

COMMUNICATION STYLES INVENTORY-BRIEF VERSION (CSI-BV): PRELIMINARY VALIDATION AMONG ROMANIAN STUDENTS

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The study aims to validate and analyse the psychometric properties of the *Communication Styles Inventory-Brief Version (CSI-BV)* in the case of a sample of a Romanian student population. The instrument that assesses the interactive communication styles was translated and adapted through the forward-backward translation procedure. The data were collected from 630 students (Mean_{age}=21.22; 51.45% males). In order to investigate and confirm the factor structure, the sample was split into two sub-samples which were the subject of exploratory (EFA) and confirmatory (CFA) factor analyses, respectively. The CSI-BV reliability was examined from the perspective of internal consistency. The concurrent validity was conducted by associating CSI-BV with the instrument BFI-10 which assesses the personality traits based on the Big Five model. In the case of the analysed sample, both the EFA and the CFA ($\chi^2/df=1.13$; CFI=0.99; RMSEA=0.017; SRMR=0.059) support a five-factor structure of the instrument, different from the original three-factor structure, that suggests the presence of the following styles: emotional, dominant, seductive, flattering and interrogative. The internal consistency, measured for the two sub-samples as well as for the total sample, is acceptable (Cronbach's α McDonald's ω vary between 0.57 and 0.79). The study indicates that the five-factor version of the CSI-BV constitutes a valid tool for the assessment of communication styles. However, subsequent research on the psychometric properties of the CSI-BV is needed for other categories of population.

Cuvinte-cheie: stiluri de comunicare, validitate de construct, fidelitate, Inventarul Stilurilor de Comunicare-Versiunea scurtă

Keywords: communication styles, construct validity, reliability, Communication Styles Inventory-Brief Version

1. INTRODUCTION

Being aware of one's communication styles is vital for understanding one's own behavioral tendencies, for refining one's communication abilities, and for improving one's personal and professional relations (Waldherr and Much, 2011). For the last two decades, research has increasingly focused on communication styles in various domains: medical (Leonard, 2017; Matusitz and Spear, 2015; Park

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et al., 2023; Pérez-Fuentes *et al.*, 2020; Torper *et al.*, 2022), educational (Ahmed and Naqvi, 2015; Iskandarova and Griffin, 2018; Ghasemi, 2022), sales (Kang and Hyum, 2012; Keeling *et al.*, 2010; Yao *et al.*, 2022), management (Bakker-Piepper and De Vries, 2013; Crews *et al.*, 2019; Yang *et al.*, 2020) etc., to mention only some of the most important domains that have been intensely researched on with regard to communication styles. Given all these, the existence of some appropriate instrument meant to identify the way in which people communicate is essential for all fields of activity. In both academic and organizational settings, the study of communication styles helps to better understand and manage interpersonal communication (Iskandarova and Griffin, 2020). Under these conditions, the present study aims to evaluate the psychometric properties and validate the Communication Styles Inventory-Brief Version (CSI-BV) (Diotaiuti *et al.*, 2020) developed to identify and analyse interpersonal communication styles. CSI-BV represents an important addition in the evaluation of communication in different contexts: companies, professional selection, psychotherapy, etc. and helps individuals to know their own communication style and to establish successful relationships with others.

2. DESCRIPTION OF THE CSI-BV INSTRUMENT

CSI-BV (Diotaiuti *et al.*, 2020) is based on the lexical hypothesis, and it is derived from the Communication Styles Inventory (CSI – De Vries *et al.*, 2013). The instrument's purpose is to assess three communication styles and their facets. Unlike CSI (De Vries *et al.*, 2013), which has 96 items and covers five communication styles (Expressiveness, Preciseness, Verbal Aggressiveness, Questioningness, Emotionality, and Impression Manipulativeness), CSI-BV has 18 items, and the measured styles are:

1. *Impression Manipulativeness* – entails the ability of a person to create an impression during a conversation. The two facets identified in the respective style: a) *charm* (a mixture of attraction, including physical attraction, sensuality, and inner confidence), and b) *ingratiation* (refers to the conscious choice of a rational strategy which aims at reaching one's objectives, namely captivating the interlocutor, almost seducing him/her). This communication style is based on the wish to please other people, so that they should be ready to accept the requests they receive.

