



Metacognitive cultural intelligence and service delivery at casual dining restaurants in Bloemfontein

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Orientation: Workplace diversity and intercultural interaction are undisputed realities in the new world of work. This is especially true for casual dining restaurants that are labour intensive and customer-oriented, catering for culturally diverse patrons.

Research purpose: The study investigated the impact of perceived metacognitive cultural intelligence of service staff on the service delivery experiences of customers at casual dining restaurants.

Motivation for the study: There is a dearth of research that explores the cultural intelligence of hospitality service staff in the South African context.

Research approach/design and method: A structured questionnaire was administered to a sample of 403 customers at casual dining restaurants in Bloemfontein, using QuestionPro. Partial Least Squares Structural Equation Modelling (PLS-SEM) was applied to examine the relationships between the variables.

Main findings: Statistically significant negative relationships were recorded between metacognitive cultural intelligence and all the service delivery constructs. Metacognitive cultural intelligence was found to have a medium predictive power towards responsiveness and assurance as part of the service delivery construct.

Practical/managerial implications: Due to the complexity of the cultural intelligence construct, the study only focused on metacognitive cultural intelligence and its impact on the service delivery experiences of casual dining patrons. The findings showed service staff lacked metacognitive cultural intelligence, hence affecting all the areas of service delivery. There is thus a persistent need for training and developing intercultural competencies.

Contribution/value-add: Despite current emphasis on diversity management and cultural intelligence, the findings of the study revealed that service staff are not adequately prepared for intercultural interactions.

Keywords: new world of work; cultural intelligence; metacognitive cultural intelligence; service delivery experiences; hospitality industry; casual dining restaurants.

Introduction

The new world of work has evolved mainly because of globalisation and the incessant development of digital technologies (e.g., computers, smart phones, video streaming, websites, online gaming, e-books, blockchain) associated with the Fourth Industrial Revolution (Nyagadza et al., 2022). New technologies implore contemporary organisations to not only adapt to new systems and processes, but to also be innovative in a highly competitive business environment (Rüth & Netzer, 2020). Continuous technological development has also resulted in societal changes and transformed the ways in which humans live and work. This is particularly evident in aspects such as consumer behaviour, consumption patterns, leisure time activities, and career development.

In the modern workplace, digital technologies have enabled remote and hybrid work, online work, and flexible work arrangements. Despite these permutations, maintaining conducive human interactions and positive work relationships remains a key component of optimal employee performance. Given that workforce diversity is a global reality, it is essential for employees to possess intercultural skills and understanding (Rüth & Netzer 2020; Tariq & Lorenz, 2017). Research has indeed shown that a workforce consisting of individuals from diverse cultural and social groups can contribute to the organisation's sustainability and competitiveness (Solomon & Steyn, 2017).

Possessing intercultural skills and understanding is linked to the notion of being culturally intelligent. Cultural intelligence relates to the acquisition of intercultural competence to effectively interact with individuals from a dissimilar culture (Presbitero, 2020). Particularly employees in service industries such as the hospitality industry need to possess high levels of cultural intelligence. The success of the hospitality industry is contingent upon the level of customer satisfaction and the perceived value attributed to the services provided by employees (Waqanimaravu & Arasanmi, 2020). Intercultural understanding and communication among culturally diverse individuals are thus a composite part of the industry (Jiony et al., 2021; Wang, 2017).

Because of their accessibility and prevalence, casual dining restaurants, as a sub-set of the hospitality industry, were the focus of the study. Also, employees at casual dining restaurants have daily interaction with culturally diverse patrons, which makes this a suitable context for investigating the phenomenon under study. Casual dining establishments can be described as often having a laid-back atmosphere and ample seating arrangements. Typically, these establishments provide comprehensive table service and may additionally feature a wine menu or a complete bar service (Samygina, 2017).

Purpose

Service delivery is the mainstay of the hospitality industry, including restaurants that are a sub-set of the industry. Given the service-oriented nature of casual dining restaurants, the main objective of the study was to assess the metacognitive cultural intelligence of service staff.

Literature review

Cultural intelligence

The 'cultural intelligence' concept was developed by Ang et al. (2007) with the purpose of measuring and predicting intercultural interactions. The concept was conceived at the turn of the 21st century when the world was experiencing unprecedented globalisation and interconnectedness (Colom & Román, 2018). Dogra (2016) notes that cultural intelligence is positively associated with good communication skills, job satisfaction, cultural adaptation, behavioural adjustment, and sound judgement and decision making. This implies self-awareness and having insight into one's own behaviour.

