

Personality Traits of Teachers in Relation to Social Intelligence

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ABSTRACT

The main aim of this research was to find the interconnections between the personality traits of the teachers and the social intelligence (SQ) components, as well as, to find gender differences between them. The SQ of teachers was based on self-evaluation using the Solution of Interpersonal Problem-oriented Situations questionnaire, the Tromsø Social Intelligence Scale and the NEO Five-Factor Inventory. The selection of the research sample, which consisted of 553 primary and secondary school teachers, was intentional and based on the subjective consideration and definition of certain typical features or traits. Data were analyzed with factor analysis, correlation analysis, and *t*-tests. This research discovered significant differences between men and women on the basis of their assessment of several social intelligence factors, and confirmed that social intelligence is an essential tool for the interpretation of people's behavior and provides an opportunity to address this behavior.

Keywords: social intelligence, personality traits, teacher, school social context

บทคัดย่อ

งานวิจัยเรื่องนี้มีจุดมุ่งหมายเพื่อศึกษาความสัมพันธ์ระหว่าง คุณลักษณะทางบุคคลิกภาพ กับองค์ประกอบด้านความฉลาดทางสังคมของครู รวมถึงความแตกต่างระหว่างเพศในด้านดังกล่าว ความฉลาดทางสังคมได้จากการประเมินตนเองของครูโดยใช้เครื่องมือวัด 3 ชุด ได้แก่ Solution of Interpersonal Problem-oriented Situations questionnaire, the Tromsø Social Intelligence Scale และ the NEO Five-Factor Inventory กลุ่มตัวอย่างในการวิจัยได้แก่ ครูโรงเรียนประถมศึกษาและมัธยมศึกษาจำนวน 553

คน ซึ่งเลือกอย่างจำกัดโดยพิจารณาจากคุณลักษณะเฉพาะของครูตามนิยาม วิเคราะห์ข้อมูลโดยวิธีการวิเคราะห์องค์ประกอบ การวิเคราะห์ความสัมพันธ์ และการทดสอบค่าที่ ผลการวิจัยพบว่า การประเมินตนเองในเรื่องความฉลาดทางสังคมมีความแตกต่างกันอย่างมีนัยสำคัญระหว่างครูเพศหญิงและครูเพศชายในหลายองค์ประกอบ อีกทั้งยังสนับสนุนว่าความฉลาดทางอารมณ์เป็นคุณลักษณะสำคัญที่ครูสามารถใช้ตีความพฤติกรรมของผู้อื่น และช่วยในการตอบสนองต่อพฤติกรรมนั้นๆ

คำสำคัญ: ความฉลาดทางสังคม คุณลักษณะทางบุคคลิกภาพ ครู บริบททางสังคมของโรงเรียน

INTRODUCTION

A specific area of predicting and explaining human behavior is created by interpersonal situations and the behavior of a person in these situations, that is, coping with and solving problems in which an important role is played by the factor of social contact (Lajčin, Frankovský & Štefko, 2012). One of the essential characteristics used to describe a prediction of this behavior is social intelligence (SQ). An increasing professional interest in the broad issue of SQ has been registered particularly since the second half of the twentieth century. A substantial increase in the reports dedicated to this problem has been observed for the last thirty years. Despite the fact that SQ is an actual individual trait (Silvera, Martinussen, & Dahl, 2001) and the beginnings of the efforts to measure it go back to Thorndike, certain difficulties appear when trying to define it more accurately (Silvera et al., 2001). One of the causes of these difficulties is connected to distinguishing between SQ and other similar constructs such as academic intelligence, emotional intelligence, or practical intelligence. When defining SQ, the way an individual understands and interprets his or her own behavior and the behavior of other people is accentuated as well as how it is possible to adjust this behavior effectively in relation to this interpretation. The development of socially intelligent behavior in an individual assumes improvement of self-reflection, reflection of social processes, reflection of the subjective sense, and interpretation of behavior and social competence training (Orosová, Sarková, Madarasová Gecková, & Katreniaková, 2004), which is very important for the work of a teacher.

