Article

The Role of Cultural Capital in Self-Reported Alexithymia and Empathy

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ABSTRACT

Background: Sociocultural factors play an essential role in the way we process and express emotions. In this study, we asked whether Cultural Capital (CC)—the set of knowledge, cultural codes, and skills embodied by people—explains individual differences in two constructs measuring the capacity to understand our own emotions (alexithymia) or others' emotions (empathy). **Method:** A pre-registered survey was conducted with an Italian sample ($N = 475$). Alexithymia and empathy were assessed respectively via the Toronto Alexithymia Scale and the Interpersonal Reactivity Index. **Results:** Regression analyses confirmed a significant, although limited, role of CC in predicting alexithymia and empathy. People with higher CC showed lower Externally Oriented Thinking, higher Perspective Taking, and higher Fantasy. Self-reported alexithymia and empathy were also impacted by scores on a social desirability scale. **Conclusions:** These results suggest that I) Cultural Capital influences the ability to analyse one's own feelings and understand others' perspectives, and II) social desirability threatens the validity of self-report measures of emotional abilities. Overall, this research underlines the importance of studying affective processes by considering an individual's cultural context.

El Papel del Capital Cultural en la Alexitimia y la Empatía Autoinformadas

RESUMEN

Antecedentes: Los factores socioculturales desempeñan un papel central en el procesamiento y expresión de las emociones. En este estudio, se explora si el Capital Cultural (CC)—es decir los conocimientos, códigos culturales y habilidades de la persona—puede explicar las diferencias individuales en comprender las emociones propias (alexitimia) y ayenas (empatía). **Método:** Se realizó una encuesta preregistrada con una muestra italiana ($N = 475$). La alexitimia y la empatía se evaluaron respectivamente mediante la Toronto Alexitimia Scale y el Interpersonal Reactivity Index. **Resultados:** Los análisis de regresión confirman un papel significativo, aunque limitado, del CC en los niveles de alexitimia y empatía registrados a través de autoinforme. Las personas con mayor CC mostraron menor Pensamiento Externamente Orientado, mayor Toma de Perspectiva y mayor Fantasía. La alexitimia y la empatía también se vieron afectadas por la deseabilidad social. **Conclusiones:** Los resultados sugieren que I) el Capital Cultural influye en la capacidad de analizar los sentimientos propios y comprender la perspectiva ajena, y II) la deseabilidad social es una variable interviniente en la validez de las medidas de autoinforme sobre habilidades emocionales. En general, esta investigación subraya la importancia de estudiar los procesos afectivos considerando el contexto cultural del individuo.

The way emotions are expressed is inherently cultural (Mesquita, 2022) since it is prominently influenced by several factors such as the gender socialisation people receive, their ethnocultural group, or the embodied set of knowledge and cultural codes that constitute their Cultural Capital (Bourdieu, 1986). This study aims to understand the influence of cultural level in self-reported measures of alexithymia and empathy, two complementary constructs widely applied in clinical settings to assess intrapersonal and interpersonal emotional dispositions.

Alexithymia is a personality trait tracking a deficit in emotional awareness. The main features of this construct include (I) difficulty identifying one's own feelings (II) difficulty describing one's own feelings, (III) an externally oriented style of thinking, and (IV) limited imaginal capacities (Nemiah et al., 1976). The first conceptualization of alexithymia was applied to denote the psychological characteristics of patients suffering from psychosomatic disorders (Nemiah, & Sifneos, 1970). High alexithymic traits were also found to prevail in various clinical conditions, such as substance-use disorders, eating disorders (Morie & Ridout, 2018), and autism spectrum disorders (Poquérusse et al., 2018). Epidemiological studies also show that high alexithymia has an incidence between 7-13 % in the Western non-clinical population (Franz et al., 2008; Joukamaa et al., 2001).

Empathy, in turn, is a construct tracking interpersonal emotional abilities. More than forty definitions of empathy are available in the psychological literature (Cuff et al., 2016). Nonetheless, several authors converge in suggesting that empathy comprises the ability to recognise another person's emotional state and the ability to experience a vicarious emotional response with some degree of self-other distinction (Decety & Jackson, 2004; Decety & Lamm, 2006). As in the case of alexithymia, deficits in one or more domains of empathy have been associated with many mental disorders. These include but are not limited to antisocial personality disorder with psychopathic features (Rijnders et al., 2021) and autism spectrum disorder (Harmsen, 2019).

