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Social Capital Measurement – the Content of the *SocCap-21* Questionnaire and a Preliminary Assessment of its Psychometric Properties

Pomiar kapitału społecznego – treść kwestionariusza SocCap-21 i wstępna ocena jego właściwości psychometrycznych

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Abstract

Aim. This article was written to introduce a new questionnaire for measuring social capital called SoclCap-21into scientific circulation. The questionnaire diagnoses three interrelated constructs: 1)the individual's perceived availability of resources through the effective mobilisation of social networks, 2) the individual's trust in people/belief in humanity, and 3) the individual's involvement in pro-social activities. This content is justified by various concepts of social capital – two approaches were initially highlighted: network-relational (Bourdieu, Nan Lin) and community-systemic (Coleman, Putnam). It was assumed that these three capital components are interrelated – experiences of high-quality support from one's personal social network translate into stronger trust in people and pro-social engagement of the individual, and that this process has its roots in other capital resources – cultural capital

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and psychological capital, as well as an optimal upbringing in a generational family and a favourable regulatory profile of basic personality traits (Big Five). The complex relationships between these constructs were the subject of research documenting the validity of the questionnaire. This was preceded by analyses of the reliability of the tool.

Methods and materials. The material was obtained in two samples, which were aggregated (total $N = 2074$). They were collected using the snowball method, with the use of an online form. After factor analysis of the tool, the reliability of its three scales was determined using Cronbach's *alpha*. Path analysis was then used to examine the validity.

Results and conclusion. The study revealed the homogeneity of each of the three subscales of the tool (exploratory and confirmatory factor analyses).The consequence of this homogeneity and high Cronbach's alpha values. Path analysis showed that extroversion and educational success at school are the main predictors of psychological capital, which in turn determines an individual's access to social network resources, which is a strong predictor of trust in people and pro-social engagement.

***Keywords*:** social capital, path analysis, psychological capital, cultural capital, big five personality traits, family functionality

Abstrakt

Cel. Artykuł powstał w celu wprowadzeniu w naukowy obieg nowego kwestionariusza do pomiaru kapitału społecznego nazwanego SoclCap-21. Kwestionariusz diagnozuje trzy powiązane wzajemnie konstrukty: 1) postrzegana przez jednostkę dostępność zasobów poprzez skuteczne mobilizowanie sieci społecznej, 2) zaufanie jednostki do ludzi/wiara w człowieka oraz 3) zaangażowanie jednostki w działania prospołeczne. Taka treść ma uzasadnienie w różnych koncepcjach kapitału społecznego – wstępnie wyeksponowano dwa podejścia: sieciowo-relacyjne (Bourdieu, Nan Lin) i wspólnotowo-systemowe (Coleman, Putnam). Założono, że te trzy kapitałowe komponenty są powiązane – doświadczenia wysokiej jakości wsparcia z osobistej sieci społecznej przekładają się na silniejsze zaufanie do ludzi i zaangażowanie prospołeczne podmiotu, a taki proces ma źródła w innych zasobach kapitałowych – w kapitale kulturowym i kapitale psychologicznym oraz optymalnym z punktu widzenia procesie wychowawczym w rodzinie generacyjnej oraz korzystnym regulacyjnie profilem bazalnych cech osobowości (Big Five). Złożone relacje między tymi konstruktami były przedmiotem badań dokumentujących trafność kwestionariusza. Poprzedzone zostały analizami rzetelności narzędzia.

Metody i materiały. Materiał uzyskano w dwóch próbach, które zagregowano (łącznie N = 2074). Skompletowano je metodą śnieżnej kuli, z użyciem formularza internetowego. Po analizie czynnikowej narzędzia określono rzetelność jego trzech skal metodą alfa Cronbacha. Następnie do zbadania trafności użyto analizę ścieżek.

Wyniki i wnioski. Badania ujawniły jednorodność każdej z trzech podskal narzędzia (eks-

ploracyjne i konfirmacyjne analizy czynnikowe). Konsekwencją jednorodności są wysokie wartości Alfa Conbacha, Analiza ścieżek wykazała, że ekstrawersja i sukces edukacyjny w szkole są głównymi predyktorami kapitału psychologicznego, ten zaś decyduje o uzyskaniu przez jednostkę dostępu do zasobów sieci społecznej, który z kolei jest silnym predyktorem zaufania do ludzi i zaangażowania prospołecznego.

Słowa kluczowe: kapitał społeczny, kapitał psychologiczny, kapitał kulturowy, analiza ścieżek, funkcjonalność rodziny, wielka piątka osobowości

Introduction

This paper introduces a new questionnaire for measuring social capital called *SoclCap-21* into scientific circles[1]. The questionnaire diagnoses three interrelated constructs: 1) individuals' access to resources through effective mobilisation of their social network; 2) individuals' trust in people/belief in humanity; and 3) individuals' engagement in pro-social activities.

The content of the research instrument is justified in view of various concepts of social capital. Hauberer (2011) thoroughly analysed five crucial approaches to the construct in question. Two of them – the concepts of Pierre Bourdieu and James Coleman – were assigned founding status. This special status results not only from the date of publication of both authors' works, but also from the fact that two main paradigms of social capital can be derived from these pioneering concepts (Esser, 2008; Mikiewicz, 2011; Portes, 2000). The first paradigm, derived from the concept of Pierre Bourdieu (1986) and, in part, from the concept of Coleman (1988), and currently developed by Nan Lin (2001, 2008), could be called a *network-relational* approach. It corresponds to the psychologist's work on social support and its relationship to the processes of regulation and psychological integration (see Cohen *et al*., 2000), in the context of maintaining health, development and adaptation. The second paradigm of social capital derives from Coleman's concept (1988). This author defined social capital by indicating its function from the perspective of an organisation/institution. Social capital refers to the characteristics of organisations and the relationships between people within their structure that enable

[1] The research was conducted as part of the project *Kapitał psychologiczny, kulturowy i społeczny w kontekście pozytywnej adaptacji – konstrukcja i walidacja baterii standaryzowanych narzędzi pomiaru* [Psychological, cultural and social capital in the context of positive adaptation – construction and validation of a series of standardised measurement tools], funded by the University of Wrocław as part of the programme *Inicjatywa Doskonałości Uczelnia Badawcza* [Research University Excellence Initiative], 2021–2022.

the realisation of organisational and individual goals that would not be achievable in its absence. Coleman's concept frames social capital in terms of a mutually beneficial relationship between the individual and the organisation. For Coleman, social capital is connected with human capital. The interest of economists and political scientists in social capital has shifted the study of this phenomenon to the macro social scale (Portes, 2000). This has resulted in a new paradigm, the construction of which should be attributed primarily to Putnam (2000; Putnam *et al*., 1993), although historically its much earlier traces can be found in the thought of Aristotle (*Nicomachean Ethics*) or, closer to the present day, in the texts of de Tocqueville (1951). From a scientific perspective, this approach can be called *systemic-community*. In it, the concept of social capital refers to three interrelated attributes of social life: *generalised trust, norms of reciprocity* and *networks of civic engagement*. The co-occurrence of these attributes increases the effectiveness of the community by facilitating the coordinated actions of many people. Such systemic capital is beyond the control of individuals. It is not owned by anyone, but is a set of highly functional features of the social system that facilitate the harmonious coexistence and effective cooperation of people and communities. They promote the creation of community resources and the multiplication of the common good, and possibly — although this is their secondary function — enable people to use these resources to enhance their personal well-being. Social capital, understood systemically, depends on cultural factors – it reflects the values and norms cherished in society, which determine people's social obligations and, in general, promote the integration and development of the civic community.

From a psychological perspective, both paradigms can be reconciled by focusing on the subjective functioning of the individual in two complementary roles – *recipient* (consumer) and *provider* (producer) of social resources.

In this approach, the main components of social capital become the properties of the individual as an active subject and/or the characteristics of the subjectively regulated relations of the individual with their social network. The *individual-relational* (psychological) perspective meets the *community-systemic* (social) perspective here. On the one hand, in the individual's subjective decisions to seek and use support from their social network, and on the other hand, in the individual's subjective decisions to invest their own resources in building a social network (with the hope of a return) or even to selflessly devote their own resources to other people or ideas for the common welfare. Most people probably balance these two perspectives in their behaviour or try to reconcile them in certain situations (individual vs. community), while deviations, towards one or the other, allow people to be differentiated on a scale whose extremes are antisociality and altruism (Kwiatkowski, 2024). Both of these perspectives were taken into account when selecting the variables that make up social capital. When testing the model of links between different types of capital — cultural, psychological,

and social — it was assumed that the development of these types of capital in ontogenesis takes place in the sequence given above and in the development of social capital. A person's pro-social productivity results from their previous positive experiences in the social network.

