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Assessing the psychometric properties of cultural intelligence scale among Indian employees

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Abstract

Cultural Intelligence as a characteristic brings a plethora of advantages to the individual, team and the organization. Literature suggests that cultural intelligence positively impacts an employees' leadership potential, creativity and job performance. Therefore, it is imperative for organizations to have a standard measure for assessing cultural intelligence. The current study examines the psychometrics of the Cultural Intelligence Scale (CIS) among Indian employees. To attain the objectives, data were collected in three studies (study 1: $n = 198$; study 2: $n = 227$; and study 3: $n = 257$). The psychometric tests included measurement of Cronbach's alpha, exploratory and confirmatory factor analysis (CFA), second-order CFA, convergent and discriminant validity (through average variance extracted, maximum variance shared, and average variance shared) and nomological validity (assessment of CIS with authentic happiness, cross-cultural adjustment and job performance). The CIS reported acceptable values for reliability and validity. In addition, the study highlights significant differences among males and females with respect to the behavioral dimension of cultural intelligence among employees. Further, the study emphasizes that the CIS is a standardized measure for assessing competent employees whose job roles demand interaction with multi-cultural and cross-cultural clients. Finally, the study elucidates significant implications for various stakeholders, limitations and ideas for future research.

Keywords Cultural intelligence · Employees · Psychometric properties · Reliability · Validity · India

Introduction

In the cotemporary world, organizations are becoming multicultural in nature (Glinkowska 2016) where employees move places for better packages and job roles (Bhattacharya and Bhattacharya 2018). Organizations nowadays are becoming boundaryless entities with highly diversified groups of employees (Korzilius et al. 2017). Given that culturally diverse individuals work together, it is essential for organizations to have a culturally intelligent workforce that can boost the innovative tendencies and productivity of their teams (Caputo et al. 2018). Technological advancements have brought a major shift in the workplace dynamics allowing richer cultural compositions (Van Dyne et al. 2012). Having said so, India is an extremely diversified country comprising of twenty-nine states and nine union territories, each with their unique individual cultures and languages. This makes any workplace in India a mixture of cultures in its employees' composition (Jyoti and Kour 2015). Such a characteristic of Indian organizations call for employees to be culturally intelligent to perform to the best of their capabilities. Cultural intelligence benefits the employees and consequently, the team and organization in channeling innovative ideas, creative outcomes (Korzilius et al. 2017), and strategic planning, thereby building a competitive advantage for the organization (Adidam et al. 2009).

Earley and Ang (2003) conceptualize cultural intelligence as "an individuals' ability to adapt to new cultural settings successfully, i.e. the unfamiliar settings characteristic to

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cultural contexts". Recruiting candidates who are culturally intelligent may serve as an important asset for organizations because of the numerous benefits it accounts for (Triandis 2006). It is important to recruit, maintain and sustain a workforce according to the organization's goals in a culturally mixed work setting. The background of psychology of sustainability addresses the problem of sustaining employees in fluctuating conditions through positive sustainable development (cf. Di Fabio 2017). The framework of psychology of sustainability comprises of hedonic (Watson 1988) and eudaimonic well-being (Waterman et al. 2010) for employees at the workplace. Positive affect, negative affect and a sense of life satisfaction comprise of hedonic well-being (Sirgy 2012). Whereas, optimal functioning, reaching a point of self-realization (Ryan and Deci 2001), meaning and purpose in life (Zabihi et al. 2014) are characteristics of eudaimonic well-being. Meaningfulness in everyday operations of one's life is representation of intrinsic motivation that endorses sustainability among employees and governs their performance, progression and choices (Di Fabio 2017). The main purpose of the framework of psychology of sustainability is to encourage organizations to become humane, leading them to become more productive (Di Fabio and Peiró 2018). A complementary framework of healthy organizations proposes that healthy organizations seek to achieve optimal amount of balance in the circumstances (Di Fabio and Peiró 2018). Healthy organizations foresee issues and at the same time work on maximizing resources and well-being at the multiple levels (Di Fabio and Peiró 2018). The present study utilizes the psychology of sustainability and healthy organizations framework to outline the importance of cultural intelligence among employees.

To measure cultural intelligence, CIS is used extensively and it has been found to be reliable and valid across cultures, time and samples (Gelfand et al. 2011). For instance, studies have validated the four-factor structure of CIS in multiple contexts, such as, Imai and Gelfand (2010) in United States; Mahembe and Engelbrecht (2014) in South Africa; Sahin et al. (2013) in Turkey; Khodadady and Ghahari (2011) in Iran; Schlägel and Sarstedt (2016) in China, France, United States, Turkey & Germany; Ang et al. (2007) in Singapore; AL-Dossary (2016) in Saudi Arabia, Gozzoli and Gazzaroli (2018) in Italy; Boštjančič et al. (2018) in Slovenia; and Barzykowski et al. (2019) in Poland.