Different measures of alexithymia and empathy have been developed in the past decades. These comprise self-report scales, structured interviews, observer-rated measures, and, in the case of empathy, performance-based measures (Neumann et al., 2015; Sekely et al., 2018). Self-report scales certainly suffer from response biases (Anvari et al., 2023). However, given their comprehensiveness, ease of administration, and relatively higher psychometric properties, they are still extremely diffused to assess emotional dispositions (Neumann et al., 2015). This is remarkably observable in research on alexithymia, primarily based on evidence collected with the Toronto Alexithymia Scale (TAS-20; Bagby et al., 1994; Gaggero et al., 2020). Research on empathy relies on a higher variety of self-report instruments, but the Interpersonal Reactivity Index (IRI; Davis, 1983) is the most diffused scale to evaluate dispositional empathy in the non-clinical population (de Lima & Osório, 2021).

Since empathy and alexithymia track complementary emotional dispositions, it is not surprising that TAS-20 and IRI share relevant similarities within their subcomponents (Grynberg et al., 2010). Both questionnaires are multidimensional measures covering cognitive and affective dimensions of the emotional experience. TAS-20 is structured according to three factors:

I) Difficulty Identifying Feelings; II) Difficulty Describing Feelings; and III) Externally Oriented Thinking—a concrete, realistic style of thinking, avoiding emotional expressions, and focusing on external events as main drivers of behaviour. IRI comprises four subdimensions: I) Personal Distress—the tendency to experience feelings of distress in emotionally salient situations; II) Empathic Concern—the ability to experience isomorphic feelings in response to others' emotional experience; III) Perspective Taking—the ability to understand other's mental states and IV) Fantasy—the proneness to be caught in stories and to identify with fictional characters. Overall, there is evidence that Externally Oriented Thinking is the most cognitive component of alexithymia, being negatively associated with the cognitive dimensions of IRI, namely Perspective Taking and Fantasy (Gaggero et al., 2022; Grynberg et al., 2010).

Based on our hypotheses, the cognitive dimensions of both measures of alexithymia and empathy are those more impacted by sociocultural factors. On the one hand, there is strong evidence that the psychological characteristics described by the affective components of alexithymia and empathy (i.e. Difficulty Describing Feelings, Difficulty Defining Feelings, Personal Distress) are stable in different cultural contexts and underline the risk of developing clinical conditions characterised by interoceptive deficits, emotion dysregulation or high negative affectivity (Fournier et al., 2019; Gaggero et al., 2021, 2022). On the other hand, evidence about the clinical significance of some cognitive dimensions of TAS-20 and IRI is scarcer and accompanied by evidence about important variations in different sociocultural and ethnocultural contexts (Ryder et al., 2018).

The role of cultural factors is usually detected in terms of differences across different ethnocultural groups. For instance, previous research found significant differences in Externally Oriented Thinking between East Asian-origin groups and Wester-origin groups, with the former reporting higher ratings than the latter (Konrath et al., 2011; Ryder et al., 2018). Two large cross-national studies (Butovskaya et al., 2021; Chopik et al., 2017) also reported significant differences in Empathic Concern and Perspective Taking in national groups belonging to more collectivistic vs. individualistic cultures. Overall, these findings suggest that the display of emotional expressivity and empathy is not "neutral", but instead rooted in cultural values and moral contexts (Dere et al., 2012, 2013; Hollan, 2012).

However, an individual's emotional disposition might not only depend on their ethnocultural group. It might also depend on other sociocultural variables, including education and general cultural level, although little attention has been devoted to these aspects so far. Most studies include people's education as a potentially relevant confound and consider this only as one among many sociodemographic factors that can affect individuals' level of alexithymia or empathy. Concerning alexithymia, there is growing evidence that higher scores at TAS-20 are associated with lower educational level, especially in normative samples (Franz et al., 2008; Joukamaa et al., 2001; Kokkonen et al., 2001). However, it is worth mentioning that the authors of TAS-20 initially claimed that alexithymia scores were unrelated to educational level and other sociodemographic variables, given the low correlations found in a relatively small convenience sample (Parker et al., 1989). This favoured the

underestimation of the influence of the sociocultural context, which was instead highlighted quite early by the exponents of transcultural psychiatry (Kirmayer, 1987; Kirmayer & Robbins, 1993). Similarly, in the case of IRI, there is evidence of a significant positive association between educational level and general empathy (Schieman & Van Gundy, 2000) or empathic concern (Yaghoubi Jami et al., 2021).