Theoretical Framework

The theoretical framework for the considerations in this paper is formed, on the one hand, by Pierre Bourdieu's concept of capital (1986), supplemented by other concepts – primarily those of social capital (Coleman, 1988; Esser, 2008; Lin, 200; Putnam, 2000; Sztompka, 2003), and on the other hand, psychological resource theories. Among these theories, a special role should be assigned to the theory of *psychological capital* (Luthans *et al*., 2004; Luthans *et al*., 2007) and other psychological resource theories (Antonovsky, 2005; Hobfoll, 2002, 2006; Erikson, 1985; Kobasa *et al*., 1982; Markstrom & Marshall, 2007). The construct of psychological capital shows many similarities with the construct of resilience (Kwiatkowski, 2019, 2015; Ostaszewski, 2014) or the construct of wisdom (see Luthans *et al*., 2007). Particularly relevant are the connotations with Sternberg's theory (1998), which identifies *concern for the common good* as an essential feature in defining this mental competence. In this view, pro-sociality — concern for non-personal goods — is a necessary condition for the development of wisdom, while antisociality categorically excludes it, and simple egocentrism hinders its development. Resources — constituting psychological capital — can be referred to in sociology in terms of Coleman's (1988) concept of *human capital* and Bourdieu's (1986) concept of *cultural capital*, whose scopes seem to partially overlap. Regardless of how these resources are named and from which approaches they are derived, it can be assumed that there are certain *embodied characteristics* – properties of the human mind that are used to regulate one's relationships with the social environment. They do so more or less effectively, and the level of this effectiveness can be reliably measured by psychological tests, recognising that this measurement reflects the psychological capital of the individuals.

Bourdieu (1986) assumed that various forms of capital — economic, cultural, and social — are transformed into one another, and their effective transformations give individuals the ability to maintain or strengthen their social position while excluding other entities that are less effective in competing for status.

In this study, social capital will be analysed in a broader context, taking into account the relationship between this capital and other forms of capital, such as *cultural capital* and a relatively new theoretical category – *psychological capital*. Some researchers see the integration of various types of human capital into a functional whole – especially

the relationship between social and psychological capital – as an interesting direction for theoretical and empirical research, viewing psychological capital as the missing piece of the theoretical puzzle created based on sociology (Dóci *et al*., 2023).

Sociological theories highlight the importance of personal investment in social relationships and building a support network that is useful to the individual. According to Bourdieu's theory, these investments and, in general, an individual's ability to construct rich social networks depend on the general abundance of various capital resources, both economic and cultural. In turn, psychologist Hobfoll (2002, 2006) lists many regularities that govern the effects of human management of adaptive resources. He distinguishes certain categories of particular importance. These are *energy resources*. Their use and investment can improve the functioning of an individual's complex resource system and stimulate so-called *growth spirals* within it.

Antonovsky (2005) specifies only one such meta-resource, which is called the *sense of coherence*. It encompasses three beliefs (meaningfulness, comprehensibility, and manageability) which, when combined, form a coherent structure with great regulatory power. The concept of psychological capital stems from a similar assumption about the functioning of psychological resources that determine effective coping with problems (Luthans *et al*., 2004), *i.e*., generating or transforming existing resources into other resources that are more useful in a given situation, and the use that an individual can make of their resources in real-life situations. The construct of psychological capital was intended by the authors to explain the ability to effectively manage one's professional career and avoid burnout at work. However, it can be used to analyse other areas of human functioning. In psychological terms, the source of this form of capital is personality and temperamental traits, as well as an individual's constructive experiences in coping with adaptation problems. This is quite obvious. If we broaden the perspective to include the socio-cultural context, we should assume that an individual's cultural capital can be transformed into psychological capital. The characteristics that make up *cultural capital* generate emancipatory potential (Czerepaniak-Walczak, 2006; 1995). This assumption is justified if, in addition to *kindersztuba* [ang. good breeding] and competent participation in high culture, the scope of cultural capital includes a behavioural and mental component – *academic habitus*, which is to some extent a consequence of school habitus. It promotes the acquisition of cognitive competence, which helps people become the authors of their own lives and strengthen their status. In this sense, cultural capital can be treated as an important source of psychological capital. It is worth noting that psychological capital can contribute to the effective regulation of people's relationships with their social environment. From a capital perspective, psychological capital can therefore be understood as an important source of social capital. Thus, taking into account the three intangible capitals — cultural, psychological, and social — we can assume the exis-

tence of a causal relationship between them. Most likely, these are circular relationships, because, according to Hobfoll's theory (2006), resources can be accumulated in a spiral manner – having some resources enables their effective investment, resulting in growth in other resource areas. In turn, serious deficits in certain resources usually lead to the depletion of other resources and the dysfunction of the processes regulating their system. Unfortunately, in a cross-sectional correlational study, it is not possible to verify circular effects. It is only possible to consider unidirectional relationships. In this study, it was assumed that psychological capital is a *mediator* of the relationship between social capital and its personality, family and cultural antecedents.

Social capital is a more comprehensive theoretical category than Bourdieu assumed in his model. When constructing a tool for studying social capital, it is worth considering not only its relational aspect, but also its systemic aspect (Esser, 2008). The benefits that constitute social capital are communal – they become available to members of a community/organisation by virtue of their membership (Coleman, 1988; Putnam, 2000). The subjective involvement of people in the creation of resources available to others, *i.e*., broadly understood activity for the benefit of other people or for the common good, *i.e*., pro-social engagement, will be the outcome variable in the analyses presented below.

Research Tasks

The aim of the research presented in this study can be summarised in three main tasks. The first task is to verify the factor structure of the *SocCap-21* instrument in terms of its consistency with the preliminary assumptions, *i.e*., its compliance with the content of the theoretical construct containing three categories/dimensions of social capital: access to resources through the mobilisation of support within one's own social network, attitudes of trust in people/belief in humanity, and respondents' engagement in pro-social activities and community resources. This structural analysis is followed by a determination of the internal reliability of the tool's factor subscales (using Cronbach's alpha procedure).

The second task is to examine the links between the above-mentioned dimensions of social capital to confirm the relationship between the three components of the construct. The relationships between them have been mentioned previously in the author's earlier studies (Kwiatkowski, 2024).

The third task — the most complex one — is to examine the connections between these (three) dimensions that build social capital and variables (three) that create cultural capital, (one) variable representing psychological capital, and their determinants in the form of (four) family variables (building the educational functionality

of the generational family) as well as a set of (five) personality variables from the *Big Five* model. If we assume that each variable creates some kind of relationship with any other variable, then even if we exclude feedback relationships between variables, it is necessary to check several dozen connections within a single model. A graphical representation of such a detailed structure of dependencies would be difficult to interpret. Therefore, the hypothetical dependencies between variables are presented in a slightly reduced form, grouping the variables into more general content categories. When analysing the chart below (Figure 1), it should be noted that it conceals a more complex network of unidirectional dependencies.

