmed by the result obtained in the research reported in the present paper. The authors also found that physicians were more firmly anchored in the religious tradition and more inclined to take part in religious practices, but less often put their religious beliefs into practice. Physicians more often describe themselves as spiritual and distinguish spirituality from religiosity, whereas in the control group these two concepts are closer to each other. In the study in question it was also shown how patients and doctors relate to God in a time of illness. Patients pray and seek refuge in Him. Doctors, by contrast, seek a solution that can be used without God's help. In their case, therefore, there appears the action imperative

and, probably, faith in human skills, which would have to be verified.

### PERSONALITY TRAITS AS PREDICTORS OF SPIRITUALITY

The positive verification of the second hypothesis (H2) made it possible to identify specific personality traits predicting the physician's Spirituality (cf. Piedmont, 1999; MacDonald, 2000). Its most frequent predictor proved to be Agreeableness, followed by Openness and Conscientiousness. It is these particular traits that are usually reported in the literature as predictors of human religiosity (e.g., Francis, 1992; Saroglou, Delpierre, & Dernelle, 2004; Saroglou, 2011; Piedmont, 2005). Research (McCrae & Costa, 1999; Saroglou, 2002) reveals that people who are more agreeable and conscientious by nature become religious immediately after an encounter with religion, which begins to be the meaning of life and a guide for them. If religion is considered as internal – that is, as strongly motivating to engage in a relationship with God and to behave morally – and as reflective, constituting a value in its own right and at the same time being a philosophy of life (cf. Allport, 1950), then it can be treated as part of the spiritual sphere (cf. MacDonald, 2000; Skrzypińska, 2014). Consequently, our results are consistent with the commonly obtained ones, and with those reported in well-known meta-analyses (e.g., Saroglou, 2011). Similar results were obtained by Slater, Hall, and Edwards (2001), who found that variables describing Transcendence correlate the most strongly with Openness to Experience. This is probably related to the crossing of boundaries that transcendence makes possible. Many authors point out that this gives rise to a prospect for building deeper meaning in life (cf. Frankl, 1975).

Incidentally, our study revealed that Extraversion is a predictor of Harmony, which may be related to a lower amount of anxiety, positive emotionality, or action orientation in extroverted physicians compared to introverted ones.

Ethical Sensitivity, Harmony, and Spiritual Openness are the elements of Spirituality that are the most strongly determined by personality. It therefore seems they may constitute the most complex components in physicians. Their significance consists in the special importance of ethical values in the general hierarchy of values, in the care taken to behave in accordance with them, and in the inclination to engage in ethical reflection, which may seem to be a precondition for taking up medical challenges. Likewise, Harmony manifests itself in seeking inner peace and the consistency of various forms of personal activity. Finally, Spiritual Openness ensures nonjudgmentality and respect towards people, satisfaction with what life brings, as well as tolerance for ambiguity and

*Spirituality  
of physicians*

different points of view. These attributes considerably facilitate contact with the patient and make for a flexible approach to solving existential problems. Confronted with their manifestations, the patients benefit not only somatically but also psychologically. This makes it easier to build an appropriate positive relationship between the one who helps and the one who needs help.

Interestingly, in the obtained results, Religious Attitude and Ethical Sensitivity are positively predicted by Neuroticism. This personality trait usually negatively correlates with Spirituality (Saroglou, 2011). Thus, apparently, it has a different tendency in physicians – which is an issue that requires further research. It should be remembered, too, that Neuroticism exhibits various associations. It sometimes happens that Spirituality is negatively correlated with traits such as depressiveness or anxiety (McCrae & Costa, 1986; Saroglou & Fiasse, 2003). On the other hand, it can be correlated positively with Ethical Sensitivity (Hills, Francis, Argyle, & Jackson, 2004), which, in the case of physicians, results in sensitivity to ultimate concerns (according to Emmons, 1999). A certain generalization of the relations between Spirituality and personality traits can also be the results of the research conducted by Kosek (2000) as well as Simpson, Newman, and Fuqua (2007). These researchers revealed that positive relationship with God positively correlates with Extraversion, Agreeableness, Conscientiousness, and Openness and negatively with Neuroticism. Negative relationship with God correlates positively with Neuroticism. It is therefore possible that in the case of physicians the relationship with God is the key – an issue which requires further research.

In the group of physicians, a predictor was identified for every Spirituality component/variable. The best model was obtained for Spiritual Openness, where the co-occurrence of Openness to Experience, Conscientiousness, and Agreeableness explains 45% of that trait. In the control group the best-explained element is Harmony, which can be predicted based on the co-occurrence of Extraversion and Agreeableness in 28% of cases. Thus, differences between the groups have to be sought deeper: in the configuration of personality traits predicting the components of Spirituality. As can be seen, the result obtained among physicians points to the specificity of the prediction of Spiritual Openness, nearly half of which is explained by three personality traits.