Solomon and Steyn (2017) view cultural intelligence as a non-academic intelligence that portrays a person's competence in functioning effortlessly in culturally diverse environments. Rùth and Netzer (2020) highlight the crucial role of cultural intelligence in predicting managerial success in intercultural settings. It is imperative that managers be culturally intelligent, as they need to set an example for employees. Moreover, cultural intelligence facilitates the training of employees and the adaptation of organisational processes to promote better intercultural understanding (Stokes, 2014).

According to Ang et al. (2007), cultural intelligence has four dimensions, namely metacognitive, cognitive, motivational, and behavioural. Metacognitive cultural intelligence enables the analysis, regulation, and comprehension of knowledge. Cognitive cultural intelligence involves an individual's factual understanding of general and specific knowledge of the norms, values, and practices associated with different countries (Jiony et al., 2021). Motivational cultural intelligence pertains to the inclination to actively engage in, guide, and sustain one's enthusiasm for acquiring knowledge and effectively operate within culturally diverse contexts and undertakings (Kundu & Mor, 2017). Behavioural cultural intelligence refers to the individual capacity to engage with individuals from diverse backgrounds through verbal and non-verbal means (Hassan et al., 2020).

Because of the complexity of the cultural intelligence construct and the measurement of two highly individual constructs (cultural intelligence and service delivery) in this study, the article focuses on metacognitive cultural intelligence as it relates to the ways in which employees think about their learning (Ang et al. 2007; Jiony et al. 2021; Le et al., 2021).

Service delivery

Service delivery entails the provision of services by an establishment that requires collective effort from a variety of employees. The process involves various stages including introductory dialogue, onboarding, configuration, service fulfilment, and follow-up provisions (Othman et al., 2019).

Alomari (2021) asserts that customers within the service sectors exhibit interest not only in the outcomes of service delivery processes, but also in the way the services are delivered. This rationale is in line with the foundation of the SERVQUAL model as developed by Parasuraman et al. (1988). The SERVQUAL model was deemed suitable for this study because of the inherent connection between service quality and service delivery. The model comprises five distinct dimensions, namely tangibles, empathy, assurance, reliability, and responsiveness. These are discussed further in the text.

Tangibles are the well-kept surroundings, equipment, and staff, which pertain to all physical aspects that have an impact on the level of service provided to customers (Parasuraman et al., 1988). *Empathy* refers to the extent to which organisations demonstrate care, focus on their clientele, and provide personalised attention to customers. *Empathy* also pertains to the capacity to deliver assured services with accuracy and dependability. This, in turn, relates to customer engagement, problem solving, empathy, addressing customer concerns and anxieties, fostering a sense of solidarity, and ensuring customer retention (Parasuraman et al., 1988).

The third dimension, *assurance*, is the ability of organisations to instil confidence and trust in customers by means of the knowledge and courtesy displayed by their service staff (Parasuraman et al., 1988). This relates closely to the fourth dimension, namely *reliability*, which pertains to the ability to

deliver the promised service consistently and accurately. Lastly, *responsiveness* refers to the willingness of an organisation to assist customers and deliver expeditious service. The assessment of responsiveness can be conducted through the use of inquiries, such as gauging the extent to which an organisation's inquisitiveness aligns with the challenges faced by its clientele, evaluating the organisation's proficiency in assisting customers in resolving issues, and examining the organisation's receptiveness towards general complaints and customer grievances (Parasuraman et al., 1988).

Customer service is the primary source of competitive advantage within the hospitality industry. Front-line employees are thus widely regarded as the most critical asset of any service organisation, fulfilling a crucial part in attaining and maintaining a competitive advantage. Consequently, it is imperative for organisations to acknowledge the significance of their employees in effectively representing and strengthening the brand identity of the establishment, as well as ensuring the accurate delivery of services (Vance, 2006).

Data and analysis

Research approach and design

Because of the nature of this study, objectivism served as ontological stance, while positivism informed the epistemological stance (Mukhles & Ababneh, 2020). The study further employed a quantitative approach. The research design was descriptive, and a structured questionnaire was used to gather the data.

