

Unravelling the interplay of authentic leadership, emotional intelligence, cultural intelligence and psychological well-being



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Orientation: Organisations are met with many challenges specifically effective leadership of employees. The role of authentic leadership (AL) in the relationship between emotional intelligence (EQ), cultural intelligence (CQ), and psychological well-being (PWB) can add valuable insights to organisations.

Research purpose: The study's focus was to understand the relationships between EQ, AL, CQ, and PWB. Furthermore, it sought to explore the mediating effect AL has in the proposed model.

Motivation for the study: Developing well-rounded leaders and managers to adopt an AL style, can increase positive outcomes for employees and organisations.

Research approach/design and method: A quantitative cross-sectional survey design was used to collect the data from a sample of 279 managers in South African organisations. The study employed structural equation modelling (SEM) to analyse the data and test hypotheses.

Main findings: The study's findings indicated that the proposed model fit well and showed positive connections between AL, EQ, CQ, and PWB. Additionally, the research revealed that AL played a mediating role in the relationships between EQ, CQ, and PWB.

Practical/managerial implications: The findings showed that employing an AL style in the workplace can be strengthened by the development of EQ, CQ, and PWB practices and interventions.

Contribution/value-add: This study contributes to the deeper understanding of the integrative connections between AL, EQ, CQ, and PWB for managers.

Keywords: authentic leadership; emotional intelligence; cultural intelligence; managers; psychological well-being; South Africa.

Introduction

In the 21st century workplace, globalisation has become a prevalent reality, necessitating managers' ability to perform effectively in both cross-border and domestic settings (Khan & Smith-Law, 2018). Consequently, contemporary organisations face an urgent demand to meticulously identify, nurture, and enhance managers who can thrive in a globalised context, leading to a positive and conducive work environment (Aina & Atan, 2020).

Authentic leadership (AL), recognised for its genuine approach, boosts a leader's legitimacy and positively influences organisational outcomes (Gavin, 2019; Zu, 2019), while differentiating world-class leaders depends on how managers interpret, learn, and adapt to AL (Gigol, 2020). Amid high stakes and uncertain outcomes in various organisations and the government in South Africa, AL encounters challenges, further accentuated by global stressors that underscore the imperative for genuine leadership (Sepeng et al., 2020). In South Africa, research consistently demonstrates a strong association between effective managers and positive organisational outcomes tied to AL (Du Plessis & Boshoff, 2018; Hlongwane, 2016). However, implementing AL is challenged by factors like government credibility, political agendas, and cultural diversity (Maughan, 2019). Despite the hurdles, there is a pressing need in the country for authentic leaders with necessary qualifications, skills, and trustworthiness.

Developing AL with emotional and cultural intelligence (CQ) can produce world-class managers, benefiting organisations of all sizes (Zu, 2019). However, more research is needed on the influence of

cultural and emotional intelligence (EQ) on managers' psychological well-being (PWB) in the South African setting (Matjie, 2018; Park et al., 2017). Leaders with higher EQ exhibit greater authenticity (Sigwela, 2020) and excel in fostering productivity and team cohesion, resulting in improved leadership, unity, and reduced staff turnover (Gio et al., 2020). Emotional intelligence plays a pivotal role as it involves understanding and managing one's own emotions as well as others' emotions (Serrat, 2017). Effective leaders shape organisational culture (De Lacerda, 2015), while a lack of EQ can lead to negative consequences, including higher turnover rates and lower employee engagement (Waldron, 2017). The presence of EQ in managers positively impacts an organisation's profitability, productivity, and overall well-being (Landry, 2019). Emotional intelligence, CQ and PWB are directly linked to the probability of AL (Wulffers, 2017; Sigwela, 2020), with CQ being regarded as equally significant as EQ for authentic leaders (Duncan et al., 2017). Leaders often encounter challenges in cross-cultural situations regarding acceptable behaviours (Khan & Smith-Law, 2018). Integrating AL with CQ allows leaders to align their values with cultural practices (Solomon & Steyn, 2017; Ziyatdinova, 2017). Studies suggest that combining AL and CQ empowers leaders to adapt to diverse cultures, and effectively guide individuals from different backgrounds, while remaining genuine and authentic (Feyes, 2018; Solomon, 2017).

To further foster AL and improve work-life quality, it is imperative to prioritise PWB, EQ and CQ (Chaudhary & Panda, 2018). Authentic leadership positively influences PWB by shaping the work climate (Bannay & Hadi, 2020; Kim, 2018). Managers with high PWB play a significant role in guiding employees through challenges, fostering creativity, promoting innovation, and inspiring their potential (Miao & Cao, 2019). Neglecting EQ, CQ, and PWB can hinder achieving authenticity, as these components contribute to the necessary balance AL requires (Bannay & Hadi, 2020).