These facts suggested the aim of this report which was to find interconnections between the personality traits of the addressed teachers and the components of SQ as well as to find the gender differences between these two.

LITERATURE REVIEW

The social-personality approach to the research of intelligence is, according to Ruisel (1999), oriented at the external world of social interactions and social structures, role behavior within social systems, and maintenance of the development of interpersonal relationships. Silvera et al. (2001) state that SQ consists of these components: perception of the internal conditions and moods of other people, a general ability to deal with other people, knowledge of social norms and social life, an ability to orientate oneself in social situations, use of social techniques which enable manipulation, dealing with other people, social attractiveness, and social adaptation.

When studying various social-psychological phenomena, a very important aspect is the personality factors or characteristics which to a great extent determine behavior and experiencing. Nowadays, one of the mostly accepted theories and personality models is the model consisting of the so-called five strong factors—the Big Five. The five-factor model consists of five personality features and we assumed that SQ would be directly connected to the degree of these features, although the impact of the environment plays an important role here as well.

Personality and behavior are the key concepts in psychology and pedagogy, as well as other disciplines. According to Drlíková (1992), pedagogy conceptualizes personality as a starting point, a requirement, and an aim of education and upbringing. Besides other fields of study, it is necessary to pay attention to the training of the multilaterally developed personality of a teacher. Ďurič (1992) states that the psychology of education does not examine only the personal qualities of people, but also the specific manifestations of their behavior. While quality represents consistent demonstrations of a subject in different situations, behavior is a relatively more variable mental phenomenon, even in the same particular situation.

According to Zelina (2004), education and environment affect primarily the cognitive and affective area and less so the sensory and motional systems. In accord with the information presented, it is clear that teachers affect their environment mostly by means of their personality. As Čáp and Mareš (2001) claim, SQ is a common label which includes character and all the moral aspects of the personality of a teacher, his or her life and development. The development and formation of these aspects of the personality of a teacher progress as complex processes of socialization, interaction with the environment, internal changes, and autoregulation.

SQ may be examined both as a performative and as a personal characteristic. When detecting SQ constructed on the basis of these starting points, the up-to-now findings have been respected (Frankovský, Štefko & Baumgartner, 2006), which means that the methodology is designed as a system of possible solutions (behavioral demonstrations) for the descriptions of several situations with a strong social context. It is assumed that the acquired data would represent a contribution from the viewpoint of theoretical methodological elaboration of the SQ issue as well as from the viewpoint of verification of the presented concept in a particular area of social practice to increase the degree of competence of the work of a teacher, and therefore, the overall educational training process.

RESEARCH METHODOLOGY

Research objectives

The main aim was to find the interconnections between the personality traits of the teachers and the SQ components, as well as, to find gender differences between them.

Objective 1: Verify the existence of the factors in the Tromsø Social Intelligence Scale (TSIS; Silvera et al., 2001) and the Solution of Interpersonal Problem-oriented Situations (SIPS; Baumgartner & Frankovský, 2004) social intelligence methodologies.

Objective 2: Find the interconnections between the personality traits of the teachers measured by means of NEO-FFI (short version of NEO-PI-R by Costa & McCrae, 1992) and the SQ components measured by TSIS and SIPS.

Objective 3: To compare the differences in perceiving SQ between men and women and between the teachers who work at the primary and those working at the secondary school levels.

Research hypotheses

H1: We assume the existence of the three factors of the TSIS methodology of SQ and the four factors of the SIPS methodology within the research sample of teachers.

H2: We assume statistically significant correlations between the personality traits of the teachers of the primary and secondary schools and the components of SQ.

H3: We assume the existence of gender differences in perceiving SQ.

