

THE RELATIONSHIP BETWEEN PERSONALITY TRAITS AND SOCIAL CAPITAL PERCEPTIONS OF PRE-SERVICE TEACHERS

Mevlüt Aydoğmuş

Necmettin Erbakan University (Turkey)

Özdal Koyuncuoğlu

Necmettin Erbakan University (Turkey)

Abstract

There are a number of psycho-social variables that predict the levels of social capital of pre-service teachers. Social capital, which is in connection with almost all of these psycho-social variables, is associated with personality traits in literary studies. This study aimed to investigate the social capital predictive levels of five-factor personality traits. This research is based on survey data and two Likert type scales were used. 470 pre-service teachers studying in different departments of Necmettin Erbakan University Faculty of Education participated in this research. The relationship between personality traits and social capital components was examined using correlation analysis. The effect of personality traits of the candidates on the perception of social capital was investigated by using structural equation model analysis. It was found that the neuroticism and conscientiousness personality traits of pre-service teachers were not effective on perceptions of social capital. In addition, it was also found that the extraversion, agreeableness and openness to experience personality traits of pre-service teachers have an impact on their perceptions of social capital.

Keywords

Social capital, Personality traits, Higher education, Prospective teachers, Teacher training

Introduction

Scholars have discussed different types of capital (Coleman, 1988; Field, 2008; Fukuyama, 2000a). These include the resources created as a result of the conscious efforts of individuals are called “physical capital”; money and precious papers, which are used as exchange tools and form the source of the material wealth owned by individuals are called “financial capital”; the sum of knowledge, skills and values that individuals acquire through education is called “human capital”; elements such as beliefs, values, habits, symbols in the evolution of society are called “cultural capital” and the

virtues such as trust, honesty, reciprocity, conscientiousness, cooperation and solidarity that promote the lives of individuals are also called “social capital” (Aktan, 2008).

Considering the importance and function of education in human life, teachers carrying out educational activities are expected to have the highest level of capital types mentioned (Toprak & Bozgeyikli, 2011). Teachers are responsible for transferring social values and rules to younger generations, socializing and preparing individuals for social life and establishing a strong and healthy social relations network. It can be argued that the

teachers undertake a duty that provides social unity in the society. In this regard, it is an indisputable fact that social capital is the most important type of capital for teachers. The efficiency of the education provided by the teacher, who cannot communicate properly with his students, does not feel as a reliable individual in his class, and cannot meet responsibilities and expectations, is open to debate (Toprak & Bozgeyikli, 2011). Therefore, it is revealed that the pre-service teachers should have the qualifications to develop their social capital. Pre-service teachers who come to the university with the same human capital accumulation on average graduate with different degrees, indicating that there are different values that affect their success.

It is seen that social capital, in connection with almost all psycho-social variables, are mostly associated with personality traits in theoretical studies (Tkach & Lyubomirsky, 2006; Costa & McCrae, 1992; Nezlek, Schütz, Schröder-Abé, & Smith, 2011; White, Hendrick, & Hendrick, 2014; Dehne & Schupp, 2007; York & Oliver, 1992; Costa & McCrae, 1992; Schaffer, 2006; Kashdan & Roberts, 2006). Therefore, the current study examines the effects of psychological and social attitudes on the social capital of the pre-service teachers based on the five-factor personality models.

Social Capital

It can be said that social capital is a concept that is used in different disciplines such as economics, sociology and psychology and is supported by many theoretical approaches (Ağcasulu, 2017). When the approaches of different theorists regarding this concept are analyzed, it is seen that social capital is generally defined as the gains from individuals' social relationships and interactions (Eniç, 2018).

The first mention of the importance of the term social capital in social life coincides with the work of Lyda J. Hanifan in 1916 (Putnam, 2000; Woolcock, 1998; Woolcock & Narayan, 2000). While emphasizing the importance of social participation in increasing school performance, Hanifan examined the process of formation of social capital and the benefits of this formation thanks to the leadership of teachers. The work pointed out goodwill, friendship, mutual sympathy and social relationships between each other in meeting the social needs of individuals and in individuals or groups of families (Woolcock, 2000). The concept used by sociologists in the 1950s, theorists of change in the 1960s, and a small number of economists and sociologists in the 1970s, began to be used with its current meaning and content from the 1980s onwards, and it appears to have reached an interdisciplinary use and prevalence in the 1990s (Lee & Law, 2016). Bourdieu, Coleman and Putnam are considered three other important philosophers who contribute to the existing multidisciplinary theories and stand out in the social capital literature. These philosophers approached the concept from different dimensions. But the point that all three authors have in common is that communication networks are important. While Bourdieu (1986) sees social capital as a factor that activates the economic and human capital of individuals in the competition process, Coleman (1988) states that it is a mechanism that facilitates the actions of individuals within the social structure by acting rationally by considering their own interests. Putnam (1993) views association and social activity ideas as the basis of social integration and defines social capital in terms of trust-oriented relationships and groups (Field, 2008). Fukuyama (1995) states that social capital consists of trust, citizenship and network relations. Grootaert and Van Bastelaer (2002,

p.2) define social capital as “the institutions, relationships, attitudes and values that govern interactions among people and contribute to economic and social development.” Coleman (1988), who expanded the concept of Social Capital, defines social capital as a public good, while Dasgupta and Serageldin (1999) state that social capital is not a public good but an individual value. Despite all these different views, the element agreed upon about social capital is that individuals take part in their relationships with their memberships in a social network (Lin, 2001).

Relationship networks, trust, commitment, reciprocity and participation elements were mostly emphasized in studies defining social capital (Coleman, 1988; Fukuyama, 2005; Putnam, 1995; Wolcoock 2001). Later, it is understood that these elements are used as dimensions in the experimental research in the field of education. The World Bank defines social capital elements as being part of a group or a network, trust and solidarity, collective action and cooperation, information and communication, social cohesion, and inclusion and empowerment and political action (Harriss & De Renzio, 1997). Meier (1999) lists elements of social capital as social closeness, communication between families, student-teacher interaction, parents’ participation in school. Bullen and Onyx (2000) define dimensions as participation in the local committee, social representation, feelings of trust and security, neighborhood relations, family and friend relationships, tolerance for differences, the value of life and work/school relations. Takakura, Hamabata, Ueji and Kurihara (2014) try to measure the social capital in the school with trust, reciprocity and neighborhood relationships between teacher and student.

In educational institutions, social capital research generally focuses on the effects of social capital on student achievement. For example, Coleman (1988) states that disadvantaged family children reduce educational inequality somewhat thanks to school. Plagens (2011) argues that social capital factors such as facilitating relationships among individuals and developing social relationships affect school performance. Galindo, Sanders and Abel (2017) suggest that social capital is an important resource that serves principals, teachers, students and families. This study and similar studies have revealed that social capital is a valuable asset for educational institutions.