Measures

By means of a desktop search, it was found that 36 restaurants in Bloemfontein self-identified as casual dining restaurants. All these restaurants were approached to participate in the study. Only five granted the researchers permission, and patrons visiting the establishments were approached to participate in the study. This study thus used non-probability sampling, specifically convenience sampling, to gather the data. Convenience sampling involves data collection from population members who are readily available and willing to participate in a study (Gul, 2021). Informed consent was obtained before the questionnaire was administered via a link to QuestionPro.

Participants

The population of individuals frequenting casual dining restaurants in Bloemfontein constitutes more than 100 000 (N) per year, of which 398 respondents (*n*) would be deemed representative (Israel, 1992). For this study, 408 questionnaires were completed and used for data analysis. The demographic data revealed that most participants (62%) were between 21 and 40 years old. Most participants were black (71%), followed by 19% coloured, 6% white, and 4% Asian and Indian.

Measuring instrument

The questionnaire comprised three sections. Section A captured the demographic profile of respondents, while

section B captured perceptions related to cultural intelligence, based on Ang et al. (2007). Section C captured the respondents' experiences regarding the levels of service delivery, based on Grosset, Truffot Pernot, Lecoeur, and Guelpa Lauras (1983).

Statistical analysis

Partial least squares structural equation modelling (PLS-SEM) was used in the analysis to examine the relationships between variables. The statistical package, SmartPLS version 3.3.7, was applied to conduct the analysis.

Ethical considerations

The study received ethical clearance from the Faculty Research and Innovation Committee (FRIC) of the Central University of Technology, Free State (no. FMSEC07/19). Respondents who participated in the study were informed of the purpose of the study and they were assured that all the information would be treated confidentially. Participation in the study was voluntary and questionnaires were completed anonymously. The captured data were stored using passwords only accessible to the researchers.

Results

The condition of normality is an essential requirement for a significant proportion of parametric statistics. As the data from this study substantially deviated from this norm, the use of PLS-SEM was validated. In using PLS-SEM, the following minimum sample size applies: (1) 10 times the most formative indicators used to measure one construct or (2) 10 times the most structural paths directed at a specific construct in the structural model (Hair et al., 2017). The sample size of the study ($N = 403$) far exceeded the minimum requirements.

The following hypotheses were tested in this research:

- H_1 : There is a statistically significant relationship between metacognitive cultural intelligence and assurance in casual dining restaurants.
- H_2 : There is a statistically significant relationship between metacognitive cultural intelligence and empathy in casual dining restaurants.
- H_3 : There is a statistically significant relationship between metacognitive cultural intelligence and reliability in casual dining restaurants.
- H_4 : There is a statistically significant relationship between metacognitive cultural intelligence and responsiveness in casual dining restaurants.
- H_5 : There is a statistically significant relationship between metacognitive cultural intelligence and tangibles in casual dining restaurants.

The research model is presented in Figure 1.

Assessing the outer model

For the outer model, the following assessments of reliability and validity were performed: indicator reliability, internal

consistency reliability, convergent validity, and discriminant validity (Amora, 2021), which are explained further in the text.

Indicator reliability relates to the extent to which a measurement item reliably reflects the underlying construct (Hulland, 1999). According to Hair et al. (2017), the outer loadings of the indicator should exceed 0.70. Thus, the following indicators, ASS1, MCG6, and REL3, with loadings below

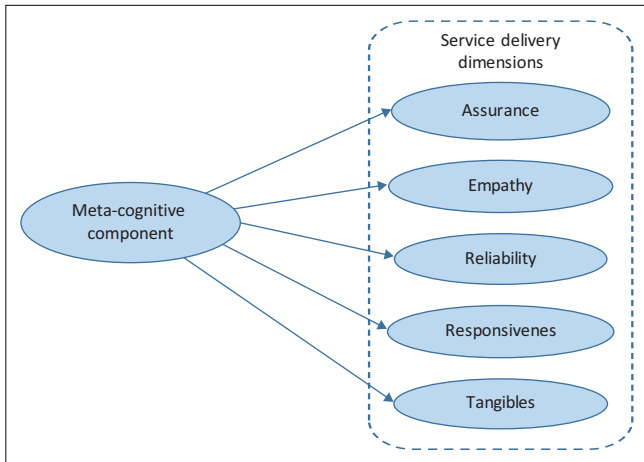


FIGURE 1: The research model.