Rationale

Jyoti and Kour (2015, 2017) investigated the influence of cultural intelligence on job performance and task performance among Indian banking employees. However, the agenda of these studies did not include establishing the psychometric properties of CIS in the Indian context. Nevertheless, the objective of the present study is to examine the psychometrics of CIS (internal consistency, factor structure – exploratory, confirmatory and second-order confirmatory, convergent, divergent and nomological validity) among Indian employees. The frameworks of psychology of sustainability (Di Fabio 2017) and healthy organizations (Di Fabio and Peiró 2018) are substantiated while establishing the nomological validity of cultural intelligence, while testing its impact on authentic happiness, cross-cultural adjustment and job performance. Additionally, the study investigates gender differences among employees with respect to cultural intelligence and its manifestation.

Cultural Intelligence: Facets and Literature Overview

Cultural intelligence (also understood as cultural quotient) is classified as non-academic intelligence which is applied in real world situations. It has been categorized with other prominent intelligence types required to deal with real life situations such as emotional, social and practical intelligence (Mayer and Salovey 1993; Sternberg 2000; Thorndike and Stein 1937). Cultural Intelligence is unlike other types of non-specific intelligences because the customs of social communication differ from culture to culture. It should be noted that social, practical and emotional intelligences does not aid the individual in mechanically translating one's cross-cultural effectiveness, communication and adjustment (Gelfand et al. 2011)

Cultural intelligence is theorized as a paradigm encompassing four dimensions discussed in this section. Metacognitive cultural intelligence comprises of a person's cultural perception and consciousness while networking with individuals from a cultural background that is different from theirs. This encompasses the thought processes of people to attain and comprehend information from cultures (Ang et al. 2007). Individuals possessing a higher metacognitive domain reflect upon their own cultural customs and monitor their precision of cultural information at the time of their communication with people from diverse cultural backgrounds (Gelfand et al. 2011).

Cognitive cultural intelligence is defined by an individuals' understanding of customs, norms, practices, and settlements in distinct cultures. Such understanding is developed through personal experience or education. Cognitive component of cultural intelligence comprises of the understanding of a culture and/or country's legal, social (marriage, arts and crafts, languages) and economic systems. It lays the foundation for performance and decision-making in cross-cultural and multicultural circumstances. Individuals with high levels of cognitive cultural intelligence are well-equipped for communicating with people in culturally varied circumstances thereby providing them a competitive edge to crack deals with ease (Earley and Ang 2003).

Motivational cultural intelligence characterizes a person's aptitude and readiness to acquire information about various

cultural systems which are different from one's own. It includes personally initiating communication in cross-cultural situations. This facet indicates the eagerness and flexibility of people willing to quickly adapt to cross-cultural situations. Having an understanding of cultural differences and cultural systems for an end result requires a drive and personal interest to make cultural intelligence effective (Templer et al. 2006). Without being motivated to learn about cultures, it is difficult to make cross-cultural adjustments and hence, some researchers mark motivational cultural intelligence as the most fundamental aspect of the overall concept (Chen et al. 2012).

Likewise, behavioral cultural intelligence determines the capacity of a person to exhibit suitable verbal and non-verbal communication in the process of interacting people from a different culture. This constituent of cultural intelligence involves the combination of cognitive and motivational competencies to act appropriately in culturally varied situation (Earley and Ang 2003). Individuals having greater behavioral cultural intelligence exhibit the right conduct in terms of facial expressions, body language and gestures, tone of voice, locution, physical appearance and work choice.

Academic research on cultural intelligence has grown rapidly in the previous decade. Cultural intelligence serves as a proxy for inter-cultural competence (Varela 2019). A study on American students report that cross-cultural academic training, international travel, foreign language skills and everyday social contact are predictors of cultural intelligence (Lee et al. 2018). Cultural intelligence has been shown to have linkages ranging from having several benefits like effective decision making and cultural judgement (Ang et al. 2007), interpersonal trust (Rockstuhl et al. 2015), job performance (Jyoti and Kour 2017; Lee and Sukoco 2010; Subramaniam et al. 2011), task performance (Jyoti and Kour 2015) and global leadership (Tuleja 2014; Van Dyne et al. 2012). This trait acts as a catalyst in assisting managers in the process of knowledge transfer (Vlajčić et al., 2019). Cultural intelligence buffers entrepreneurial intentions and international performance (Sahin and Gürbüz 2020). Moreover, teams comprising of culturally rich composition of employees demonstrate increased level of cultural intelligence (Iskhakova and Ott 2020). These findings of the abovementioned studies illuminate the importance of cultural intelligence at contemporary workplaces.