The most important factor that determines the behavior of people in the formation of social capital is individual differences that express different personal characteristics. When it comes to individual differences, people differ in terms of mental and psychological as well as physical characteristics. Systematic identification of these differences is important for the development of individuals and the definition of abilities. Thus, the characteristics underlying individual factors have become comparable and measurable (Somer & Goldberg, 1999).

Personality Traits

Looking at the theoretical and empirical studies conducted to discover the underlying causes of individuals’ different behaviors and experiences, it is seen that many definitions about personality have been made (Cloninger, 2009). Although there is not a common consensus, some researchers define personality as a coherent and stereotyped form of dialog in which the person connects with the internal and external environment, distinguishing the person from others (Girgin, 2007). Two of the most accepted theories in classification of personality

today are Psychobiological Personality Theory (Cloninger, 1993) and the Five-Factor Personality Model (McCrae & Costa, 1991). As a result of the literature review, it is seen that the five-factor personality traits inventory is used more widely to determine personality (Somer, 1998; Yelboğa, 2006; Yeni, 2015). The five-factor personality model emerges from a comprehensive factor analysis of various scales and comprehensive adjective analyzes to define personality (Friedman & Schustack, 1999). The model, also known as Big-5, is accepted as a measurement system developed from the language hypothesis that defines individual differences based on the first theoretical studies on personality psychology (Bakan & Karaaslan, 2017). As a result of the studies, the five-factor personality model was defined as extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience.

The Relationship between Social Capital and Personality Traits

As mentioned above, social capital, which is in connection with almost all of the psycho-social variables, has been studied in relation to personality traits in mostly theoretical studies (Tkach & Lyubomirsky, 2006; Costa & McCrae, 1992; Nezlek et al. 2011; White et al. 2004; Dehne & Schupp, 2007; York & Oliver, 1992; Costa & McCrae, 1992; Schaffer, 2006; Kashdan & Roberts, 2006). The personality theory approach of the five-factor inventory (Big-5) assumes that five basic personality dimensions that require attitudes, motivation and experience and behavioral differences between individuals can be distinguished (Costa & McCrae, 1992; Lang & Lüdtke, 2005). Individuals have a characteristic adaptation feature that directly controls behavior and experience while interacting with the environment, habits, skills, values, perception schemes, etc. that arise in dealing

with the requirements of the environment, but reflect the underlying characteristic trends. For example, extroversion (Tkach & Lyubomirsky, 2006), which is manifested by an optimistic approach to life and having a strong life energy, positively correlates with features such as joy, being energetic, desire, and being friendly (Costa & McCrae, 1992) among the symptoms of positive mood. Research results also show that extroversion has a positive effect on the quality and quantity of social interactions (Nezlek et al., 2011; White et al., 2004). Friendly, collaboration and helpfulness represent the behavior of people with high levels of agreeableness. In contrast, individuals with low level of agreeableness tend to be more self-centered and not to cooperate (Dehne & Schupp, 2007). Personality dimension of agreeableness is seen as a component of social behavior and has been observed as a dependent variable in personal relationships (Costa & McCrae, 1988; Ostendorf, 1990). Research has shown that personal needs, expressive behaviors, and the tendency to over-control impulses are related to the agreeableness dimension (York & Oliver, 1992). The prominent features of the agreeableness dimension are being anxious, angry, depressed, tactlessness, fussy, and not self-confident (Costa & McCrae, 1991). Conscientiousness is defined as the personality being organized, reliable, discreet and thorough. When the conscientiousness dimension of personality is evaluated from an adaptive point of view, it is stated that this dimension includes delaying pleasure, patience in unpleasant tasks, paying attention to details, and acting responsibly and reliably (MacDonald & Holland, 2002). Individuals with these characteristics are likely to be successful in all kinds of tasks in both autonomous and hierarchical structure. The high level of individuals with high level of conscientiousness in the work environment ensures the development of the element of trust, which is the

most important component of social capital. The perception of the social environment is also included in the effect of the Big Five approach on different attitudes and experiences (Costa & McCrae, 1992). Research has shown that neuroticism has a negative impact on various aspects of social interaction, such as perceived quality in social relationships (Lang et al., 2001; Nezlek et al., 2011) and level of satisfaction with personal relationships (White et al., 2004). Neuroticism dimension refers to the individual's level of anxiety and emotional stability. Individuals who are able to cope with stress and emotionally stable feel more satisfied with their life by being less affected when unpleasant and unexpected things happen (Schaffer, 2006). The openness to experience dimension refers to the individual's tolerance and emotional openness to both his own emotions and others' emotions (Costa & McCrae, 1995). Tolerance and emotional openness are prerequisites for the quality of social relationships (Kashdan & Roberts, 2006).

The Aim of Research

The main purpose of the study is to examine the effects of teacher candidates' personality traits on the formation of social capital based on the five-factor personality model. The hypotheses created in accordance with the purpose of the research are given below.

Hypotheses

H1: Extroversion has a significant effect on the perception of social capital.

H2: Neuroticism has a significant effect on the perception of social capital.

H3: Agreeableness has a significant impact on the perception of social capital.

H4: Conscientiousness has a significant effect on the perception of social capital.

H5: Openness to experience has a significant effect on the perception of social capital.

Method

Population

The research was carried out with 470 pre-service teachers studying at the Faculty of Education at Necmettin Erbakan University. 76.8% (n=361) of the participants are female and 23.2% (n=109) are male. 33.6% (n=158) of the participants are first year, 27.7% (n=130) are second year, 22.3% (n=105) are third year and 16.4% (n=77) the fourth-year students. Individuals in the study group are students of Elementary Mathematics Education by 12.8% (n=60), Turkish Language and Literature by 7.4% (n=35), English Language Teaching by 19.1% (n=90), Physical Education by 10.9% (n=51), History by 7.9% (n=37), Guidance and Psychological Counseling by 16% (n=75), Geography by 6%, 4 (n=30) and Primary School Education by 19.6% (n=92).

Data collection

The research was carried out in the second semester of the 2019-2020 academic year, after obtaining the necessary permissions. Data was obtained by applying online questionnaires to pre-service teacher. A brief explanation about the purpose of the research was added to the form. Pre-service teachers were informed that the participation in the survey was voluntary. The questionnaire took an average of 10 minutes.