Regardless of the mixed results, it is noteworthy that education cannot be considered as the unique proxy of individuals' cultural attainment (Coscarelli et al., 2007). To better understand the role played by the cultural level on alexithymia and empathy, we should adopt more comprehensive constructs, such as Cultural Capital. This construct was introduced by sociologist Pierre Bourdieu (1986) to define the knowledge and use of cultural codes relevant to the community wherein people live (Lamont & Lareau, 1988). Cultural Capital derives from the sum of activities, attitudes, predilections, formal knowledge, and cultural goods of the individuals and considered as high-status cultural signals in the society wherein they live. Notably, Cultural Capital depends on education and socialisation, but it is not strictly determined by the socioeconomic status of the family (Balboni et al., 2019; Menardo et al., 2022, 2023).

Although the concept of Cultural Capital is more commonly found in the sociological literature, there have been recent applications in clinical and personality psychology. For instance, self-reported Cultural Capital was found to correlate with the Big Five personality profile of Italian adults (Pellicci et al., 2015). Similarly, adolescents' scores at the Openness to Experience dimension of the Big Five were positively associated with the Cultural Capital of their parents (Menardo et al., 2017).

In the present study, we intended to unveil the association between educational and cultural factors with self-reported alexithymia and empathy. With this aim, we administered the Scale of Cultural Capital, SCC (Balboni et al., 2019)—the sole self-report measure of cultural level validated in Italian—and explored its association with the different dimensions of the two most widely adopted self-reported measures of alexithymia (TAS-20; Bagby et al., 1994) and empathy (IRI; Davis, 1983). Following our pre-registered hypotheses, cultural factors—namely the individual and parents' educational level, as well as the individual Cultural Capital—should be associated with Externally Oriented Thinking, Perspective Taking, and Fantasy, which are cognitive components of the selected measures of alexithymia and empathy. While testing our main hypotheses, we controlled for possible social desirability biases and other demographic characteristics.

Method

Participants

The participants entered in the analyses were 475 Italian-speaking participants (70 % females) aged between 18 and 70 years ($M = 33$, $SD = 14.55$). All participants declared that they were raised in Italy and that Italian was their native language (4 % were bilingual native speakers). Detailed information about the demographic and cultural level of participants is displayed in Table 1.

In total, 534 participants took part in the study and completed the survey in its entirety. From this initial pool, we excluded participants who did not fit with the pre-registered inclusion criteria: participants older than 70 ($n = 4$); those who failed more than >1/3 attention check items ($n = 44$); participants recognising themselves in the gender category called "other" ($n = 5$).

Instruments

Alexithymia

The 20-item Toronto Alexithymia Scale (TAS-20; Bagby et al., 1994; Italian version: Bressi et al., 1996) includes three dimensions: (I) Difficulty Identifying Feelings ("I am often confused about what emotion I am feeling"); (II) Difficulty Describing Feelings ("It is difficult for me to find the right words for my feelings"); (III) Externally Oriented Thinking ("I prefer talking to people about their daily activities rather than their feelings"). A total score can also be computed. Higher scores are indicative of higher levels of alexithymia. In our sample, McDonald's omega reliability values were as follows: TAS-20 Total $\omega = .86$; Difficulty Identifying Feelings $\omega = .89$; Difficulty Describing Feelings $\omega = .85$; Externally Oriented Thinking $\omega = .68$.

Empathy

The Interpersonal Reactivity Index (IRI; Davis, 1983; Italian version: Albiero et al., 2006) measures empathic abilities across the following dimensions: (I) Perspective Taking evaluates attempts to take into consideration the point of view of others; (II) Fantasy measures the propensity to identify with fictional characters; (III) Personal Distress assesses 'self-oriented' feelings and the tendency to feel anxious when confronted with negative situations; (IV) Empathic Concern assesses "other-oriented" feelings of sympathy and concern for unfortunate others. In our sample, McDonald's omegas were as follows: Personal Distress $\omega = .82$; Empathic Concern $\omega = .76$; Perspective Taking $\omega = .82$; Fantasy $\omega = .86$.

Cultural Capital

The Scale of Cultural Capital (SCC; Balboni et al., 2019) is a 14-item questionnaire that measures cultural interests and activities that may be developed on-site and online. The questionnaire includes the following three main dimensions of SCC: (I) Participating refers to engagement and membership in community service, political, religious, and cultural associations; (II) Consuming refers to the fruition of cultural activities, such as visiting museums, exhibitions, or galleries, attending theatre performances, musical events, conferences, or seminars, and having books and reading them for pleasure; (III) Expert Using refers to the involvement in cultural activities that require technical skills and formal experiences, such as reading books for study/work; using foreign languages; using the Internet for professional activities; writing, producing artwork, or performing in concerts, plays, or dance productions. A total score was also computed. In our sample, values for McDonald's omegas were as follows: SCC Total: $\omega = .79$; SCC Participating $\omega = .83$; SCC Consuming $\omega = .77$; SCC Expert Using $\omega = .55$.