0.70, were removed from the measurement model. Table 1 shows that all indicator loadings were above the 0.7 threshold. It can be concluded that the measurement model exhibited indicator reliability.

Internal consistency reliability measures the consistency of the measuring instrument using composite reliability (CR) and Cronbach's alpha (α). According to Gefen et al. (2000), the CR should be greater than 0.7 to indicate adequate internal consistency reliability and for α between 0.60 to 0.70. Table 2 shows that all constructs displayed an acceptable level of internal consistency reliability.

Convergent validity is the degree to which a measurement instrument demonstrates a positive correlation with other measures that assess the same underlying construct. This is achieved by measuring the average variance extracted (AVE) (Janadari et al., 2016). The AVE should be greater than 0.5 according to Bagozzi and Yi (1988) and Fornell and Larcker (1981). The AVE for assurance was 0.618; empathy, 0.614; metacognitive cultural intelligence, 0.679; reliability, 0.601; and tangibles, 0.637.

Discriminant validity describes the extent to which a construct is genuinely separate from other constructs based on empirical criteria (Hair et al., 2017). Heterotrait-heteromethod

TABLE 1: Factor loadings.

Questions	Assurance	Empathy	Meta-cognitive component	Reliability	Responsiveness	Tangibles
Customers feel safe in their transactions (ASS 2).	0.778	-	-	-	-	-
Employees are consistently courteous (ASS 3).	0.825	-	-	-	-	-
Service staff have sufficient knowledge to answer customers' enquiries about the offerings and operations (ASS 4).	0.754	-	-	-	-	-
Service staff pay individual attention to the customer (EPM 1).	-	0.729	-	-	-	-
Service staff pay personal attention to customers (EPM 2).	-	0.784	-	-	-	-
Service staff understand specific needs of their customers (EPM 3).	-	0.802	-	-	-	-
Service staff have the best interests of customers at heart (EPM 4).	-	0.817	-	-	-	-
Service staff are conscious of the cultural knowledge they use when interacting with customers with different cultural backgrounds (MCG 1).	-	-	0.879	-	-	-
Service staff adjust their cultural knowledge as they interact with customers from a culture that is unfamiliar to their own (MCG 2).	-	-	0.891	-	-	-
Service staff display a positive attitude when interacting with culturally diverse customers (MCG 3).	-	-	0.796	-	-	-
Service staff are conscious of the cultural knowledge they apply to cross-cultural interaction (MCG 4).	-	-	0.766	-	-	-
Service staff generally have good interpersonal skills (MCG 5).	-	-	0.780	-	-	-
Service staff generally meet their promised timeframes for responses to customers (REL 1).	-	-	-	0.736	-	-
When a customer has a problem, service staff show a sincere interest in solving it (REL 2).	-	-	-	0.793	-	-
Services are provided by service staff at the time they promised to do so (REL 4).	-	-	-	0.791	-	-
Service staff keep accurate records (REL 5).	-	-	-	0.779	-	-
Service staff adequately inform customers when services will be performed (RES 1).	-	-	-	-	0.709	-
Service staff provide prompt service (RES 2).	-	-	-	-	0.754	-
Service staff perform the service right the first time (RES 3).	-	-	-	-	0.801	-
Service staff are never too busy to respond to customers' requests (RES 4).	-	-	-	-	0.728	-
The restaurant has modern-looking equipment (TAN 1).	-	-	-	-	-	0.766
The physical facilities are visually appealing (TAN 2).	-	-	-	-	-	0.816
Service staff appear neat (TAN 3).	-	-	-	-	-	0.808
Materials associated with the service are visually appealing (TAN 4).	-	-	-	-	-	0.802

ASS, assurance; EMP, empathy; MCG, metacognitive cultural intelligence; REL, reliability; RES, responsiveness; TAN, tangibles.

TABLE 2: Cronbach's alpha and composite reliability.

Constructs	Cronbach's α	CR
Assurance	0.700	0.829
Empathy	0.793	0.864
Metacognitive component	0.886	0.913
Reliability	0.779	0.857
Responsiveness	0.742	0.836
Tangibles	0.811	0.875

CR, composite reliability.

TABLE 3: Heterotrait-heteromethod ratios.