2. *Emotionality* – refers to the emotional effect that verbal interaction has on the interlocutor. The three components are: a) *sentimentalism* (the emotional charge of the person's conversation), b) *defensiveness* (the level of vulnerability perceived by the person when they are criticized and verbally attacked), and c) *worrisomeness* (the person's inability to hide their emotions during the verbal interaction; therefore, the individual fears that every negative emotional state will immediately be sensed by the interlocutor).

3. *Expressiveness* – refers to the individual's capacity to be efficient during the conversation by monitoring and balancing the communication elements, such as the quality of the illustrated subject, supported by the variety of data and sources; clarity and consistency, the presentation of the topic so as to hold interest and attention. In this case, there are also three facets: a) *conversational dominance* (the choice and the approach of the conversation subjects), b) *inquisitiveness/curiosity* (the involvement of the interlocutor through many questions which aim at testing the latter's opinion) and c) *talkativeness* (the tendency to speak at length).

Obtaining a high average score in the case of one style signifies its dominance at the behavioral level. CSI-BV was validated on two samples of Italian respondents with the average young age recruited from the general population. The factorial and concurrent validity of the CSI-BV was tested (Diotaiuti *et al.*, 2020). Regarding the structure, as we have shown, the CSI-BV proved to be a significantly reduced version compared to the original instrument of De Vries *et al.* (2013) having only three factors. The significant correlations with the Multidimensional Personality Profile personality test (MPP – Caprara *et al.*, 2006) supported the concurrent validity of the tool.

3. COMMUNICATION STYLES AND PERSONALITY

A communication style can be defined as a person's disposition toward a certain kind of interrelationship (Beatty *et al.*, 1988). According to the author of the four-dimensional model of communication, Schulz von Thun (2003), styles represent a specific way of contacting, communicating, and managing relations with other people. They are associated with states of mind and intentions that manifest themselves through words and non-verbal signals. In a more nuanced way, De Vries *et al.* (2009) define the communication style as “the way a person sends verbal, paraverbal, and nonverbal signals in social interactions denoting a) who s/he is or wants to (appear to) be, b) how s/he relates to interactants, and c) in what way his/her literal messages should be interpreted” (p. 2).

Various communication styles are not mutually exclusive, but rather come together in a specific combination that, as a whole, expresses the individual's preferred pattern of contact. In fact, the communication style shows the way in which a person organizes the world of their social relations, by combining all the right styles in a given context and by not reducing them to a certain style (Pânișoară *et al.*, 2010).

Studies on personality recognize the lexical hypothesis according to which the most important characteristics in people's lives will, eventually, become a part of their language. The more important these characteristics, the most probable for them to be encoded in language. Individuals communicate the same way they act, feel, or behave (Adler and Rodman, 2006). The communication styles are not

personality traits, but they appear under the influence of these traits and of the environment. Research revealed that every personality trait is related to a certain way of expressing oneself (De Vries *et al.*, 2013). Empirical studies (Ahmed and Naqvi, 2015; De Vries *et al.*, 2013; Diotaiuti *et al.*, 2020) correlated communication styles with personality by using various measuring instruments (for example: NEO-FFI – Costa and McCrae, 1992; NEO-PI-R – Costa and McCrae, 1992; Hoekstra *et al.*, 1996; Hexaco – Ashton *et al.*, 2008; MPP – Multidimensional Personality Profile – Caprara *et al.*, 2006). The results confirmed that certain communication styles correspond to certain personality traits. For example, the Emotionality style which entails difficulty in keeping calm as well as the visible expression of emotions exhibits elements that seem to fit Neuroticism (Ahmed and Naqvi, 2015; De Vries *et al.*, 2013); the Expressiveness communication style, based on the ability to have relaxed and pleasant conversations, is related to Extraversion (Ahmed and Naqvi, 2015; De Vries *et al.*, 2013), Agency, Self-regulation (Diotaiuti *et al.*, 2020), and Conscientiousness (Ahmed and Naqvi, 2015). The style called Impression Manipulativeness, a communication style based on deception, the ability to manipulate one's own image in the conversation with the interlocutor so that he perceives him in a positive light, is correlated with Concision (Diotaiuti *et al.*, 2020) and with the Honesty-Humility factors (De Vries *et al.*, 2013). The Inquisitiveness communication style, oriented towards disputes and nonconventional subjects, highly correlates with Openness to experience and reflectivity (De Vries *et al.*, 2013). The style based on Verbal Aggressiveness, authoritarianism, and pejorative behavior is inversely correlated with Agreeableness (De Vries *et al.*, 2013) and Neuroticism (Ahmed and Naqvi, 2015).