The remainder of this article is structured as: method section describes participants, procedure and statistics applied to arrive at the results of the study 1, 2 and 3 respectively. Results present the steps taken to progress with the statistical analysis for establishing the psychometric properties of CIS. Discussion section presents the findings of the current paper considering other studies carried out under the area of investigation. Lastly, implications (theoretical and practical), drawbacks, and avenues for future studies are discussed.

Method

Study 1

Participants and Procedure

The authors acquired the approval from the institutional human ethics committee to proceed with the data collection process. Hereafter, data were collected from Indian employees for three studies respectively. The authors created google forms for collecting data from employees working in different sectors. The google form link was circulated among employees working in multinational companies from Hyderabad, India. Snowballing sampling technique was deployed for data collection. This was done during the time period of August 2018 to March 2019. Each item was marked mandatory and the form could not be submitted if any of the items were left unanswered, not leaving scope for any missing data. For study 1, around 350 employees were requested to complete the cultural intelligence questionnaire. A total of 243 employees responded to the link, among which 45 data sets were discarded (due to patterns of response set and outliers), leaving a total of 198 data sets for final analysis. Demographic details of the sample are shown in Table 1.

Table 1 Demographic distribution (Study 1; $n = 198$)

	Demographics		Percentage
Sample one (n = 198)	Gender	Male	54.2%
		Female	45.8%
	Educational Qualification	Graduate	62.3%
		Post-Graduate	27%
		Doctorate	11.7%
	Sectors	Banking and Finance Information technology	15%
		Education	52.3%
		Manufacturing	21%
			11.7%

Measures

Cultural Intelligence Scale (CIS) (Ang et al. 2007)

The CIS encompasses twenty statements measuring four dimensions of the construct, namely; metacognitive, cognitive, motivational and behavioral cultural intelligence. Examples of statements for the dimensions consist of: metacognitive - "*I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds*", cognitive – "*I know the rules (e.g., vocabulary, grammar) of other languages*", motivational – "*I am confident that I can socialize with locals in a culture that is unfamiliar to me*" and behavioral – "*I change my non-verbal behavior when a cross-cultural situation requires it*". The responses are marked on a seven-point Likert type scale. The scores range from strongly disagree to strongly agree (1 = strongly disagree, 2 = disagree, 3 = somewhat disagree, 4 = can't say, 5 = somewhat agree, 6 = agree, and 7 = strongly agree). The originally reported Cronbach's alpha for the four dimensions were .80, .87, .82 and .86. Whereas, overall Cronbach's alpha coefficients of CIS was found to be 0.89. Internal consistency reliability was found to be acceptable for the obtained dataset (cf. Nunnally and Bernstein 1994; Gliem and Gliem 2003).

Statistical Analysis

Descriptive statistics for each dimension were computed using means and standard deviations. Normality of the data was checked using skewness and kurtosis. As suggested by Churchill Jr (1979), the scale validation procedure was carried out utilizing the following tools of statistical analysis. Reliability of the scale was examined with the statistic Cronbach's alpha. To establish the validity of CIS, we ran exploratory factor analysis (EFA) on the dataset. This was done to test the underlying factor-structure of cultural intelligence.

Study 2

Participants and Procedure

Data for study 2 was collected between the time period of July 2019 to October 2019 via the circulation of google forms link among employees from multinational companies located in Bengaluru, India. Similar to study 1, every item was marked mandatory on the google form and submission of the form was not possible in case any item was left un-attempted. A total of 320 employees were contacted in the metropolitan city of Bengaluru, India through snowballing technique. A total of 243 employees responded to the online link, however, only 227 data sets were considered for final analysis after eliminating data outliers and response set. Characteristics of the sample are represented in Table 2. CIS scale as outlined in study 1 was re-used for this study.

Statistical Analysis

Descriptive statistics for each dimension were computed using means and standard deviations. Normality of the data was checked using skewness and kurtosis. As suggested by Churchill Jr (1979), the scale validation procedure was carried out utilizing the following tools of statistical analysis. Confirmatory factor analysis (CFA) was calculated to assess construct validity. Further, second-order CFA was computed to investigate whether the dimensions of cultural intelligence further collapse into a single factor, measuring cultural intelligence. Average variance extracted was calculated to evaluate convergent validity and the squared correlation among facets

Table 2 Demographic distribution (Study 2; $n = 227$)

	Demographics		Percentage
Sample two (n = 227)	Gender	Male	47%
		Female	53%
	Educational Qualification	X^{th} Grade	0.5%
		XII^{th} Grade	0.9%
		Diploma	0.5%
		Graduate	43.8%
		Post-Graduate	49.3%
		Doctorate	5%
	Sectors	Banking and Finance	35%
		Information technology	31%
		Education	21%
		Manufacturing	8%
		Hospitality	5%

was employed to estimate divergent validity (Fornell and Larcker 1981).

