

PERSONALITY PREDISPOSITIONS AND COMPETENCES

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Abstract

Background. People are the determining factor for the effectiveness of an organization. Diagnosing factors affecting the achievement of good work results, is an important issue, not only for the world of science, but above all for people managing organizations. The article presents factors affecting the level of competences expected by the organization and the tools through which they can be measured.

Research aims. The aim of this study was to present the connection between self-esteem of personality preferences in individual scales of the psychometric questionnaire, and the assessment of selected competences made by external observers during the Assessment Center session.

Methodology. References to extensive literature were made, in the field of psychology and management science. Also the diagnosis of indicated persons to perform future managerial roles was made with the use of the Assessment Center session and the questionnaire – Bochumski – Personal Performance Inventory. Thereby, the data showing the relationship of competences with psychological factors were obtained.

Key findings. The presented research indicates that there is a relation between the self-esteem of personality preferences and the assessment of competences, made by external observers. Orientation on the target correlated positively with the Action and Team Orientation. There was a relationship between the Cooperation Competence and Relationships Orientation, and also Team Orientation, Emotional Stability and Self-confidence and Flexibility. Leadership level was influenced by Achievement Power Motivation. Responsibility Competence positively correlated with Conscientiousness, Power Motivation and Team Orientation. There was also a connection between Change Management with Flexibility and Achievement Motivation.

Keywords: competences, psychological factors, psychometric tools, Assessment Center, predictors of effectiveness

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INTRODUCTION

The concept of competence appeared in literature still in 20th century. Various attempts were undertaken to define it. These efforts were an answer to the growing need for a tool to assess the quality of work and effectiveness of work methods, so that it could be used, i.a., in recruitment processes and employees' development process. There was also the need to define the factors which could affect employees' performance.

Today competences are the basis for many processes related to managing human resources. According to the research conducted by Michał Łukasz Sienkiewicz (2013), they are used by most of organizations.

As can be seen from the table above, competences are predominantly used by big companies in recruitment and selection processes, creating

Table 1. The percentage of companies which introduced human resources management. Based on competences in specific areas (in subsamples) (in %)

ZZL Area	Medium e n = 638	Big e n = 118	Knowl- edge-inten- sive services e n = 247	Less knowl- edge-inten- sive services e n = 193	Production n = 316
Recruitment and selection of the employee	67.1	83.1	73.7	65.3	69.0
Creating job descriptions and valuating job positions	60.2	79.7	66.0	61.1	62.3
Training and development of the employees	55.5	72.9	62.8	51.3	58.9
Periodic assessment of the employees	44.5	66.1	51.4	46.6	45.9
Employees' career planning	26.0	33.9	33.2	18.1	28.2
Strategic employment planning	34.0	47.5	34.8	32.1	39.6
Remuneration	53.6	69.5	58.3	53.4	56.0

Source: Sienkiewicz, 2013, p. 81.

job descriptions and their valuating, building payment schemes and development of the employees.

One of the first competence definitions was the one created by McClelland (1973) which sounds as follows:

Competences are characteristics possessed by employees, mostly represented through knowledge, skills, abilities (KSA – Knowledge, Skills, Abilities) and their personal qualities, necessary to do the work properly. Competences indicate (allow us to predict) the future work efficiency. They are complementary to knowledge and attitudes of the employees McClelland (Sienkiewicz, 2013, p. 15).

McClelland's co-worker Boyatzis, developed this definition by adding extra elements and it sounds as follows: "Competence means a lasting, inherent feature of a given person (motives, characteristics, skills, self-perception, social role, knowledge), which are demonstrated through effective and/or above average behaviors and performance" (Sienkiewicz, 2013, p.15). Boyatzis indicates, that it is a collection of certain characteristics but he does not indicate what is the connection between these elements. Woodruffe (1992) drew our attention to the fact that that in the competence definition, we should reject these elements which are connected to knowledge, technical skills and abilities. According to his definition – competence is a set of behaviors which must be possessed by the person, who performs a particular professional role in order to carry out the tasks and functions connected with this competence. Our native definition of competence was constructed by Oleksyn (Sienkiewicz, 2013, p.15) and it is like follows:

Competences of the employees cover their interests, abilities, predisposition, education, knowledge, experience and practical skills, inner motivation, attitudes and behaviors relevant to the job, as well as health and psychophysical condition, formal rights to act on the behalf of the specific organization, professed values and ethical norms.

All the definitions mentioned above are connected to each other by understanding of competence as:

- a construct which can be observable,
- a result of many compositional elements,
- one of the factors which affects the level of competence are personality predispositions.

The answer to the question why competence has become so important for the people engaged in human resources management is provided by the definition constructed by Levy-Leboyer (1997). It sounds as follows:

(...) competences are set of behaviors, which are mastered by some people better than the other, and, as a result of this, these people can act more effectively in a specific situation. From experiences and observations it was clear that the people with the same qualifications and similar experiences achieve different results at a workplace.

Organizations started to measure competences, so as to be able to base on these results, the above mentioned human resources management processes. At the same time people started to compare the sources of information about competences and the correlation between their results and success at a workplace. It was checked if the results measured by different tools can be predictors of good job performance. For human resources management practitioners it would be the answer to the question which tools should be used and in what combinations.

ARE PERSONALITY TESTS RESULTS PREDICTORS OF JOB PERFORMANCE?

The history of psycho-metrical tools and their use dates back to 19th century and the works by Galton and Catella. Their first research resulted in the presentation of modern testing methods in the article entitled "Mental tests and measurement". In 1905 the first ability test was created by Alfred Binet. Eleven years later the first method for the intelligence quotient analysis was created: Stanford-Binet. The next stage was dedicated to the tool used by the army – Army Alpha. The subsequent years resulted in further research on the psycho-metrical methods, which were created not only to evaluate cognitive abilities but also personality questionnaires.