Demographic Variables

Gender, age, and individual and parents' educational levels were also assessed. The educational level was converted into years of education based on the estimated duration of each educational level in the Italian educational system (see pre-registration for details).

Social Desirability

The Balanced Inventory of Desirable Responding (BIDR; Bobbio & Manganelli, 2011) is made up of 16 items with a 6-point Likert scale to evaluate (I) Self-Deceptive Enhancement: the unconscious tendency to provide honest but positively biased responses; (II) Impression Management: the habitual and conscious presentation of a favourable public image. In our sample, McDonald's omegas were as follows: BIDR Impression Management ω = .74; BIDR Self-Deceptive Enhancement ω = .76; BIDR total ω = .75.

Procedure

The protocol of this study was approved by the ethical committee of the University of Trento (n. 2021-017) and data processing complies with the EU's General Data Protection Regulation. Using an oddball paradigm, the survey was diffused among university students at the Universities of Perugia and Trento (Italy) and through the researchers' social networks. Anonymous data were collected online via the Qualtrics software. The order of presentation of questionnaires was counterbalanced across participants using a balanced Latin-square design. Participants did not receive any remuneration for their participation. Informed consent was asked online at the beginning and the end of the survey. The hypotheses of this study were pre-registered in the Open Science Framework before accessing the data: https://osf.io/wvsxu/. Supplementary data and Material associated with this study are available online: https://osf.io/ypgte/.

Data Analysis

Data analysis was conducted using RStudio (version 2021.09.2+382). Since scores at Social Desirability (BIDR) subscales presented a correlation ≥ .20 with some alexithymia and empathy subscales, we did not exclude any participant based on this criterion. On the contrary, we introduced social desirability as a covariate in the regression models.

The main hypotheses were tested using Multiple Regression models. Before running regression models, we verified whether the expected independent (IVs) and dependent (DVs) variables correlated significantly. We excluded IVs that did not correlate significantly with DVs from the regression models. We also ran multiple t-tests to check whether statistically significant differences (p < .05) in DVs' mean values between males and females justified the inclusion of gender within the list of predictors. Selected variables were normalised before entering regression models. The squared semipartial correlation coefficient (sr^2) of each IV was computed to detect its unique contribution to explain the variance in DV. Regression assumptions were checked using a 5-step procedure described by Tabachnick et al. (2019). (1) Appropriateness of the participants size was investigated under the formula $N \geq 104$ + m (where m was the number of independent variables); (2) the presence of univariate outliers (e.g., participants with a z value higher than |3.29|) and multivariate outliers (e.g., participants for which the probability associated with the Mahalanobis distance was lower than .001) was checked for all observed variables. Asymmetry and kurtosis values between - 1.00 and 1.00 were considered appropriate. Normality of the multivariate distribution was tested using Mardia's test; (3) multicollinearity of predictors was controlled with the variance inflation factor (VIF), and the absence of collinearity was considered for values lower than 2; (4) normality, linearity and homoscedasticity of residuals were graphically checked; (5) independence of errors was investigated via Durbin-Watson test, considering acceptable values included in the range of 1.5-2.2, and the presence of extreme outliers among standardised residuals was also detected (> 3.29 SD).

Table 1
Demographic and Cultural Characteristics of the Participants

Characteristics	Total	Females	Males
	(n = 475)	**(n = 333)**	**(n = 142)**
Demographic Factors			
Age			
Mean *(SD)*	33 (14.55)	31 (13.78)	37 (15.49)
Range	18-70	18-70	18-69
Origin (%) born in Italy with...			
Both Italian parents	449 (95)	311 (93)	138 (97)
One foreign parent	18 (4)	14 (4)	4 (3)
Both foreign parents	8 (2)	8 (2)	0 (0)
Residence (%)			
North Italy	215 (45)	162 (49)	53 (37)
Central Italy	139 (30)	105 (31)	34 (24)
South Italy	111 (23)	57 (17)	54 (38)
Other Country	10 (2)	9 (3)	1 (0)
Occupational Status (%)			
Worker	211 (44)	126 (38)	85 (60)
Student	203 (43)	164 (49)	39 (28)
Retreated	21 (4)	11 (3)	10 (7)
Unemployed	17 (4)	12 (4)	5 (4)
Other	18 (4)	16 (5)	2 (1)
Educational and Cultural Factors			
Own Educational Level (in years)			
Mean *(SD)*	16 (2.36)	16 (2.26)	16 (2.52)
Mother's Educational Level (level)			
Mean *(SD)*	2.70 (1.78)	2.77 (1.73)	2.54 (1.89)
Father's Educational Level (level)			
Mean *(SD)*	2.67 (1.70)	2.70 (1.67)	2.58 (1.77)
Cultural Capital			
Mean *(SD)*	3.90 (1.52)	4.00 (1.52)	3.65 (1.48)