Study 3

Participants and Procedure

Data for study 3 was collected between the time period of January 2020 to February 2020 via the circulation of google forms link among employees enrolled in an executive MBA program at IIM Kashipur. Following study 1 and 2, marking and format of items for this study was made consistent. The questionnaire was then sent out to 358 professionals, of which 310 completed it through the circulated link. As many as 53 data sets were eliminated due to outliers and 257 data points were considered for final analysis. Sample distribution details are discussed in Table 3.

Measures

In addition to the CIS scale already described in study 1 and 2, following scales were used additionally. These includes:

a) Authentic Happiness Inventory (AHI) measured the happiness of employees. The 22-item inventory established by Zabihi et al. (2014) was used in this study. The scale measured four dimensions of happiness, namely, meaningful and purposeful life (eight items), pleasure and positive emotions (seven items), engagement in life activities (five items) and interpersonal connectedness (two items). The scale has 22 questions with five sentences each where participants mark the option that they usually feel like about their life. The sentences are marked on an A to E (for example, A = *I feel ashamed of myself*, B = *I am not ashamed of myself*, C = *I am proud of myself*, D = *I am very proud of myself* and E = *I am extraordinarily proud of myself*) and rated from 1 to 5. The Cronbach's alpha was .94 which is close to the value reported by Zabihi et al. (2014).
b) Cross-cultural adjustment scale (CCA) was utilized to measure CCA (Black 1988). Cross-cultural adjustment scale consists of fourteen statements measuring general, interactional and work adjustment. Participants rated their responses on a seven-point Likert scale ranging between (1) strongly disagree to (7) strongly agree. Employees were asked to rate responses on criteria such as living conditions, healthcare facilities, entertainment facilities and so on. The Cronbach's alpha coefficient of the scale on current dataset was found to be .82.
c) Job performance - To measure job performance, we used scale developed by Goodman and Svyantek (1999) consisting of twenty-five statements which were rated by employees' supervisors or managers on a five-point Likert scale. Supervisors rated employees on criteria such as whether the employee assists manager with his duties, achieves the objectives of his or her job, demonstrates expertise in job-related tasks and so on. The Cronbach's alpha was found to be .87.

Statistical Analysis

For assessing the nomological validity of the CIS at individual, team and organizational level, authentic happiness, cross-cultural adjustment and job performance were examined using linear regression analysis. To investigate the differences between males and females with respect to cultural intelligence, we ran an independent samples *t*-test ($n = 425$) on the cumulative dataset of study one and two.

Results

Means and standard deviations for the dataset of study 1 ranged from 3.82 ± 1.03 to 6.77 ± 1.68. The skewness and Kurtosis values for first data set ranged between $-.334 \pm 1.528$ and $-.066$ to 2.496. For study 2, Means and standard deviations ranged between 4.33 ± 1.047 to 6.10 ± 1.555, and skewness and kurtosis ranged between $-.442 \pm 1.520$ and -1.227 ± 2.66. Lastly, means and standard deviations for study 3 ranged between 4.45 ± 1.02 to 6.59 ± 1.477, and skewness and kurtosis ranged between -1.028 ± 1.254 and -1.392 ± 1.477.

Table 3 Demographic distribution (Study 3; $n = 257$)

	Demographics		Percentage
Sample three (n = 257)	Gender	Male	51.3%
		Female	48.7%
	Educational Qualification	Graduate	96.6%
		Post-Graduate	3.4%
	Sector	Banking and Finance	26.4%%
		Information technology	54.2%
		Manufacturing	19.4%

Exploratory Factor Analysis (EFA)

Results of EFA ($n = 198$) represent that the rotated component matrix displayed a four-factor structure which explained 64% of the total variance extracted. Obtained factor structure is consistent with the original scale (Ang et al. 2007). Factor one, in the case of the present study, cognitive cultural intelligence explains 34.5% variance taking a share of six eigen values. Factor two, behavioral cultural intelligence explains about 12.5% variance taking a share of 2.5 eigen values. Likewise, factor three and four (motivational and metacognitive cultural intelligences) explain about 8% variance each in the total variance extracted with values over one eigen value. Factor loadings of each of the dimensions extracted are displayed in Table 4.