The use of ability tests and personality questionnaires in business was aimed at evaluating predispositions to perform certain roles. Initially they were most frequently used in recruitment processes. Certain tools were used, which were prepared for needs not connected with business – for example, the above mentioned intelligence quotient analysis among children and adults, so as to diagnose potential

developmental delays. With time, tools tailored to the needs of particular professional groups were created, oriented to diagnose personality predispositions and abilities to perform certain roles in a given work environment. As compositional elements of competence, in agreement with the above mentioned definitions, they should allow us to predict work performance within the competence framework. This issue became a subject of many research, as it was checked if it was possible to predict work performance, on the basis of personality predispositions and abilities.

Barros and his team (2014) conducted research on the basis of big five factor model of personality by Costa and McCrae. Currently it is one of the most popular and most frequently analyzed personality theory. Their research shows that on the basis of one of the five personality features – Consciousness and general cognitive abilities, it is possible to predict work performance.

The Five-Factor Model was constructed in 1980s and 1990s, but it was a continuation of Cattell's theory, and Allport and Odbert's theory. It was created on the basis of lexical research and free descriptions of personality by Costa and McCrae (Zawadzki, Strelau, & Śliwińska, 1998). They managed to extract a number of the so called super-factors, which constitute the underlying personality features. These dimensions are called acronyms, usually OCEAN which is derived from the names of the individual dimensions (N – neuroticism, E – extroversion, O – openness to experience, A – agreeableness, C – conscientiousness).

Neuroticism is a quality defining emotional adaptation versus emotional imbalance. Within this dimension the susceptibility to experience of the negative emotions is tested. Neuroethical people are prone to irrational ideas, they have low ability to control impulses, they find it difficult to control stress. They frequently experience negative emotions such as anger, fury, sense of guilt.

Extroversion in the model of Costa and McCrae defines the quality and quantity of social interactions, the level of abilities and activities, energy and tendency/easiness to experience positive emotions. Extroversion is connected to optimism, tendency to play, preference for human company and cheerful mood. Openness measures the tendency to search for life experiences, but also their positive reception and seeing them in a positive light. The people with high openness level are curious of the world, they are broad-minded, have bigger readiness to learn. Agreeableness describes the dimension of the attitude to others: positive

or negative. It is also involves trusting others. The fifth dimension is called Conscientiousness and it relates to the way of implementation of goals and tasks and involves taking care of details and reliability (Zawadzki, Strelau, Szczepaniak, & Śliwińska, 2007).

Bertua's research (2005) indicates that intellectual abilities tests (and in particular the general ones) – predict 30% variance of work performance. It was verified in Chad H. Van Iddekinge's (2018) and his team research. One of their findings was that the additive effects of ability and motivation accounted for about 91% of the explained variance in job performance. Rothmann research (2003) shows that there is a correlation between particular personality features and work performance. Extroversion, Openness to new experience and Conscientiousness account together for about 15% variance of the job performance in the Rothmann's research. Neuroticism, however, has quite strong negative correlation with creativity. Openness correlates strongly with managerial competences and accounts for 28% of their variances.

Robertson and Kinder (1993) on the basis of meta-analysis show the results that have been achieved so far: how many variances individual methods account for. In agreement with the results they achieved – cognitive tests, assessment Centre and work samples – exceed the level of 0.30, which means that they account for the 30% variance of job performance. Their research also shows that the lack of correlation between the job performance of the person tested, and the results of competence assessment methods, which may occur in certain situations, can for example, depend on the following facts: if the overall result of the questionnaire was taken into account or whether individual dimensions were taken into account, or whether the method relates to the work situations or not. If the tool does not relate to the professional situation, the correlation between the results achieved through its use and the job performance decreases. However, if the tools are selected adequately, the results of the questionnaires account for 33% of the competence variances. And so they can be considered as an adequate tool to predict performance.

Sally (2009) in her article shows, that the use of psycho-metrical tests in business is growing systematically. The form of tests has changed – pen and paper tests were replaced with on-line tests, and they seem to be a more objective criterion than methods which are based, for instance, on interviewing. There are many evidence to prove

that tests and questionnaires provide reliable data and are trustworthy predictors of job performance. Sally's research shows that colleagues' assessment is more accurate than self-assessment. Also testing with several methods rather than one, shows bigger criterion accuracy. Moreover, the assessment conducted by competent judges are more accurate than self-assessment. This suggests, that that competence assessment conducted by others might be better predictor than self-assessment.

CAN THE RESULTS OF THE ASSESSMENT CENTRE BE A PREDICTOR OF A JOB PERFORMANCE?

In the 1950s the company AT&T started to implement Assessment Centre as a method for studying on management (Kuna, 1989). The most frequently cited definition of Assessment Centre is the one by Charles Woodruffe (2003, p. 256):

The centres of development and assessment bring together groups of people who take part in the simulated situations which occur at work. During sessions the most important elements of the tasks performed at a given workplace are reconstructed. The results achieved by the participants are recorded and compared to the skills required for a given work position.

It is a multidimensional competence assessment conducted with the use of many methods: individual exercises, group exercises, interviews, tests, questionnaires. Its popularity grew as it was ascribed much bigger value than individually implemented methods. It seemed that if its results were based on the results obtained from numerous sources, than its predicative value was much higher. According to research (Gaugler et al., 1987; Dale, 2002; Arthur et al., 2003; Hogan & Kaiser, 2010) the correlation between the results obtained in the process of Assessment Centre with the job performance or the accuracy of candidates selection (depending on the method used) is between 0.65 and 0.4. Individual methods compared in the research by Clegg, Smith, Andrews (Dale, 2002) reached a lower rate of predicative accuracy.