Research sample

The research was carried out in two phases at primary and secondary schools in Prešov, Slovakia. The first research measurement took place from May to July in 2009. The research file, which was not random but selected intentionally on the basis of the subjective consideration and definition of certain typical features or traits, consisted of 161 teachers (29 men, 132 women) aged from 20 to 62 years, the average age being 40.73 years. The second measurement was carried out at some other primary and secondary schools from June to July in 2010. The second research file consisted of 392 teachers (93 men, 299 women) aged between 26 and 62 years, the average age being 38.42 years. The described research measurement was realized by connecting the two files. The total number of teachers in the research sample was 553, 122 of which were men and 431 were women aged between 20 and 62 years, the average age being 39.57 years.

Research methods

The test battery consisted of three methodologies and was administered to the primary and secondary school teachers through their principals. The teachers were required to complete the response within ten days. The given test battery contained social intelligence methodologies (TSIS and SIPS) and a personality methodology (NEO-FFI). The statistical results were processed by the SPSS software program.

TSIS methodology

In the context of solving the given objectives and issues, we used a social intelligence methodology (TSIS). TSIS consists of 21 self-evaluation items, which are answered by the respondents on a 7-point scale of agreement (1—describes me extremely poorly, through to 7—describes me extremely well). The questionnaire is divided into three subscales with three factors: SP—social information processing, SS—social skills, and SA—social awareness.

SIPS methodology

This report presents the findings gained by using the SIPS questionnaire. This methodology of SQ is based on applying the situational approach where the aspect of behaving in a certain situation is accentuated. The respondents are presented with a concrete social situation as well as 18 forms of possible behavior in such a situation. Respondents evaluate their behavior in the situation using a 6-point scale (definitely yes, yes, rather yes than no, rather no than yes, no, definitely no). The factors which contain a specification of the behavioral, emotional, and cognitive component of reacting in a social situation may be, according to their content, defined as follows: F1—positive individual behavioral solution, F2—search for social support, F3—negative individual solution, and F4—cognitive processing.

NEO methodology

The most widespread method identifying five general personality factors is the NEO Personality Inventories by Costa and McCrae (1992).

To measure personality characteristics, we used the Slovak version (Ruisel & Halama, 2007) of the NEO Five-Factor Inventory (NEO-FFI), which was designed to measure five factors of personality. The methodology consists of 60 items divided into 5 dimensions (Neuroticism, Extraversion, Openness to experience, Agreeableness, Conscientiousness), each of which is filled with 12 items.

ANALYSIS AND DISCUSSION

In order to process the data, factor analysis (Principal Component Analysis and Varimax Rotation), correlation analysis (Pearson's correlation coefficient), *t*-tests, and Cronbach's alpha coefficient were used. The results were calculated and processed by the SPSS software program.

The first objective was to verify the existence of the factors in the two methodologies of SQ. Three factors of the TSIS were described by Silvera et al. (2001) and four factors of the SIPS were introduced by Baumgartner and Frankovský (2004). These factors were verified by means of the factor analysis of the data gained by monitoring the research sample consisting of 553 primary and secondary school teachers. We assumed the existence of the three factors of the TSIS methodology of SQ and the four factors of the SIPS methodology within the research sample of teachers. A factor analysis of the results confirmed the existence of the internal structure of the TSIS in which three factors may be defined, particularly SP and SA (Table 1). After the calculation of the scores (factor loading), it was found that some variables were closely connected and could be further tested individually (detected lower factor analysis values—less than 0.500—were also accepted as results, although not significant).