Measuring Tools

Social Capital Scale: The Social Capital Scale developed by Onxy and Bullen (2000) and

adapted to Turkish by Ardahan (2012) was used to determine the social capital perceptions of pre-service teachers. The scale is based on self-report and consists of 28 items. The scale has 9 dimensions which are participation in local committee, neighborhood relation, sense of belonging, tolerance for differences, Non-governmental Organization (NGO) Membership, trust in people, safe environment, initiative in social issues and social representation. The statements in the scale are definitely rated as absolutely yes (4), often yes (3), often no (2) and absolutely no (1). High scores obtained from the scale indicate that the perception of social capital is high.

The validity of the Turkish form of the scale was examined by exploratory factor analysis. The factor loading of the scale items ranged from 0.58 to 0.89. The alpha coefficient calculated for the overall scale was 0.71 (Ardahan, 2012). In this study, confirmatory factor analysis was applied to test the structural validity of the Social Capital Scale. Whether the measurement tool maintains its 9-factor structure was investigated by factor analysis. The 9-factor scale model is well compatible with the data obtained from pre-service teachers ($X^2/df=1.95$; GFI=0.98; AGFI=0.97; CFI=0.97; RMSEA=0.04; SRMR=0.03) according to the obtained values (Carmines & McIver, 1981; Browne & Cudeck, 1993; McDonald & Marsh, 1990; Tanaka & Huba, 1985; Jöreskog & Sörbom, 1984). The Cronbach alpha coefficients calculated for the dimensions of the measuring tool was between 0.65 and 0.75.

Five Factor Personality Traits Inventory: Five Factor Personality Traits Inventory, which was developed by John, Donahue and Kentle (1991) and the validity and reliability study of the Turkish form was conducted by Parlak (2018), was used to examine the traits of pre-service teachers. The

scale, which consists of 44 items, includes extraversion, neuroticism, agreeableness, conscientiousness and openness to experience dimensions. The statements in the scale are evaluated by scoring absolutely agree (5), agree (4), partially agree (3), disagree (2) and absolutely disagree (1). High scores from the dimensions of the scale indicate that personality traits such as extraversion, neuroticism, agreeableness, conscientiousness and openness are dominant.

Confirmatory factor analysis was used to test the construct validity of the five-factor personality inventory. Whether the inventory preserves its 5-factor structure or not was investigated by factor analysis. The 5-factor scale model is well compatible with the data obtained from pre-service teachers ($X^2/df=2.22$; GFI=0.99; AGFI=0.97; CFI=0.99; RMSEA=0.05; SRMR=0.04) according to the calculated fit values (Carmines & McIver, 1981; Browne & Cudeck, 1993; McDonald & Marsh, 1990; Tanaka & Huba, 1985; Jöreskog & Sörbom, 1984). Cronbach alpha coefficients for extraversion, neuroticism, agreeableness, conscientiousness and openness factors were as 0.78, 0.75, 0.69, 0.72, 0.78, respectively.

Data Analysis

Within the scope of the research, Pearson correlation coefficients were calculated to examine the relationships between personality traits and social capital. Structural equation model analysis was used to determine the effect of personality traits on entrepreneurial components. The skewness and kurtosis coefficients are based on to determine the distribution of the data. The fact that skewness values are within ± 3 and kurtosis values within ± 10 indicate that the data have normal distribution (Kline, 2011). The skewness and kurtosis coefficients calculated for personality

traits and social capital scores were within the specified range ($-0.68 < \text{Skewness} < 0.67$; $-0.32 < \text{kurtosis} < 0.86$). In order to determine multivariate extreme values, whether Cook distance values are less than 1 (Field, 2009) can be investigated. It was understood that multivariate extreme values were not included in the data set (Cook distance < 1). VIF (variance inflation factor) value was calculated to determine whether there are multiple connection problems between the independent variables. $VIF \geq 10$ indicates that there is a multicollinearity problem between variables (Hair et al., 1995). The values obtained ($1.15 < VIF < 1.43$) showed that there were no multicollinearity problem between the variables. Data were analyzed using SPSS and AMOS statistical software.

Findings

Pearson Correlation analysis was used to examine the relationships between pre-service teachers' personality traits and social capital factors. In the next step, the effect of personality traits on social capital was tested by structural equation model analysis (see **Table 1**).

When we examine the table, it is seen that there are low and moderate positive relationships between extraversion and participation in the local committee ($r=0.2268$; $p<0.01$), NGO membership ($r=0.120$; $p<0.01$), taking initiative on social issues ($r=0.177$; $p<0.01$), sense of social trust ($r=0.294$; $p<0.01$), sense of local security ($r=0.139$; $p<0.01$), neighborhood relations ($r=0.329$; $p<0.01$), social representation ($r=0.203$; $p<0.01$), tolerance for differences ($r=0.120$; $p<0.01$) and sense of belonging ($r=0.377$; $p<0.01$).

It is understood that there are low and negative relationships between neuroticism and taking initiative on social issues ($r=-0.117$;

$p<0.05$), sense of social trust ($r=-0.169$; $p<0.01$), local sense of security ($r=-0.111$; $p<0.05$), neighborhood relationships ($r=-0.112$; $p<0.05$) and sense of belonging ($r=-0.278$; $p<0.01$).

There are low and moderate positive relationships between agreeableness and participation in the local committee ($r=0.124$; $p<0.01$), taking initiative on social issues ($r=0.273$; $p<0.01$), sense of social trust ($r=0.171$; $p<0.01$), sense of local security ($r=0.146$; $p<0.01$), neighborhood relations ($r=0.295$; $p<0.01$), social representation ($r=0.160$; $p<0.01$), tolerance for differences ($r=0.187$; $p<0.01$) and sense of belonging ($r=0.293$; $p<0.01$).

There are low and positive relationships between conscientiousness and participation in taking initiative on social issues ($r=0.229$; $p<0.01$), sense of local security ($r=0.095$; $p<0.05$), neighborhood relations ($r=0.250$; $p<0.01$), social representation ($r=0.119$; $p<0.01$), tolerance for differences ($r=0.093$; $p<0.05$) and sense of belonging ($r=0.173$; $p<0.01$).

There are low and positive relations between openness and participation in the local committee ($r=0.249$; $p<0.01$), NGO membership ($r=0.116$; $p<0.05$), taking initiative on social issues ($r=0.162$; $p<0.01$), neighborhood relations ($r=0.196$; $p<0.01$), social representation ($r=0.236$; $p<0.01$), tolerance for differences ($r=0.181$; $p<0.01$) and sense of belonging ($r=0.196$; $p<0.01$).

Structural equation model analysis was applied to test the hypotheses of the research. Social capital is included in the model under test as an endogenous variable. Social capital represents the structure consisting of participation in the local committee, NGO membership, taking initiative in social issues, sense of social trust, sense of local security, neighborhood relations, social representation,

tolerance for differences and sense of belonging. Extraversion, neuroticism, agreeableness, conscientiousness and openness are exogenous variables in the model. In order to observe the effect of personality traits on social capital one by one and simply, personality traits are added to the model as the observed variable. The structural equation model tested is shown in **Figure 1**. In order to obtain better fit values, the modification index values were examined and the correlations between the errors of some observations were released.

