

The influence of cultural intelligence on the intra-team knowledge-sharing behaviour of knowledge-intensive teams

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Background: Although knowledge sharing among members of knowledge-intensive teams can enhance an organisation's competitive advantage, individuals are often reluctant to share their knowledge. Inadequate cultural intelligence could explain this reluctance in knowledge sharing. Empirical research on cultural intelligence and knowledge sharing in a culturally diverse team context is scant, and existing research is rather outdated. Accordingly, the purpose of this study was to investigate the influence of cultural intelligence on the intra-team knowledge-sharing behaviour of individual members of knowledge-intensive teams in South African organisations.

Objective: This study aimed to address the gap in the knowledge-sharing literature concerning the relationship between cultural intelligence and intra-team knowledge-sharing behaviour, especially in a culturally diverse context such as South Africa. Understanding and successfully managing cultural intelligence in diverse knowledge-intensive teams can increase intra-team knowledge-sharing behaviour and, subsequently, an organisation's overall competitive advantage.

Method: Positivism, which is associated with quantitative research, and a deductive approach were adopted to empirically test the relationship between intra-team knowledge-sharing behaviour and cultural intelligence. The data were collected through an online survey from 384 respondents who participated in knowledge-intensive teams in South African organisations. Structural equation modelling was conducted to assess the relationship between the variables.

Results: The results of the study revealed that cultural intelligence is significantly and positively related to intra-team knowledge-sharing behaviour.

Conclusion: Team leaders can enhance cultural intelligence and, subsequently, intra-team knowledge-sharing behaviour and an organisation's competitive advantage through practical recommendations proposed by this study.

Keywords: behavioural cultural intelligence; cognitive cultural intelligence; cultural intelligence; knowledge-intensive organisations; knowledge-intensive teams; knowledge-sharing behaviour; metacognitive cultural intelligence; motivational cultural intelligence.

Introduction

Knowledge is the lifeblood of a business and therefore crucial for its survival in today's constantly changing and highly competitive economic environment (Asrar-UI-Haq & Anwar 2016). Although knowledge is a vital resource, it is the management of knowledge that renders increased competitiveness to organisations (Sayyadi 2019). More specifically, knowledge sharing is widely recognised as the key activity in the process of knowledge management (Lee 2018; Zouari & Dakhli 2018) and holds various advantages for organisations. For example, knowledge sharing has been positively associated with increased organisational performance, learning and innovation and business process efficiency (Ahmad & Karim 2019; Cormican et al. 2021; Mohajan 2019; Muhammed & Zaim 2020; Nkurunziza et al. 2018). In this respect, teams are important elements of modern organisational structures, and knowledge sharing among team members can not only have a positive impact on performance and creativity at a team level but can also positively affect organisational outcomes, which in turn can enhance competitive advantage (Ahmad & Karim 2019; Kipkosgei, Kang & Choi 2020). Similarly, Jiang and Chen (2021) asserted that by using team structures, knowledge-sharing allows team members to collaborate on their skills and expertise that ultimately promote the organisation's competitive advantage.

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Notably, knowledge-sharing is vital in knowledge-intensive teams. Knowledge-intensive teams, which include research teams, product development teams and strategic planning teams, comprise highly qualified individuals with varying skills, experience and functional expertise. These individuals undertake complex and nonroutine tasks and address the challenging demands of knowledge-intensive work. They are thus important to an organisation's competitive advantage (Cummings & Haas 2012; Lowik, Kraaijenbrink & Groen 2016).

Problem statement and purpose of study

Despite the importance of team members sharing their knowledge with the rest of the team, some individuals in knowledge-intensive teams are often reluctant to engage in knowledge sharing (Amiri, Pourkiani & Pourrashidi 2014; Kaur 2016; Kiniti & Standing 2013). Inadequate cultural intelligence of these team members could explain this reluctance. Cultural intelligence is a nonacademic intelligence that refers to an individual's capability to adapt, communicate and successfully function in situations in which cultural diversity plays an integral part (Li, Wu & Xiong 2021; Solomon & Steyn 2017). By understanding and successfully managing cultural intelligence in diverse knowledge-intensive teams, intra-team knowledge-sharing behaviour can be increased. However, empirical research on cultural intelligence and team knowledge-sharing in a culturally diverse context is limited, and the existing research is rather outdated. In particular, limited empirical research is available on the various dimensions of cultural intelligence, namely metacognitive, cognitive, motivational and behavioural cultural intelligence and team knowledge sharing in South Africa – a country that is characterised by its cultural diversity. The purpose of this study was therefore to investigate the influence of cultural intelligence on the intra-team knowledge-sharing behaviour of individual members of knowledge-intensive teams in South African organisations. This study subsequently addressed the gap in the knowledge-sharing literature that insufficiently explores the relationship between cultural intelligence and intra-team knowledge-sharing behaviour, especially in a culturally diverse context.