Note. Five participants missed information about occupational status. Mothers' and Fathers' educational levels were coded as follows: 0 = Primary Education, 1 = Lower-Secondary Education, 2 = Upper-Secondary Education, 3 = Post-Secondary Non-Tertiary Education, 4 = Some Years of University, 5= Master's Degree, 6 = Doctoral Degree or equivalent. Own Educational level was converted in years. Cultural Capital scores range from 0 to 12.

We also performed exploratory analyses to better understand the role of Cultural Capital in the cognitive dimensions of alexithymia and empathy (Externally Oriented Thinking, Perspective Taking, and Fantasy). For each of the three dependent variables, we individuated the extreme groups, namely the group below the 33rd percentile (Low Trait Group) and the group above the 67th percentile (High Trait Group). Scores on Cultural Capital were compared between the two groups using unpaired t-tests. In cases of statistically significant differences, we computed Cohen's *d*.

Results

Preliminary Analysis

Six univariate outliers and one multivariate outlier were removed. Mardia's index (24.59, critical value: 24) was considered acceptable since the assumption of normality can be relaxed when the sample size is large enough (Pek et al., 2018). The other assumptions were all satisfied.

Table 2 compares mean values on all dimensions of alexithymia and empathy (criterion variables) across the two genders using t-tests.

Table 2
Descriptive Statistics (M[SD]) and Comparison (t-test) of Alexithymia and Empathy Scores Between Genders

Psychological variables	Total (*n* = 475)	Females (*n* = 333)	Males (*n* = 142)	*t-test* value
TAS-20 Total	47.33 (11.95)	46.77 (12.04)	48.65 (11.65)	3.89
TAS-20 DIF	17.38 (6.24)	17.65 (6.30)	16.74 (6.07)	- 1.25
TAS-20 DDF	13.77 (5.05)	13.61 (5.17)	14.13 (4.73)	- 0.69
TAS-20 EOT	16.19 (4.33)	15.50 (4.21)	17.79 (4.18)	1.60***
IRI Fantasizing	24.92 (5.01)	25.51 (5.12)	23.56 (4.47)	- 1.48***
IRI Empathic Concern	27.29 (3.85)	27.84 (3.61)	26.01 (4.09)	1.05***
IRI Perspective Taking	25.27 (4.54)	25.24 (4.57)	25.35 (4.48)	5.45
IRI Pers. Distress	19.80 (4.82)	20.42 (4.70)	18.37 (4.79)	- 4.16***

Note. DIF = Difficulty Identifying Feelings, DDF = Difficulty Describing Feelings, EOT = Externally Oriented Thinking. Scale ranges are as follows. TAS-20 Total: 20-100; TAS-20 DIF: 7-35; TAS-20 DDF: 5-25; TAS-20 EOT: 5-40; IRI subscales: 7-35. *p < 0.05; **p < 0.01; ***p < 0.001

The results of gender differences in the dependent variables (Table 2) and the correlation analyses (Supplementary Material, S1) guided the selection of predictors in regression models. Age, gender, and social desirability subscales were selected as control variables because they were all significantly associated with DVs, and gender differences were found in the distribution of DVs (see Table 2). Regarding the main independent variables, mothers' and fathers' educational levels were removed from the list of predictors since none significantly correlated with alexithymia and empathy dimensions. Mother's educational level was instead associated with other predictors, namely one's own educational level (*r_s* =.22***), Cultural Capital (*r_s* =.17*), and Social Desirability (*r_s* = -.18***). Similarly, the father's educational level was significantly associated with participants' educational level (*r_s* =.18*). These results suggested a more indirect effect of mothers' and fathers' educational level that was considered negligible. Therefore, only Cultural Capital (SCC Total) and educational level were considered in the list of sociocultural factors. SCC Total was

used instead of scores on the single SCC subscales because of its higher internal validity (ω = .79).