Confirmatory Factor Analysis (CFA)

CFA was run using method of maximum likelihood. Following recommendations by Byrne (2001), the factor structure of CIS and its fit indices were tested on the phase two dataset of Indian employees ($n = 227$). The chi-square test values (χ^2), normed chi-square (χ^2/df = ≤3), goodness of fit index (GFI = ≥ .90), adjusted goodness of fit index (AGFI = ≥ .90), comparative fit index (CFI = ≥ .90) and root mean square error of approximation (RMSEA = ≤ 0.08) to measure fit indices of cultural intelligence scale. Fig. 2 demonstrates the model convergence of CFA computed in the present study. The χ^2 value of 371.540 at 164 degrees of freedom was found to be significant at $p < .000$, while all other fit indices were in an acceptable range (χ^2/df = 2.265; GFI = .946; AGFI = .927; CFI = .957; RMSEA = 0.058). Factor loadings of CIS ranged from 0.63 to 0.83 representing that each item made a good fit for its respective factor. The values of the CFA demonstrate a good fit for the model being tested on a sample of Indian employees. Figure 1 represents the results of CFA.

A second-order model was also run to examine whether the four-factor model collapses into a single factor measuring cultural intelligence. Chi-square value of 371.540 at 164 degrees of freedom was reported to be statistically significant at $p < .000$ suggesting adequate model fit. The values of other fit indices were found to be acceptable as per standards (χ^2/df = 2.565; GFI = .953; AGFI = .937; CFI = .968; RMSEA = 0.06). Factor loadings of second-order CIS model ranged from 0.57 to 0.72 representing that each factor collapsed into the overall CIS scale. The findings show that first-order model and the second-order model represents the cultural intelligence scale as a psychometrically sound measure that can be used for professional purposes in the Indian context. Fig. 2 illustrates results of second-order CFA.

Table 4 Factor structure of cultural intelligence scale (n = 198)

	Component			
	1	2	3	4
COGQ4	.826			
COGQ5	.785			
COGQ6	.767			
COGQ3	.743			
COGQ2	.733			
COGQ1	.684			
BEHQ4		.797		
BEHQ3		.793		
BEHQ5		.769		
BEHQ2		.728		
BEHQ1		.683		
MOCQ2			.803	
MOCQ4			.772	
MOCQ3			.706	
MOCQ5			.685	
MOCQ1			.674	
MCQ3				.765
MCQ1				.758
MCQ2				.749
MCQ4				.692

Facet Acronyms: *COGQ = cognitive CQ, BEHQ = behavioural CQ, MOCQ = motivational CQ, MCQ = metacognitive CQ*

Convergent and Discriminant Validity

The present study investigated convergent validity by calculating the average variance extracted (AVE) for each dimension of cultural intelligence. AVE is an indicator of how accurately the statements of each variable explain it. Convergent validity is deemed to be acceptable when AVE for each dimension is greater than 0.5 (Fornell and Larcker 1981). As evident in Table 5, AVE of all the factors to be above 0.5 depicts satisfactory convergent validity. In other words, the items fit well into the framework being measured. To measure discriminant validity, AVE of each factor was compared with squared correlation among dimensions of CIS (Hulland 1999). The factors are discriminant when AVE for each dimension is higher than squared correlations of the construct. The obtained values support discriminant validity of cultural intelligence scale.

The impact of cultural intelligence on dependent variables was investigated using linear regression. Descriptive statistics (means and standard deviations) and correlation coefficients of selected variables is presented in Table 6. The prediction values of cultural intelligence on dependent variables are illustrated in Table 7. The results invariably suggest that cultural intelligence predicts authentic happiness, cross-cultural adjustment and job performance. These relationships establish the nomological validity of CIS in the Indian scenario.