As shown, in the group of physicians there are significant differences between doctors of different specialties in terms of the mean level of all elements describing Spirituality. The level of overall Spirituality was the highest in neurologists, followed by surgeons and pediatricians, and the lowest in internists as well as emergency medicine specialists. It therefore seems that the obtained result may be related to

the stress connected with a particular specialty. With an increase in the level of Spirituality, the risk of a heart attack decreases, and so does blood pressure. Spirituality has a beneficial influence on the immune system, which reduces the frequency of disease (Koenig, McCullough, & Larson, 2001; Levin & Schiller, 1987; Levin, Chatters, Ellison, & Taylor, 1996).

Of all the scores reflecting the level of particular Spirituality components, those above the mean were obtained by surgeons and neurologists – except the Transcendence Proper variable, which manifests itself rather untypically compared to other elements of Spirituality (cf. Piotrowski, Skrzypińska, & Žemojtel-Piotrowska, 2013). Emergency medicine specialists scored below the mean on all variables. Thus, it is possible to speak of a pattern. Surgery and neurology deal with special cases of adults, where the physician is constantly exposed to contact with severely ill patients, very often requiring emergency life-saving procedures or deep intervention in their organism. Perhaps it is especially an increased level of Spirituality that helps overcome the trauma that stems from contact with human suffering. In this context, one cannot help wondering why emergency medicine specialists scored considerably lower than other physicians. What may be helpful here is the hypothesis concerning the short contact they have with injured people. Acting quickly and during the transport of patients, emergency medicine specialists lose physical contact with them afterwards and therefore no deeper interpersonal relations are established. This specialty thus manifests itself in short-term task-oriented actions.

Religious Attitude, manifested the most strongly among surgeons, internists, and neurologists, may constitute psychological support for representatives of this group of specialists, who are faced with much more difficult tasks than other physicians. Especially in difficult medical cases, ending in death, there arises the need for explaining such a course of events. In such moments, people often fall back on faith and the hope connected with the belief in life after death (cf. Skrzypińska, 2002).

The highest Ethical Sensitivity among internists is promising when it comes to contacts with patients, and this specialty is the one that involves the largest number of such contacts. This is an optimistic result, since this element of Spirituality brings ethical values to the fore and is a precondition of fulfilling the Hippocratic Oath as well as a precondition of the desire to provide help and respect boundaries in the relationship with the patient. The fact that the lowest score was obtained by emergency medicine specialists does not mean that they act mechanically or that they are heartless. It is accounted for by the explanation presented two paragraphs above, based on the need for quick action and a task-oriented approach.

The high level of Harmony in neurologists corresponds with meeting the patients' need for a balance of nervous processes, which makes for their quicker recovery.

#### PERSONALITY AND SPIRITUALITY AS PREDICTORS OF WELL-BEING

The next variable significant to physicians' work proved to be well-being. We found the highest satisfaction with life in pediatricians, which may be due to their constant contact with children, who usually make the most rewarding patients. It may also be linked with the lowest work-related psychological strain in this group, probably due to the highest rate of successful diagnoses and recoveries in the case of children.

The scores indicating the lowest satisfaction with life were obtained by internists and emergency medicine specialists; in the former this may stem from excessive duties and work overload, and in the latter from the character of the work, which often involves night duty and emergency action. Importantly, the physicians experiencing the greatest amount of negative emotions and a relatively small amount of positive ones are surgeons, which, again, classifies their occupation as heavily straining.

The people who are more engaged in religion or spiritual development are happier, healthier, and better at coping with difficulties than those for whom religion and spirituality are less important (Ellison & Fan, 2008; Patrick & Kinney, 2003; Levin et al., 1996; Myers & Diener, 1995). Surprisingly, the third hypothesis (H3) could not be wholly confirmed: Personality traits and Spirituality reported by the physicians were not revealed as predictors of satisfaction with life regarding specialties (H4). This result is contradictory to conclusions from previous investigations (Myers & Diener, 1995). The reason for such an effect, which concerns all the groups of doctors, can be explained by other sources of satisfaction in this job. According to Headey and Wearing's (1991) *dynamic equilibrium model*, "stocks" (personality, demographic characteristics, social relationships) are not the only factor responsible for satisfaction. Positive and negative life events ("flows") build everyday experience which shapes this state. Perhaps they play a bigger role in the process of good appraisal of life or maybe this situation is more complex and related to variables not taken into consideration in this research. Anyway, this result needs further exploration, including with application of other techniques of investigation. Also, further statistical analyses could concern particular components of Spirituality in the future. As other researchers report, harmony correlates particularly strongly with all the compo-

nents of well-being, which is a fairly often obtained result (cf. Skrzypińska & Chudzik, 2012).