Consequently, age, gender, and the two social desirability subscales (BIDR Self-Deceptive Enhancement, BIDR Impression Management) were introduced as covariates, while Education Level and Cultural Capital Total scores were introduced as focal predictors in Multiple Linear Regression models applied to estimate: 1) TAS-20 subscales (Difficulty Identifying Feelings, Difficulty Describing Feelings, Externally Oriented Thinking) and TAS-20 Total scores, and 2) IRI subscales (Personal Distress, Empathic Concern, Perspective Taking, and Fantasy).

Regression Models

The results of regression analyses for alexithymia are displayed in Table 3. Cultural Capital (SCC Total) explained the 4 % and the 2 % of the variance in Externally Oriented Thinking and TAS-20 Total, respectively. Years of education were not a significant predictor of Externally Oriented Thinking, but they explained the 3 % and 2 % variance in Difficulty Identifying Feelings and TAS-20 Total, respectively. With regards to the analyses of the other covariates, while the two social desirability subscales contributed to explaining the variance in Difficulty Identifying Feelings (8 %) and Difficulty Describing Feelings (5 %), they were not significant predictors of Externally Oriented Thinking. Instead, the male gender predicted higher scores in Externally Oriented Thinking, but gender was not a significant predictor of all the other dimensions of alexithymia. The role of age was overall negligible.

The regression analyses results for empathy are displayed in Table 4. Years of education never explained more than the 1 % variance in any of the subscales of the IRI questionnaire. Cultural Capital (SCC Total) explained the 3 % variance in Perspective Taking and the 2 % variance in Fantasy and Personal Distress. With respect to social desirability, Self-Deceptive Enhancement contributed substantially to explaining the variance in Personal Distress (9 % of variance), while Impression Management was a relevant predictor of Perspective Taking (7 % of variance) and Empathic Concern (4 % of variance). Female gender contributed to explaining the higher scores in the two more affective subscales, i.e., Personal Distress and Empathic Concern. Younger age was slightly associated with higher scores in cognitive dimensions of IRI: i.e., Perspective Taking and Fantasy.

Exploratory Analyses

The results of exploratory analyses showed that scores on SCC Total were significantly higher for the group with low Externally Oriented Thinking in comparison with the group with high Externally Oriented Thinking, *t*(267) = 4.27, *p* < .001, Cohen's *d* = 0.52. Conversely, SCC was significantly lower for the group with low Perspective Taking in respect to the group with high Perspective Taking, *t*(248) = 3.19, *p* = .002, Cohen's *d* = 0.40. Additionally, the group with low Fantasy showed lower SCC scores than the group with high Fantasy, *t*(253) = 3.73, *p* < .001, Cohen's *d* = 0.46. These results were primarily guided by differences in the two subscales of the SCC questionnaire called Consuming and Expert Using, while differences in Participating were of lower magnitude (see Supplementary Material, S2). Overall, these results confirmed the association between Cultural Capital and the cognitive dimensions of alexithymia and empathy.

Table 3
Results of Multiple Regressions Conducted Separately for Each Alexithymia Subscale

IVs	DIF		DDF		EOT		TAS-20 Total	
	β	*sr²*	*β*	*sr²*	*β*	*sr²*	*β*	*sr²*
Age	-.12**	.01**	-.08	.01	.11*	.01*	-.05	.00
Gender (female)	.12	.00	-.11	.00	-.44**	.04**	-.15	.00
BIDR Self-Deceptive Enhancement	-.28**	.07**	-.17**	.03**	-.04	.00	-.21**	.04**
BIDR Impression Management	-.10*	.01*	-.14**	.02**	-.04	.00	-.14**	.02**
Years of Education	-.18**	.03**	-.08	.01	.01	.00	-.13**	.02**
SCC Total	-.09*	.01*	-.11*	.01*	-.20**	.04**	-.16**	.02**
F	14.26***		7.98***		9.66***		11.88***	
Adj. R²	.14		.08		.10		.12	

Note. N = 474. Gender: dummy coded (0 = male, 1 = female). DIF = Difficulty Identifying Feelings; DDF = Difficulty Describing Feelings; EOT = Externally Oriented Thinking;
SCC Total = Scale of Cultural Capital Total scores; BIDR. = Social Desirability questionnaire.
*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Table 4
Results of Multiple Regression Conducted Separately for Each Empathy Subscale