The presented analysis of the acquired data is aimed at characterizing the preliminary but essential psychometric parameters of the SQ methodology. A factor analysis of the results confirmed the existence of the internal structure of

Table 1 Factor structure of the TSIS methodology

TSIS questionnaire item	Rotated factor loadings:		
	0.921	0.799	0.812
	SP	SA	SS
1. I can predict the behavior of other people.	0.636		
2. Often I feel that it is difficult to understand the decisions of others.		-0.663	
3. I know how my behavior affects the feelings of others.	0.710		
4. I often feel uneasy in the company of people I don't know.			-0.537
5. People often surprise me by the things they do.		-0.575	
6. I understand the feelings of others.	0.738		
7. I can manage easily in social situations.			0.593
8. Other people are often angry with me and I am unable to explain why.		-0.650	
9. I understand the wishes of others.	0.744		
10. I am good at coping with new situations and getting acquainted with new people.			0.589
11. It seems that people get often angry or irritated when I say what I think.		-0.696	
12. Getting along with other people takes a lot of my effort.		-0.687	
13. I consider people to be unpredictable.		-0.693	
14. I often understand the efforts of others without them having to tell me.	0.658		
15. It takes me a lot of time to get to know others well.		-0.526	
16. I often used to hurt people without me realizing it.		-0.417	
17. I can predict the reactions of others to my behavior.	0.699		
18. I am successful at establishing good relations with new people.			0.532
19. I often understand what others really think by observing their facial expressions, body language, etc.	0.736		
20. I have regular problems with finding suitable topics for conversation.			-0.763
21. I am often surprised by the reactions of others to my actions.		-0.735	

Note. SP = social information processing, SS = social skills, and SA = social awareness.

the described forms of behavior within which the four factors of the SIPS methodology may be defined (Table 2).

The internal consistency of the individual factors as an indicator of reliability of the methodology was calculated by means of Cronbach's alpha (Table 3). The detected values of Cronbach's alpha coefficient serve as proof that the internal consistency of the items saturating the specific factors is at the level of acceptability.

Validity of the presented SIPS methodology was monitored in relation to the TSIS methodology. The comparison of the results gained by TSIS and SIPS introduced some crucial knowledge for

confirmation of the content validity and the verification of the methodology (Table 4). The internal validity of the TSIS factors (Silvera et al., 2001) was: SP (0.79), SS (0.85), and SA (0.72). In their research, Makovská and Kentoš (2006) illustrated the satisfactory level of reliability of the TSIS scale.

The correlation between factor F3 (behavioral negative individual solution) of the SIPS and the scales of SP (social processing) and SA (social awareness) of the TSIS methodology was proved to be quite clear which means that the tendency towards a socially constructive solution of a social situation is related to the higher degree of social

Table 2 Factor structure of the SIPS methodology

		Rotated factor loading:			
		F1	F2	F3	F4
When in the street, you greet your acquaintance whom you have not seen for a long time. The person does not return the greeting.		0.832	0.682	0.782	-0.910
What do you do?					
1. I do not take it into consideration and continue walking.	-0.787				
2. I stop, turn to see the person but say nothing.	0.483				
3. I greet the person the second time.	0.732				
4. I stop to ask the person what is the matter.	0.780				
5. I do not tell anyone about it.	-0.742				
6. I tell my good friend about this.	0.824				
7. I complain about the person to our mutual acquaintances.	0.611				
8. Next time I do not greet this person first.	0.819				
9. Next time I greet this person first again.	-0.759				
10. It does not spoil my good mood.	0.499				
11. I get angry with the person.	0.658				
12. When I see the person again, I act like I do not see them.	0.835				
13. I ask our acquaintances what happened to the person.	0.664				
14. I think about what could possibly happen to this person.	0.797				
15. I feel like an idiot.	0.555				
16. I ask loudly whether they can see me.	0.650				
17. When I meet the person again, I do not greet them either.	0.713				
18. I think about whether I did something to this person.	0.727				

Table 3 Cronbach's alpha values for the selected factors of the SIPS methodology

	F1	F2	F3	F4
Cronbach's alpha	0.81	0.79	0.74	0.62

Table 4 Correlation coefficients of factors of SIPS and TSIS.