Literature review

Intra-team knowledge-sharing behaviour

Several behavioural concepts such as attitude, intention and actual behaviour can be linked to knowledge-sharing among individuals. These concepts originate from Fishbein and Ajzen's (1975) theory of reasoned action and Ajzen's (1985) theory of planned behaviour. These theories imply that an individual's actual knowledge-sharing behaviour is based on their intention to share knowledge, whereas their intention to share knowledge is a function of their attitude towards sharing knowledge. These theories, however, have been criticised for the existence of an intention-behaviour gap (Nguyen, Nham & Hoang 2019; Olatokun & Nneamaka 2012; Xue, Bradley & Liang 2011), which suggests that intention is not always an accurate predictor of actual behaviour.

This notion has been supported by the findings of several studies (Elogie & Asemota 2013; Kuo & Young 2008; Olatokun & Nneamaka 2012; Ramdhanian 2012; Yang & Farn 2007) that showed an inconsistency between intention and actual knowledge-sharing behaviour. It is estimated that only one-half of intentions translate into actual behaviour (Nguyen et al. 2019; Sheeran & Webb 2016).

Against this background, the focus of this study is on the actual knowledge-sharing behaviour of individual members participating in knowledge-intensive teams in South African organisations. This approach is consistent with several other knowledge-sharing studies that also measured actual knowledge-sharing behaviour instead of the intention to share knowledge (Brooke, Rasdi & Samah 2017; Chuang, Jackson & Jiang 2016; Fullwood, Rowley & McLean 2018; He, Baruch & Lin 2014; Noh 2013; Wang 2016; Xue et al. 2011). Moreover, given the complementary nature of tacit knowledge (i.e. intangible and captured in the 'minds' of individuals) and explicit knowledge (i.e. tangible and easy to document), this study measured both knowledge types. In this respect, explicit knowledge, for example, can be converted to new tacit knowledge. Similarly, tacit knowledge can be converted to explicit knowledge (Ayub, Kogeda & Lall 2018). Sharing both types of knowledge in knowledge-intensive teams is therefore important, given the challenging nature of the tasks to be performed in these teams by members with diverse skills, experience and functional expertise.

Cultural intelligence

Cultural intelligence can be categorised into four interrelated but different dimensions, namely metacognitive, cognitive, motivational and behavioural cultural intelligence (Bogilovic, Cerne & Skerlavaj 2017; Solomon & Steyn 2017). Metacognitive cultural intelligence denotes the processes that individuals employ to gain and understand cultural knowledge. This type of cultural intelligence relates to individuals' cultural alertness throughout social relations with other team members from different cultural backgrounds (Chen & Lin 2013; Gooden, Creque & Chin-Loy 2017). In teams characterised by high metacognitive cultural intelligence, knowledge-sharing is likely to improve, because members are consciously attentive to other team members' cultural inclinations. In fact, team members are aware of their fellow team members' preferences before and throughout their social interactions and thus know how and when to use their cultural knowledge (Chen & Lin 2013; Gooden et al. 2017; Solomon & Steyn 2017).

The second dimension of cultural intelligence, namely cognitive cultural intelligence, refers to a general knowledge and understanding of a particular culture, cultural commonalities and cultural differences (Chen & Lin 2013; Solomon & Steyn 2017). This type of cultural intelligence involves knowledge of specific behaviour in a team that is rich in cultural diversity. Knowledge sharing is likely to thrive when team members have high cognitive cultural intelligence, with ample knowledge of the resemblances and

differences across cultures (Chen & Lin 2013). Team members with high cognitive cultural intelligence are self-confident about teamwork and knowledge-sharing (Chen & Lin 2013). Because these individuals recognise important similarities with out-group members and can deal with preconceptions derived from surface-level cultural features, they are also likely to cooperate and successfully share knowledge with out-group members (Bogilovic et al. 2017).