The fit values ($X^2/df=2.64$; $GFI=0.95$; $AGFI=0.92$; $CFI=0.91$; $RMSEA=0.06$; $SRMR=0.05$; $PClose=0.08$) of the structural equality model tested to determine the effects of pre-service teachers' personality traits on their perceptions of social capital indicated that the model and data were in good agreement (Carmines & McIver, 1981; Browne & Cudeck, 1993; McDonald & Marsh, 1990; Tanaka & Huba, 1985; Jöreskog & Sörbom, 1984). The path coefficients and significance levels shown in the model are given in **Table 2**.

It is understood that extraversion positively affects social capital in the model ($\beta=0.36$; $t=5.36$; $p<0.01$). Neuroticism has a negative and insignificant effect on social capital ($\beta=-0.07$; $t=-1.31$; $p>0.05$). Agreeableness positively affects social capital ($\beta=0.23$; $t=3.74$; $p<0.01$). Conscientiousness has a positive and insignificant effect on social capital ($\beta=0.01$; $t=0.09$; $p>0.05$). Openness positively affects social capital ($\beta=0.12$; $t=2.13$; $p<0.05$). When standardized beta coefficients are taken into consideration, it could be argued that extraversion, agreeableness and openness are more effective on social capital, respectively. Personality traits explain 35% of the change in social capital. According to the results obtained, H1, H3 and H5 hypotheses were accepted and H2 and H4 hypotheses were rejected.

Conclusion, Discussion & Suggestions

In this study, an applied research was carried out on 470 pre-service teachers studying in departments of Elementary Mathematics Education, Turkish Language and Literature, English Language Teaching, Physical Education, History, Guidance and Psychological Counseling, Geography and Primary School Education. Relationships between personality traits and social capital components were examined with correlation analysis. The effects of pre-service teachers' personal traits on their perception of social capital were investigated with the structural equation model analysis. It was found that the neuroticism and conscientiousness personality traits of pre-service teachers were not effective on perceptions of social capital. However, it was found that the extraversion, agreeableness and openness personality traits of pre-service teachers were effective on their perceptions of social capital.

Considering the bilateral relations examined between the variables within the scope of the research, it was found that the extraversion personality trait has positive correlations with the perception of social capital components (participation in the local committee, NGO membership, taking initiative on social issues, sense of social trust, sense of local security, social representation, tolerance for differences and sense of belonging). When other personality traits were taken under control, it was seen that extraversion had a positive effect on social capital. When the characteristics of extraverted individuals are examined, it is expected that these individuals have a high tendency to exhibit attitudes and behaviors related to social capital. Extraverted individuals are talkative, social, loving and active individuals. Social interaction is a need for these individuals (Barrick & Mount, 1991). Hogan

(1986) states that extroversion has two basic components such as desire and socialization. The desire component represents initiative and assertiveness, while the socialization component represents assertiveness and effectiveness. It was found that teams consisting of extravert personality traits dominant individuals had higher ability to work together (Barrick et al., 1998). The fact that group members are composed of average extravert individuals is extremely important for increasing group performance to the desired level (Barry & Stewart 1997). Thus, individuals with extraverted personality are very important both for the integrity of groups and teams, and for the development and enrichment of social capital in society. The fact that these individuals are social, loving and active can make it easier for them to develop healthy neighborhood relationships, take part in social responsibility projects and create an environment of trust in their immediate surroundings. In this way, they can contribute more to the formation of social capital.

In this study, generally negative relationships were observed between neuroticism personality trait and social capital components. It was seen that neuroticism was not effective on the perception of social capital, when other personality traits were taken under control. Anxious, angry, introverted, worried and insecure features are common features of neurotic personality trait dominant individuals (John, 1989; McCrae & Costa, 1985). These people have a tendency to react excessively and have difficulty returning to normal (Noller, Law, & Comrey, 1987). It is very difficult for these individuals to develop social relations and to act in relation to social capital. One of the main elements of social capital is trust (Fukuyama, 2000b). The individual needs to trust his immediate environment and people in order for

social capital to be formed. Individuals with dominant neurotic personality feature have difficulties in creating a sense of trust (Barrick & Mount, 1991). In this regard, it is possible to argue that these individuals are unlikely to develop attitudes and behaviors related to social capital. The results obtained in this research are in line with the theoretical explanations.

Another result obtained in the research is that there are positive correlations between agreeableness and social capital components. It was found that the compliance personality trait positively affects social capital when other personality traits are taken under control. Agreeableness personality trait dominant individuals are known as benevolent, friendly and honest individuals in their environment (Conley, 1985; John, 1989; Digman & Takemoto-Chock, 1981; McCrae & Costa, 1985). Being flexible, reliable, forgiving and soft-hearted has been associated with agreeableness personality traits (Barrick & Mount, 1991). Thus, these individuals do not have difficulty in developing social relations. Since the agreeableness personality trait requires being friendly, flexible and forgiving, the level of tolerance for differences and neighborhood relations may be better than normal individuals. Also, since these individuals are honest and helpful, they can be more successful in taking initiatives on social issues and gaining people's trust. Therefore, individuals whose agreeableness personality traits are dominant are more likely to develop attitudes and behaviors related to social capital. The results obtained in this research support the theoretical explanations.

A high level of neuroticism or a low level of adaptation does not mean that teachers will fail in their job. Being successful in lecturing depends on knowledge, experience and talent. However, it cannot be said that the attitude or reaction of the environment is not important in a

teacher's success. Being more harmonious at a certain level will cause the person to maintain harmonious relationships with his environment and to produce productive works related to this. Harmonious relationships will help the individual manage their time and stress more efficiently. Thanks to less stress and an efficient and effective time management, the person will be able to use his time in useful works with his immediate environment. In addition, it can be said that the more harmonious teacher, the more communication he will be with both his colleagues and students. This will be useful for developing new ideas and solving problems. If the person is overly compatible, it will mean that the people around him will always say "yes" to their demands. This will mean using the scarce time for others. It is unthinkable for a teacher who does not have time to be successful.

Another result of the research is that there are positive relationships between conscientiousness and social capital components. However, when other personality traits are taken under control, it was found that the personality of conscientiousness does not affect social capital. Conscientiousness' personality traits require being responsible, systematic, controlled, and following the rules and norms (Botwin & Buss, 1989; Hogan, 1983; Noller et al., 1987). Conscientiousness' personality traits have been expressed that dominant individuals are hardworking, success-oriented and determined (Krug & Johns, 1986; Lei & Skinner, 1982; Peabody & Goldberg, 1989). According to these explanations, individuals whose conscientiousness personality is dominant can be expected to contribute to social capital by taking initiative in social issues, participating in local projects and taking part in non-governmental organizations. However, the results obtained in this research did not support theoretical explanations. It was revealed in this

research that the conscientiousness personality trait was not effective on social capital when the other personality traits of pre-service teachers were taken under control. This can be explained by the prevalence of other personality traits of pre-service teacher.