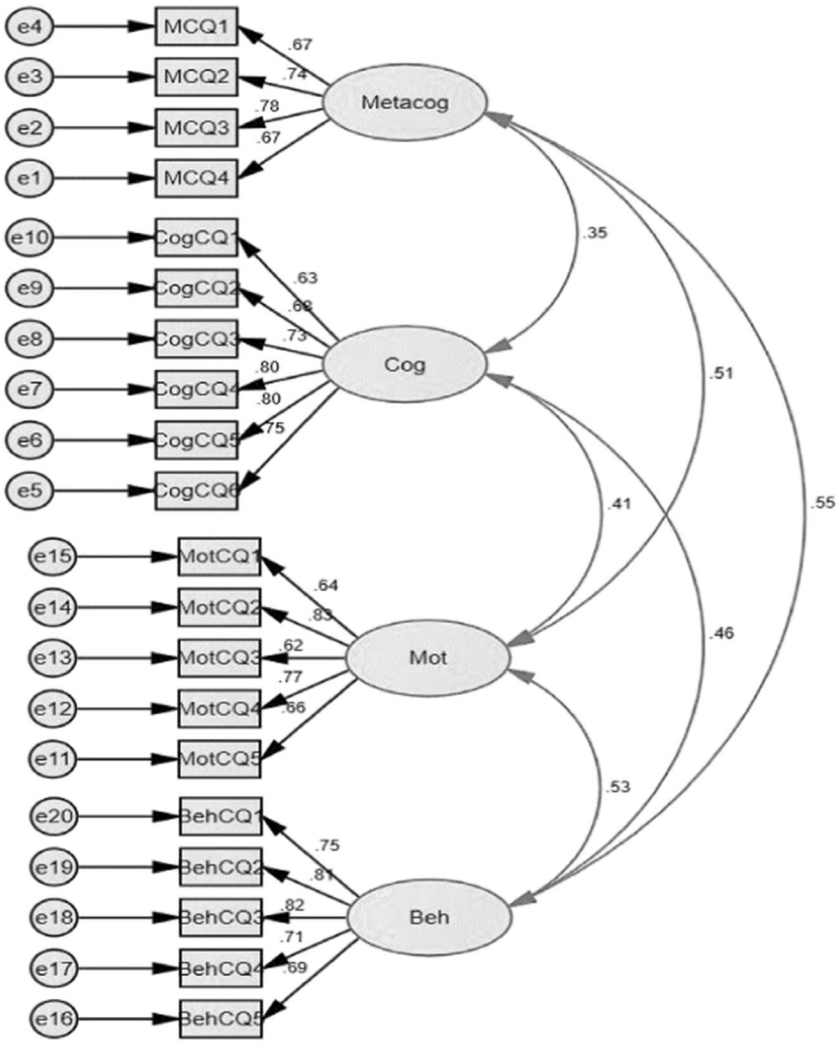

Fig. 1 Confirmatory Factor Analysis ($n = 227$)

The results report a significant difference among males and females with respect to behavioral cultural intelligence. The means and standard deviation scores of males (27.00 ± 5.08) and females (25.17 ± 5.79) indicate that males were found to be more intelligent when compared to females in executing behavioral cultural intelligence. Although not significant, men scored more than women on cognitive, motivational and overall cultural intelligence. Contrarily, women scored more than men on the metacognitive dimension. These results are discussed further in the next section. The values of descriptive statistics of the sample and *t*-test are presented in Table 8.

Discussion

The present study examined the psychometrics of CIS (Cronbach's alpha, exploratory factor analysis, first and second-order confirmatory factor analysis, convergent, discriminant and nomological validity) with three different datasets of Indian employees. Reliability and validity analysis demonstrated adequate and acceptable values for using the CIS among employees in India. CIS demonstrated internal consistency when measured using Cronbach's alpha coefficient. The four-factor structural model of CIS was found to be consistent with the original questionnaire (Ang et al. 2007). The factor structure of CIS is validated among other collectivist contexts such as Slovenia (Boštjančič et al. 2018), Saudi Arabia (AL-Dossary 2016), South Africa (Mahembe and Engelbrecht 2014), and Iran (Khodadady and Ghahari 2011). In addition, second-order CFA of CIS further validates the theoretical underpinnings of the construct as the four facets collapse into a single construct, measuring cultural intelligence. All the factors displayed adequate values of convergent validity and discriminant validity.

Cultural intelligence predicted authentic happiness, cross-cultural adjustment and job performance. These results not only provide satisfactory evidence for the nomological