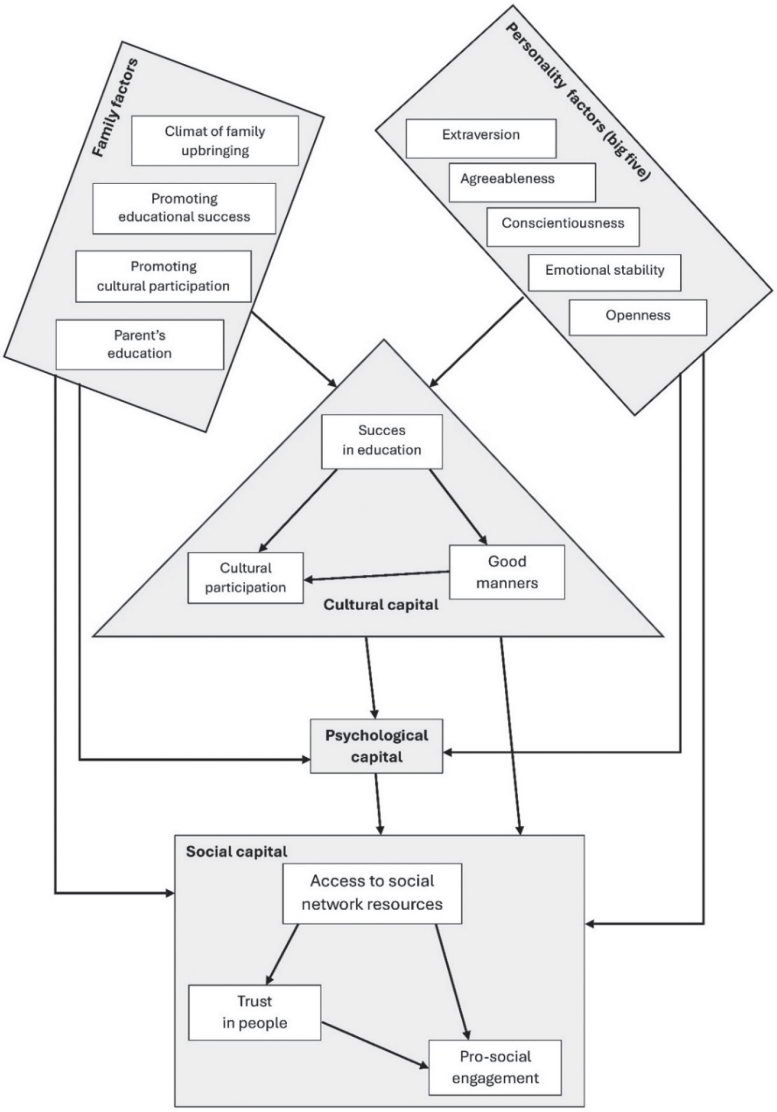
Some of these interdependencies between variables have already been tested in previous studies aimed at validating another questionnaire – *CulCap-15*, a scale for measuring three components of cultural capital (Kwiatkowski, 2024). The same four characteristics of the family environment were analysed as in this study as variables determining cultural capital, while the three variables constituting cultural capital were positioned as separate and specifically interrelated mediating factors. These mediating factors can contribute to the accumulation of psychological capital (measured as a single dimension).

The analyses presented in this study supplement the same system of relationships by adding five factors to the set of distant predictors (*exogenous variables*) in the form of four characteristics of the family environment of origin – personality traits from the so-called *Big Five model* (extraversion, agreeableness, conscientiousness, emotional stability, and openness to experience). The variables explained by the entire model now include not only psychological capital, but also three dimensions of social capital (with pro-social engagement as the outcome variable of the entire model). Psychological capital appeared here as a crucial mediator between social capital and its more distant sources (this distant causal background was created by family factors, personality traits from the Big Five model, and cultural capital). The importance of psychological capital as a mediator between personality traits and various measures of human functioning has been documented in the literature (Hu *et al*., 2023; Nambudiri *et al*., 2020).

A complex model of mediating effects requires testing on the largest possible sample. Therefore, an aggregated set of cases from two different studies (total N = 2,074) was used for testing. Combining the two sets was considered reasonable because they differed only slightly in terms of socio-demographic characteristics. The properties of both sets are discussed in another study (Kwiatkowski, 2024). The research material was collected in both research samples using an electronic questionnaire. The data sets were compiled using the snowball method. The data collection process was completed when no new entries appeared in the data set for a long time.

Figure 1

Simplified model of relationships between family and personality factors, as well as psychological and social cultural capital – tested using path analysis



The research material was analysed in two stages. In the first stage, the structure of the social capital measurement instrument was checked by determining its factor structure and assessing the reliability of individual subscales. In the second stage, structural modelling was carried out, first testing the so-called *saturated path model*, in which individual exogenous variables (*i.e.*, family and personality factors) and endogenous

variables (*i.e.*, variables defining three types of capital: cultural, psychological, and social) were linked together. All possible relationships between variables were included in this model (the model, therefore, had zero degrees of freedom). Details of this stage of the analysis have been omitted due to space limitations. Ultimately, all relationships between variables with insignificant path coefficients (for which $p > 0.05$) were eliminated from this full (saturated) model. For the reduced path model, it was possible to calculate its fit indices to the empirical data (*CFI*, *TLI* and *RMSEA* indicators were selected). Particularly valuable information from this model is the data on the relationships between the three social capital factors and between each of these three variables and all other factors in the model. This information allows conclusions to be drawn about the theoretical validity of the *SocCap-21* scale.

Characteristics of Variables and Their Measurement

Personality Traits – Characteristics From the Big Five Model

These traits are largely individual characteristics determined not only by ontogenetic experience but also, to a significant extent, by biological influences. This is indicated by the results of research in behavioural genetics (Power & Pluess, 2015; Vollrath *et al*., 2024) and relatively strong correlations between the Big Five traits and temperament traits (Strelau, 1992). For this reason, they were given the status of exogenous variables in the analyses, *i.e*., variables whose variability is not explained by other variables in the tested model. It was recognised that the Big Five traits can significantly determine the development of psychological capital, although their relationship with the formation of cultural capital cannot be ruled out, nor can their direct relationship with the formation of the dimensions of social capital included in the analyses. The content of the Big Five model variables is generally known, so it will only be briefly discussed using the categories used in the construction of the tool for their measurement (Donnellan *et al*., 2006; Topolewska *et al*., 2014). *Extraversion* means a high level of activity, energy, sociability, and social confidence (assertiveness); its deficit can be an obstacle to an individual building a rich social network. *Agreeableness* is understood in theory as a positive (*vs*. negative) attitude towards people. It can be a trait that makes it easier to win people over in social relationships. Its deficit means distrustful, selfish, harsh, rude and emotionally cold treatment of other people and a tendency to compete with and oppose them. It can be a factor limiting the building of social capital, but in certain circumstances, it can promote the acquisition of psychological capital (as a positive consequence of experiencing self-sufficiency). *Conscientiousness*, *i.e*., a high level of organisation, reliability in achieving goals and tasks, as well as a tendency towards order and diligence, seems to build mainly psychological capital and,

to some extent, cultural capital (*e.g.*, systematic work at school can generate knowledge). A deficit in this trait may hinder the accumulation of psychological and cultural capital. *Emotional stability* is understood in theory as a low level of excitability and a high level of emotional balance, as well as the resulting emotional resilience and high tolerance for frustration. This trait should primarily facilitate the generation of psychological capital. A deficit in this area seems to hinder its development. The last trait of the Big Five personality traits — *openness to experience* — is intellectually active, open, creative and reflective functioning, and also means a rich imagination and a wide range of interests. These traits may therefore be associated with the formation of cultural capital and psychological capital. A deficit in this area, in the form of closed-mindedness, dogmatic and rigid personality traits, can significantly hinder the accumulation of these types of capital. The Big Five traits were measured using the IPIP-20 questionnaire. This is a carefully shortened version of the IPIP-50 scale, containing precisely selected items that diagnose the individual traits included in the Big Five concept. All these shortened personality scales are characterised by satisfactory reliability and sufficiently high correlations with other measures of the traits of the assumed five-factor model. The Polish adaptation of the questionnaire (Topolewska *et al*., 2014) was used in the studies analysed below.

Characteristics of the Family Environment (Educational Functionality of the Family of Origin)

The research took into account four characteristics of the family of origin. One of these characteristics is essentially a description of the functioning of a family system that creates a *positive climate for the parenting relationship* – it is a fusion of involved/authoritative parenting (Baumrind, 2013; Lewis, 1981), good communication within the family and the resilience of the family as a system (Black & Lobo, 2008). Other characteristics of a functionally educational generational family may contribute to building children's cultural capital. These include: *promoting children's educational success* (parents' activities encouraging learning and educational achievement, creating optimal conditions as well as opportunities for children to acquire knowledge) and *promoting children's participation in high culture* (encouraging participation in culture, organising children's participation in valuable cultural events). The three family factors listed above were examined using a self-designed instrument, which is discussed in detail in another paper (Kwiatkowski *et al*., 2024). In view of the research, the individual measures are factor-homogeneous. They are characterised by satisfactory internal reliability indicators. The fourth characteristic from the group of family factors is the *level of parental education* (aggregated indicator of the father's and mother's education). The index is the sum of numbers from 1 to 3 assigned to the educational levels of each parent (or the educational level of one parent multiplied by two when data on the educational level

of the other parent was missing). All four characteristics of the family environment were previously analysed in a study on the determinants and consequences of cultural capital (Kwiatkowski, 2024). These analyses were conducted on the same sample used in this study. They demonstrated a connection between family variables and the level of psychological capital. The research in this study was conducted in a more extensive format, taking into account more variables.