Positive relationships were identified between the openness personality trait and social capital components. When other personality traits were taken under control, openness was observed to have an impact on the perception of social capital. Openness personality trait requires being able to think creatively and analytically (Digman, 1990; Hakel, 1974). Individuals with openness personality traits are more sensitive and broad-minded than normal individuals (Barrick & Mount, 1991; John, 1989; McCrae & Costa, 1985). This can enable these individuals to take more initiative on social issues, engage in social representative activities, and contribute to social capital by being open to different cultures and lifestyles. The results obtained in this research are in line with the theoretical explanations.

Basendowski (2016) and Hoenig (2019) state that social capital, that is, the resources actors use through access to social networks and the norms and values reinforced in these networks, is one of the foundations of a successful education career. "Effective norms" - in the sense of norms in a society that encourage and reward academic achievement - can be viewed as an effective form of social capital (Coleman 1995, 403).

The Council of the European Union (2014) underlines that cultural heritage plays an important role in the creation and strengthening of social capital. Because social capital provides some opportunities and opportunities in the development of knowledge, skills, competencies, creativity and innovation. In addition, the

Council of the European Union sees social capital as an effective teaching tool for formal, non-formal and informal education and lifelong learning.

The concept of social capital is also examined within the framework of the network approach (Haug, 2013). Coleman (1988) chose the school type as an indicator of closeness to the network in his study. It presumes that there are closer relationships between parents and teachers in private and especially Catholic schools, and that children and young people are in the close network of the religious community, representing a social capital for all involved. Uslaner (1995, 1996) measures social solidarity by being married or talking to neighbors (Uslaner 1995) and being a member of a trade union (Uslaner 1996). Inclusion in an ethnic community can also represent social capital (Zhou & Bankston 1994). Bourdieu (1992) assumes that what constitutes social capital is high status, high degree of integration, and belonging to a family network with close emotional ties.

Young people from disadvantaged neighborhoods face a range of obstacles to exercising their right to education and problems in developing their educational potential (Council of Europe, 2016). This barrier can range from lack of access to educational institutions to poor quality education and school failure. Teacher training programs can be adapted to the challenges of working with young people from disadvantaged neighborhoods by adding new approaches (e.g. intercultural, equality and mediation) and developing partnerships between professionals to help young people living in poor neighborhoods achieve their education rights, and work closely with neighborhood youth and related education programs. In addition, new subject contents such as social problems, concerns and concerns

of young people, social identity can be added to teacher training programs.

Does individual social capital also play a role in the chance to enter the labor market? It can be said that there is little research on the relationship between young people with social capital and the transition to a successful job and how this affects the progress of their careers and whether there are job-specific aspects of social capital. For this reason, firstly, theoretical models can be developed that explain how social capital exerts its influence depending on the different characteristics of educational professions (e.g. type of education, diploma or certificates, professional prestige) and which of these are particularly relevant.

Suggestions and Limitations

In this study, it was found that the extroversion, agreeableness and openness personality traits of pre-service teachers were more related to their perceptions of social capital. Supporting pre-service teachers' extraversion, agreeableness and openness personality traits can facilitate their attitude and behavior towards social capital. In this way, it can be ensured that pre-service teachers contribute more to the enrichment of social capital in society. In this research, data were obtained by using questionnaire based on self-report. The results can be compared by using different data collection methods in future research. The cross-sectional data collection approach used in this study only provides an understanding of complex relationships at a certain time. Longitudinal studies can be conducted to track the relationships between pre-service teachers' personality traits and their perceptions of social capital. This type of research will help pre-service teachers to observe and better understand personality traits and perceptions of social capital for a longer

period of time. It will also be interesting to see if teachers with certain personality traits have social capital. For future studies, follow-up studies that determine the relationship between the results of this study and the actions of teachers in their careers can be recommended. Finally, in future research, factors that may affect the relationship between pre-service teachers' personality traits and perceptions of social capital can be examined with moderator analysis.

References

- Ağcasulu, H. (2017). Sosyal sermaye kuramı ve temel bakış açılarının karşılaştırılması [Comparison of social capital theory and basic perspectives]. *Süleyman Demirel Üniversitesi Vizyoner Dergisi*, 8(17), 114-129.
- Ardahan, F. (2012). Sosyal sermaye ölçeği geçerlilik, güvenilirlik çalışması [Social capital scale validity and reliability study]. *Uluslararası İnsan Bilimleri Dergisi*, 9(2), 773-789.
- Bakan, U., & Karaaslan, İ. A. (2017). Bireysel farklılıkların sosyal sermaye oluşumuna etkisi: Facebook ve linkedin kullanıcıları üzerine karşılaştırmalı bir analiz [The effect of individual differences on social capital formation: A comparative analysis on Facebook and LinkedIn users]. *Intermediak International e-Journal*, 4(6), 77-94.
- Balcı, E. (1991). *Öğretmenlerin rolleri* [Teachers' roles]. Ankara: Eğitim Sosyolojisi.
- Barrick, M. R., & Mount, M. K. (1991). The big five personality dimensions and job performance: A meta-analysis. *Personnel psychology*, 44(1), 1-26.
- Barrick, M. R., Stewart, G. L., Neubert, M. J., & Mount, M. K. (1998). Relating member ability and personality to work-team processes and team effectiveness. *Journal of Applied Psychology*, 83(3), 377-391.
- Barry, B., & Stewart, G. L. (1997). Composition, process, and performance in self managed groups: The role of personality. *Journal of Applied Psychology*, 82(1), 62-78.
- Basendowski, S. (2016). *Das soziale kapital auf dem prüfstand - Eine empirische annäherung an soziale heterogenität in einer inklusiven sekundarstufe*. Waxmann Verlag GmbH.
- Bourdieu, P. (1986). The forms of capital. In I. Szeman, & T. Kaposy (Eds.) (2010), *Cultural Theory: An Anthology* (pp. 81-93), Sussex: Wiley-Blackwell.
- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen, & J. S. Long (Eds.), *Testing structural equation models* (pp. 136-162). Newbury Park, CA: Sage.
- Bourdieu, P. (1992). *Die feinen unterschiede* (5. Aufl.). Frankfurt: Suhrkamp.
- Carmines, E. G., & McIver, J. P. (1981). Analyzing models with unobserved variables: Analysis of covariance structures. In G. W. Bohrnstedt, & E. F. Borgatta (Eds.), *Social Measurement: Current Issues* (pp. 65-115). Beverly Hills: Sage Publications, Inc.
- Cloninger, C. R. (1993). A psychobiological model of temperament and character. *Archives of General Psychiatry*, 50(12), 975-990.
- Cloninger, S. (2009). Conceptual issues in personality psychology. In P. J. Corr, & G. Matthews (Eds.), *The cambridge handbook of personality psychology* (pp. 3-26). Cambridge: Cambridge University Press.
- Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94, 95-120.
- Coleman, J. S. (1995). *Grundlagen der sozialtheorie. Band 1: Handlungen und handlungssysteme*. München: Oldenburg.