The latest research is not as optimistic though. The meta-analyses indicate a lower predicative value of Assessment Centre and assess it at the level of from 0.37 to 0.28 (Hermelin, Lievens, & Robertson,

Table 2. The relevance factor values of the recruitment and selection results and the employees performance at a workplace according to research by Clegg, Smith, Andrews (Dale, 2002)

No.	Method	Relevance factor value
1	Assessment centre	0.37–0.75
2	Tests	0.23–0.60
3	Structured interviews	0.31–0.61

Source: Chirkowska-Smolak, 2014, p. 132.

2007; Ekuma, 2012). The controversies around the Assessment Centre contributed to the inception of the International Task Group for the Assessment Centre, and to constructing clear guidelines for the effective implementation of this method, which result not only in its increased ethical value but also predicative value. What sets this method apart from other tests and questionnaires is the object of the evaluation. During session the observations of behaviors is conducted and that is the subject of assessment. The assessors are external observers. They can relate exclusively to what they can see. These are behavioral indicators of competence. In keeping with the above mentioned theories – the result of many variables. If competences are the most decisive element at a workplace and define how the work is to be done – the results of the Assessment Centre should be predictors of job performance. The research quoted below indicates that it can be empirically proven.

The research which indicates that the results of AC are predictors of job performance was conducted by Gaugler and his team (1987). In their meta-analyses based on 50 AC processes they obtained data confirming that AC can be a job performance predictor. The more women assessors were present, the higher was the accuracy, the assessment methods varied, the assessors were psychologists rather than managers. In these circumstances research was considered to be highly methodologically correct.

The research conducted by Arthur (Arthur et al., 2003) confirmed a correlation between the results of competence observation during the of Assessment Centre process and job performance. It can be concluded from the research that it is better to juxtapose individual competences rather than the general AC result because it does not correlate with job permanence. By analyzing individual components, they obtained results which accounted for 20% of the competence variance. It is much more than in the research conducted by Gaugler (Gaugler et al., 1978),

who obtained only 14% variance when he juxtaposed just the general AC result and job performance. These results were based on the meta-analyses of 34 research articles. Such meta-analysis were verified by Celine Rojon and her team (2015). According to their findings validity for predictors is enhanced when performance is assessed specifically rather than generically. Assessment decisions can be facilitated through a thorough mapping and subsequent use of predictor measures using specific performance criteria.

Sackett and his colleagues (2017) conducted meta-analyses of the cognitive ability and assessment center (AC). They focused on 17 samples and found using random-effects models mean validity of 0.22 for ability and 0.44 for ACs using comparable corrections for range restriction and measurement error in the criterion. They posit that 2 factors may contribute to the differences in their findings comparing with previous: (a) ACs being used on populations already restricted on cognitive ability and (b) the use of less cognitively loaded criteria in AC validation research.

These research shows that AC can have a higher or lower prognostic value depending on certain, the above mentioned factors.

THUS, IS THERE A RELATIONSHIP BETWEEN THE RESULTS OF PERSONALITY TESTS AND THE RESULTS OF ASSESSMENT CENTRE, IN OTHER WORDS, CAN PERSONALITY PREDISPOSITIONS BE PREDICTORS OF COMPETENCES?

If personality predispositions are compositional elements of competences, then the results of competence should be correlated with them. Dilchert and Ones (2009) in their research obtained results which tell us that it is possible to predict the AC results on the basis of ability tests and personality tests. The sample which was used in that research is really impressive (N = 4985) and it allowed to conduct the meta-analyses. They obtained statistically important correlations between tests results and competence observation results. No link between the general AC result and personal characteristics was found.

However Collins (Collins et al., 2003) in his research indicates that there is a statistically important link between the general AC

results and the ability tests and questionnaire tests results. He obtained the following data: The correlation between the competence assessment during the session and cognitive abilities – at the level 0.67, with Extroversion at 0.05, with Emotional Stability at 0.35, with Openness at 0.25 and with Agreeability at 0.017.

There is also research indicating that there is a certain link between the applied methods and the tests or questionnaires used, and it depends on their use whether the correlation between the AC results and the psycho-metrical tools occurs or not. And so, for example, the results of “in-basket” exercises (based on presenting a candidate with a huge amount of facts connected to the tasks typical for a given job position and asking him to order them into an action plan) correlates with the results of intellectual abilities test (Gaugler et al., 1987; Klimoski & Bikner, 1987). In the same research was obtained correlation between the results of the competence assessment exercise “a group discussion without distinct roles” and personality traits. In this type of exercise all the participants receive the same information about a company and its problems and then they have to discuss these problems and collectively work out solutions to them. The personality trait which correlated the most with the AC results was Extroversion.

Goffin et al. (1996) in his research discovered, that examining personality traits can be equivalent to AC results. Both methods have different constructs but they both have a significant connection to job performance. This, however, does not contribute to being promoted in the company. Maybe promotion depends on other factors which lay beyond employees’ control, for example, the situation in the company.

In other research (Furnham & Chamorro-Premuzi, 2008) correlation between tests and questionnaire results was obtained with AC results by using the NEO FFI questionnaire (testing personality traits) and Raven Matrix Test (testing the ability of inductive thinking). On the basis of these results it was concluded that women got higher results in Agreeability. Also, older people, who did worse in the Raven Matrix Test, were worse assessed in openness to new experiences and exercises related to finding solutions to analytical problems. The Raven Matrix Test results correlated positively with Openness. Only the Raven Matrix Test result was a significant predictor of the general AC result. This research have also shown that there is low conscientiousness, which predicts a high result in AC.