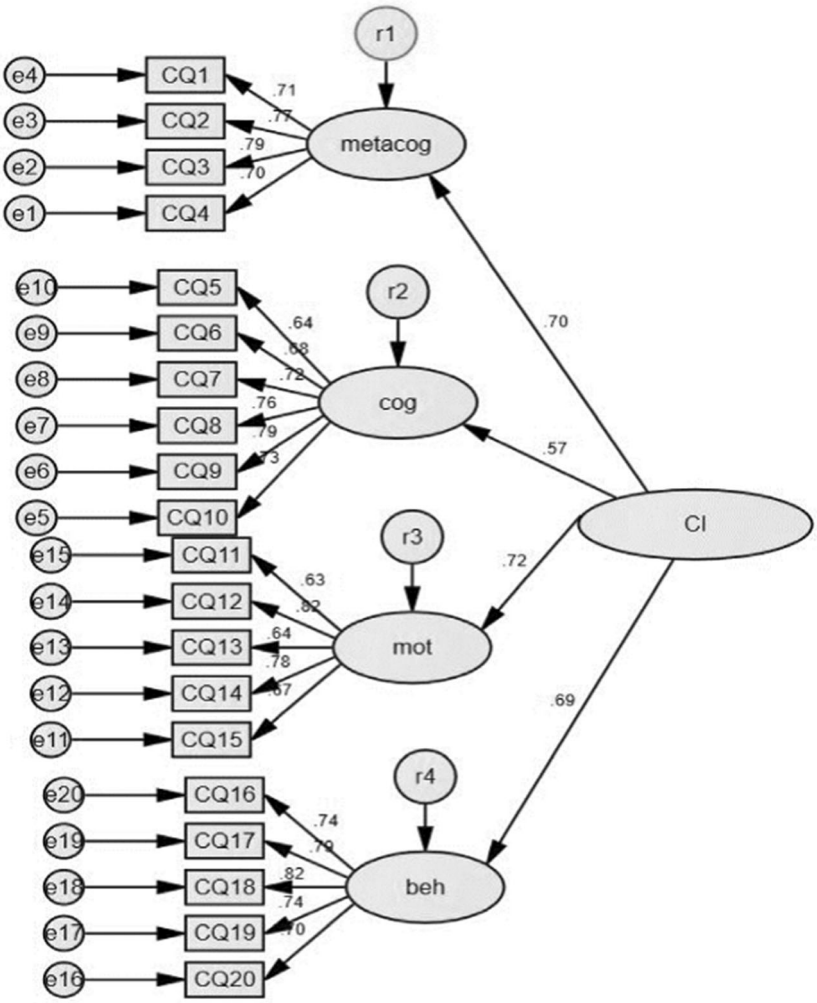

Fig. 2: Second-order Confirmatory Factor Analysis (n = 227)

validity of the questionnaire but also support the fact that cultural intelligence is a vital characteristic delving in framework of psychology of sustainability (Di Fabio 2017) and healthy organizations (Di Fabio and Peiró 2018). Psychology of sustainability and healthy organizations framework emphasize on the humane approach to promote well-being of employees and making organizations productive. Since cultural intelligence significantly impacts authentic happiness (having a life with meaning and purpose, interpersonal connectedness, experiencing positive emotions), cross-cultural adjustment and job performance, it is nested in frameworks of psychology of sustainability and healthy organizations. With respect to gender differences, men displayed the capability to use proper language (non-verbal and verbal communication) while interacting with people from dissimilar cultures. Men were more able than women in integrating motivational and cognitive cultural intelligence in practical real-world scenarios. This is a novel contribution of the present study which can be subjected to replication in its future extensions.

Table 5 Average variance extracted and squared correlations among facets (n = 227)

	Metacognitive	Cognitive	Motivational	Behavioral
Metacognitive	**0.549**			
Cognitive	0.316	**0.574**		
Motivational	0.409	0.334	**0.532**	
Behavioral	0.457	0.406	0.468	**0.571**

Note: Diagonal bold-faced values indicate the Average variance extracted; matrix entries show squared correlation among the dimensions of cultural intelligence

Implications

The study holds several implications in light of theory and practice for managers, consultants, trainers and policymakers. Theoretically, the contributions made by the present study are manifold. *First*, the main contribution of the paper is establishing the usability of the cultural intelligence scale (CIS) in Indian scenario. *Second*, the article emphasizes the importance

Table 6 Descriptives & Correlation coefficients between the variables ($n = 257$)

	Mean (SD)	Cultural intelligence	Authentic Happiness	Cross-cultural adjustment	Job Performance
Cultural intelligence	98.21 (13.37)	**1**			
Authentic happiness	68.60 (14.57)	**.176***	**1**		
Cross-cultural adjustment	55.08 (6.74)	**.254****	−.034	**1**	
Job performance	137.92 (14.35)	**.250****	.33	**.487****	**1**

Note: ** = $p < 0.01$; * = $p < 0.05$; SD = standard deviation

of cultural intelligence in buffering of well-being, cross-cultural adjustment and performance. This signifies that cultural competence is beneficial for the individual, team dynamics and performance at the workplace to achieve organizational goals. *Third*, the findings verify cultural intelligence as an important trait contributing to psychology of sustainability and healthy organizations framework (Di Fabio 2017), which may serve important for any organization in fostering and maintaining their workforce. Maintaining and sustaining employee performance is an essential aspect for organizations to be consistent in achieving their objectives. Psychology of sustainability and healthy organizations framework serve as effective strategies to enhance employee performance, the key to which is a culturally competent workforce.

Talent management is the major concern for human resource professionals. As organizations turn global in their approach, training a workforce (managers and employees) to be culturally competent is a prime agenda for organizations to sustain themselves in the market (Alon et al. 2016). The outcomes of the current study confirm that CIS is suitable for use in the Indian scenario to identify managers and employees as culturally competent. Culturally intelligent workforce can complement the organizations' strategies to perform well, irrespective of circumstances. For managers, the main implications of the study are: *First*, the usability of CIS to support organizations to appeal and hire culturally lucid employees. *Second*, focus upon training and development of employees, leaders and managers who are culturally intelligent and *third*, assistance in preserving talent that is capable of international strategic implementation.