On the other hand, positive emotions differentiate doctors' groups apart from representatives of *emergency medicine*. In the case of *internists*, extraversion plays the biggest role as a predictor, followed by conscientiousness and spirituality. Such a high percentage of variance (95%) indicates the importance of these variables. According to testing of McCrae and Costa's (2003) Big Five model, such results confirm previous reports. Similarly, in a group of *surgeons* openness, conscientiousness and Spirituality are responsible for 82% of variance of positive emotions. Concerning this, especially conscientiousness and Spirituality are key factors in this relationship.

In the case of *peditricians*, Spirituality itself explains 83% of variance of positive emotions. So this group is distinguished from others. Perhaps constant contact with children enriches their spiritual sphere and provides positive states of mind. That indicates Spirituality as an important factor in *peditricians'* everyday life, contrary to *neurologists*, where it did not appear as a predictor. For them, personality traits (positively extraversion, negatively neuroticism and conscientiousness) are more related to positive emotions, which is in accordance with previous research (McCrae & Costa, 2003). It should be mentioned that *peditricians* probably experience a lower level of stress at the place of work compared to the remaining groups of doctors.

Negative emotions are explained negatively only by Spirituality in the case of *internists*: when Spirituality increases, negative emotions decrease. Such a mechanism could indicate spiritual coping (Pargament, 1997). Quite a different situation can be observed among *neurologists* and *surgeons*, where Spirituality is positively related to this kind of emotions. It could be contrary to *internists'* mechanisms of coping in the place of work. These two groups of physicians are often in contact with difficult medical cases, involving heavy stress. It is difficult to explain the essence of suffering or sudden loss of life in such a job. Perhaps the need for fast, rational decisions and actions does not leave any space for spiritual, ultimate concerns. Moreover, according to *neurologists* higher agreeableness can guarantee a lower level of negative emotions (conscientiousness intensifies them).

On the other hand, many studies prove that Spirituality increases in the face of death (Flynn, 1986; Grey, 1985; Greyson, 1992-93; McLaughlin & Maloney, 1984; Noyes, 1980; Ring, 1984). But in those reports the element of a professional approach is not taken into consideration. When doctors have to save lives many times, they cannot analyze this process in every case. Empathy or spiritual rites could be a significant obstacle during medical treatment. Perhaps

the level of spiritual involvement proportionally depends on the level of stress and challenges.

The lack of significant results among *pediatricians* and representatives of *emergency medicine* can suggest other variables, not considered here, as important for feeling negative emotions.

## CONCLUSIONS

In conclusion, this research revealed the following:

- There is no difference between doctors and the control group in level of Spirituality.
- Agreeableness is the most frequent predictor of Spirituality; Ethical Sensitivity, Harmony and Spiritual Openness are the three components of Spirituality which are explained by the largest number of personality traits. They can represent the most complicated elements of the spiritual sphere.
- Differentiation of doctors' specialty is key to their spirituality.
- The highest well-being characterizes pediatricians and the lowest characterizes internists and emergency medicine specialists.
- In a deeper analysis Spirituality is not a predictor of satisfaction with life considering doctors' specialties.
- Spirituality is a predictor for positive and negative emotions if we analyze specialties: Positive Emotions are predicted by Spirituality among *internists* (+), *pediatricians* (+) and *surgeons* (+); Negative Emotions are predicted by Spirituality among *internists* (-), *neurologists* (+) and *surgeons* (+).
- We did not obtain significant results among doctors of *emergency medicine*.
- The spiritual sphere can be an important factor of emotional balance among doctors, taking into consideration their specialties.

## LIMITATIONS

It should be stressed that the present study is an introduction to further empirical explorations: searching for causal-effective relationships. In future research, in order to continue addressing the topics taken up, it would be advisable to build a model based on the analysis of mediators and moderators, mediating between physicians' Spirituality and their well-being. All the present research was conducted in one country, so in a subsequent stage the cultural context should be taken into consideration. Anyway, we have to be aware of the method's weakness: declaration of any state is always a declaration. On the other hand, the strength of this research consists in the diversity of physician groups.

Summing up, what seems to be extremely important is the role of Spirituality in the stressful environ-

ment of physicians' work, and the type of specialty may act as a mediator in this process.

## ENDNOTES

- 1 This research was presented as a keynote lecture during European Conference on Religion, Spirituality and Health in Gdańsk, Poland, May 12-14, 2016.

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