Constructs	Assurance	Empathy	Metacognitive component	Reliability	Responsive ness
Empathy	0.862	-	-	-	-
Metacognitive component	0.419	0.349	-	-	-
Reliability	0.629	0.642	0.345	-	-
Responsiveness	0.839	0.900	0.422	0.780	-
Tangibles	0.450	0.307	0.337	0.602	0.399

correlations (HTMT) compare the average correlations between indicators measuring different constructs and indicators measuring the same construct. The HTMT ratio should not be greater than 0.9 (Hair et al., 2017). Table 3 shows that 14 out of 15 HTMT ratios did not exceed the 0.9 threshold. It can therefore be concluded that the measurement model exhibited discriminant validity.

Inner model (structural model) assessment

The assessment of the structural models of the study was conducted in two steps, as explained further in the text.

Step 1: Assess the significance and relevance of the structural model relationships

Bootstrapping analysis was applied to assess the direct impacts of all the hypothesised relationships. The standardised beta coefficients and t -values were calculated through a bootstrapping technique, employing a resample size of 5000 (Hair et al., 2017). Table 4 indicates a statistically significant negative relationship between the metacognitive cultural intelligence and assurance ($\beta = -0.360, p < 0.001$). A statistically significant negative relationship was also found between metacognitive cultural intelligence and empathy ($\beta = -0.330, p < 0.001$).

Two other statistically significant negative relationships were recorded, between metacognitive cultural intelligence and reliability ($\beta = -0.315, p < 0.001$), as well as responsiveness ($\beta = -0.379, p < 0.001$). Lastly, a statistically significant negative relationship was found between the metacognitive cultural intelligence and tangibles ($\beta = -0.305, p < 0.001$).

Step 2: Assess the level of R^2

R^2 indicates the percentage of variance in a latent endogenous construct that can be accounted for by other exogenous constructs. Figure 2 shows the R^2 value of tangibles as 0.093. This implies that the metacognitive cultural intelligence construct explained 9.3% of the variance in the tangibles construct. R^2 values of 0.12 or below indicate a low effect size; values between 0.13 and 0.25 indicate a medium effect size;

TABLE 4: Path model results of structural equation modelling.

Hypotheses	Std beta	Std error	t -value	p	Decision
H1: Metacognitive component \rightarrow Assurance	-0.360	0.039	9.212	< 0.001	Accepted
H2: Metacognitive component \rightarrow Empathy	-0.330	0.040	8.251	< 0.001	Accepted
H3: Metacognitive component \rightarrow Reliability	-0.315	0.037	8.478	< 0.001	Accepted
H4: Metacognitive component \rightarrow Responsiveness	-0.379	0.035	10.876	< 0.001	Accepted
H5: Metacognitive component \rightarrow Tangibles	-0.305	0.051	5.946	< 0.001	Accepted

and values of 0.26 or above indicate a high effect size (Cohen, 1992). From these guidelines, the metacognitive cultural intelligence construct had a low predictive power for the tangibles construct.

The R^2 value of reliability is 0.099, indicating that the metacognitive cultural intelligence construct explained 9.9% of the variance in the reliability construct. The metacognitive cultural intelligence construct thus had a low predictive power for the reliability construct (Cohen, 1992). Figure 2 also shows the R^2 value of responsiveness as 0.143, indicating that the metacognitive cultural intelligence construct explained 14.3% of the variance in the responsiveness construct. This means that the metacognitive component had a medium predictive power for the responsiveness construct (Cohen, 1992).