Strategy	Social information processing	Social skills	Social awareness
F1—positive individual behavioral solving		0.295**	
F2—searching for social support			
F3—negative individual solving	-0.214**		-0.280**
F4—cognitive processing	0.197*		0.198*

* $p < .05$; ** $p < .01$

processing of information and the higher degree of social awareness. A significant correlation between the factor F1 (positive individual behavioral solution) and the scale SS (social skills) was also detected. This means that the respondents with a higher level of social skills tend not to leave the situation unnoticed, they contact the person one more time by repeating the greeting, or they try to find out directly from this person, why the greeting was not returned. The correlation between the factor of cognitive processing (F4) and the level of social information processing (SP) as well as social awareness (SA) also supports the validity of the SIPS methodology. Hypothesis 1 was therefore confirmed. The existence of the three factors of the TSIS methodology of SQ and the four factors of the SIPS methodology was detected in the research sample of teachers.

The second objective was to find the interconnections between the personality traits of the teachers which were measured using NEO-FFI and the components of SQ measured by TSIS and SIPS. We assumed statistically significant correlations between the personality traits of the teachers of the primary and secondary schools and the components of SQ. Table 5 summarizes the correlations between the individual personality characteristics of the teachers and the components of SQ of these respondents.

The SP factor (social information processing) correlated positively with the personality factor of Openness to experience which represents the cognitive personality component and a curious

approach to the inner and outer world. It also correlated positively with Extraversion and Conscientiousness. Open individuals have a better ability to work and process social information than persons with low scores in the given factor. The addressed teachers seem to be active, talkative, and optimistic, as well as reliable and principled. The second factor of SS (social skills) also correlated positively with the personality factors of Extraversion, Openness, and Conscientiousness. Simultaneously, a negative correlation was recorded between the SS factor and Neuroticism. Socially skilled teachers are not worried or nervous, and do not feel inadequate. The third factor of SA (social awareness, perception) also correlated negatively with Neuroticism and positively with all other personality factors.

Thus, socially intelligent teachers seem to be extroverts, sociable with a strong need for social contacts, open to communication, active, energetic and optimistic, conscientious, reliable, strong-minded, able to control impulses, and to have well-developed will power. A statistically significant negative correlation of the factors SS and SA with Neuroticism demonstrates the fact that teachers who are prone to emotional lability, and are anxious, insecure and full of doubt also have difficulties with establishing social contacts and solving common social situations. The addressed teachers are described as cooperative, kind-hearted, honest, friendly, caring, and helpful to others in perceiving social signals. This indicates the ability of the

Table 5 Correlations of SQ components (TSIS, SIPS) and personality traits (NEO-FFI)

	SP	SS	SA	F1	F2	F3	F4
Neuroticism		-0.544**	-0.414**	-0.160*	0.199*	0.189*	0.151**
Extraversion	0.283**	0.661**	0.195**	0.215**		-0.230**	
Openness	0.234**	0.087*	0.302*		-0.298*	-0.188*	
Agreeableness			0.466**			-0.248**	
Conscientiousness	0.281**	0.362**	0.188*				

* $p < .05$; ** $p < .01$

teachers scoring high in this factor to be sensitive to and able to decipher social signals.

Another objective was to verify the interconnections between the personality traits of teachers and the SQ factors measured by SIPS. Table 5 illustrates these well. The F1 factor (positive individual behavioral solutions) correlated negatively with Neuroticism. Neuroticism correlated positively with F2 (searching for social support), F3 (negative individual solutions), and F4 (cognitive processing). Emotionally labile individuals prefer negative solutions to interpersonal problematic situations over positive ones and search for social support. The F1 factor, however, correlated positively with Extraversion. The extraverted, emotionally stable teachers are thus able to solve interpersonal situations positively. A negative correlation was recorded between F3 and the personality factors of Extraversion, Openness and Agreeableness. Agreeable, open, extraverted individuals avoid social situations where there are negative solutions to the problem. Hypothesis 2 was confirmed. Statistically significant correlations between the personality traits of the primary and secondary school teachers and the SQ components were detected.