It is imperative for organizations to recruit positions for culturally intelligent individuals strategically. The CIS is a valuable tool for assessing employees in the selection process when administered with other measures of performance and well-being (Alon et al. 2016). Considering experience of living abroad and multilingualism as antecedents of cultural intelligence, hiring managers may keep in mind the criteria of hiring individuals with these attributes. The CIS may also be used in internal recruitment of employees inside the organization. Internally, employees who are identified to be culturally intelligent can be assigned to teams that crack deals.

The CIS can be utilized to measure cultural intelligence to identify strengths and weaknesses of employees. This may lead to designing of useful programs for employees. For instance, especially in the Indian organizations, an employee may know more than two languages because of the diversity and number of languages spoken in the country, however, the employee may have to be trained to familiarize to diverse cultural settings. In such a situation, exposing the employee to international clients along with experienced employees can serve as a training for the employee to handle forthcoming tasks and accomplishing goals for the organization.

Limitations

Data were collected through self-report measures from Indian employees which may have some degree of social desirability bias. Therefore, to leave lesser scope of limitations in future studies, inter-rater reliability can be assessed to increase the

Table 7 Linear regression coefficients (n = 257)

	B	SE	β	Significance
Authentic happiness	.189	.17	**.176***	.040
Cross-cultural adjustment	.123	.65	**.254****	.000
Job performance	.257	.63	**.250****	.000

Note: ** = p < 0.01; * = p < 0.05

Table 8 Gender differences among cultural intelligence and its facets ($n = 425$)

	Mean		SD		t	Significance
	Male	Female	Male	Female		p
Metacognitive	22.13	22.25	3.55	4.17	0.13	.893
Cognitive	27.16	27.14	7.02	6.26	0.02	.984
Motivational	27.82	27.76	5.00	4.94	0.09	.921
Behavioral	27.00	25.17	5.08	5.79	**2.46***	**.014**
Overall CQ	104.12	102.29	16.12	15.13	0.87	.384

*$p < 0.05$; SD = Standard deviation

statistical power of the results. Managers can rate their employees and a correlation between self-perception and manager ratings can be drawn to measure CIS accurately without social desirability bias. In addition, the extraneous factors that could possibly impact the cultural intelligence levels of employees were not taken into consideration for this study.

Recommendations for Future Research

Discrete gender differences among men and women on dimensions of cultural intelligence indicate prospective gap in research to examine why women scored higher on metacognitive dimension but not on the other dimensions and how men although low on metacognitive dimension, exhibited higher behavioral cultural intelligence when compared to women. Such findings call for further reflection and adoption of theoretical frameworks such as models of national culture to document such differences in academic literature. The results suggest that further exploration of cultural intelligence and its expression in the Indian scenario would consequentially unearth the cultural richness and diversity present in India.

In view of psychology of sustainability and healthy organizations framework, proactive behaviors such as job crafting may be studied. Another novel contribution to academic literature can be a proposition to study cultural intelligence with mental toughness, a trait that empowers employees to sustain under pressure (Ruparel 2020). The cultural intelligence relationship may be explored with other psychological variables such as psychological capital, organizational virtuousness (Dubey et al. 2019), firm-specific variables (Seth et al. 2019; Chadha and Seth 2020), firm performance (Sharma, Chadha and Seth 2020) and sustainable development (Khanra et al. 2019). In addition, given that cultural intelligence enhances performance, a potential area of exploration could be whether this construct helps the organization improve employee's productivity (Seth et al. 2020a). Moreover, the impact of cultural intelligence can be tested on consumer inertia and resistance (Seth et al. 2020b). Such an exploration could enrich the framework of psychology of sustainability, thereby facilitating organizations to sustain their present workforce by effective training strategies.

The effect of work experience, educational qualifications, languages known (bilingual and multilingual) on cultural intelligence can also be potentially explored. The sample population of this study is representative of the diverse cultural composition of Indians. In this regard, the differences in the manifestation of cultural intelligence among individuals brought up in these diverse backgrounds could be explored further including cross regional variations and possible relationships with other variables.

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Compliance with Ethical Standards

Ethical Approval The study was approved by the Institutional Human Ethics Committee (IHEC), vide approval no: IHEC-52/18–2.

Informed Consent Informed consent was obtained from all individual participants included in the study. Informed consent was designed following the guidelines of Helsinki Declaration of 1975, as revised in 2000.

Conflict of Interest The authors declare no conflict of interest.

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