Motivational cultural intelligence, the third cultural intelligence dimension, relates to an individual's inherent willingness, curiosity and deliberate efforts to understand different cultures in their attempt to manage the challenges of cross-cultural interactions (Bogilovic et al. 2017; Gooden et al. 2017). An individual with high motivational cultural intelligence enjoys and is more confident during interactions with culturally diverse individuals (Bogilovic et al. 2017; Gooden et al. 2017). As a result, these individuals tend to interact more with colleagues from diverse cultures and are less likely to uphold robust in-group-out-group distinctions during their interactions. In fact, individuals with high motivational cultural intelligence seek to network more with out-group members and are likely to encourage knowledge sharing in teams (Bogilovic et al. 2017; Chen & Lin 2013).

The fourth dimension, behavioural cultural intelligence, relates to what individuals do instead of what they think or feel. More specifically, this dimension has to do with the use of appropriate verbal and nonverbal skills, such as words, tone of voice, gestures and facial expressions, to effectively work together and communicate with individuals from diverse cultural backgrounds (Chen & Lin 2013; Gooden et al. 2017; Solomon & Steyn 2017). This form of cultural intelligence improves social relations and emphasises how an individual modifies their behaviour to adjust to different cultures (Chen & Lin 2013; Gooden et al. 2017).

From an empirical perspective, cultural intelligence was found to be positively linked to knowledge-sharing behaviour. For example, Putranto and Ghazali (2013) studied the effects of cultural intelligence on the knowledge-sharing behaviour of Master of Business Administration students in Indonesia. Their findings showed a positive link between all four dimensions of cultural intelligence and knowledge-sharing behaviour. Likewise, Chen and Lin (2013) investigated the effects of cultural intelligence on team knowledge-sharing among team leaders in high-technology firms in Taiwan. These authors (Chen & Lin 2013) established that knowledge-sharing behaviour was directly influenced by metacognitive, cognitive and motivational cultural intelligence. Furthermore, knowledge-sharing was found to be indirectly motivated by behavioural cultural intelligence, through the mediation of perceived team efficacy. Older, but well-acknowledged research by Messarra, Karkoulou and Younes (2008) revealed that metacognitive, motivational and behavioural cultural intelligence were predictors of employees' knowledge-sharing intentions. However, no relationship was found between the cognitive cultural intelligence dimension and knowledge-sharing intentions. The sample in their study

comprised employees working in multinational organisations in Lebanon. In a recent empirical study involving Chinese employees across several industries (e.g. manufacturing, finance and education), Li et al. (2021) found that cultural intelligence was significantly and positively related to knowledge-sharing behaviour. These authors, however, did not report on each dimension of cultural intelligence. Similarly, Stoica, Florea and Gonzalez (2020) found a strong and positive relationship between metacognitive cultural intelligence and knowledge-sharing behaviour. These authors investigated the determinants of team cohesiveness for virtual teams by using a sample of students from Europe, Brazil, China and the United States of America. Besides metacognitive cultural intelligence, the other dimensions of cultural intelligence were not measured by these authors. Limited, but other recent empirical research (Isichei 2017; Presbitero & Attar 2018) also implies that cultural intelligence has a positive effect on individuals' knowledge-sharing behaviour.

In contrast to the aforementioned findings, De Geus (2018) concluded that not one of the four cultural intelligence dimensions were significantly related to knowledge-sharing behaviour in multinational project teams. Similarly, Chou (2012) did not find a significant relationship between cultural intelligence and knowledge-sharing behaviour in teams. Apart from these two studies, overall, there is sufficient empirical evidence of a positive relationship between cultural intelligence and intra-team knowledge sharing. However, from the aforementioned studies it is evident that not all research was conducted in a team context. The relationship between cultural intelligence and intra-team knowledge sharing should therefore be subjected to further empirical testing.