Conley, J. J. (1985). Longitudinal stability of personality traits: A multitrait-multimethod-multioccasion analysis. *Journal of Personality & Social Psychology*, 49(5), 1266-1282.

Costa, P. T., & McCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO PI-R) and NEO Five-Factor Inventory (NEO-FFI)*. Odessa : Psychological Assessment Resources.

Costa, P. T., Jr., & McCrae, R. R. (1995). Domains and facets: hierarchical personality assessment using the revised NEO Personality Inventory. *J Pers Assess*, 64(1), 21–50.

Costa, P. T., Jr., & McCrae R. R. (1998). From catalog to classification: Murray's needs and the Five-Factor Model. *Personality and Social Psychology*, 55(2), 258–265.

Coşkun, C. A., & Çoban, H. (2008). Ekonomik refaha ulaşmanın ötesinde sağlıklı ve güçlü bir toplum oluşturmanın altyapısı: Sosyal sermaye [The infrastructure for building a healthy and strong society beyond achieving economic prosperity: Social capital]. *Pazarlama ve İletişim Kültürü Dergisi*, 7(26), 1-13.

Çelikten, M., Şanal, M., & Yeni, Y. (2005). Öğretmenlik mesleği ve özellikleri [Teaching profession and its characteristics]. *Erciyes Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 2, 207-237.

Dasgupta, P., & Serageldin, I. (1999). *Social capital: A multifaceted perspective*. Washington, DC: World Bank.

Dehne, M., & Schupp, J. (2007). *Persönlichkeitsmerkmale im Sozio-oekonomischen Panel (SOEP): Konzepte, Umsetzung und empirische Eigenschaften*. Berlin: Deutsches Institut für Wirtschaftsforschung DIW.

Digman, J. M. (1990). Personality structure: Emergence of the five-factor model. *Annual Review of Psychology*, 41,417-440.

Digman, J. M., & Takemoto-Chock, N. K. (1981). Factors in the natural language of

personality: Re-Analysis, comparison, and interpretation of six major studies. *Multivariate Behavioral Research*, 16(2), 149-170.

Eniç, D. (2018). Facebook sosyal sermayeyi nasıl etkiler [How does facebook affect social capital]? *Artibilim: Adana Bilim ve Teknoloji Üniversitesi Sosyal Bilimler Dergisi*, 1(1), 39 - 61.

Field, J. (2008). *Sosyal Sermaye* [Social capital], (Çev. Bahar Bilgen, & Bayram Sen), İstanbul: İstanbul Bilgi Üniversitesi Yayınları.

Field, A. (2013). *Discovering Statistics Using IBM SPSS* (4th ed.). London: Sage Publications.

Fukuyama, F. (1995). *Trust: The social virtues and the creation of prosperity*. London: Hamish Hamilton.

Fukuyama, F. (2000a). Social capital and civil society, *IMF Working Paper*, 2000, 0-74.

Fukuyama, F. (2000b). *Büyük Çözülme, İnsanın Doğası ve Toplumsal Düzenin Yeniden Oluşumu* [The Great Disintegration, Human Nature and Social Order Reconstruction]. (Z. Avcı, & A. T. Aydemir, Çev.). İstanbul: Sabah Kitapları.

Galindo, C., Sanders, M., & Abel, Y. (2017). Transforming educational experiences in low- income communities: A qualitative case study of social capital in a full-service community school. *American Educational Research Journal*, 54(1), 140-163.

Girgin, B. (2007). *Beş Faktör Kişilik Modelinin İşyerinde Duygusal Tacize (Mobbing) Etkileri*. Unpublished master's thesis, Dumlupınar Üniversitesi/ SBE, Kütahya.

Grootaert, C., & Van Bastelaer, T. (2002). *Understanding and measuring Social Capital: A synthesis of findings and recommendations from the social capital initiative*. Washington, D.C.: The World Bank.

- Hair, J. F., Jr., Anderson, R. E., Tatham, R. L., & Black, W. C. (1995). *Multivariate Data Analysis* (3rd ed). New York: Macmillan.
- Hake1, M. D. (1974). Normative personality factors recovered from ratings of personality descriptors: The beholder's eye. *Personnel Psychology*, 27, 409-421
- Harriss, J., & De Renzio, P. (1997). Missing link or analytically missing? The concept of social capital. *Journal of International Development*, 9(7), 919-937.
- Haug, S. (2013). *Soziales kapital und kettenmigration: Italienische migranten in Deutschland - Schriftenreihe des Bundesinstituts für Bevölkerungsforschung BIB*. VS Verlag für Sozialwissenschaften, Springer-Verlag.
- Hoenig, K. (2019). *Soziales kapital und bildungserfolg - Differentielle renditen im bildungsverlauf*. VS Verlag für Sozialwissenschaften, Springer Fachmedien Wiesbaden GmbH.
- Hogan, R. (1986). *Manual for the Hogan Personality inventory*. Minneapolis: National Computer Systems.
- John, O. P. (1989). Towards a taxonomy of personality descriptors. In D. M. Buss, & N. Cantor (Eds.), *Personality Psychology* (pp. 261–277). New York: Springer-Verlag.
- John, O. P., Donahue, E. M., & Kentle, R. L. (1991). *The Big-Five Inventory-Version 4a and 54*. CA: Berkeley Institute of Personality and Social Research.
- Joreskog, K. G., & Sorbom, D. (1984). *LISREL VI: Analysis of linear structural relationships by the method of maximum likelihood: User's guide*. Mooresville, IN: Scientific Software.
- Kashdan, T. B., & Roberts, J. E. (2006). Affective outcomes in superficial and intimate interactions: Roles of social anxiety and curiosity. *Journal of Research in Personality*, 40[2], 140–167.
- Kline, R. B. (2011). Convergence of structural equation modeling and multilevel modeling. In M. Williams, & W. P. Vogt (Eds.), *Handbook of methodological innovation* (pp. 562–589). Thousand Oaks, CA: Sage.
- Krug, S. E., & Johns, E. F. (1986). A large scale cross-validation of second-order personality structure defined by the 16PF. *Psychological Reports*, 59(2, Pt 2), 683-693.
- Lang, F. R., & Lüdtke, O. (2005). Der Big Five-Ansatz der Persönlichkeitsforschung: Instrumente und Vorgehen . In S. Schumann (Eds.), *Persönlichkeit. Eine vergessene Größe der empirischen Sozialforschung* (pp. 29-39). Wiesbaden: VS Verlag.
- Lang, F. R., Lüdtke, O., & Asendorpf, J. (2001). Testgüte und psychometrische Äquivalenz der deutschen Version des Big Five Inventory (BFI) bei jungen, mittelalten und alten Erwachsenen. *Diagnostica*, 47(3), 111 – 121.
- Lee, W. C., & Law, S. (2016). Hook the roles of formal and informal institutions on innovations activity (Peranan Institusi Rasmi dan Tidak Rasmi terhadap Inovasi). *Jurnal Ekonomi Malaysia*, 50(2), 167-180.
- Lei, H., & Skinner, H. A. (1982). What difference does language make? Structural analysis of the personality research form. *Multivariate Behavioral Research*, 17(1), 33-46.
- Lin, N. (2001). *Social Capital: A theory of social structure and action*. Cambridge: Cambridge University Press.
- McCrae, R. R., & Costa P. T., Jr. (1985). Updating Norman's "adequate taxonomy": Intelligence and personality dimensions in natural language and in questionnaires. *Journal of Personality & Social Psychology*, 49(3),710-721.
- McDonald, R. P., & Marsh, H. W. (1990). Choosing a multivariate model: Noncentrality and goodness of fit. *Psychological bulletin*, 107(2), 247-255.