Cultural Capital

Cultural capital, referring to the work of Bourdieu and Passeron (1990) as well as Lareau and Lamont (1988), can be defined as cultural signals that indicate high status, used in cultural and social selection. The purpose of introducing this theoretical category is its usefulness in understanding how culture and education contribute to social reproduction. Social reproduction means recreating and preserving the position occupied by individuals and communities (classes, strata) in the hierarchical social structure. Cultural capital comes in three forms: 1) in an *embodied state*, *i.e.*, in the form of long-term dispositions of the mind and body; 2) in an *objectified state*, *i.e.*, in the form of cultural goods accumulated by the subject (pictures, books, dictionaries, instruments, machines, *etc.*); and 3) in an *institutionalised state* – in which case it is a form of objectification, giving formal guarantees to the dispositions that make up cultural capital (Bourdieu, 1986). In this study, the essential category is the embodied form of cultural capital. The fundamental components of cultural capital in its embodied form are the good manners acquired by the individual (appropriate to the middle or upper class) and participation in high culture. However, cultural capital manifests itself not only at the behavioural level as conventional activity in relation to the requirements of middle or upper-class culture. An important part of it is contained in human cognitive structures in the form of academic knowledge as well as attitudes towards knowledge and its acquisition. Embodied cultural capital, therefore, includes various competences and attitudes learned in socio-cultural practice – in the family, at school and in contact with institutions promoting culture. Many of these competences are linguistic in nature, *i.e.*, they concern culturally acquired linguistic content and ways of expressing oneself and communicating with other people. In other words, cultural capital is a specific code that an individual uses to communicate with the world, signalling their cultural affiliation, position in the social hierarchy or aspirations in these areas. Bernstein (1980, 2003) writes in this context about two linguistic codes: restricted (typically used by the lower class) and extended (acquired by members of the middle and upper classes in the course of family socialisation and school education). An important element of cultural capital is the individual's ability to verbalise thoughts using the developed code. Individuals acquire this ability essentially unconsciously through everyday communication within their family of origin. They later perfect it at school, which ultimately

contributes to better educational results and a privileged position for the individual in the social structure. Cognitive and linguistic competences, which are interrelated and accumulated in a long-term process, as a component (along with habits, attitudes and behaviour patterns) of the structure called habitus by Bourdieu, are an important element in building an individual's cultural capital. The above cognitive theme has been described as an individual's established orientation towards acquiring knowledge/educational success. This means that not only cognitive competence (knowledge) itself, but also the active pursuit of acquiring and deepening it, has been included in the concept of cultural capital. This pursuit (inclination, orientation, and motivation to acquire knowledge) is crucial in the context of preparing an individual to function productively in today's rapidly changing world. In the literature on the subject, these characteristics are referred to as academic habitus (de Moll *et al*., 2024).

In this paper, cultural capital is considered as a factor that facilitates the accumulation of psychological capital – a complex set of competences useful in creating constructive life changes and career development — and the accumulation of social capital — building a rich network of social relations and exhibiting socially productive behaviours (supporting other people and/or building community). The three components of traditionally understood cultural capital – participation in high culture, good manners and academic habitus (competencies and involvement in education). They were measured using a self-descriptive research instrument, the properties of which were discussed in another study (Kwiatkowski, 2025).

Psychological Capital

Psychological capital is a concept from the field of positive psychology. The concept of psychological capital was formulated as a conceptual "umbrella term" covering four source constructs: *optimism* (Carver & Scheier, 2014; Scheier & Carver, 1985; Seligman, 1998), *hope* (Snyder, 2000, 2002), *self-efficacy* (Bandura, 1977, 1997), and *resilience* (Wagnild & Young, 1993). The authors of the concept discussed above have combined the above theoretical constructs into a single adaptive *meta-resource*, on which the functioning of an adult in the area of work and career largely depends (Luthans *et al*., 2007). However, the real significance of psychological capital seems to go beyond these two spheres – it is an asset of universal importance in regulatory processes. It is, in fact, something similar in significance to the *sense of coherence* in the concept of *salutogenesis*. To measure psychological capital, we used our original Polish version of the *PsyCap-12R* questionnaire. This tool is a revised version of the scale proposed by Timo Lorenz and co-authors. The revised version, prepared for the Czech population, contains modified items of the resilience subscale (Dudasova *et al*., 2021) and, after this modification, has better psychometric properties than the original version (Lorenz *et al*., 2016). The original version of this scale has a hierarchical structure

with one secondary factor, as demonstrated by confirmatory factor analyses conducted by the authors of both versions of the research instrument. This was also confirmed by studies of the Polish version, carried out on the data set analysed in this study. Depending on the factor analysis method, the tool reveals a one- or two-factor structure. In confirmatory factor analysis, the one-dimensional structure has acceptable fit indices. The internal reliability indices calculated for the single-factor structure of the instrument are satisfactory (Cronbach's $\alpha = 0.92$). For the above reasons, the tool was used in the presented analyses as a single measure of the psychological capital construct, without separating the four source categories that constitute this construct.

Social Capital

Social capital essentially refers to the capital resources available to individuals, which can be effectively mobilised and used as a result of their relationships with other people (Bourdieu, 1986) or with collective beings or communities (Coleman, 1988; Putnam, 2000). It is therefore the resources at the disposal of other entities, which an individual can effectively mobilise for their own purposes by first investing their own resources in establishing themselves in a sufficiently rich social network or community. Social capital understood in this way (in the relational sense) can be relatively easily transformed into other forms of capital (*e.g.*, good relationships enable the acquisition of financial or material resources in the form of loans or donations, and an individual's material wealth can contribute to the effective building of social networks and prestige in interpersonal relationships). However, social capital can be considered not only from an individual perspective as a pool of resources within an individual's reach, but also from a systemic perspective – as a property of an organisation or community, the beneficiaries of which can be all members of the community. In this sense, social capital is not the property of individuals, but is a systemic property and encompasses the characteristics of a community that facilitate the effective functioning of all its members. From this perspective, individuals need to function not only as consumers of social resources but also as their producers or donors. From a psychological perspective, such activity can be described as pro-social engagement – a pro-social attitude. Some concepts of social capital include the category of social trust, which is also a kind of attitude resulting from the expectation of good coming from other people, based on mutual obligations or belief in the pro-social/good nature of people. In these approaches, trust is treated as the basic "bond" of constructive interpersonal relationships at various levels of social organisation (Esser, 2008; Fukuyama, 1995; Sztompka, 2003). For this reason, the category of trust has been included in the construct of social capital. This construct, tested in the studies presented below, ultimately consists of three components: 1) access to resources through the mobilisation of support within one's own social network

(the most obvious component of social capital as understood according to Bourdieu's approach); 2) trust in people/belief in humanity (an attitude that is the basic "glue" of interpersonal relationships, most likely generated by experiencing constructive, supportive behaviours of other people within their social networks, postulated as an important factor of social capital in several influential theories; see Esser, 2008; Fukuyama, 1995; Putnam, 2000; Sztompka, 2003); 3) individual engagement in pro-social activity – actions for the benefit of the community, the common good and civic engagement, *i.e.,* broadly speaking, the attitude of a "giver" of resources within the networks, organisations or social systems in which a given individual functions (in this work, this feature will be treated as a consequence of the first two dimensions of social capital). Taking into account the above general assumptions, social capital was operationalised by selecting diagnostic items for the three constructs subordinated to it.

Each of these constructs was initially assigned a variety of Likert-type items, which were then empirically selected and combined into coherent sets reflecting the three components mentioned above. The items for this scale were generated by the author of the research instrument and discussed with several scientific colleagues, which led to their modification and the creation of different versions. The extensive pool of items prepared in several trials was subjected to factor analysis as part of a pilot study. At this stage, exploratory factor analysis with Promax oblique rotation was used. The oblique rotation technique allows for correlations between the extracted factors. It is appropriate when, according to theory (or even common sense), such correlations between factors can be expected. As a result of this analysis, items that were weakly correlated with the theoretically postulated factors or relatively strongly correlated with more than one factor were eliminated from the pool at the outset. The factor loadings were used as a guide. It was assumed that within a subscale, the loading value should be above 0.50, while any item loadings relative to other subscales should be less than 0.50. This stage of the construction of the social capital subscales will not be discussed in detail here. As a result, a set of 18 items was finally modelled – six for each of the three postulated constructs. This first version of the research instrument, after confirming its relatively good structural properties (factor homogeneity and internal reliability) of the generated subscales, was used in previously published studies (Kwiatkowski, 2024). To increase the reliability and validity of the measurement, it was decided to increase the number of scale items from six to seven. Items were added whose content generally characterised the essence of a given factor of the instrument and, where appropriate, supplemented a given factor with an aspect that had been neglected in the original version. The table below contains the full set of *SocCap-21* items with their assignment to subscales.