In the light of the preceding discussion, this study tested the hypothesis that a positive relationship exists between intra-team knowledge-sharing behaviour and cultural intelligence. To address possible multicollinearity concerns associated with the different variables that belong to a shared category, these variables were combined into a single hierarchical variable, as suggested by some researchers (Allen, Bennett & Heritage 2018; Kim 2019). Metacognitive cultural intelligence, cognitive cultural intelligence, motivational cultural intelligence and behavioural cultural intelligence belong to a common category and were therefore combined to form the variable cultural intelligence, which was measured as a single variable.

Research methodology

A positivistic research philosophy, which is typically associated with quantitative research, and a deductive approach was adopted in this study to empirically test the relationship between intra-team knowledge-sharing behaviour and cultural intelligence.

Population and sampling

The population in the present study was employees participating in knowledge-intensive teams in South African

knowledge-intensive businesses. In this respect, the unit of analysis included individual members of knowledge-intensive teams, as knowledge-sharing starts with the individual (Edwards 2016; Foote 2016; Rehman et al. 2019). However, a complete database of employees working in such teams in South Africa was not available at the time of the study. The whole population could therefore not be selected, and a sample that represented the population had to be chosen by means of convenience sampling. More specifically, the researcher secured a database with the contact details of more than 8000 qualified individuals in South Africa who worked in knowledge-intensive businesses. This database was obtained from a leading higher education institution and consisted of professionals who were also likely to participate in knowledge-intensive teams. Concerning research ethics, respondents were assured of their confidentiality and anonymity, and ethical clearance was obtained for the study. The purpose of the study was explained, and informed consent to participate in the study was obtained from all respondents.

Measuring instrument

In this study, a survey strategy was adopted. An online questionnaire was used to measure the dependent variable (intra-team knowledge-sharing behaviour) and the

independent variable (cultural intelligence). To verify that respondents met the criteria to participate in this study and were representative of the population, the respondents had to indicate by means of a qualifying question whether they participated (or had participated) in a knowledge-intensive team at their organisation. Using the database of professionals working in knowledge-intensive businesses, an electronic link to the final questionnaire was e-mailed to 8496 potential respondents. A total of 384 usable questionnaires were returned, representing a response rate of 4.5%. The sample size is deemed appropriate for the purpose of the present study that uses structural equation modelling (SEM) to assess the relationship between cultural intelligence and intra-team knowledge-sharing behaviour (Hair et al. 2019).

A Likert-type scale consisting of seven items was developed to measure the dependent variable (intra-team knowledge-sharing behaviour). The scale that measured the independent variable (cultural intelligence) comprised 18 items. For illustrative purposes, the various dimensions of cultural intelligence and their associated items are shown in Table 1. As observed earlier, the dimensions of cultural intelligence belong to a common category and were therefore combined and measured as a single variable to address multicollinearity

TABLE 1: Operationalisation of the dependent and independent variables.