The results of Kolk research (Kolk, Born, & Flier, 2004) throw an interesting light on this matter. In this research attention was paid to the fact that personality questionnaires are the result of self-assessment, which is carried out by the person tested, while in the case of AC results, assessment is conducted by external observers and, what is more, it is a time limited assessment. Thus, it was assumed that higher correlation can be obtained between the results of a self-assessment questionnaire and in the same way from the AC sessions, than between the results of the self-assessment personality test and observations conducted by external observers, during an AC session. This hypothesis was confirmed. This means that stronger correlation can occur in the situation, when the assessment in two different methods, is conducted by the same evaluators: the person being assessed or observers.

RESEARCH PROBLEM

The purpose of this study was to verify the hypothesis about the connection between personality predispositions and competences. In agreement with the above mentioned research such a connection was confirmed in many different research with the use of questionnaires and the AC method. Questionnaires as a tool for testing personality predispositions are predictors of professional success. At the same time personality traits are compositional elements of competences, which are significant for employees' job performance. Defined as a behavioral element, and as such observable, they can be subject to assessment, for example, in the process of Assessment Centre.

SAMPLE

Total population employees working in Energy industry in Poland in 2018 was 154 000 people on specialist and managerial positions in different structures of the company (GUS, 2018). Women make up 20% in this group – 33 000. In this research 52 employees participated. This sample was chosen because of their availability – occasionally sample. Their age was between 23 and 56; 38 of them has secondary education and 17 has higher education.

Up till then none of them had taken part in a questionnaire study or Assessment Centre. The purpose of the research was to single out the people with the best results in individual competences in order to prepare them for a leading role.

The research were conducted in December 2017.

METHOD

These people participated in Assessment Centre sessions and filled in Bochumski's Personal Performance Inventory. The research was carried out to assess the following competences: Innovativeness, Responsibility, Target Orientation, Cooperation, Management, Leadership, Change Management. These competences were defined as below:

1. Innovativeness – improving the organization's performance by facilitating work processes, creating new solutions, introducing new products, promoting culture of innovation.
2. Responsibility – keeping in mind the company's and other employees wellbeing, taking responsibility for it by acting on one's own initiative, conforming to the accepted rules and norms, reacting to mistakes, showing enthusiasm for work.
3. Target Orientation – readiness and ability to focus on the set targets and to undertake actions in order to meet these targets.
4. Cooperation – effective cooperating in a team by getting involved in common goals, working towards their realization, sharing information with others, showing respect for other employees and ensuring good communication. Building relations (internal and external with business partners).
5. Management – managing the work of the subordinate team by appointing tasks and setting goals, organizing work, monitoring work results and keeping workers accountable for them.
6. Leadership – effective “pulling others behind you” by using motivational techniques based on positive communication, developing subordinates' skills, acting in keeping with the organization's values and safeguarding these values.
7. Change management – getting involved in the process of change implementation in the organization, by planning of its execution, the ability to persuade other subordinates/co-workers and

analyzing of its consequences, as well as modifying the way and extend of its implementation.

The scale for assessing competences used in this study was the 5 levels scale, where 1 means lack of competence and 5 its highest level.

ASSESSMENT CENTRE

The Assessment Centre session in which the participants took part was designed in keeping with the above mentioned international standards. During the session the participants took part in two group discussions (with a role and without it), an individual exercise based on a conversation with a superior. These exercises were tailored specifically for this project's needs so as to reflect the problems and challenges connected to it. Their subject matter was designed in an environment similar to, but not exactly the same as the original industry. The purpose was to focus on the competence assessment rather than the knowledge of the industry or workplace. The variety of tasks made it possible to present behaviors in different situational contexts and to assess competences in different environments. Each competence was assessed at least twice: during an observation and interview.

Bochumski Personal Performance Inventory (BIP)

The above mentioned studies on the relation between personality traits and competences were conducted on the basis of personality questionnaires and were not connected to the work environment. In the second half of 20th century, in response to demand, psycho-metrical tools, which were aimed at researching personality traits in the context of professional activities were created. Their purpose was to enable to measure the chances for professional success at a given workplace. One of them is Bochumski Personal Performance Inventory. Personality is defined by the authors as follows: "Personality is a set of features that characterise an individual and manifesting themselves through their behavior, system of values and motivation" (Jaworowska & Brzezińska, 2011, p. 6).

The BIP Inventory assesses personality in 4 dimensions:

- professional orientation,
- professional behaviors,

Table 3. Matrix of exercises and competences

Competences	Exercise 1 Group discussion with- out a role	Exercise 2 Role Play a con- versation with a superior	Exercise 3 Group dis- cussion with a role	Interview	BIP	The sum of exercises in which the compe- tence is tested
Innovativeness	x		x			
Responsibility	x		x		x	
Target orientation	x	x	x	x	x	
Cooperation	x		x		x	
Management		x	x	x	x	
Leadership	x	x			x	
Change management	x	x				
The amount of com- petences tested in each task	6	4	5			

Source: author's own elaboration.

- social competences,
- psychological nature.

The first of the above mentioned dimensions includes motivation and professional values, the second – the attitude towards performed duties, the third – the style of building social relationships whereas the fourth one indicates preferences for the psychophysical conditions at a workplace.