Amid the multitude of studies examining the importance of AL in organisations, the current research seeks to examine the specific role that AL plays in combination with EQ, CQ, and PWB. Additionally, the study delves into exploring the potential mediating role of AL between EQ, CQ, and the PWB of managers.

Research purpose and objectives

The general aim of the study was to investigate how AL, EQ, CQ and PWB are interconnected among South African managers. The specific objectives were: (1) to assess the proposed structural model and establish the relationships between AL, EQ, CQ, and PWB, and (2) to investigate whether AL acts as a mediator in the relationship between EQ, CQ, and PWB.

Literature overview

Emotional intelligence

According to the early theory of EQ proposed by Salovey and Mayer in 1990, EQ is a form of social intelligence that involves

the ability to recognise and manage one's own and others' emotions, distinguish between them, and use this emotional awareness to guide thoughts and actions (McKinny, 2019). Mayer et al. (2008, p. 511) further emphasised that EQ 'concerns the ability to accurately reason about emotions and use emotional knowledge to enhance cognition'. Based on Mayer and Salovey's (1997) well-known four-branch model, EQ comprises four interconnected abilities: *Perception*, which involves accurately recognising emotions in oneself and others through sensory cues like tone, facial expressions, posture, and environmental stimuli; *Facilitation*, the skilful use of emotions and mood to enhance task performance; *Understanding*, a comprehensive grasp of how emotions blend, evolve, and vary across different situations and over time; and *Management*, which refers to effectively regulating one's own emotions and those of others, promoting a greater sense of positive well-being and encouraging personal growth, both emotionally and intellectually.

In his work, Faltas (2017) highlights the importance of differentiating between EQ and emotions themselves, as emotions are influenced by our environment and arise from our knowledge and circumstances. With the rising focus on emotions in organisations during the past decade, there has been a growing interest in EQ (Katungu, 2018; Popescu et al., 2020). Research has shown that managers with high EQ exhibit social acumen, effectively recognising and understanding the emotions of their teams, which in turn fosters positive attitudes and emotions among team members and contributes to their overall success (Goleman, 2016; Houston, 2021).

Authentic leadership

The concept of personal authenticity can be traced back to ancient Greek philosophers who emphasised the importance of being true to oneself and having self-awareness (Varga & Guignon, 2020). Authenticity in management and organisational literature was later addressed by Chester Barnard in 1938, drawing on insights from the ancient philosophers (Varga & Guignon, 2020). Luenendonk (2020) also supports the idea that AL has its roots in Greek philosophy, which emphasised cultivating temperance, prudence, fortitude, and justice within a leader. Compared to other leadership theories, AL is a relatively new concept that emerged within the field of positive organisational behaviour (Gill & Caza, 2018). It was Bill George who first introduced AL in his writings in 2003, and the concept gained popularity after his publication. According to George (2003, 2007), AL refers to a leader's style that aligns with their personality, core values, and honesty.

Authentic leadership has been defined by various authors as displaying genuine behaviour, building trust, fostering a positive ethical climate, and being dedicated to achieving organisational success aligned with social values (Walumbwa et al., 2008; Whitehead, 2009). Nelson et al. (2014) recently provided a definition of AL as a pattern that harnesses and nurtures positive psychological capacities and an ethical

climate. Effective leadership is a fundamental pillar of organisational success, and in this context, AL plays a crucial role in driving positive outcomes (De Smet et al., 2018). Furthermore, AL aims to foster greater self-awareness, an internalised moral perspective, balanced information processing, and transparent relationships between leaders and followers, thereby promoting positive self-development (Towler, 2019).

Cultural intelligence

Earley and Ang (2003) were among the first scholars to propose the term CQ and developed the term CQ based on the nature intelligence theory proposed by Sternberg (1986). Furthermore, Ang et al. (2007) found that CQ is not a personality trait construct that describes individuals' enduring characteristics or behaviours across time and situation. Later definitions came from Fakhredin (2011) and Dangmei (2016) that described CQ as an effective leadership across diverse cultural contexts that necessitates individuals to possess CQ, enabling them to skilfully comprehend, adapt to, and navigate different cultural settings while aligning with the values and beliefs of specific societies or cultures, thus representing a distinct form of intelligence. Furthermore, CQ is recognised as a multidimensional construct rather than a singular ability or skill-based approach comprising of four dimensions: metacognitive, cognitive, motivational, and behavioural (Ang et al., 2007; Solomon, 2017).