Items	Sources
Dependent variable: Intra-team knowledge-sharing behaviour (ITKSB)	
I share my specialised knowledge and expertise with members of my team.	Chuang et al. (2016)
I share my work experiences with members of my team.	Chuang et al. (2016)
I share my work-related insights with members of my team.	Chuang et al. (2016)
I share my practical know-how (for carrying out daily tasks) with members of my team.	He et al. (2013)
I share well-documented manuals (notes regarding work) with members of my team.	Pangil and Nasurdin (2009)
I share methodologies (methods for completing a particular task) with members of my team.	Pangil and Nasurdin (2009)
I share models (examples of previously completed projects) with members of my team.	Pangil and Nasurdin (2009)
Independent variable: Cultural intelligence (CI)	
Metacognitive cultural intelligence	
I am capable of understanding the different cultural values and norms of team members.	De Geus (2018)
I reflect on the cultural beliefs and values of team members before interacting with them.	De Geus (2018)
I am conscious of the accuracy of my cultural knowledge (i.e. knowledge about a particular culture, including its values, beliefs and norms) when I interact with team members from different cultural backgrounds.	Ang et al. (2007)
I adjust my cultural knowledge (i.e. knowledge about a particular culture, including its values, beliefs and norms) when I interact with team members from different cultural backgrounds.	Ang et al. (2007)
I am conscious of the cultural knowledge (i.e. knowledge about a particular culture, including its values, beliefs and norms) I use when interacting with team members from different cultural backgrounds.	Ang et al. (2007)
Cognitive cultural intelligence	
I know the values of team members from other cultural backgrounds.	Ang et al. (2007)
I know the social systems (i.e. how society functions as a whole) of other cultures that members of my team come from.	Chen and Lin (2013)
I know the rules and meaning (i.e. the vocabulary and grammar) of other languages that members of my team use.	Ang et al. (2007)
I know the legal and economic systems (e.g. command or socialist, market or mixed economies) of other cultures that members of my team come from.	Ang et al. (2007)
Motivational cultural intelligence	
I am confident that I can socialise with team members from other cultural backgrounds.	Ang et al. (2007)
I am confident that I can get accustomed to the working conditions that are influenced by team members from different cultural backgrounds.	Chen and Lin (2013)
I actively seek information about the cultural backgrounds of team members that are different from mine.	De Geus (2018)
I enjoy learning about the cultural backgrounds of team members that are different from mine.	Chen and Lin (2013)
I am confident that I can deal with the stress of adjusting to a diverse team culture.	Ang et al. (2007)
Behavioural cultural intelligence	
I change my nonverbal behaviour (e.g. gestures, facial expressions) when a cross-cultural team situation requires it.	Ang et al. (2007)
I use pauses and silence differently to suit different cross-cultural situations.	Ang et al. (2007)
I use appropriate words when interacting with team members from diverse cultural backgrounds.	Ang et al. (2007)
I change my verbal behaviour (e.g. tone of voice) when a cross-cultural team interaction requires it.	Ang et al. (2007)

TABLE 2: Demographic profile of respondents.

Age (Years)	%	Gender	%	Home language	%	Highest academic qualification	%	Ethnic background	%	Organisational tenure (Years)	%	Job tenure (Years)	%
18–24	3.6	Male	55.2	Afrikaans	10.2	Grade 11 and lower	0.0	White people	14.1	Less than a year	4.4	Less than a year	5.7
25–30	9.9	Female	44.8	English	26.8	Grade 12 or equivalent qualification	6.3	Black people	65.6	1–2	8.1	1–2	14.3
31–40	36.7	-	-	Xhosa	7.6	Higher certificate	7.0	Asian people	9.1	3–5	23.7	3–5	37.2
41–50	34.4	-	-	Zulu	15.6	Diploma	13.5	Mixed race people	6.3	6–10	19.0	6–10	21.1
51–60	14.3	-	-	Sotho	13.5	Bachelor's degree	17.2	Other	4.9	11–15	19.0	11–15	13.5
61–70	1.1	-	-	Other	26.3	Honours degree	23.7	-	-	16–20	10.4	16–20	4.2
Older than 70	0.0	-	-	-	-	Master's degree, MBA or higher	26.8	-	-	More than 20	15.4	More than 20	4.0
-	-	-	-	-	-	Other	5.5	-	-	-	-	-	-

concerns and to minimise the possibility of obtaining misleading statistical results. The respective scales were anchored with descriptors ranging from 1 = 'strongly disagree' to 7 = 'strongly agree'. The scales were derived from scales used in previous empirical studies that reported reliable and valid results, and they also included a few self-generated items based on the theory on cultural intelligence (see Table 1). Minor adaptations were made to the wording of previous scales to make the items more appropriate for the purpose of this study.

Concerning research ethics, respondents were assured of their confidentiality, anonymity and that ethical clearance had been obtained for the study. The purpose of the study was explained, and informed consent to participate in the study was obtained from all respondents.

Data analysis

The overall factor structure of the dependent and independent variables was assessed by means of a confirmatory factor analysis (CFA). Besides the overall factor structure, convergent and discriminant validity were analysed by calculating the average variance extracted (AVE) estimates and squared correlations between the constructs.

The reliability of the scales that measured the dependent and independent variables was assessed against Cronbach's alpha coefficients. Finally, the relationship between cultural intelligence and intra-team knowledge-sharing behaviour was evaluated by means of SEM.