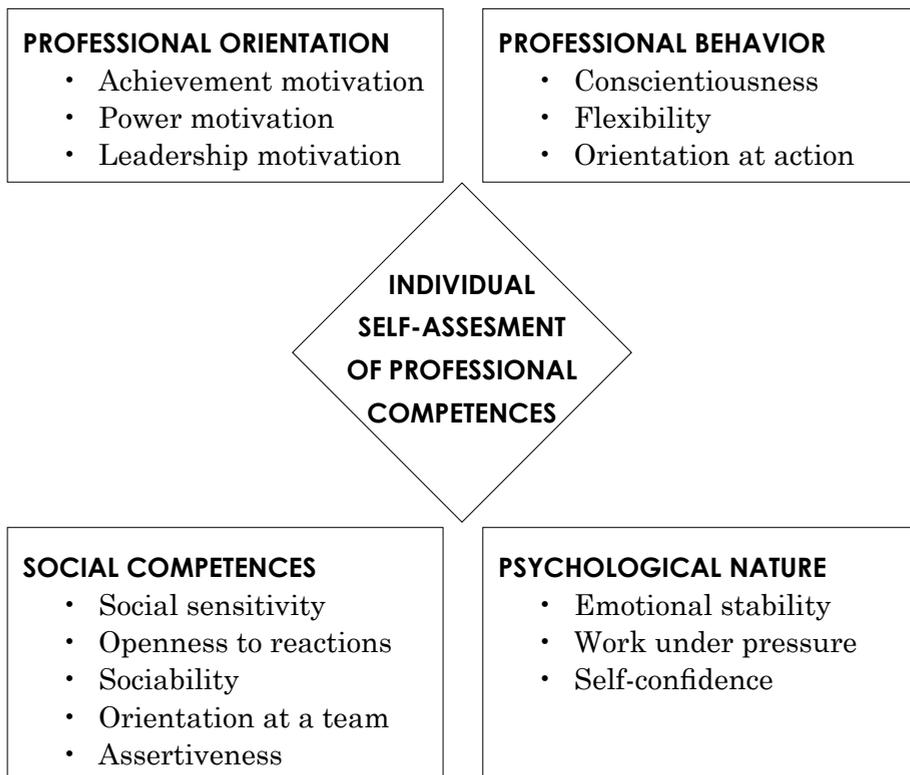


Figure 1. The scales included in the individual dimensions assessed by Bochumski Personal Performance Inventory

Sources: Jaworowska & Brzezińska, 2011, p. 7.

The BIP questionnaire was inspired by several psychological theories. Among others: the so called Great Five – based on a five-factor model of personality by Costa and McCrae (1980), the motivation theories by David McClelland (1987) and Heinz Heckhausen (1991), the theory of volitional behavior control (Khul, 1994).

The above mentioned studies, which verify the prediction of professional success on the basis of personality traits and the relation between personality and competences, were frequently based on the Big Five Model. This theory was used to create the scales: Conscientiousness (in reference to the Conscientiousness Scale), Flexibility (in reference to the Openness scale). Social Sensitivity and Openness to relations (in some reference to Openness and Extroversion), Emotional Stability (in reference to Neuroticism).

McClelland's motivation theory indicates, that motivation is influenced by the following needs: of achievements, of belonging and power. The last one can be dictated by the need to dominate or to use power in order to achieve organization's targets or socially desirable results. However, the thread of striving to achieve the standards of excellence was derived from Heckhausen's theory. Both theories were used to create the scales: Motivation for achievement, leadership and power.

The theory of volitional behavior control by McClelland distinguishes two orientations: at state and action. The first one is connected with maintaining the status quo, the other focuses at looking for changes. This theory was used to construct the scale of Achievement Orientation.

The BIP scales: Assertiveness, Sociability, Team Orientation, Work under pressure and Self-confidence were created as a result of definitions and studies conducted by the authors of the Inventory themselves.

The Author of this article formed the following auxiliary hypotheses:

- H_1 : Target Orientation Competence will correlate positively with the Orientation at the professional motivation, and in particular with the Achievement Motivation. The definition of the Target Orientation assumes concentration of effort on achieving goals and high dynamics of actions. It is convergent with the definition of the scale Achievement Motivation, which is based on the individual's striving for continuous development and competence improvement and, in consequence, an increasing involvement in the duties to be fulfilled.
- H_2 : Target Orientation Competence will correlate positively with Professional Behaviors, and in particular with the Action Orientation. The Scale of Action Orientation assumes, that the people with high preference within this scale strive to be in constant motion and action. The higher the level of Target Orientation competence, the bigger is the person's activity to

achieve their goals. Therefore the link between both above mentioned variables was assumed.

- H₃: Target Orientation Competence will correlate positively with Psychological Nature, and in particular with Self-confidence. Self-confidence is a scale defined as emotional independence from the opinions of others. It can considerably influence the decision to act or (at low preference) to avoid action for fear of criticism. A target-oriented activity requires confidence in decision making process and moving on to action and therefore a correlation between the two variables is assumed to take place.
- H₄: Cooperation Competence will correlate positively with Social Competences. The Cooperation Competence is defined as building relationships with others and cooperating to achieve a common goal. The Scales belonging to Social Competences are connected with these indicators. They measure sensitivity to emotional signals (Social Sensitivity), developing and maintaining relationships (Openness to relations), ensuring harmony and balance in interactions with other people (Sociability), readiness to work towards common goals and putting them above personal interests (Team Orientation).
- H₅: Cooperation Competence will correlate positively with Psychological Nature and in particular with Emotional Stability. Because of this element of building relationships and maintaining them through ensuring emotional control and expressing them in social contacts, Cooperation should correlate with the Emotional Stability scale, which contains the above mentioned elements.
- H₆: Leadership Competence will positively correlate with Social Competences. The definition of this Competence is connected with building relationships with subordinates, developing them further and focusing on actions tailored to their needs and expectations. For this reason, it has been assumed that a positive relation will occur with such scales as: Social Sensitivity, Relationship Orientation or Team Orientation.
- H₇: Leadership Competence will positively correlate with Professional Orientation. A positive relation between Leadership and Professional Orientation has been assumed, containing such scales as: Achievement Motivation, Power Motivation and Leadership Motivation. Building the authority of the leader in a team can be

fundamentally motivated by striving to gain influence in order to realize the company's aims and set new challenges.