Meier, A. (1999). *Social capital and school achievement among adolescents*. Madison: Center for Demography and Ecology, University of Wisconsin-Madison.

Nezlek, J. B., Schütz, A., Schröder-Abé, M., & Smith, C. V. (2011). A cross-cultural study of relationships between daily social interaction and the Five-Factor Model of personality. *Journal of Personality*, 79(4), 811–840.

Noller, P., Law H., & Comrey, A. L. (1987). Cattell, Comrey, and Eysenck personality factors compared: More evidence for the five robust factors? *Journal of Personality and Social Psychology*, 53(4), 775-782.

Onyx, J., & Bullen, P. (2000). Measuring social capital in five communities. *Journal of Applied Behavioral Science*, 36(1), 23-42.

Ostendorf, F. (1990). *Sprache und Persönlichkeitsstruktur. Zur Validität des Fünf-Faktoren-Modells der Persönlichkeit*.

Regensburg: Roderer.

Parlak, Ö. (2018). *Beş faktör kişilik özelliklerinin iş yaşamında yalnızlık üzerine etkisinin incelenmesi* [Investigation of the effect of five factor personality traits on loneliness in business life]. Unpublished master's thesis, Bahçeşehir Üniversitesi Sosyal Bilimler Enstitüsü, İstanbul.

Peabody, D., & Goldberg, L. R. (1989). Some determinants of factor structures from personality-trait descriptors. *Journal of Personality & Social Psychology*, 57(3), 552-567.

Plagens, G. (2011). Social capital and education: Implications for student and school performance. *Education and Culture*, 27(1), 40-64.

Putnam, R. D. (1993). The prosperous community: Social capital and public life. *The American Prospect*, 13, 35-42.

Putnam, R. D. (2000). *Bowling alone: The collapse and revival of American Community*. New York: Simon & Schuster.

Somer, O., & Goldberg, L. R. (1999). The structure of Turkish trait-descriptive adjectives. *Journal of Personality and Social Psychology*, 76(3), 431–450.

Takakura, M., Hamabata, Y., Ueji, M., & Kurihara, A. (2014). Measurement of social capital at school and neighborhood among young people. *Japan Association School Health*, 10(1), 1-8.

Tanaka, J. S., & Huba, G. J. (1985). A fit index for covariance structure models under arbitrary GLS estimation. *British Journal of Mathematical and Statistical Psychology*, 38(2), 197-201.

The Council of the European Union (2014). *Official Journal of the European Union - Notices and Announcements*. Retrieved from <https://eur-lex.europa.eu/legalcontent/DE/TXT/PDF/?uri=OJ:C:2014:183:FULL&from=LV>

The Council of Europe (2016). *Zugang von jugendlichen aus benachteiligten stadtteilen zu sozialen rechten*. Retrieved from <https://rm.coe.int/1680666720>

Tkach, C., & Lyubomirsky, S. (2006). How do people pursue happiness? Relating personality, happiness-increasing strategies, and well-being. *Journal of Happiness Studies*, 7(2), 183-225.

Toprak, E., & Bozgeyikli, H. (2011). Öğretmen adaylarının sosyal sermaye düzeylerinin karşılaştırmalı incelenmesi [Comparative analysis of pre-service teachers' social capital levels]. *Erciyes Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 1(31), 125-147.

Uslaner, Eric M. (1995). *Faith, hope and charity: Social capital, trust and collective action*. College Park, MD: University of Maryland, Unpublished Manuscript.

Uslaner, (1996). *Trust but verify. Social capital and moral behavior*. SAGE Social Science Collections.

White, J. K., Hendrick, S. S., & Hendrick, C. (2004). Big five personality variables and relationship constructs. *Personality and Individual Differences*, 37(7), 1519–1530.

Woolcock, M. (2001). The place of social capital in understanding social and economic outcomes. *Canadian Journal of Policy Research*, 2(1), 11-17.

Woolcock, M., & Narayan, D. (2000). Social capital: Implications for development theory, research, and policy. *World Bank Research Observer*, 15(2), 225-250.

York, K. L., & Oliver, J. P. (1992). The four faces of eve: A typological analysis of women's personality at midlife. *Journal of Personality and Social Psychology*, 63(3), 494-508.

Zhou, M., & Bankston, C. L. (1994). Social capital and the adaptation of the 2nd generation - The case of Vietnamese Youth in New-Orleans. *International Migration Review*, 28(4), 821-845.

About the Author

Mevlüt Aydoğmuş is a member of is the Education Faculty of Ahmet Kelesoglu, Department of Curriculum and Instruction, at Necmettin Erbakan University in Konya, Turkey, as well as editor-in-chief of the *International Journal of Modern Education Studies* and the *Journal of Educational Studies and Multidisciplinary Approaches*.

Özdal Koyuncuoğlu is a member of the Faculty of Applied Sciences at Necmettin Erbakan University in Konya, Turkey.