Empirical results

Demographic profile of respondents

The majority of the respondents were male (55%) and between 31 and 40 years old (37%). As far as home language is concerned, most respondents were English-speaking (27%) and held a master's degree or higher qualification (27%). With regard to ethnic background, the highest number of respondents were black people (66%), while most of the respondents had worked in their organisation (24%) and current position (37%) for between 3 and 5 years.

It can be concluded that the respondents in this study were generally well qualified, diverse and accustomed to their

TABLE 3: Model fit indices of the confirmatory factor analysis.

Factor	Parameters	CMIN/df	SRMR	CFI	RMSEA
Intra-team knowledge-sharing behaviour	All significant ($p < 0.01$)	3.398	0.037	0.961	0.079
Cultural intelligence	All significant ($p < 0.01$)	2.625	0.056	0.930	0.065
Norm		Less than 3.0	Less than 0.08	Above 0.90	Less than 0.07

CMIN/df, normed chi-square; SRMR, standardised root mean residual; CFI, comparative fit index; RMSEA, root mean square error of approximation.

organisation and role (see Table 2). These characteristics were ideal for the purpose of the present study.

Validity and reliability of the measuring instrument

The CFA results for the dependent and independent variables are illustrated in Table 3. According to these results, both factors indicated an adequate model fit, and subsequently, the overall theoretical structure of the dependent and independent variables could be confirmed.

Table 3 shows that the standardised root mean residual (SRMR) values well below the 0.08 norm and comparative fit index (CFI) values above the 0.90 norm were returned for both factors. The root mean square error of approximation (RMSEA) value for intra-team knowledge-sharing behaviour was marginally higher than the 0.07 guideline, while an RMSEA value less than 0.07 was reported for the factor cultural intelligence. The normed chi-square (CMIN/df) ratio for the factor intra-team knowledge-sharing behaviour was fairly close to the guideline of 3.0 and below 3.0 for the factor cultural intelligence. Hair et al. (2019) suggested that the fit index values should be used with discretion and caution against using a single index cut-off value. In line with these recommendations, the reported fit index values indicated an appropriate model fit.

Following the assessment of the overall factor structure, the discriminant and convergent validity of the constructs were evaluated. Convergent validity was assessed based on a construct's AVE value. In this instance, the researcher established whether each construct's AVE value was greater than the guideline of 0.5 (Hair et al. 2019). Intra-team knowledge-sharing behaviour and cultural intelligence returned AVE values of 0.435 and 0.347, respectively. These values were marginally below the guideline of 0.5 and

were subsequently not rejected, solely because of their AVE values. Also, a construct's reliability is an indicator of its convergent validity (Hair et al. 2019). In this respect, if a construct's AVE value is below 0.5, but it returns a reliability estimate higher than 0.6, a construct's convergent validity can be accepted, as suggested by the well-known scholars in structural equation models, Fornell and Larcker (1981). High Cronbach's alpha estimates were reported for both intra-team knowledge-sharing behaviour ($\alpha = 0.832$) and cultural intelligence ($\alpha = 0.894$), which exceeded the generally accepted threshold of 0.7 (Hair et al. 2019). Accordingly, there was sufficient evidence of internal reliability and convergent validity for both constructs.

With reference to discriminant validity, the Fornell–Larcker criterion was used in the present study. According to this criterion, a researcher must establish whether the square root of the AVE estimates of any two constructs is greater than the correlation between the two constructs (Hair et al. 2016, 2019). This criterion was met in the present study, with the square root of the AVE values of both constructs being greater than the absolute value of the correlation coefficient of the given construct with the other construct. The first column in Table 4 lists the square root of the AVE values of both constructs. These results can be considered as satisfactory evidence of discriminant validity of the measuring instrument.

The results of the CFA and the convergent and discriminant validity assessments confirmed the overall construct validity in this study.

Structural equation modelling analysis results

To test the hypothesis of a positive relationship between intra-team knowledge-sharing behaviour and cultural intelligence, SEM was performed. As illustrated in Table 5, the factor cultural intelligence was regressed onto intra-team knowledge-sharing behaviour ($\chi^2 = 656.963$; $df = 264$; $p = 0.000$), while modification indices were applied to enhance the overall model fit.