4. METHOD

4.1. THE TRANSLATION AND THE ADAPTATION OF THE SCALE

The scale was translated in accordance with the recommendations proposed by Beaton *et al.*, (2000), recommendations regarding the adaptation of self-reporting scales. An English teacher and a psychologist collaborated for the translation from English into Romanian. The back-translation was made independently by another bilingual person, who speaks both Romanian and English fluently. The two versions were compared, and semantic modifications were made with a view of fitting the conceptual clarity of the original items. The differences resulted from the comparison of the translations were revised until a consensus was reached. The last version was piloted on a sample of 18 students who were asked to assess how clear the items are and how difficult they are to understand. They were not included in the final sample, and the minor reformulations made by them in the

case of the items did not lead to significant changes in the structure of the instrument.

4.2. PARTICIPANTS AND THE DATA COLLECTION PROCEDURE

The present study has a quantitative and cross-sectional approach which included 630 students. Between October 2022 and March 2023, they completed an online survey that was distributed using e-mail addresses and social networks (Facebook and WhatsApp). The participants' eligibility conditions were: being over 18 years old, being a native Romanian speaker, and being a Romanian resident. It took 7-8 minutes to fill in the questionnaire. The questionnaire was secured so as to allow its completion only once by one and the same participant. An introductory text posted above the instrument set informed the participants with regard to the aim of the research and to the informal consent. We underlined the fact that the respondent could stop filling in the questionnaire anytime with no consequences whatsoever. The participation was anonymous, in accordance with the recommendations on bias methods (Podsakoff *et al.*, 2003). The students did not receive any credits for the completion of the instruments.

4.3. MEASURES

1. *Communication Style Inventory-Brief Version (CSI-BV)* (Diotaiuti *et al.*, 2020) with 18 items assessed from 1 – *completely disagree*, to 5 – *completely agree* included in three subscales, each with six items and representing three communication styles:

- Impression Manipulativeness (e.g.: I sometimes use my charm to get something done; I sometimes praise somebody at great length, without being really genuine, in order to make them like me).

- Emotionality (e.g.: When describing my memories, I sometimes get visibly emotional; People can tell that I am emotionally touched by some topics of conversation.)

- Expressiveness (e.g.: I often take the lead in a conversation; I always ask how people arrive at their conclusions).

The score for every style was obtained by adding up the total sum of the items included in subscales corresponding to the respective style.

2. *Big Five Inventory-10 – BFI-10* (Rammstedt and John, 2007) uses 10 items (five of which are inversely scored) to measure the personality factors within the Big Five model (Extraversion, Agreeableness, Conscientiousness, Neuroticism, Openness) on a scale from 1 – *strongly disagree* to 5 – *strongly agree*. The instrument demonstrated good psychometric properties, adequate construct and convergent validity in the case of samples of Romanian students (Balgiu, 2018).

4.4. SOCIODEMOGRAPHIC DATA

The following data were collected: gender, age, residence (urban versus rural), and education (bachelor and master).