Appendix: Tables and Figures

Table 1. Pearson Correlation Coefficients for Relationships between Personality Traits and Social Capital Scores

| Variables | 1. | 2. | 3. | 4. | 5. | 6. | 7. | 8. | 9. | 10. | 11. | 12. | 13. | 14. |
|---|-------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|
| 1. Extraversion | 1 | | | | | | | | | | | | | |
| 2. Neuroticism | ,308* | 1 | | | | | | | | | | | | |
| 3. Agreeableness | ,421* | -,230** | 1 | | | | | | | | | | | |
| 4. Conscientiousness | ,334* | -,250** | ,428** | 1 | | | | | | | | | | |
| 5. Openness | ,367* | -,072 | ,362** | ,307** | 1 | | | | | | | | | |
| 6. Participation in the Local Committee | ,268* | 0,012 | ,124** | 0,062 | ,249** | 1 | | | | | | | | |
| 7. NGO Membership | ,120* | -,072 | 0,043 | 0,024 | ,116* | ,476** | 1 | | | | | | | |
| 8. Taking Initiative on Social Issues | ,177* | -,117* | ,273** | ,229** | ,162** | ,168** | ,166** | 1 | | | | | | |
| 9. Sense of Social Trust | ,294* | -,169** | ,171** | -,039 | 0,084 | ,220** | ,187** | ,146** | 1 | | | | | |
| 10. Sense of Local Security | ,139* | -,111* | ,146** | ,095* | 0,042 | ,144** | -,003 | ,141** | ,232** | 1 | | | | |
| 11. Neighborhood Relationships | ,329* | -,112* | ,295** | ,250** | ,196** | ,327** | ,216** | ,304** | ,306** | ,280** | 1 | | | |
| 12. Social Representation | ,203* | -,023 | ,160** | ,119** | ,236** | ,209** | ,129** | ,247** | ,146** | 0,057 | ,273** | 1 | | |
| 13. Tolerance for Differences | ,120* | 0,001 | ,187** | ,093* | ,181** | 0,085 | ,119* | ,282** | ,175** | ,118* | ,258** | ,323** | 1 | |
| 14. Sense of Belonging | ,377* | -,278** | ,293** | ,173** | ,196** | ,237** | ,134** | ,234** | ,311** | ,202** | ,337** | ,205** | ,181** | 1 |
| Mean | 3,33 | 3,10 | 3,87 | 3,64 | 3,48 | 2,03 | 1,91 | 3,06 | 2,27 | 2,72 | 2,75 | 2,92 | 3,16 | 2,77 |
| Standard deviation | 0,67 | 0,68 | 0,49 | 0,52 | 0,45 | 0,77 | 0,87 | 0,55 | 0,62 | 0,78 | 0,70 | 0,73 | 0,71 | 0,61 |

*p<0,05; **p<0,01; N=470

Figure 1. Structural Equation Model Tested to Determine the Effect of Personality Traits on Social Capital, $\chi^2=169.20$; $SD=64$; $p<0.001$

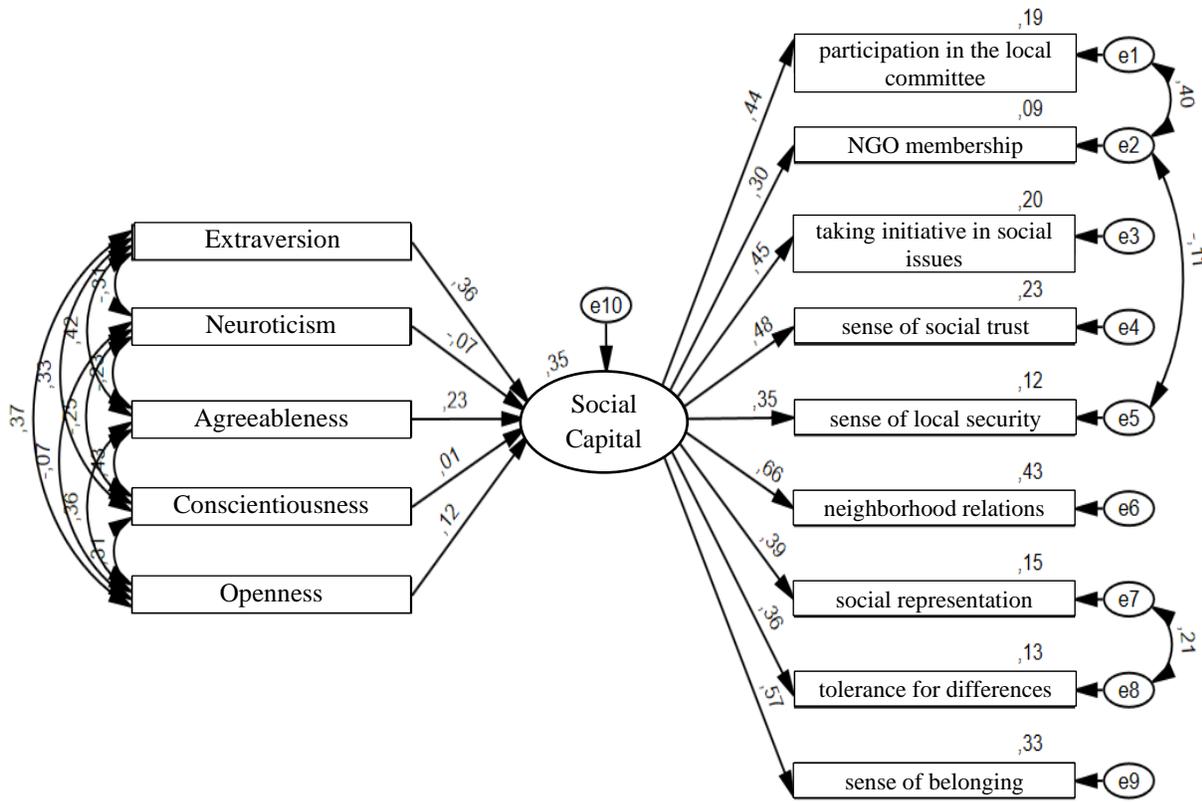


Table 2. Path Coefficients Obtained as a Result of Structural Equation Model Analysis

| Dependent variable | Independent variable | B | S.E. | β | t |
|--------------------|------------------------|-------|-------|-------|--------|
| Social capital | <--- Extraversion | 0,19 | 0,04 | 0,36 | 5,36** |
| Social capital | <--- Neuroticism | -0,03 | 0,03 | -0,07 | -1,31 |
| Social capital | <--- Agreeableness | 0,16 | 0,04 | 0,23 | 3,74** |
| Social capital | <--- Conscientiousness | 0,01 | <0,01 | 0,01 | 0,09 |
| Social capital | <--- Openness | 0,09 | 0,04 | 0,12 | 2,13* |

* $p < 0,05$; ** $p < 0,01$