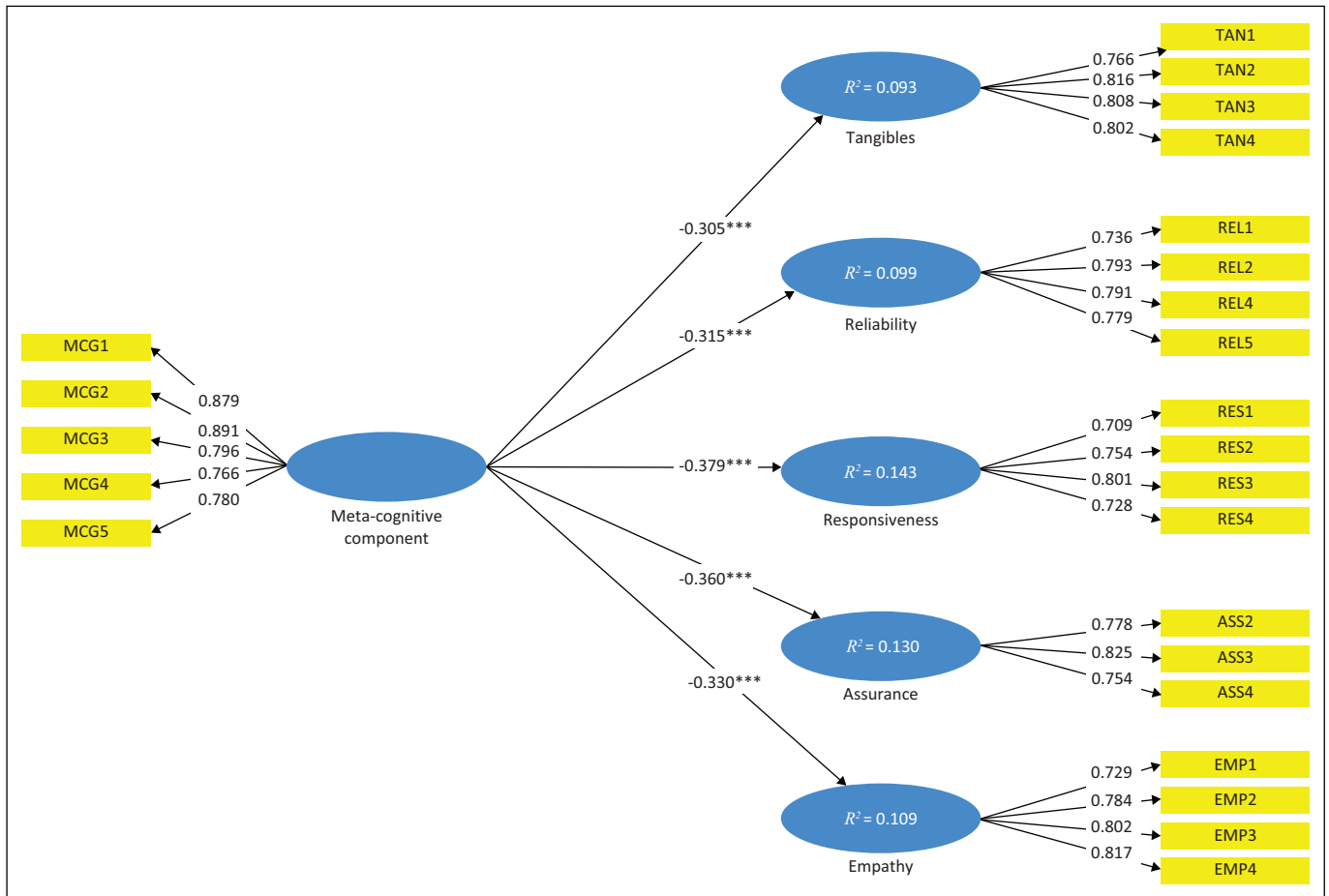
The R^2 value of assurance was 0.130. This means that the metacognitive cultural intelligence construct explained 13.0% of the variance in the assurance construct. Therefore, the metacognitive cultural intelligence construct had a medium predictive power for the assurance construct (Cohen, 1992). Lastly, the R^2 value of empathy was 0.109. In essence, the metacognitive cultural intelligence construct explained 10.9% of the variance in the empathy construct. The metacognitive cultural intelligence construct thus had a low predictive power for the assurance construct (Cohen, 1992).

Discussion

Outline of the results

Metacognitive cultural intelligence requires individuals to be active participants in intercultural settings by continuously organising, monitoring, and adapting their thinking processes (Ang et al., 2007). The findings of the study (see Figure 2) revealed that metacognitive cultural intelligence had a statistically significant negative relationship with all the service delivery variables: assurance ($\beta = -0.360, p < 0.001$), empathy ($\beta = -0.330, p < 0.001$), reliability ($\beta = -0.315, p < 0.001$), responsiveness ($\beta = -0.379, p < 0.001$), and tangibles ($\beta = -0.305, p < 0.001$). Statistically negative relationships imply that the higher the one variable (metacognitive cultural intelligence), the lower the other variable (service delivery).