The results confirmed a positive and statistically significant relationship between cultural intelligence and intra-team knowledge-sharing behaviour ($\beta = 0.410$; $SE = 0.071$; $CR = 5.761$; $p < 0.001$). With reference to the goodness-of-fit indices (see Table 6), the model indicated an appropriate fit with a CMIN/df ratio of 2.488, a SRMR value of 0.0675, a CFI value of 0.903 and a RMSEA value of 0.062. The hypothesis of a positive relationship between cultural intelligence and intra-team knowledge-sharing behaviour could therefore be supported.

Discussion and implications of findings

The results of this study are in congruence with previous empirical studies (e.g. Li et al. 2021; Presbitero & Attar 2018; Stoica et al. 2020) that reported a positive relationship between cultural intelligence and knowledge sharing. The findings of

TABLE 4: Average variance extracted values versus correlation estimates.

1	2	3	4
Factor	$\sqrt{\text{AVE}}$	ITKSB	CI
Intra-team knowledge-sharing behaviour (ITKSB)	0.659	1	0.475
Cultural intelligence (CI)	0.589	0.475	1

TABLE 5: Model parameter estimates and p -value.

Regression	Path estimate	SE	CR	p
ITKSB \leftarrow CI	0.410	0.071	5.761	*

ITKSB, intra-team knowledge-sharing behaviour; CI, cultural intelligence; SE, standard error; CR, test statistic value.

*, $p < 0.001$

TABLE 6: Model fit indices.

Regression	Parameters	CMIN/df	SRMR	CFI	RMSEA
ITKSB \leftarrow CI	All significant ($p < 0.001$)	2.488	0.0675	0.903	0.062
Norm		Less than 3.0	Less than 0.08	Above 0.90	Less than 0.07

ITKSB, intra-team knowledge-sharing behaviour; CI, cultural intelligence; CMIN/df, normed chi-square; SRMR, standardised root mean residual; CFI, comparative fit index; RMSEA, root mean square error of approximation.

this study imply that individuals' cultural alertness during social relations with other members from different cultures has a positive influence on their knowledge-sharing behaviour with members of their team. A general knowledge and understanding of a particular culture, which includes an understanding of cultural commonalities and differences, also positively affects knowledge-sharing behaviour with team members. In addition, an individual's inherent willingness, curiosity and deliberate efforts to understand different cultures in their attempts to manage challenges associated with cross-cultural interactions is likely to have a positive influence on the knowledge-sharing behaviour of team members. Finally, the use of appropriate verbal and nonverbal skills, such as words, voice tone, gestures and facial expressions to effectively work together and communicate with team members from diverse cultural backgrounds is also positively related to knowledge-sharing behaviour.

Practical recommendations

In the light of the findings of this study, several recommendations related to each dimension of cultural intelligence are offered next.

Team leaders should have a clear vision to develop and improve the various dimensions of cultural intelligence of team members to improve each individual team member's knowledge-sharing behaviour. In this instance, transformational leadership is important to inspire and create a shared commitment (i.e. among team members) towards the vision that could subsequently play an integral role in advancing their cultural intelligence. For example, with respect to the metacognitive cultural intelligence dimension, team leaders should lead by example and encourage team members to heighten their cultural alertness during social relations with other members from different cultures. This leadership orientation includes advising team members to be conscious of

and to adjust their cultural knowledge when interacting with others. They should also be encouraged to be conscious of the accuracy of their cultural knowledge and reflect on the cultural beliefs and values of other team members before interacting with them.

With regard to cognitive cultural intelligence, a general knowledge and understanding of a particular culture, which includes an understanding of cultural commonalities and differences, should also be driven by team leaders as part of their vision to develop and improve the various dimensions of cultural intelligence among team members. For example, team leaders can host special social events such as cultural days during which team members can be requested to dedicate a lunch hour or afternoon to display some of their traditions. In this way, team members can obtain a better understanding of different cultures in a relaxed social environment. Also, team leaders can instil a team culture in which team members can learn more about the legal, economic and social systems of other cultures.

Knowledge about the rules and meaning of the different languages and the values of team members from other cultural backgrounds can also be enhanced during these interactions. The above-mentioned events can also contribute towards team members' motivational cultural intelligence. For example, a team member's confidence to deal with the stress of adjusting to a diverse team culture and to socialise with team members from other cultural backgrounds can also improve by means of social gatherings. A team member's enjoyment from learning and seeking information about the different cultural backgrounds of other team members along with the confidence to get accustomed to the working conditions that are influenced by these team members are further benefits that can emanate from these social events.