4.5. DATA ANALYSIS STRATEGY

The construct validity of the scale was tested through EFA and CFA. Thus, by using syntax from SPSS: Data/Select cases/Random sample of case, the general sample was divided into two relatively equal sub-samples: the first one (N=316) was used for EFA and the second (N=314) for CFA. EFA was based on the two essential conditions: the Kayser-Meyer-Olkin coefficient (KMO)>0.80 (Chauhan *et al.*, 2018; Field, 2009) and the significance of the Bartlett's test of sphericity (Tabachnick and Fidell, 2013). In the case of CFA, in order to determine the statistical fit of the model, we used the coefficients χ^2 (chi-square), df (degrees of freedom), χ^2/df (criterion chi squared/df), CFI (comparative fit index), TLI (Tucker-Lewis index), GFI (goodness-of-fit index), RMSEA (root mean squared error of approximation), SRMR (standardized root mean square residual) and AIC (Akaike's Information Criterion). In the case of these indices, we took into consideration the following cut-off level: the value of χ^2/df is acceptable if it is < 3 (Schermelleh-Engel *et al.*, 2003). CFI, GFI and TLI, values close to 0.90 or greater are acceptable to good (Hooper *et al.*, 2008). RMSEA and SRMR have good values if they are almost 0.06 (Brown, 2015); AIC, used to compare the models of measuring CFA, deems the model with the lowest value of the AIC indicator to be statistically adequate (Hu and Bentler, 1999). The concurrent validity was performed by associating CSI-BV and BFI-10. The reliability was examined by using α Cronbach and ω McDonald, considered to be good when they are ≥ 0.70 (Chin *et al.*, 2010). The SPSS22 and JASP 0.16.10 programs were used to analyse all of the data.

5. RESULTS

5.1. THE SOCIODEMOGRAPHIC ANALYSIS OF THE SAMPLE

The analysed group was made of 630 students with the average age $M=21.22$, ($SD=3.99$), selected within two universities, the National University of Science and Technology Politehnica Bucharest (former name Polytechnic University of Bucharest) (74.92%) and the Academy of Economic Studies (25.07%). Of these 51.45% (319) are male subjects ($Mean_{age}=21.07$; $SD=3.02$) and 48.54% (301) are female subjects ($Mean_{age}=23.11$; $SD=3.20$). Most participants lived in the urban area (84.6%), the rest of 15.4% lived in the country areas. 18.25 % (113) of the students are master students and 81.74 % (515) are undergraduates.

5.2. DESCRIPTIVE STATISTICS

Firstly, the descriptive statistics of the items were analysed (the average, the standard deviations, asymmetry, CSI-BV univariate normality). In this respect, we considered the recommendation made by Kim (2013) according to whom for samples larger than 300, an absolute value of skewness over 2 and an absolute value of kurtosis over 7 can be used as reference values to determine the data normality. The absolute values of the two indicators, the skewness (between -0.04 and 1.07) and the kurtosis (-1.21 and 0.22) highlight the normality of the data distribution (Table no. 1). The item with the highest average value was retained: *Sometimes I use my charm to do something* (M=3.47; SD=1.21). The one with the lower average scores is item 16: *During discussions, I sometimes express an opinion which I don't really hold in order to make a good impression* (M=1.97; SD=1.17).

Table no.1
Descriptive statistics of the items (N=630)

Items	M	SD	Min.- Max	Skewness	Kurtosis
Item1	3.47	1.21	1-5	-0.49	-0.66
Item2	3.31	1.24	1-5	-0.28	-0.90
Item3	3.42	1.12	1-5	-0.30	-0.61
Item4	2.75	1.32	1-5	0.24	-1.08
Item5	3.40	1.22	1-5	-0.33	-0.85
Item6	3.51	1.08	1-5	-0.42	-0.33
Item7	3.03	1.37	1-5	-0.04	-1.21
Item8	2.96	1.29	1-5	0.10	-1.06
Item9	3.56	1.21	1-5	-0.41	-0.92
Item10	2.11	1.23	1-5	0.86	-0.36
Item11	3.09	1.25	1-5	0.02	-1.02
Item12	3.51	1.21	1-5	-0.42	-0.77
Item13	2.35	1.33	1-5	0.60	-0.88
Item14	2.55	1.26	1-5	0.41	-0.83
Item15	3.23	1.31	1-5	-0.11	-1.08
Item16	1.97	1.17	1-5	1.07	0.22
Item17	2.68	1.25	1-5	0.34	-0.88
Item18	3.14	1.23	1-5	-0.05	-0.92