The third objective was to use *t*-tests to compare the differences in perceiving SQ between men and women and between the teachers who work

at the primary and those working at the secondary school levels. We assumed the existence of gender differences in perceiving SQ. The existence of significant differences between the two school types was not assumed.

From the viewpoint of the gender differences, this research recorded significant differences between the men's and the women's answers when assessing the factors of cognitive processing, searching for social support as well as positive individual behavioral solutions (Table 6). The *t*-tests confirmed the existence of a statistical significance between the SQ factors and the respondents' sex only in the SIPS methodology. These factors of the SQ methodology are always significant in favor of men who do not leave the situation unnoticed, contact the person again, or try to find out directly from this person what are the reasons for his or her behavior. These reactions to the situation represent a manifestation of a higher level of SQ. In the other SQ factors (F3 and the TSIS factors of SP, SS and SA) no statistically significant differences between the sexes of the respondents were found.

In the SIPS factors, women had lower scores than men which means that they tend to think about whether they hurt the person, or not, or what could possibly happen to this person more than men and consequently they try to find the answers to these

Table 6 *t*-Tests of SQ factors of TSIS and SIPS and sex of respondents

Social intelligence factors	Sex	Mean	Standard deviation	t	Sig. (2-tailed)
F1 positive individual behavioral solution	male	29.81	5.62	2.84	0.005
	female	25.64	4.48		
F2 searching for social support	male	33.69	7.49	2.57	0.010
	female	31.59	6.46		
F4 cognitive processing	male	33.50	6.46	2.18	0.029
	female	30.56	6.41		

questions. Women also try to look for emotional and social support among their friends and acquaintances, they talk to them and complain about the given situation.

Similar to the analysis of the gender differences, certain statistically significant interconnections between the teachers who work at the primary and those working at the secondary school levels were detected. However, nothing important was discovered here due to the fact that similar research measurings had been carried out before (Birknerová, 2010) and this fact was already assumed. According to the research, the teachers in both levels of school seem to be considerably socially skilled with a high degree of social awareness and social information processing and a tendency towards social positive constructive solutions of social relations regardless of whether they work at the primary or secondary schools.

The only significant difference was recorded in the comparison of the sexes, particularly in the factors of positive solution of a social situation, searching for social support and cognitive processing, always in favor of men. Men only rarely leave the situation unnoticed, and they try to find out about what has happened directly from the involved person. Hypothesis 3 was also confirmed. It was found that the only gender differences are in the perception of SQ of the addressed respondents.

CONCLUSION AND IMPLICATION

From the viewpoint of gender differences, this research discovered significant differences between men's and women's answers in assessing the factor of cognitive processing, the factor of searching for social support, and the positive individual behavioral solution always in favor of men who do not leave the situation unnoticed and contact the involved person once again or try to find the reasons for their behaviour directly from them. These reactions to the situation are a manifestation of the higher level of SQ. Women, unlike men, were

found to have a tendency to think about how they hurt the person, or what could have happened to them; consequently, they rather try to find the answers to these questions. Women also try to look for emotional and social support among their friends and acquaintances, and they talk and complain about the given situation to them.

This research confirmed that SQ is a very important factor for interpretation of the behavior of other people towards an individual and also an opportunity to answer this behavior. It provides an individual with several possibilities to respond to various stimuli in a social environment which may not seem very pleasant from the beginning. In educational work, this is a crucial piece of knowledge.

Teachers solve interpersonal situations in various ways. The effectiveness of this behavior is conditioned by several factors according to which social intelligence plays an important role. We presume that the use of the behavioral-situational approach to examine SQ is at least as productive as the cognitive or dispositional approaches. The adequacy of the social-personality approach to the conceptualization of the SQ construct which assumes a definition of SQ as a personality trait was also confirmed. The mentioned conceptualization may be regarded as an appropriate methodological basis for the construction of a diagnostic tool for measuring SQ which also applies to the behavior of teachers. Vávrová (2009) concludes that a well-developed social competence is inevitable in the area of education.

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