- H_8 : Leadership Competence will positively correlate with Psychological Nature. Emotional Stability connected with emotional control, work under pressure and self-confidence in decision making processes are inseparable elements in shaping the position of the leader in a team and managing employees. For this reason a positive relation between Psychological Nature scales and Leadership Competence has been assumed.
- H_9 : Innovativeness Competence will positively correlate with Professional Behaviors and in particular with Flexibility. Innovativeness is connected with transcending traditional standards and looking for new unconventional solutions. For this reason, a positive relation with the Flexibility scale, which measure openness to new experiences and changes, has been assumed.
- H_{10} : Responsibility Competence will positively correlate with Professional Behaviors and in particular with Conscientiousness. The Responsibility Competence, which is defined in research as care about acting according to rules, regulations and procedures obligatory in the organization, should have a positive relation with the Conscientiousness scale. It measures the care about realizing tasks as it is expected.
- H_{11} : Management Competence will correlate positively with Social Competences. Appointing tasks and setting goals, as well as their effective execution, are determinants of the Management Competence, and it should have connection with these elements of scales which are included in such scales of Social Competences like: Openness to relations, Team Orientation or Assertiveness. The last scale is particularly focused on independence from opinions and judgments, which is an essential element of efficiency in team management.
- H_{12} : Management Competence will positively correlate with Professional Orientation. Management is a competence connected to the need of having an influence on others and taking responsibility for their performance. The Power Motivation and Leadership Motivation, which are studied within the framework of Professional Orientation, measure the need to persuade others to do the appointed tasks.

- H₁₃: Management Competence will positively correlate with Psychological Nature. Effective and long term results of Management can be achieved thanks to the ability to work under pressure of limited time and heavy load of tasks, confidence to make difficult decisions, including decisions which relate to other people and their work. So a positive relation between this competence and the scales within the area of Psychological Nature, has been assumed.
- H₁₄: Change Management Competence will correlate positively with the Psychological Nature and in particular with Work Under Pressure. Managing of change implementation processes requires among others effectiveness in dealing with employees' resistance to new way of actions. Stamina and toughness in difficult situations are closely connected to it. Therefore, a positive relation between this competence and scales in the area of Psychological Nature is assumed.
- H₁₅: Change Management Competence will positively correlate with Professional Behaviors and in particular with Flexibility. Introducing new methods of actions and effective dealing with new situation is connected to a high degree of flexibility of action and quick response to challenges. And thus the assumption about the positive relation between the Change Management Competence and the Flexibility scale.

RESULTS

The conducted studies confirmed a part of hypotheses about the correlation between personality traits tested by means of self-assessment questionnaires and the results of competence assessment being the outcome of observations conducted during Assessment Centre.

The results of BIP personality questionnaire are presented below.

Table 4. The results of the participants' of Bochumski Personal Performance Inventory

Scale	Average	Minimum result	Maximum result	Standard deviation	Kurtosis	Skewness
Achievement motivation	6.00	1	10	2.08	-0.25	-0.22
Power motivation	5.33	1	10	1.82	0.23	0.22
Leadership motivation	6.92	3	10	1.66	-0.30	-0.25
Conscientiousness	7.19	4	10	1.33	-0.34	0.21
Flexibility	5.83	1	10	1.85	0.29	-0.10
Action orientation	7.17	4	10	1.57	-0.45	-0.08
Social sensitivity	6.31	2	10	1.63	0.36	0.02
Relationship orientation	6.40	3	10	1.74	-0.72	-0.04
Sociability	7.19	3	10	1.75	-0.53	0.08
Team orientation	7.42	5	10	1.27	-1.10	0.03
Assertiveness	6.37	1	10	1.96	0.23	-0.26
Emotional stability	6.75	2	10	1.81	0.54	-0.51
Work under pressure	7.08	3	10	1.83	-0.16	-0.34
Self-confidence	6.42	1	10	1.92	0.20	-0.36

Source: author's own elaboration.

The results of preferences assessment indicate that the group being assessed has its own specificity. In the range of scales: Achievement Motivation, Leadership Motivation, Assertiveness, Emotional Stability, Work Under Pressure, Self-confidence – we are dealing with with a light left-sided distribution asymmetry, which means that more than half of the participants got above average results (the standardized scale used in BIP is a sten scale). On this basis it can be concluded

that in this group of participants, a tendency towards lower self-assessment in the area of target orientation and continuous striving to competence development, the need to gain influence and to build one's own authority as the leader, occurred. Lower results occurred also in the area connected to Psychological Nature. The participants got lower results in the area of assertiveness, the ability to say "no", the ability to present one's opinions with courage, self-confidence and independence from opinions of the others, emotional stability or emotion control in the work environment, dealing with the pressure of heavy workload and multitasking.

Results of the diagonal distribution from the BIP questionnaire were also analyzed. In the case of the scales of Achievement Motivation, Leadership Motivation, Conscientiousness, Action Orientation, Sociability, Team Orientation, Work under Pressure, the value of the skewness indicator was negative. It means a large variation of results and polarization of preference ratings by the participants of this research. It is worth noticing, that this is largely the case for the scales connected with cooperation and social relations. The participants assessed themselves as highly or poorly cooperation orientated.

The platykurtic distribution, which shows concentration of results around the average value, occurred in the following cases: Power Motivation, Flexibility, Social-Sensitivity, Emotional Stability and Self-confidence. It means that within these scales majority of the participants assessed their preferences in the medium intensity area. These scales are connected among others to Psychological Nature. As it can be seen, a bigger difficulty in self-assessment occurred here and in a way that clearly indicates its unambiguity – either high or low.