Note: M–Mean; SD–Standard Deviation

5.3. THE EXPLORATORY FACTOR ANALYSIS

The conditions of the EFA implementation showed it was possible to apply the latter. Thus, Kayser-Meyer-Olkin (KMO)=0.80 and Bartlett's test of sphericity is significant $\chi^2=3155.138$, $df=157$, $p<0.001$, hence supporting the factorability of the correlation matrix (Chauhan *et al.*, 2018; Field, 2009). The factorial solution (Principal component analysis with varimax rotation) showed the presence of five

factors that accounted together for 61.55% of the total variance of the scale. Every factor included items whose loading is > 0.40 (Tabachnik and Fidell, 2013). As can be seen in table 2, the only factor fully found in the resulting matrix is the Emotional style (factor 1). The Impression manipulateness style is divided into two factors each with three items representing Seduction (factor 3) and Flattery (factor 4). Expressive style is split into two factors with an unequal number of items including items representing Verbal dominance (factor 2) and Curiosity-Inquisitiveness (factor 5).

Table no. 2
The result of the exploratory factor analysis (N=316)

Items	Factors				
	1	2	3	4	5
item14	0.80	-0.02	-0.06	0.20	-0.06
item 17	0.73	0.08	-0.12	0.22	-0.12
item 2	0.72	-0.03	0.11	-0.03	0.10
item 8	0.69	-0.25	-0.06	0.07	0.12
item 5	0.60	0.16	0.14	-0.19	0.16
item 11	0.58	0.08	0.02	0.03	0.26
item 18	-0.03	0.87	0.03	0.00	0.09
item 15	0.19	0.70	0.05	0.13	0.00
item 3	-0.13	0.76	0.26	0.00	0.04
item 6	-0.02	0.69	0.27	0.09	0.14
item 1	0.07	0.33	0.77	0.15	-0.09
item 4	0.03	0.21	0.70	0.02	-0.08
item 7	-0.00	0.06	0.74	0.11	0.05
item 10	0.00	0.06	0.17	0.75	0.23
item 16	0.08	0.10	-0.04	0.72	-0.19
item13	0.08	-0.03	0.28	0.77	0.23
item 9	0.20	0.16	0.07	0.17	0.78
item12	0.08	0.06	-0.08	0.06	0.77

5.4. THE CONFIRMATORY FACTOR ANALYSIS

Next, the CFA was calculated for the second subsample, using the robust version of maximum likelihood estimator. The Mardia coefficient was considered when checking for normality conditions. Since the critical ration value (c.r.) of 12.15 ($p < 0.001$) demonstrated multivariate non-normality, bootstrapping with 2000 resamplings (95% confidence interval) was applied in order to solve non-normality. Five models were calculated: model 1 with a single factor proved to be inadequate due to the coefficient values. Models 2 and 3 (with and without correlated errors) postulate three factors in conformity with the results obtained by Diotaiuti *et al.* (2020). Models 4 and 5 (with and without correlated errors) are in conformity with the EFA carried out in the present study. Investigation of modification indices suggested the inclusion of correlation errors. To determine

how many error correlations are allowed to be made, we considered that the modification indices should be greater than the $\chi^2/25$ ratio (Sava, 2011). Thus, in the case of model 3, we made nine correlated errors, and for model 5 there exist five correlated models. The analysis of the obtained indices highlights the superiority of model 5 with five factors and five correlated errors: $\chi^2=217.462$; $df=120$; $\chi^2/df=1.81$; CFI=0.94; TLI=0.92; GFI=0.94; RMSEA=0.051 (90% Confidence Interval – 90%CI: 0.040–0.062); SRMR = 0.056; $p<0.001$ (Table no. 3). Within this last model, two pairs of items were correlated in the first factor, which represents the Emotional style: items 14 (When people criticize me, I am visibly hurt) with 17 (The comments of others have a noticeable effect on me), and 2 (People can tell that I am emotionally touched by some topics of conversation) with 5 (When describing my memories, I sometimes get visibly emotional). For the second factor, which represents the Dominant style, the errors of items 18 (I always have a lot to say) and 15 (I like to talk a lot) were correlated, next items 3 (I often take the lead in a conversation) with 6 (I often determine the direction of a conversation), and 3 (I often take the lead in a conversation) with 18 (I always have a lot to say) (Figure 1).