Table 1

Subscales and content of the SocCap-21 questionnaire items – description of the research instrument content

Subscale and item number	Item content
NetRes_1	Many people want to have a good relationship with me.
NetRes_2	I have true friends – faithful and proven.
NetRes_3	I am surrounded by people who are valuable and respected by others.
NetRes_4	My friends are always willing to help me with my problems.
NetRes_5	I have friends who are able to do many things for me.
NetRes_6	There are people around me who make me feel more self-confident.
NetRes_7	Thanks to my good relationships with others, some interesting career opportunities and/or a good life are opening up for me.
TruPeo_1	From my observations, it is clear that human solidarity is a fiction. (R)
TruPeo_2	You can count on justice in this world.
TruPeo_3	I think you can only rely on yourself. (R)
TruPeo_4	People usually keep their promises, even when it is not convenient for them.
TruPeo_5	People are usually mean by nature – it's innocent to believe them. (R)
TruPeo_6	In this world, you can count on human kindness and good intentions.
TruPeo_7	In this world, good generally prevails over evil – there is more good than evil and injustice among people.
ProSoc_1	I am involved in a useful organisation.
ProSoc_2	I have the soul of a committed social activist.
ProSoc_3	I am looking for opportunities to do something good for others.
ProSoc_4	I appreciate people who are involved in civic activities.
ProSoc_5	I am deeply involved in social issues – I am committed to fighting for good causes.
ProSoc_6	I persuade others to get involved in social issues.
ProSoc_7	I want to do something socially meaningful that will help others live better, with more dignity.

Note. *NetRes* – access to resources through the mobilisation; *TruPeo* – trust in people/belief in humanity; and *ProSoc* – engagement in pro-social activity; (R) item requiring reversal of scoring when calculating results.

The subscales correspond in terms of content to the constructs for which they were designed to measure. The *NetRes* scale describes an individual who perceives themselves as valuable to other people, someone who is cared about by others. These people are "proven" in various circumstances. They are valuable and respected by others. They have extensive opportunities to provide support to individuals and are willing to do so. The individual, in turn, feels that their contacts open up career opportunities

or opportunities to build a life for themselves. The *TruPeo* scale is constructed from statements with positive and negative content. Positive items describe the individual's beliefs about the world as a fairly organised place where people usually keep their word and have good intentions as well as kindness towards others, and where, ultimately, good prevails over evil. Negative items describe an individual's alienation in their social environment – a lack of solidarity in interpersonal relationships, loneliness among people (the need to rely solely on oneself), and a belief in the evil nature of human beings. Negative items require the scores to be reversed. The *ProSoc* subscale consists exclusively of positive items. The individual describes themselves as a person who not only actively works for the benefit of others or for the common good, but also encourages others to become involved in social/civic issues and highly values other socially active people. Their social activity stems from a deep commitment and from the satisfaction they derive from helping others or working for the common good.

Results

Factor Structure and Basic Psychometric Properties of the SocCap-21 Scale

The studies presented in the tables in the following sections examined the structure of the tested instrument using exploratory and confirmatory factor analyses. Both forms of factor analysis were necessary, each for different reasons. Exploratory factor analysis leads to the spontaneous generation of a factor matrix – it produces a structure that emerges from the data without any predetermined substantive formula. The structure that emerges is determined by statistical criteria for factor extraction and rotation. A factor eigenvalue above 1 was adopted as the criterion, and oblique rotation (Promax) was used as the rotation technique. The above procedure led to the solution of three oblique factors, which explained 16.3%, 15.7%, and 10.5%, respectively. The content of these factors corresponds exactly to the content of the constructed subscales. Based on factor loadings, the questionnaire items can be clearly assigned to the assumed dimensions of the research instrument. These factors proved to be significantly correlated with each other. The strongest correlation (r = 0.54, $p < 0.001$) occurred between the second factor (access to resources through the mobilisation of support within one's own social network) and the third factor (trust in people/ belief in humanity). The first factor (engagement in pro-social activity) also correlates with the second factor (access to resources…). The correlation between them is relatively high (r = 0.50, p <0.001). The first factor (engagement in pro-social activity) correlates with the third factor (trust in people/belief in humanity), but the correlation is slightly weaker than the other two ($r = 0.40$, $p < 0.001$). Despite the correlation between the factors, a hierarchical analysis of diagonal factors was not undertaken because the content of the factors describes

phenomena that are clearly distinct in theoretical terms. Therefore, even if it were possible to extract a factor superior to the primary factors, its interpretation would remain uncertain.

Table 2

Factor analysis of the SocCap-21 scale, factor extraction carried out using the least residuals method with Promax oblique rotation

subscales/items	Factors		
	1	**2**	**3**
NetRes_1	.13	**.50**	- .03
TruPeo_1	.12	.02	**- .61**
ProSoc_1	**.66**	- .14	.00
NetRes_2	- .11	**.77**	- .07
TruPeo_2	.15	- .06	**.49**
ProSoc_2	**.81**	- .04	- .04
NetRes_3	- .01	**.64**	.07
TruPeo_3	.11	- .07	**- .51**
ProSoc_3	**.46**	.22	- .01
NetRes_4	- .09	**.79**	.01
TruPeo_4	.16	.04	**.35**
ProSoc_4	**.45**	.14	.03
NetRes_5	- .05	**.78**	- .06
TruPeo_5	.14	.09	**- .72**
ProSoc_5	**.84**	- .03	- .08
NetRes_6	- .06	**.70**	.01
TruPeo_6	.06	.10	**.63**
ProSoc_6	**.82**	- .11	- .05
NetRes_7	.12	**.48**	.08
TruPeo_7	.14	.00	**.53**
ProSoc_7	**.67**	.04	.01
Variance explained by the factor	16.3%	15.7%	10.5%
Correlations between factors			
(1)	x	.50	.43
(2)		x	.54
(3)			x

Note. NetRes – subscale "access to resources through the mobilisation of support within one's own social network"; *TruPeo* – subscale "trust in people/belief in humanity"; and *ProSoc* – subscale "engagement in pro-social activity." Bolded factor loadings indicate the items' affiliation with the respective subscales.

Confirmatory factor analysis — performed next — made it possible to check the goodness of fit of predetermined factor solutions, whose meaning was derived from theory and previous research (Kwiatkowski, 2024). After preliminary modelling of the 3-factor structure

of the tool in exploratory analyses, with a secondary factor that could be isolated, it was decided that the fit to the empirical data should be checked: 1) one-dimensional factor solutions for each factor (subscale) of the instrument as a separate variable; 2) the full scale including all items from the three factors of the *SocCap-21* scale; and 3) three factors correlated with each other. Relatively high fit indices were expected for individual subscales and for the structure of three correlated factors (the latter should reveal better fit indices than the structure of three uncorrelated factors). Table 4 contains data testing the models of the instrument's structure.

The first research task was to confirm (as shown in Table 1) the 3-factor structure of the *SocCap-21* scale. To this aim, two analyses were performed. Exploratory factor analysis (*EFA*) was used to determine whether the study replicates the 3-factor structure of the instrument proposed in preliminary research. In turn, confirmatory factor analysis (CFA) was used to determine how well the postulated structure – comprising three mutually correlated factors – fits the empirical data. Another research task was to determine the reliability of the measurement using individual subscales of the *SocCap-21* questionnaire. To do so, the discriminant power coefficients of individual questionnaire items were calculated in relation to the identified subscales, and Cronbach's α coefficients were calculated.