The results obtained by the participants of the Assessment Centre indicate that the average competence assessment on a 5 degree scale, for each of tested competences reached the level between 2.07 and 2.37. On the basis of the information about minimum and maximum results, which in majority of competences range from 1 to 4 (thus almost the whole range of scale), one can conclude that in this group the level of tested competences is close to the level which is described with the term "efficiency" (the third level already denotes certain efficiency of behaviors within the given competence with still some developing areas). The fact that level 5 is not observed may indicate certain specificity of the group. This level, in the model of competences accepted in this study, is dedicated to the whole organization. Thus,

the highest level of competence development, is a strategic level specific for the highest step into the organization's hierarchy ladder, to which participants do not belong.

In the Innovativeness Competence nobody got the result higher than 3.5, which means that in this group nobody demonstrated behaviors representative for people searching for new solutions to existing problems, which would mean exceeding standard actions, taking into consideration wider context and various sources of information.

In the case of the Change Management Competence the layout of results was similar to the case of Innovativeness Competence. The maximum result obtained was 3.5. Nobody among the participants had the ability to manage changes in difficult conditions or to implement them in a wider organization's structure.

In the case of the Responsibility and Management competences, none of the participants reached the result above level 3. It means that, within the indicated areas nobody demonstrated behaviors representative for high efficiency.

Table 5. The results of competence assessment after Assessment Centre

Scale	Average	Minimum result	Maximum result	Standard deviation
Innovativeness	2.25	1	3.5	0.72
Responsibility	2.27	1	3.0	0.70
Target orientation	2.37	1	4.0	0.71
Cooperation	2.23	1	4.0	0.73
Directing	2.06	1	3.0	0.50
Leadership	2.07	1	4.0	0.77
Change management	2.12	1	3.5	0.57

Source: author's own elaboration.

For dependency testing between the assessment results in the BIP questionnaire and the competence assessment carried out during the Assessment Centre, the r-Pearson's correlation coefficient was used. In the table below the results of this study are presented.

The hypothesis which assumes, that the Competence Target Orientation will correlate positively with Professional Orientation, and in particular with the Achievement Motivation, was not confirmed.

Table 6. The results of correlation – the BIP scales and competences

Area	Scale	Innovativeness	Responsibility	Target orientation	Cooperation	Directing	Leadership	Change management
Professional orientation	Achievement motivation	,128	,215	,180	,268	,136	,411	,288
	Power motivation	,225	,359	,156	,198	,105	,320	,048
	Leadership motivation	,078	,107	,91	,185	,053	,193	,061
Professional behaviours	Conscientiousness	0.41	327	,-003	0.55	0.172	0.227	0.112
	Flexibility	,0232	,123	,146	,345	,137	,239	,341*
	Action orientation	,139	,206	,*304	,209	,178	,238	,217
Social competences	Social sensitivity	,029	,149	,241	,167	,209	-,001	0.87
	Relationship orientation	0.121	0.246	,196	,351*	,166	,243	,247
	Sociability	,121	,169	,235	,207	,253	,041	,163
	Team orientation	,166	,358**	,402**	,323*	,225	,221	,200
	Assertiveness	,094	,184	,121	,171	,165	,237	,136
Psychological Nature	Emotional stability	,057	,108	,111	,281*	,162	,097	,160
	Work under pressure	,067	,090	,189	,203	,212	,205	,215
	Self-confidence	,057	,128	,143	,322*	,149	,173	,266

*p < 0.05, **p < 0.01
Sources: author's own elaboration.

Thus, both variables examine elements which did not co-occur in the sample under examination. The hypothesis assuming that the Target Orientation Competence will correlate positively with Professional Behavior, and in particular with Action Orientation, was confirmed in this study. The rate of correlation was 0.3 ($p \leq 0.05$). It means, that the higher was the participants' readiness to face challenges actively, the higher were their abilities to set goals and striving to achieve them. The hypothesis assuming that the Target Orientation competence will correlate with Psychological Nature, and in particular with Self-confidence, was not confirmed in this study. None of the scales had any relations with the results obtained in this competence. However, a correlation between this competence and the Team Orientation scale was obtained (0.40; $p \leq 0.01$). It means, that the higher was the participants' readiness to work towards team's goals and readiness to make effort to implement them, the more frequently they were demonstrated in participants' behaviors. Higher levels of the Target Orientation Competence assume setting and implementing the team's goals. The hypothesis assuming that the Cooperation Competence will correlate positively with Social Competences was partly confirmed within two scales: Relationship Orientation (0.35; $p \leq 0.05$) and Team Orientation (0.32; $p \leq 0.05$). It means, that the higher the participants' assessed their preferences for building relationships and cooperating, the more positive behaviors typical for higher levels of the Cooperation Competence they demonstrated. The hypothesis assuming that the Cooperation Competence will positively correlate with Psychological Nature, and in particular with Emotional Stability, was confirmed within two scales: Emotion Stability (0.28; $p \leq 0.05$) and Self-confidence (0.32; $p \leq 0.05$). It means, that the better the participants assessed their independence in forming opinions and the ability to control emotions, the higher level of behaviors related to cooperation they demonstrated. What is more, a positive correlation between the competence Cooperation and the Flexibility scale was established within the Professional Behaviors (0.34; $p \leq 0.05$). It means, that the higher the participants assessed their openness to new experiences, the better abilities to cooperate they demonstrated. The hypothesis assuming, that Leadership Competence will positively correlate with Social Competences was not confirmed. Sensitivity to emotional signals coming from the environment, building relationships, the ability to work in a team, or the independence in forming