The factors which represent the communication styles were named depending on the items included within the latter, namely, emotional, seductive (it contains the items that aim at using personal charm in conversations), flattering (items that aim at manipulating the interlocutor by flattering the latter), verbally

Table no. 3.
Goodness-of-fit indices of the CFAs (N=314)

Model	χ^2	df	χ^2/df	CFI	GFI	TLI	RMSEA [90%CI]	SRMR	AIC
M1	1047.418	135	7.75	0.40	0.67	0.33	0.147 [0.139-0.155]	0.136	17647.093
M2	549.067	132	4.15	0.73	0.81	0.68	0.100 [0.092-0.109]	0.087	17154.742
M3	252.718	123	2.05	0.91	0.91	0.89	0.058 [0.048-0.069]	0.068	16876.394
M4	326.817	124	2.63	0.87	0.89	0.84	0.072 [0.063-0.082]	0.060	16948.492
M5	217.462	120	1.81	0.94	0.94	0.92	0.051 [0.040-0.062]	0.056	16847.137

Note: M1 – one factor solution; M2 – three factors according to Diotaiuti *et al.* (2020); M3 – three factors with correlated errors; M4 – five factors in accordance with the present EFA; M5 – five factors with correlated errors.

dominant (items which aim at leading and establishing the direction of a conversation), and interrogative (items that entail the curiosity to know one's interlocutors). The factor loading varies between 0.45 and 0.76.

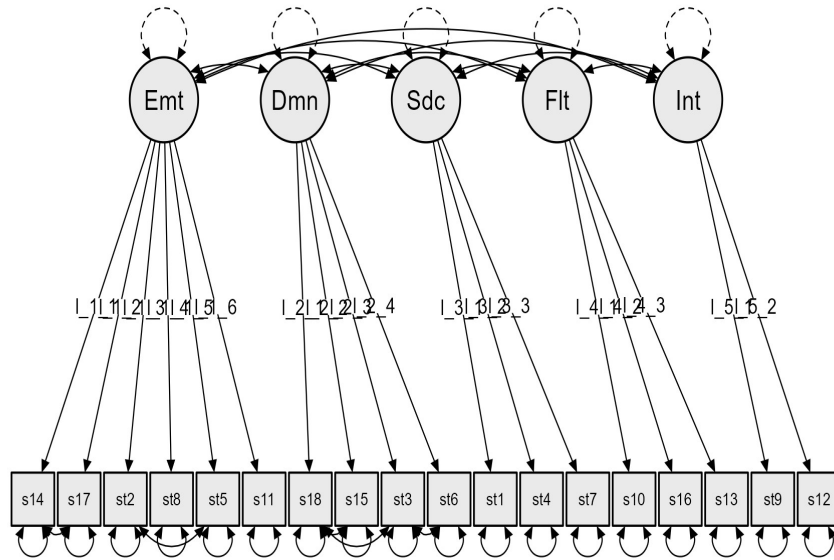


Figure no. 1. Confirmatory factor analysis of the CSI-BV
Note: Emt – Emotional, Dmn – Dominant, Sdc – Seductive; Flt – Flattering,
Int – Interrogative.

5.5. RELIABILITY

Table no. 4 presents the α and ω coefficients for the total samples and for the two sub-samples used in the EFA and the CFA. The values of coefficients are acceptable, above 0.70 in the case of the styles emotional, dominant, flattering and seductive.

As expected, the factor that underlies the interrogative style presents moderate coefficients, between 0.57-0.61. According to Furnham (2008), the α Cronbach coefficients are influenced by the number of items in the scale, and Thalmayer *et al.* (2011) consider that in the case of the extra-short two-item scales the minimum admitted is 0.45.