IVs	Personal Distress		Empathic Concern		Perspective Taking		Fantasizing	
	β	*sr²*	*β*	*sr²*	*β*	*sr²*	*β*	*sr²*
Age	.01	.00	.06	.00	-.17**	.03**	-.15**	.02**
Gender (female)	.40**	.03**	.44**	.04**	-.20*	.01*	.29**	.02**
BIDR Self-Deceptive Enhancement	-.31**	.09**	-.08	.01	-.02	.00	-.07	.00
BIDR Impression Management	-.09	.01	.20**	.04**	.28**	.07**	-.07	.00
Years of Education	-.09*	.01*	-.11*	.01*	.03	.00	-.04	.00
SCC total	-.16**	.02**	.09*	.01*	.17**	.03**	.15**	.02**
F	16.88***		10.24***		9.53***		8.25***	
Adj. R²	.17		.10		.10		.08	

Note. N = 474. Gender: dummy coded (0 = male, 1 = female); SCC Total = Scale of Cultural Capital Total scores; BIDR = Social Desirability questionnaire.
*$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

Discussion

In this study, we explored the role of sociocultural factors on the two most diffused self-report measures of alexithymia and empathy, i.e., TAS-20 and IRI. Our focus was mainly on the role of Cultural Capital. It is noteworthy that the sociological construct of Cultural Capital (Bourdieu, 1986) paints a more comprehensive picture of the cultural knowledge, cultural consumption, and habits of people compared with the mere indication of their educational attainment. Consequently, we hypothesised that using a validated self-report scale of Cultural Capital–SCC (Balboni et al., 2019) could help understand the influence of cultural factors on intrapersonal and interpersonal emotional abilities.

To our knowledge, this study was the first to consider the role of Cultural Capital in association with alexithymia and empathy. Our results partially supported the intuition that Cultural Capital better explains individual differences in the two constructs with respect to educational attainment. Specifically, regression analyses showed a significant, although small, effect of Cultural Capital on the cognitive dimensions of alexithymia

and empathy, namely Externally Oriented Thinking, Perspective Taking, and Fantasy. Exploratory analyses brought further evidence that people with higher Fantasy, Perspective Taking, and lower Externally Oriented Thinking exhibit significantly higher Cultural Capital than the opposite group. On the contrary, regression analyses did not show a significant role of the educational level in these dimensions. This null result can be justified by considering that in convenience samples like ours, the variability in sociodemographic factors is limited, and, thus, a significant role of educational attainment was not always found (Parker et al.,1989; Ryder et al., 2018). This aspect underlines the additional contribution of Cultural Capital.

When commenting on the role of Cultural Capital in alexithymia and empathy, a first sceptical consideration is in order. In this regard, we might notice that some items belonging to the dimensions of Externally Oriented Thinking and Fantasy explicitly assess themselves cultural preferences (e.g., "I prefer to watch 'light' entertainment shows rather than psychological dramas" [Reversed], "Becoming extremely involved in a good book or movie is somewhat rare for me"). Therefore, it is not surprising that such items correlated with Cultural Capital

since they seem indirect measures of cultural habits. However, it is unlikely that these specific items reveal emotional deficits. This scepticism is supported by the fact that Externally Oriented Thinking and Fantasy are not strongly linked with somatic or mental outcomes (Luminet et al., 2021), as opposed to other dimensions of alexithymia and empathy. Consequently, some of their items may be more apt at creating distinctions between the habits of individuals from different sociocultural backgrounds rather than at discriminating their emotional abilities.

Nonetheless, we cannot exclude that exposure to cultural goods can facilitate the development of intrapersonal and interpersonal emotional abilities. Items belonging to Externally Oriented Thinking evaluate the tendency to analyse problems or to understand the reasons for one's behaviour (e.g., "I prefer to analyse problems rather than just describe them"). Similarly, items at the Perspective Taking subscale evaluate the tendency to analyse the reasons for others' behaviour ("Before criticising somebody, I try to imagine how I would feel if I were in their place"). Therefore, it is reasonable that higher consumption of cultural goods enhances the search for psychological explanations of people's own and other's feelings and behaviours. This interpretation complies with initial evidence that patients from low socioeconomic backgrounds have a lower ability to introspect (Kirmayer & Robbins, 1993). Furthermore, it is in line with previous evidence of a negative association between alexithymia and reading frequency (Samur et al., 2017), as well as with experimental research showing that reading literary fiction enhances performance in theory of mind tasks (Kidd & Castano, 2013, 2017). The results of the present research advance the possibility that reading works of literary fiction and training in literary skills could enhance some cognitive and emotional abilities, as suggested by Samur et al. (2013).