It is further recommended that resources in knowledge-intensive businesses be directed towards cultural immersion initiatives. These immersions can contribute to the realisation of a team leader's vision to develop and improve the various dimensions of cultural intelligence among team members, behavioural cultural intelligence in particular. To illustrate: in an effort to develop successful future leaders, team members can be encouraged to attend leadership development programmes that not only focus on developing leadership skills but also provide an opportunity to visit other countries where they can be exposed to different cultural backgrounds. In this way, team members can become accustomed to verbal and nonverbal skills to effectively work together and communicate with individuals from diverse cultural backgrounds. International secondments are another valuable opportunity that can be afforded to team members to gain international exposure and experience of diverse cultural environments.

In addition to the practical recommendation, this study makes a valuable contribution to the body of knowledge-

sharing literature in general and team knowledge-sharing literature in particular. The study also confirms the (albeit) limited previous empirical findings of a positive relationship between cultural intelligence and intra-team knowledge-sharing behaviour. Finally, a valid and reliable measuring instrument was developed for the present study, which can be adopted or amended by future researchers who are interested in further investigating cultural intelligence and intra-team knowledge-sharing.

Limitations and recommendations for future research

As is the case with all empirical studies, this study also has some limitations. Firstly, the extent to which a convenience sample represents the population can be questioned. Although the sample size of 384 respondents was deemed appropriate for this study, the findings should be generalised and interpreted with caution given the use of a nonprobability sample. The researcher believes, however, that the findings can be generalised to some extent. Also, this study lent itself to possible common method variance, as the data were collected through self-reporting by respondents. Although the Harman's single factor-test could not establish evidence of common method variance, its possibility cannot be ignored. It is recommended that future researchers employ remedies to limit the possibility of common method variance such as those that were employed in the present study. For example, respondents should be informed of their confidentiality and that their names would not appear in the research report. The respondents should be assured that their anonymity would be protected at all times. Furthermore, it is important to point out to respondents that there are no right or wrong answers when responding to survey questions. These are selected procedures that could minimise evaluation apprehension, which is a possible cause of common method variance (Rodriguez-Ardura & Meseguer-Artola 2020; Tehseen, Ramayag & Sajilan 2017).

Besides the aforementioned recommendations, several other ideas can be explored in future studies. For example, this study's focus could be extended to include other behaviour concepts such as knowledge-sharing attitudes and intentions. A longitudinal study using a larger sample size could also be considered by future researchers. In this respect, researchers can potentially detect changes or patterns in knowledge-sharing behaviour over time. Finally, it was decided to combine the dimensions of cultural intelligence into a single hierarchical variable, namely cultural intelligence, as the dimensions belong to a shared category that could lead to multicollinearity. Investigating these dimensions independently as part of a less complex model holds potential for future research. For example, researchers can focus on one or two cultural intelligence dimensions in a study or remove highly correlated dimensions. In this way, future researchers can establish which dimension or dimensions of cultural intelligence have an influence on intra-team knowledge-sharing behaviour.

Conclusion

This study examined the influence of cultural intelligence on the intra-team knowledge-sharing behaviour of individual members of knowledge-intensive teams in South African organisations. In doing so, the study addressed the dearth in knowledge-sharing literature concerning the relationship between cultural intelligence and intra-team knowledge-sharing behaviour, especially in a culturally diverse context. The findings revealed a positive and significant relationship between cultural intelligence and intra-team knowledge-sharing behaviour. Several recommendations were made to team leaders to enhance the various dimensions of cultural intelligence and to strengthen the knowledge-sharing behaviour among team members and subsequently contribute to an organisation's competitive advantage.

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Competing interests

The author has declared that no competing interest exists.

Author's contributions

I declare that I am the sole author of this research article.

Ethical considerations

Ethical clearance to conduct this study was obtained from the Research Ethics Committee of Nelson Mandela University (ref. no. H20-BES-BMA-041).

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Data availability

Data are available upon reasonable request from the author.

Disclaimer

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