Table no. 4
The consistency coefficients in the case of the total sample and of the two sub-samples

Samples	Styles									
	Emotional		Dominant		Seductive		Flattering		Interrogativ	
	α	ω	α	ω	α	ω	α	ω	α	ω
1	0.79	0.79	0.78	0.78	0.71	0.71	0.74	0.73	0.61	0.61
2	0.78	0.79	0.79	0.79	0.72	0.72	0.72	0.73	0.57	0.57
3	0.74	0.75	0.79	0.78	0.70	0.70	0.72	0.72	0.57	0.57

Note: 1 – total sample, 2 – the sample on which EFA was carried out, 3 – the sample on which CFA was carried out

5.6. CONCURRENT VALIDITY

There were weak, but significant correlations between the communication styles and the personality traits in the Big Five model. As Table no 5 shows, the extraversion correlates positively and significantly with the styles Dominant ($r=0.36$), Seductive ($r=0.14$), Flattering ($r=0.23$) (all at $p<0.01$), and Interrogative ($r=0.11$; $p<0.05$). Agreeableness is inversely associated with the Dominant style ($r=-0.10$; $p<0.05$), while Neuroticism correlates with the styles Emotional ($r=0.19$ $p<0.01$) and Flattering ($r=0.10$; $p<0.05$). Openness to experience correlated with the styles Emotional ($r=0.14$), Seductive ($r=0.10$), and Interrogative ($r=0.10$) (all at $p<0.01$).

Table no. 5
The correlations between CSI-BV and BFI-10

	Ex	Ag	Co	Ne	Op
Emotional	0.02	0.08	0.08	0.19**	0.14**
Dominant	0.36**	-0.10*	0.01	-0.03	0.02
Seductive	0.14**	0.07	0.02	-0.00	0.10*
Flattering	0.23**	-0.00	0.07	0.10*	0.05
Interrogative	0.11*	0.00	0.08	0.00	0.10*

Note: Ex – Extraversion, Ag – Agreeableness; Co – Conscientiousness, Ne – Neuroticism, Op – Openness to experience

6. DISCUSSION

The main objective of the present study was to assess the validity and the instrument CSI-BV (Diotaiuti *et al.* 2020), filled in by a group of students. The results conclude that the tool structure proposed by Diotaiuti *et al.* (2020) is not supported in the case of the population we studied. For the present research, the five-factor model showed the most satisfying adequacy from a statistic point of

view. The reliability for the general sample and for the sub-samples on which EFA and CFA were carried out highlight that there is a good internal consistency.

The concurrent validity revealed moderate, but significant relationships between personality traits and communication styles. Specialized literature has shown that every personality type has its own way of communicating with others (De Vries *et al.*, 2013, Ahmed and Naqvi, 2015; Bakker-Pieper and De Vries, 2013; Diotaiuti *et al.*, 2020). In addition, the manner in which people communicate with each other can be learned. It is a continuous, never-ending process. But over time the experience gets more refined and one particular style becomes much more prominent. The results of the present studies show that the Emotional style correlates with Neuroticism and Openness to experience. The relation we found suggests that the Emotional style is specific to emotionally weak individuals who tend to become depressed and anxious. In general, neurotic individuals are more afraid to communicate, they have an emotional approach to things, and they are excessively dramatic (Emanuel, 2013; Singh, 2019). The result obtained in the present study is not surprising. Studies have reported that people who use emotional communication always score highly in neuroticism since neurotic personality communicates much more emotionally and defensively (De Vries *et al.*, 2013; Ahmed and Naqy, 2015). The obtained result corroborates other pieces of research carried out on various groups of subjects. For example, there are high positive correlations between the Emotionality style and Neuroticism in the case of groups of students (Ahmed and Naqy, 2015; Barnett *et al.*, 2020).