This study also contributes to unveiling some limits of self-report measures of alexithymia and empathy. First, we highlighted that TAS-20 and IRI are considerably influenced by social desirability. Specifically, self-deception enhancement predicted lower reporting of Difficulty Identifying Feelings, Difficulty Defining Feelings, and Personal Distress. On the contrary, Impression Management predicted higher reporting of Perspective Taking and Empathic Concern, suggesting that respondents can be biased in their answers since they perceive the positive value generally attributed to the dispositions disclosed in these subscales. The influence of social desirability further questions the clinical relevance of self-report measures of emotional abilities. To this consideration, we might add that Externally Oriented Thinking has low internal consistency across different linguistic groups (Ryder et al., 2018). This evidence led to some cultural psychologists questioning whether people's diminished attention to their internal states should be considered as the signal of a clinically relevant emotional deficit or, rather, the result of healthy variations in how emotions are expressed cross-culturally (Dere et al., 2012, 2013; Ryder et al., 2018). Similarly, higher Externally Oriented Thinking in males can be due to gender role socialisation, since masculinity ideology imposes restricted emotional expressivity, as highlighted in previous research (Levant et al., 2003, 2015). Results from this study confirmed that males only score higher at the Externally

Oriented Thinking component of alexithymia, but not in the other more clinically relevant alexithymia components (see Table 3). These findings further promote a cultural explanation of the gender differences highlighted by this subscale and raise attention to the problem of discriminating culturally driven variations in emotional expressivity from clinically relevant emotional deficits.

Overall, our results suggest a significant, although limited, association between Cultural Capital and the cognitive dimensions of empathy and alexithymia. Furthermore, they highlight the role of other demographic factors and the importance of controlling for social desirability in self-report measures of alexithymia and empathy. On the one hand, the influence of such sociocultural factors should bring new attention to the critical aspects inherent to assessing emotional abilities through self-reports. These results partly suggest the necessity to revise the assessment of alexithymia and empathy. For instance, it is essential to find alternative ways to assess imaginal ability rather than asking about the involvement in cultural activities that are expressions of individuals with higher sociocultural backgrounds. Moreover, it may be beneficial to revise those items at the IRI and TAS-20 that are too susceptible to social desirability biases. We need to consider the possibility that gender norms of emotional expressivity might cause a differential item function for individuals declaring to belong to the male and female gender. Beyond these considerations, the specific association found between Cultural Capital, on the one hand, and Externally Oriented Thinking and Perspective Taking on the other hand, open to the possibility that cultural interventions might enhance cognitive processes implicated in the ability to understand one's own and others' behaviour.

Some limitations of this study are worth mentioning. This is a cross-sectional study. Therefore, causality cannot be demonstrated but only discussed speculatively. Data were collected in a convenience sample with limited variability in educational level. This design suggests that the role of educational level and Cultural Capital can be higher in a stratified or normative sample. Additionally, the employed scale of Cultural Capital has low internal reliability within one subdimension (SCC Expert Using). For this reason, we did not take into great consideration a facet-level analysis of Cultural Capital. Overall, we might acknowledge that the effect of all independent variables on empathy and alexithymia dimensions was small. Finally, in future studies, it would be useful to explore better the effect of gender on alexithymia and empathy scores. Specifically, measurement invariance of TAS-20 and IRI across the two genders should be tested with specific statistical procedures (e.g., multigroup confirmatory analysis).

The significance of this study lies in using a comprehensive measure of cultural level and in exploring its impact on our capacity to understand our own and others' emotions. The results from this study indicate that, on the methodological side, it is important to control for sociocultural factors in self-report measures assessing intrapersonal and interpersonal emotional abilities. On the theoretical side, this study highlights that personality traits and emotional abilities should not be investigated by considering the person in isolation, but rather by acknowledging the influence played by the ethnocultural and sociocultural context.

Author Contributions

Giulia Gaggero: conceptualization; data curation; formal analysis; investigation; methodology; project administration; writing – original draft; writing – review and editing. **Giulia Balboni:** methodology; project administration; supervision; writing – review and editing. **Gianluca Esposito:** methodology; project administration; supervision; writing – review and editing.

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Declaration of Interests

The authors declare that there is no conflict of interest.

Data Availability Statement

The data and scripts supporting the findings of this study are openly available at this link: https://osf.io/ypgte/.

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