opinions did not have any connections with the tested competence. The hypothesis assuming that the Leadership competence will correlate positively with Professional Orientation was partly confirmed within two scales: Achievement Motivation and (0.41; $p \leq 0.01$) and Power Motivation (0.32; $p \leq 0.05$). It means, that the higher the participants assessed their motivation to have influence on work and actions of the others, the better their abilities to build their position of the leader, who “pull other people behind him”, were assessed. The hypothesis assuming that the Leadership Competence will correlate positively with Psychological Nature was not confirmed. The control of emotions and the way they are expressed, working in difficult conditions or showing confidence in decision making processes were not connected to the competence being tested. The hypothesis that the Innovativeness Competence will correlate positively with Professional Behavior, and in particular with Flexibility, was not confirmed. Thus, the readiness to change, the ability to cope with unfavorable circumstances measured with the indicated scale did not have any connection with searching for new solutions and improvements, which are defined as Innovativeness in this study. The hypothesis assuming that the competence Responsibility will correlate positively with Professional Behavior, and in particular with Conscientiousness, was confirmed only within the mentioned competence (0.33; $p \leq 0.05$). It means, that the better the participants assessed their preference for performing tasks in an accurate and precise way, the better results they achieved in the competence connected to acting in keeping with the rules and procedures accepted by an organization and in taking care of the organization’s wellbeing. What is more, a positive relation was established between the assessment results of the Responsibility Competence and Power Motivation Competence (0.36; $p \leq 0.01$) and Team Orientation (0.36; $p \leq 0.01$). It means, that the higher the participants assessed their preference for having influence on others, the more ready they were to take the responsibility for their actions. At the same time their attitude was more closely connected to working towards the team’s common goals, even at the costs of diminishing their own interests. The hypothesis assuming that the Management Competence will positively correlate with Social Competences was not confirmed. The lack of connection between this competence and Professional Orientation and Psychological Nature also occurred. This competence has certain elements which are not tested by any of the scales used

in the personality questionnaire. The hypothesis that the Change Management Competence will correlate positively with Psychological Nature, and in particular with work under pressure, was not confirmed. Coping with difficult situation was not connected with setting and implementing new methods of action. The hypothesis assuming that the Change Management Competence will correlate positively with Professional Behavior, and in particular with Flexibility, was confirmed in reference only to the scale mentioned (0.34; $p \leq 0.05$). It means that the better the participants assessed their openness to new conditions and their readiness to adapt to them, the better the abilities to implement changes they had. What is more, a positive relation was established between the assessment results of the Change Management Competence and Achievement Motivation (0.29; $p \leq 0.05$). It means, that the better the participants assessed their readiness to deal with problems, the better assessment results they got within the competence of managing changes in an organization.

Confirmation of some of the hypotheses indicates that there is a relation between personality predispositions and competences. Additional results were obtained, which may indicate what additional elements could make the definitions of the tested competences complete. A good example is the positive relation discovered between the Cooperation Competence and the Flexibility scale. The ability to adapt to different work conditions can be a clear indicator of efficiency in cooperating.

Some of the scales of the BIP questionnaire did not correlate with any of the competences tested. Social Sensitivity, Leadership Motivation, Work under pressure and Assertiveness or Sociability did not have any connection with the model used in this study. It can be particularly surprising in the case of Leadership Motivation which is connected to the need to exert influence in order to achieve certain results for the organization. During the AC session two competences could be particularly connected to this definition: Leadership and Management. Sociability (defined as an ability to adapt to others in order to avoid conflicts) and contradictory to it Assertiveness (remaining in opposition to others and putting forward one's own solutions) did not have any connection with the results in the competences tested. Maybe certain independence in forming opinions and presenting them underlying both scales, can to certain extent enhance, for example, the efficiency in directing or cooperating. However, with one of the preferences

becoming too intense, the further competence development at a higher level can be blocked.

Innovativeness is the only competence which did not correlate with any personality indicator. The assumed correlation between the scale Flexibility was not established. The other scales do not register any of the elements which are included in its definition.

The lack of certain assumed relations between variables can be dictated by the research procedure itself. Work under pressure, one of the scales which remain without connection to the competence assessment results, may not have been adequately tested during the AC session, in which the level of difficulty of the tasks presented to the participants, was not high enough to provoke certain behaviors.

PRACTICAL IMPLICATIONS

The presented study indicates, that there is a relation between the self-assessment of the personality preferences and the competence assessment conducted by external observers. It can have many practical implications for the people connected to human resources management in organizations.

For the people responsible for recruitment it can be important from the perspective of managing the budget, set for the employees selection processes. If on the basis of personality preferences we can predict the way the work will be done by an individual, you can use at a certain stage interchangeably: questionnaires or Assessment Centre as a method to assess competences.

Despite the fact that in the BIP inventory self-assessment is carried out, while in the AC the assessment is conducted by external observers – a positive, statistically important relation was discovered. It means, that the way a person assesses their own predispositions affects the way this person functions and the way they behave. It can mean, that preferences can restrain or stimulate employee's development. If they are high in the area of expected competences, they will enhance all the development activities. In case they are low – they can slow them down.

For the people who are responsible for the employees development, it can be crucial to collect information about competences from various sources. If they juxtapose the results of personality questionnaires

with the results of the observations during the Development Centers (this method is different from AC only with the respect to the purpose, which in this case focuses on development) and diagnose the differences between them, they can use them in the competence improvement process. If personality predispositions connected to competences are low, they should plan a more complex development process. When, for example, the results of the DC competence assessment are lower than these obtained in a questionnaire, they can assume that it is enough just to offer the right opportunities for the person to realize their potential and so to develop behaviors at a higher level.

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