The styles Dominant and Interrogative, whose common root is the Expressiveness style, correlate with Extraversion and Openness to experience (the Interrogative style) and negatively with Agreeableness (the Dominant style). Similarly, De Vries *et al.* (2013) found a correlation between Extraversion and the Expressive style in the case of a group of students. The fact that extraverted people are more open, more relaxed, friendlier and funnier is well-known; they are individuals who like to communicate with others (Emanuel, 2013). De Vries *et al.* (2011) empirically demonstrated that expressivity has the characteristics of extraversion. The authors highlight that extraverts interact with others in a friendlier way and they are more dominant than their fellow-beings. On a different note, prior studies showed that these individuals are optimistic, creative, open to experimenting new things, and they are expressive when they talk (De Vries *et al.*, 2013). The relation between Inquisitiveness and Openness, on the one hand, and verbal Dominance and low Agreeableness, on the other hand, is in line with prior research (De Vries *et al.*, 2009, 2013) according to whom the communication style Inquisitiveness is related to Openness to experience, while the style based on verbal Aggressiveness is inversely correlated with Agreeableness. The extracted styles Seductive and Flattering correlate with Extraversion and Openness to experience (the Seductive style) and Neuroticism (the Flattering style). The result suggests that the Flattering style is specific to emotionally unstable individuals who

need support and who, in order to win others over, choose to compliment the interlocutor so that the latter should be ready to accept possible requests. Conscientiousness is not related to the analysed communication styles. In prior studies, Conscientiousness appears to be correlated with the Preciseness communication style characteristic to people who always structure their communication, a style which seems to be specific to efficient managers (De Vries *et al.*, 2013). The association of the two instruments used in the study suggests that the communication styles may be considered the communicative expression of personality factors. Certain personality factors have certain specific communication styles.

The limits of the study. We admit to certain limits in our paper. Firstly, the study is carried out on a convenience sample comprising students who come only from two universities, both in the same city. Therefore, the results cannot be generalized. The second limitation is related to the fact that the instruments of the research were based exclusively on using some *self-report scales* through which a global picture of the investigated variables was obtained. On the other hand, snowball sampling facilitates data collection, but it should not be forgotten that this technique involves the possibility that respondents recommend people with similar characteristics to their own (Etikan *et al.*, 2015).

CONCLUSIONS

The findings of the study show promising psychometric properties for the Romanian version of CSI-BV; thus, its applicability is supported for the case of young adults. In addition, the results confirm the relationship between communication styles and personality. The development of a certain communication style by an individual tends to match his/her fundamental personality traits. The study contributes to the knowledge about communication styles and, implicitly, to the improvement of the communication among students. However, given the limitations of the study, it is recommendable that CSI-BV should be analysed in correlation with other instruments that measure not only styles but also communication skills and the potential to communicate effectively with other people.

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REZUMAT

Studiul se ocupă de validarea și analiza proprietăților psihometrice ale Communication Styles Inventory-Brief Version (CSI-BV) în cazul unui eșantion de populație studențească din România. Instrumentul care evaluează stilurile interactive de comunicare a fost tradus și adaptat prin procedura *forward-backward translation*. Datele au fost colectate de la 630 de studenți ($\text{Mean}_{\text{age}}=21.22$; 51.45% males). Pentru investigarea și confirmarea structurii factoriale, eșantionul a fost scindat în două subeșantioane care au constituit obiectul analizelor factoriale exploratorii (EFA) și, respectiv, confirmatorii (CFA). Fidelitatea CSI-BV a fost investigată din perspectiva consistenței interne. Validitatea concurrentă a fost performată prin asocierea CSI-BV cu instrumentul BFI-10 care evaluează trăsăturile de personalitate bazate pe modelul Big Five. Atât EFA cât și CFA ($\chi^2/\text{df}=1.13$; CFI=0.99; RMSEA=0.017; SRMR=0.059) susțin în cazul eșantionului analizat o structură cu cinci factori a instrumentului, diferită de structura originală cu trei factori, care sugerează prezența stilurilor emoțional, dominant, seducător, lingușitor și interogativ. Consistența internă măsurată pentru cele două subeșantioane ca și pentru eșantionul total este acceptabilă (coeficienții Cronbach's α și McDonald's ω variază între 0.57 și 0.79). Studiul indică faptul că versiunea cu 5 factori a CSI-BV se constituie într-un instrument valid pentru evaluarea stilurilor de comunicare. Totuși, cercetări ulterioare de analiză a proprietăților psihometrice ale CSI-BV sunt necesare pe diferite categorii de populație.