Table 3

Results of confirmatory factor analysis of the SocCap-21 scale for the solution of three mutually correlated factors (N = 2074)

Podscals/	**Statistics for individual items**				
Items		***Regression coefficient***	***SE***	***Z***	***p***
NetRes	Item 1	.57	0.02	25.6	<.001
	Item 4	.79	0.02	33.3	<.001
	Item 7	.65	0.02	32.6	<.001
	Item 10	.81	0.02	38.3	<.001
	Item 13	.80	0.02	36.3	<.001
	Item 16	.70	0.02	32.4	<.001
	Item 19	.66	0.02	27.5	<.001
TruPeo	Item 2	.53	0.03	19.3	<.001
	Item 5	- .69	0.03	-26.2	<.001
	Item 8	.57	0.03	18.7	<.001
	Item 11	- .57	0.02	-23.1	<.001
	Item 14	.59	0.03	21.2	<.001
	Item 17	- .86	0.02	-36.4	<.001
	Item 20	- .75	0.03	-29.5	<.001
ProSoc	Item 3	.82	0.03	27.3	<.001
	Item 6	.98	0.02	39.5	<.001
	Item 9	.61	0.02	26.0	<.001
	Item 12	.64	0.02	25.9	<.001
	Item 15	1.00	0.02	41.7	<.001

Podscals/ Items	**Statistics for individual items**				
		Regression coefficient	***SE***	***Z***	***p***
	Item 18	.98	0.03	37.6	<.001
	Item 21	.90	0.03	35.4	<.001
Covariances of factors	*NetRes-TruPeo*	-.57	.02	-28.3	<.001
	TruPeo-ProSoc	.43	.02	20.1	<.001
	NetRes-ProSoc	-.44	.02	19.6	<.001
Goodness-on-fit-indictates		Chi2 = 1815, df = 186, p <.001 CFI = .89; TLI = .88, RMSEA = .065			

Note. NetRes – subscale "access to resources through the mobilisation of support within one's own social network"; *TruPeo* – subscale "trust in people/belief in humanity"; and *ProSoc* – subscale "engagement in pro-social activity"; *Regression coefficient* – unstandardised regression coefficient of the item relative to the subscale; *SE* – standard error of the regression coefficient; *Z* – Z-statistic (basis for estimating the significance of the regression coefficient); *p* – estimate of the statistical significance of the regression coefficient.

The fit of the individual subscales *NetRes*, *TruPeo,* and *ProSoc* to the proposed single-factor solutions was checked. The first of these subscales proved to be a good fit. All item regression coefficients relative to the subscales are significant with p below 0.001. The CFI index = 0.97, the TLI index = 0.95, and the RMSEA index = 0.074 are acceptable. The *NetRes* scale is therefore factor-homogeneous. The second of the analysed subscales – *TruPeo* – reveals clearly weaker fit indices for the single-factor solution. Although all factor loadings are significant with *p* below 0.001, the *CFI* and *TLI* fit indices are unsatisfactory, *i.e*., below .90, while the RMSEA index is clearly above 0.10. This means that the subscale in question needs to be modified in further work on the instrument. The *ProSoc* subscale, like the first of the subscales discussed, has good parameters. All items on the scale have factor loadings significant at $p < 0.001$. The fit indices *CFI* = 0.96, *TLI* = 0.94 are good, and *RMSEA* has a satisfactory value of 0.083.

Taking the above results into account, it is recommended to use the *NetRes* subscale, *i.e*., access to resources through the mobilisation of support within one's own social network, and the *ProSoc* subscale, *i.e*., engagement in pro-social activity, in research. The *TruPeo* subscale, *i.e.,* trust in people/belief in humanity, may be difficult to interpret, as confirmatory analysis does not confirm its homogeneity, similar to previous exploratory analyses, which suggested some inconsistency between items with positive content and items with negative content.

In addition to the above factor solutions, two additional solutions calculated for structures from which items from the problematic *TruPeo* subscale (as relatively non-homogeneous) were eliminated were tested. The one-dimensional structure built from elements of two subscales (*NetRes* + *ProSoc*) reveals very poor fit indices. A structure composed of two mutually correlated subscales (*NetRes* and *ProSoc*) is better suited

to the empirical data. The fit indices for this solution are similar to those for the three-factor correlated structure. Taking into account the confirmatory factor analysis, it is recommended to use the scale in its full version in the form of three separate factors (*NetRes*, *TruPeo*, and *ProSoc*) or in a reduced version with two separate factors (*NetRes*, *ProSoc*).

Table 4

Fit indices for one-dimensional subscale structures (NetRes, TruPeo, ProSoc) and the entire SoclCap-21 scale, three mutually correlated social capital factors in the sample (N=2074), and two correlated factors and one factor from two subscales (excluding the TruPeo subscale)

Factor solution	Fit indicates			
	χ^2 (df), p	CFI	TLI	RMSEA (90% CI)
NetRes subscale as a single factor	169 (14), <.001	.97	.95	.073 (.063 - .083)
TruPeo subscale as a single factor	652 (14), <.001	.81	.71	.143 (.139 - .158)
ProSoc subscale as a single factor	215 (14), <.001	.96	.94	.083 (.074 - .093)
Three subscales aggregated into one factor	6155 (189), <.001	.61	.56	.124 (.121 - .126)
Three subscales as separate but correlated factors	1815 (189), <.001	.89	.88	.065 (.062 - .068
Two correlated factors (*TruPeo* subscale omitted)	1083 (76), <.001	.89	.87	.079 (.076 - .084)
Two subscales aggregated into one factor (*TruPeo* subscale omitted)	3814 (77) <.001	.66	.60	.153 (.149 - .157)

Table 5

Reliability and the distribution characteristics of three social capital measures

Statistics	Measures of social capital		
	Subscale ***NetRes***	Subscale ***TruPeo***	Subscale ***ProSoc***
Cronbach's alpha	.85	.76	.85
Mean of intercorrelation	.44	.32	.46
Item-total correlation (range)	.51 - .68	.40 - .61	.49 - .73
Minimum–Maximum	7 - 35	7 - 35	7 - 35
Mean (Standard deviation)	26.6 (5.4)	20.7 (5.2)	21.1 (6.4)
Median	27	21	21
Quartiles (lower and upper)	23 - 31	18- 24	16 - 25
Skewness (St. error of skewness)	-.65 (.05)	-.16 (.05)	.09 (.05)
Kurtosis (St. error of kurtosis)	.23 (.11)	-.01 (.11)	-.55 (.11)
Test of normality (K-S d)	.09 (p < .01)	.06 (p < .01)	.05 (p < .01)

Note. *NetRes* – access to resources through the mobilisation of support within one's own social network; *TruPeo* – trust in people/belief in humanity; and *ProSoc* – engagement in pro-social activity*; K-S d* – Kolmogorov-Smirnov statistic.

To summarise the discussion on the structure of the research instrument so far, it can be concluded that the analyses revealed two factor-homogeneous subscales (*NetRes* and *ProSoc*). One subscale (*TruPeo*) is less homogeneous, although hierarchical analysis of diagonal factors allows us to extract a secondary factor from the two factors that make up this subscale and interpret it as an indicator of trust in people. The internal reliability analysis (according to Cronbach's α formula) yielded satisfactory results for all three subscales. Subsequent analyses served to assess the theoretical validity of the tool for measuring cultural capital by demonstrating the relationship between social capital measures and other capital variables (cultural and psychological capital) as mediators and distant antecedents of these capitals. These are personality factors from the Big Five model and factors forming the capital properties of the family of origin.

Path Model – an Attempt to Assess the Validity of the Research Instrument

A hypothetical model of causal relationships between variables was constructed, taking into account correlations from the matrix of variables considered in the analyses. It was a saturated model (*i.e.*, complete – covering all possible links between variables) without feedback relationships. It is presented in simplified form in the diagram below (Figure 1). A path analysis was performed for this saturated model, which first allowed the removal of relationships with insignificant path coefficients. The "reduced" model, *i.e.*, one that only includes statistically significant ($p < 0.05$) relationships between variables, is presented in the table below (Table 6). Relationships between variables with relatively high standardised path coefficients are highlighted in bold.

Table 6

Family and personality factors, cultural capital, psychological capital, and social capital in the path model after removing insignificant relationships between variables (N = 2074)

Relationships between model variables			**Statistics**				
			Path coefficient	**Std. Error**	**CR**	**p**	**Beta**
SucEdu	←	**Openne**	**.40**	**.04**	**9.11**	**< 001**	**.18**
SucEdu	←	Consci	.15	.05	3.02	.001	.06
SucEdu	←	**Agreea**	**.48**	**.03**	**16.39**	**< 001**	**.33**
SucEdu	←	Extrav	.08	.03	2.47	.01	.05
SucEdu	←	**ProEdu**	**.12**	**.01**	**9.81**	**< 001**	**.20**
SucEdu	←	ParEdu	.39	.09	4.14	< 001	.08
GoodMa	←	**SucEdu**	**.38**	**.02**	**22.39**	**< 001**	**.41**
GoodMa	←	Stabil	-.09	.03	-3.09	.001	-.05
GoodMa	←	Consci	.12	.04	3.1	.001	.05
GoodMa	←	**Agreea**	**.42**	**.03**	**16.45**	**< 001**	**.31**