Contrary to the findings of this study, most research confirms that higher levels of cultural intelligence support organisational processes including service delivery. Tariq and Lorenz (2017) reported a significant increase of service failure because of



ASS, assurance; EMP, empathy; MCG, metacognitive cultural intelligence; REL, reliability; RES, responsiveness; TAN, tangibles.
 *, $p < 0.05$; **, $p < 0.01$; ***, $p < 0.001$.

FIGURE 2: The impact of metacognitive intelligence on service delivery in casual dining restaurants.

disparities in cultural backgrounds between service employees and customers. Jiony et al. (2021) found that an increased understanding of cultural intelligence has a significant influence on the psychological capital of front-line employees, consequently impacting the overall quality of service.

Alshaibani (2015) found that metacognitive cultural intelligence predicts task performance, while Ang et al. (2007) found that metacognitive cultural intelligence supports cultural judgement and decision-making effectiveness. According to Ratasuk and Charoensukmongkol (2020), teams demonstrating elevated levels of cultural intelligence were found to be more engaged in team-sharing activities and received higher evaluations for being innovative compared to teams with low cultural intelligence. Similarly, Alshaibani (2015) established that front-line hospitality staff with higher levels of cultural intelligence engaged better with culturally diverse customers. They were also more inclined to offer guests a dependable and compassionate service, bolstering confidence and trust in the organisation. A positive correlation has also been found between high levels of cultural intelligence and the interactions and job performance of employees (Alshaibani, 2015).

Puyod and Charoensukmongkol (2019) observed that individuals with little work experience derived a significantly

greater benefit from cultural intelligence compared to individuals with more work experience. Furthermore, Suthatorn and Charoensukmongkol (2018) suggested that employees who possess a higher degree of cultural intelligence exhibit not only proficient cross-cultural communication when interacting with customers from various cultural backgrounds, but also actively strive to meet customer expectations more effectively in comparison with individuals with a lower degree of cultural intelligence. Tariq and Lorenz (2017) support the notion that high cultural intelligence is a significant competency for effective cross-cultural service interactions.

Owing to the complexity of the cultural intelligence concept, this article focused only on metacognitive cultural intelligence and its impact on service delivery. A possible explanation for the statistically significant negative relationships found in this study is that metacognitive cultural intelligence relates to the thinking processes of individuals. The investigation did not consider the other cultural intelligence components, notably cognition (where individuals need to figure out what to do in an intercultural context), motivation (where individuals need to engage with the situation), and behaviour (where individuals need to enact appropriate behaviours) (Sternberg et al., 2022).

Practical implications

The study only reported on metacognitive cultural intelligence as one component of cultural intelligence. The findings thus relate only to the thinking processes of respondents. Although negative relationships were observed between metacognitive cultural intelligence and service delivery, they were still significant. These findings could indicate insufficient training and development, a relatively youthful workforce and inadequate educational qualifications.

Limitations and recommendations

As this study specifically focused on casual dining restaurants in Bloemfontein, South Africa, the findings cannot be generalised to other settings. To enhance the generalisability of future studies, it is suggested that a larger sample size be used, despite the potentially increased costs. It is further suggested that future research employ alternative methods of data gathering, such as conducting interviews, to gain a more in-depth understanding of the experiences of customers. A major challenge for the researchers was obtaining consent from casual dining establishments to participate in the study. The data gathering was also laborious and time-consuming.

A main recommendation from the study is for intercultural training and development in casual dining restaurants in Bloemfontein. This applies especially to younger staff with little work experience. The study supports the need for continuous soft skills training as an integral part of diversity management. This will allow the development of a greater level of understanding and sensitivity towards diverse customer attitudes and behaviours.

Conclusion

Service delivery is the cornerstone of the hospitality industry. Customer experience ensures return business, and restaurant staff need to attend to the wants and needs of paying customers as part of their daily activities. In contributing to the service delivery debate, the study focused on two highly individual constructs, namely metacognitive cultural intelligence and service delivery. The findings show a statistically negative significant relationship between metacognitive cultural intelligence and service delivery dimensions, which means that metacognitive cultural intelligence did not enhance the service delivery experiences of the customers in this study.

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Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

P.S. constructed the literature review, performed the data gathering, and wrote the first draft of the article. D.K. assisted with the overall aim of the study and refined the results, conclusions, and the article.

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Data availability

Data sharing is not applicable to this article, as no new data were created or analysed in this study.

Disclaimer

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