Relationships between model variables			Statistics				
			Path coefficient	Std. Error	CR	p	Beta
GoodMa	←	**ProEdu**	**.08**	**.01**	**8.43**	**< 001**	**.15**
GoodMa	←	ParEdu	-.31	.07	-4.19	< 001	-.07
CulPar	←	**SucEdu**	**.31**	**.02**	**13.89**	**< 001**	**.31**
CulPar	←	**GoodMa**	**.19**	**.03**	**7.31**	**< 001**	**.17**
CulPar	←	**Openne**	**.44**	**.04**	**1.44**	**< 001**	**.19**
CulPar	←	**Agreea**	**.23**	**.03**	**7.32**	**< 001**	**.15**
CulPar	←	Extrav	-.09	.03	-2.97	.001	-.05
CulPar	←	**ClimUp**	**-.04**	**.01**	**-3.40**	**< 001**	**-.12**
CulPar	←	**ProEdu**	**-.07**	**.02**	**-3.24**	**.001**	**-.11**
CulPar	←	**ProCul**	**.15**	**.02**	**7.43**	**< 001**	**.23**
PsyCap	←	**GoodMa**	**.35**	**.05**	**7.20**	**< 001**	**.18**
PsyCap	←	**SucEdu**	**.49**	**.04**	**1.99**	**< 001**	**.27**
PsyCap	←	**CulPar**	**-.23**	**.04**	**-5.70**	**< 001**	**-.13**
PsyCap	←	Openne	.26	.08	3.18	.001	.06
PsyCap	←	**Stabil**	**.36**	**.06**	**5.88**	**< 001**	**.11**
PsyCap	←	Agreea	-.24	.06	-3.98	< 001	-.09
PsyCap	←	**Extrav**	**.78**	**.06**	**13.34**	**< 001**	**.25**
PsyCap	←	**ProCul**	**.15**	**.04**	**3.99**	**< 001**	**.13**
PsyCap	←	ParEdu	-.49	.17	-2.90	.001	-.06
PsyCap	←	**ClimUp**	**.06**	**.02**	**3.42**	**< 001**	**.11**
NetRes	←	**PsyCap**	**.16**	**.01**	**17.37**	**< 001**	**.36**
NetRes	←	CulPar	.07	.02	4.05	< 001	.08
NetRes	←	**GoodMa**	**.11**	**.02**	**5.07**	**< 001**	**.12**
NetRes	←	Agreea	-.07	.03	-2.47	.01	-.05
NetRes	←	**Extrav**	**.19**	**.03**	**7.02**	**< 001**	**.14**
NetRes	←	ClimUp	-.02	.01	-2.38	.02	-.09
NetRes	←	**ProEdu**	**.09**	**.02**	**5.37**	**< 001**	**.19**
NetRes	←	ProCul	.04	.02	2.14	.03	.07
TruPeo	←	PsyCap	.02	.01	2.40	.02	.06
TruPeo	←	**NetRes**	**.36**	**.02**	**16.36**	**< 001**	**.37**
TruPeo	←	**CulPar**	**.10**	**.02**	**6.08**	**< 001**	**.13**
TruPeo	←	GoodMa	-.08	.02	-4.01	< 001	-.09
TruPeo	←	Stabil	.09	.03	3.39	< 001	.07
TruPeo	←	Consci	-.08	.04	-2.12	.03	-.04
TruPeo	←	ClimUp	.02	.01	1.96	.05	.06
TruPeo	←	**ProCul**	**.05**	**.02**	**3.01**	**.001**	**.10**
ProSoc	←	PsyCap	-.03	.01	-2.47	.01	-.06
ProSoc	←	**NetRes**	**.28**	**.03**	**1.01**	**< 001**	**.24**
ProSoc	←	**TruPeo**	**.20**	**.03**	**8.02**	**< 001**	**.17**

Relationships between model variables			Statistics				
			Path coefficient	Std. Error	CR	p	Beta
ProSoc	←	**SucEdu**	**.15**	**.02**	**6.8**	**< 001**	**.16**
ProSoc	←	**CulPar**	**.17**	**.02**	**7.89**	**< 001**	**.18**
ProSoc	←	Openne	-.17	.04	-4.01	< 001	-.08
ProSoc	←	**Extrav**	**.26**	**.03**	**8.09**	**< 001**	**.16**
ProSoc	←	**ProEdu**	**-.09**	**.02**	**-5.33**	**< 001**	**-.16**
ProSoc	←	**ProCul**	**.11**	**.02**	**5.95**	**< 001**	**.18**

Note. PsyCap – psychological capital*; CulPar* – participation in high culture*; GoodMa* – good manners*; SucEdu* – orientation towards educational success; *ParEdu* – parents' education*; ProCul* – promoting participation in culture in the family of origin*; ProEdu* – promoting educational success in the family of origin*; ClimUp* – positive climate of educational relations in the family of origin*; NetRes* – access to resources through social networks*; TruPeo* – trust in people/belief in humanity*; ProSoc* – engagement in pro-social activities*; CR* – critical ratio*; p* – statistical significance*; Beta* – standardised path coefficient. The strongest relationships between variables (standardised path coefficient value – *Beta* < 0.10) are marked in bold.

The diagram below is a simplified scheme of the relationships between variables. The reduction consisted of taking into account only those relationships whose standardised regression coefficients (Beta) were above or equal to 0.10. The coefficients determining the covariance of exogenous variables, normally calculated in path analysis, were also omitted. The figure shows the most important relationships between variables. The thickness of the arrows indicates the strength of the relationship. Arrows drawn with a solid line indicate a positive correlation, while arrows drawn with a dotted line indicate a negative correlation. In the presented model, only positive correlations between variables were expected, so arrows drawn with a dotted line indicate a result contrary to the hypothesis. It is worth paying attention primarily to the relationships indicated by bold arrows. These are relationships with a strength expressed by beta coefficients above or equal to 0.20. They are exclusively positive, *i.e*., consistent with the hypotheses. Variables that were set as causes of another variable in the path model and revealed such a relationship in the calculations with a beta equal to or greater than 0.20 were marked with shading in the boxes. The discussion of the path diagram can begin by pointing out the relationships between the three variables representing social capital and other variables in the model. The perceived availability of social network resources depends on four variables in the causal model. First and foremost, it depends on psychological capital, while other significant variables include *ProEdu*, *GoodMa*, and *Extrav*. Trust in people depends primarily on the availability of social network resources, or *ProCul* and *CulPar*. Trust in people depends on an individual's experiences within their social network and on family activities that stimulate participation in culture.

Figure 2

Graphical representation of the relationships between variables in the path model

Note. Solid lines indicate positive correlations and dashed lines indicate negative correlations. The thickness of the lines indicates the strength of the relationship between variables. *Agreea* – agreeableness; *Openne* – openness; *Stabil* – emotional stability; *Extrav* – extraversion; *PsyCap* – psychological capital; CulPar – participation in high culture; *GoodMa* – good manners; *SucEdu* – orientation towards educational success; *ProCul* – promoting participation in culture in the family of origin; *ProEdu* – promoting educational success in the family of origin; *ClimUp* – positive climate of educational relations in the family of origin; *NetRes* – access to resources through social networks; *TruPeo* – trust in people/belief in humanity; *ProSoc* – engagement in pro-social activities.

Research Conclusion

The SocCap-21 scale is a quick and easy-to-use 3-factor research tool designed to measure social capital. The three factors – access to resources through the mobilisation of support within one's own social network (*NetRes*), trust in people/belief in humanity (*TruPeo*), and engagement in pro-social activity (*ProSoc*) – reflect the functioning of the individual as a "consumer" (*NetRes* subscale) and a "producer" of social resources (*ProSoc* subscale). Trust in people (*TruPeo* subscale) was included in the proposed instrument because it is a factor mentioned in several concepts of social capital as a component that binds social relations. The above three components are relatively homogeneous in the view of exploratory factor analyses. Exploratory factor analyses of each subscale (using the least squares method) performed separately for each subscale yielded a solution with a single factor with an eigenvalue above 1. Analyses performed using the principal component method for two subscales (*NetRes* and *ProSoc*) yielded a single-factor solution, while for the *TruPeo* subscale, a two-factor solution emerged – items with positive content and items with negative content were found in two separate but correlated factors. This subscale, therefore, has a hierarchical structure – a secondary factor is distinguished. This allows the results of this subscale to be summed up to measure trust in people. Next, confirmatory factor analyses were performed for each subscale. They revealed a good fit to the empirical data of the single-factor structures of the two subscales (*NetRes* and *ProSoc*). The third subscale – *TruPeo*, or trust in people, proved to be heterogeneous according to exploratory factor analysis. Unsurprisingly, it was also heterogeneous according to confirmatory factor analysis. These data imply the need to improve the problematic subscale in further construction work. The three subscales of the questionnaire are characterised by satisfactory internal reliability indices (Cronbach's α between 0.76 and 0.85). The correlations between the individual subscales are moderate, and the fit of the single-factor model constructed from full-scale items is poor in view of confirmatory factor analyses. Therefore, in multivariate analyses, it is recommended to use the individual subscales of the SocCap-21 questionnaire as separate variables. The path analysis, which took into account the educational functionality of the family of origin, the Big Five personality traits, the three components of cultural capital, the level of psychological capital, and the three variables describing social capital, demonstrated that the components measuring social capital are interrelated. Moreover, each of these variables has its own determinants in the variables of the tested causal model. The variables included in the tested causality model explain a significant part of the variance of each of the three components of social capital (from 25% to 33%). The availability of resources through social networks (*NetRes*) depends primarily on the level of psychological capital (*PsyCap*) and, to a lesser extent, on the level of extraversion (*Extrav*), good manners (*GoodMa*) as a component of cultural capital, and the promotion of the respondent's

educational success within the family of origin (*ProEdu*). Trust in people/belief in people was found to be primarily related to the availability of social network resources (*NetRes*) and, to a lesser extent, to the respondent's level of participation in high culture (*ParCul*) and the promotion of such participation in the family of origin (*ProCul*). Most of the variables from the tested causality model were related to engagement in pro-social activity (*ProSoc*). The strongest correlation of this trait was with access to social network resources (*NetRes*). The other variables revealed slightly weaker, but similar, correlations with the explained variable. An important correlate of prosocial engagement was the second variable from the area of social capital, *i.e*., trust in people (*TruPeo*). In addition, the respondent's participation in high culture (*CulPar*), the respondent's orientation towards educational success (*SucEdu*), the level of extraversion (*Extrav*), as well as the promotion of participation in high culture in the family of origin (*ProEdu*) and the promotion of children's educational success in the family (*ProEdu*) should also be mentioned. All of the above-described relationships between variables — with one exception — were positive, and a high intensity of the factors mentioned led to an increase in the intensity of the social capital component. The exception was the relationship between promoting educational success in the family and the respondent's pro-social engagement, which turned out to be negative (*i.e*., activities in the family promoting the child's educational success may, in certain circumstances, generate reluctance to engage in pro-social activities). It is difficult to interpret this result unequivocally – perhaps it is a matter of excessive emphasis on personal career and a competitive attitude. Without appropriate research, however, such an interpretation remains unsubstantiated. It is interesting, however, that while parental influences promoting a child's educational success have a negative impact on the pro-social engagement of respondents, the educational success achieved by the respondents themselves has a positive impact in this regard (generally, good students are more pro-socially engaged than poor students, regardless of how their parents were involved in promoting their educational success). More important than uncertain interpretations of exceptional relationships between variables is a discussion of the positive — *i.e*., expected — relationships found in the analyses. It is worth noting the special role of psychological capital (*PsyCap*) in generating respondents' access to social network resources (*NetRes*) and the special significance of the latter variable in independently generating an attitude of trust in people (*TruPeo*) and the level of pro-social engagement (*ProSoc*). Trust in people is also a mediator of the relationship between high access to social network resources and strong pro-social engagement of the individual (in this case, the role of trust as a kind of "glue" of reciprocity in social relations, postulated in several theories of social capital, is evident). It is also worth noting that psychological capital has many determinants in the tested causal model. It appears as the main mediator between broadly understood social capital and the Big Five personality traits, the educational functioning of the family of origin and the cultural capital of the individual. It is worth noting that all three

characteristics describing cultural capital — good manners (*GoodMa*), the respondent's lasting attitude towards educational success (*SucEdu*), and participation in high culture (*CulPar*) — revealed positive correlations with the level of psychological capital. Among personality traits, emotional stability and extroversion are of crucial importance for the level of cultural capital. This is obvious in view of the nature of these individual traits, which largely result from a strong temperament. Among the characteristics of the educational functionality of the family environment, two factors are particularly important for the formation of psychological capital: a positive climate of educational relations in the family (*ClimUp*), *i.e.*, the combination of authoritative, involved parenting with an optimal atmosphere of interpersonal relations in the family and the resilience of the family as a system, and the promotion of participation in high culture within the family (*ProCul*). The model of causal relationships is complemented by numerous determinants of the intensity of psychological capital traits. Most of these are, as expected, positive relationships between cultural capital traits and family parenting functionality traits and Big Five personality traits. The respondent's educational success (*SucEdu*) has positive correlations with agreeableness (*Agreea*), and openness to experience (*Openne*) from the Big Five model, as well as with family influences promoting academic success (*ProEdu*). The respondent's conscientiousness and extraversion from the Big Five model are also of some importance for their educational success, as are family factors such as the level of education of their parents, but the correlations are relatively weak in this case. In turn, the respondents' good manners (*GoodMa*) are primarily conditioned in the causal model by agreeableness (*Agreea*) and persistent orientation towards educational success (*SucEdu*) as well as family of origin influences promoting educational success (*ProEdu*). As expected, there are also weak but significant effects of conscientiousness (*Consci*) on respondents' good manners. Interesting, but difficult to interpret without additional research, are the unexpected negative correlations between good manners (*GoodMa*) and the emotional stability of respondents (*Stabil*), but also the level of education of their parents (*ParEdu*). Numerous determinants in the tested path model for the cultural capital factor, referred to as participation in high culture (*CulPar*), were identified. The intensity of this factor depends primarily on the respondent's orientation towards educational success (*SucEdu*) and on the influences of the generational family promoting participation in culture (*ProCul*). Participation in high culture (*CulPar*) also depends positively on the good manners of the respondent (*GoodMa*), on their openness to experience (Openne), and agreeableness (Agreea). In addition, unexpected negative correlations were found between participation in culture and a positive climate of educational relations in the family (*ClimUp*) and the promotion of children's educational success in the family (*ProEdu*). Path analysis allowed us to establish a probable causality model, which assumes that the resulting change is the respondent's engagement in pro-social activity, the main determinants of which are two other characteristics from the area of social capital – access

to social network resources and trust in people. The first of these (*NetRes*) determines the other two (*TruPeo* and *ProSoc*), while itself being influenced by psychological capital (*PsyCap*). It is psychological capital that is the fundamental 'generator' of social capital. It therefore acts as a meta-resource for adaptation – a factor on which the generation of social capital by an individual depends – both in the individual-relational dimension (effective investment in social relationships that are beneficial to the individual) and in the social-systemic dimension (building the common good, acting for the benefit of other people within social networks). Psychological capital is rooted both in basic personality traits (the Big Five) and in the formative characteristics of the family environment. These distant conditions in the analysed model (exogenous variables) have both a direct impact on psychological capital and an indirect impact through the formation of a high level of cultural capital, which in turn has a positive impact on psychological capital. The path model of interdependence presented in this study thus integrates three types of capital into a functional whole: cultural, psychological, and social. The results described above are consistent with the assumption adopted in Bourdieu's theory (1986) about the mutual transformability of different forms of capital and the theoretical postulate of integrating psychological and sociological capital perspectives (Dóci *et al*., 2023). The model discussed cannot be considered final at this stage – it is rather a working proposal for further research, with the possibility of supplementing the model with other variables that have been omitted from the considerations discussed so far.

The results presented allow us to assess, to a certain extent, the accuracy of the social capital measurement instrument (*SocCap-21*). This research instrument still needs refinement (the *TruPeo* scale — trust in people/belief in humanity — is a problematic issue). However, the two scales that seem crucial for the study of social capital – access to resources through the mobilisation of support within one's own social network (*NetRes*), and the level of the engagement in pro-social activities (activity for the benefit of other people and the community, or building the common good; *ProSoc*), are factorially homogeneous, internally consistent measures that are consistent with expectations in relation to personality and sociocultural variables. They are therefore reliable measures and, as it appears at the preliminary stage of research, theoretically accurate.

One drawback of this instrument is that the distributions of individual capital measures deviate significantly from the normal curve. This creates certain inconveniences in empirical analyses using parametric tests, as it leads to the need to transform the data or, where possible, to ignore the assumptions of these tests. It is possible that changing the response scale format from five-point to seven-point, or making certain modifications to the content of the items, could bring about the expected change in distributions. However, such interference with the content of the scale may not necessarily improve the functioning of its items and may ultimately distort the quality of the measurement. Any modifications require caution and, above all, thorough verification in subsequent studies on large samples.

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