Cultural intelligence holds significant importance in the workplace and for managers, as it aids in addressing culture clashes and unresolved issues between different cultures (Holland, 2016). A higher level of CQ also facilitates individuals in bridging gaps between diverse cultures and thriving in multiple cultural contexts (Nel & Mziray, 2017). Essentially, CQ involves comprehending one's own culture, the multiple sub-cultures one belongs to, and their personal significance, as well as being fully aware of how culture influences people's thought processes (Ziyatdinova, 2017).

Psychological well-being

Psychological well-being is a widely explored aspect of well-being within the realm of psychology. It is a dynamic concept that encompasses subjective, social, and psychological dimensions, along with health-related behaviours (Medvedev & Landhuis, 2018). It draws from diverse theoretical and philosophical domains (Ryff & Singer, 1996), and is commonly conceptualised using the six factors of the Ryff Scale: self-acceptance, personal growth, purpose in life, mastery, autonomy, and positive relationships with others (Ryff, 1989, 2014).

According to Puente-Martinez et al. (2018), PWB is characterised by a high level of self-satisfaction, a positive mood, and occasional experiences of negative emotions such as sadness, anger, and inhibitions. This experience of PWB can be viewed as the cognitive aspect of life satisfaction, as it involves individuals' assessments of how they are leading their lives (Moore, 2020). Psychological well-being has been

variously defined by researchers. Keyes et al. (2005, p. 1007) described it as 'an engagement with existential challenges of life', while Deci and Ryan (2008) characterised it as a combination of positive affective states and optimal functioning in individual and social life. Burns (2017) referred to PWB as encompassing inter- and intraindividual levels of positive functioning, including relatedness with others, a sense of mastery, and personal growth. Trudel-Fitzgerald et al. (2019) defined PWB as a person's level of psychological happiness and health, along with feelings of accomplishment and life satisfaction.

Psychological well-being plays a significant role in the workplace, as it is associated with job satisfaction, in-role performance, and the reduction of job stressors (Alvi, 2017). It is considered a fundamental factor contributing to both organisational performance and employee engagement (Loon et al., 2019). Fostering PWB in the workplace benefits both employees and organisations (Young & Chapman, 2020). By reducing or preventing stress, PWB creates a positive working environment that promotes the well-being of both employees and the organisation (Bennett et al., 2017). Therefore, PWB is a crucial element that enhances organisational performance and employee engagement (Loon et al., 2019).

Construct relationships

Numerous studies have demonstrated a positive association between EQ and PWB (Guerra-Bustamante et al., 2019; Malinauskas & Malinauskiene, 2020; Marzuki et al., 2018). Emotional intelligence encompasses various emotional skills, including analysis, perception, management, and recognition of one's emotions and those of others (Faltas, 2017). Trudel-Fitzgerald et al. (2019) defined PWB as an individual's level of psychological happiness and health, encompassing feelings of accomplishment and overall life satisfaction.

Research has consistently shown that individuals with higher EQ and effective emotion regulation experience several positive outcomes, such as increased happiness, life satisfaction, and a sense of PWB. Moreover, they tend to be more engaged in their work (Barreiro & Treglown, 2020). Gustems-Carnicer et al. (2019) also supported these findings by affirming that EQ contributes to enhanced happiness and emotional well-being.

Miao et al. (2018) classified EQ into four branches: understanding emotions, emotional perception, managing emotions, and using emotions to facilitate thoughts. Their study revealed that these branches have positive correlations with AL. Moreover, Iqbal et al. (2020) suggested that utilising emotions to enhance thinking can have a positive influence on AL. In line with this, Mayer et al. (2016) provided an example of how leaders with high EQ can leverage emotional states to improve cognitive abilities, leading to diverse perspectives, enhanced reasoning, and increased creativity.

In recent research, a positive link between AL and EQ has been unveiled. Miao et al. (2018) found a favourable association between EQ and AL, and Duncan et al. (2017) also observed a connection between the two. The combination of a high level of EQ with the cultivation of AL can yield positive effects not only for individual managers but also for the overall organisation (Goleman, 2016). Therefore, the following hypotheses can be formulated:

H1: A positive relationship exists between EQ and PWB.

H2: A positive relationship exists between EQ and AL.

Barile (2018) argues that CQ is an extension of EQ, building upon its foundational aspects. Cultural intelligence involves the capacity to understand and integrate both rational and emotional behavioural patterns, making it a crucial element of AL. As a result, the significance of CQ in leadership is gaining prominence, particularly in multicultural settings like South Africa, where interactions between diverse ethnic groups are common (Medler-Liraz & Seger-Guttmann, 2018). Menzies (2015) suggests that managers with higher EQ are more likely to develop CQ and excel at discerning cultural differences. The findings from Putranto et al.'s (2018) study indicate that individuals proficient in adapting to a multicultural context, possessing both knowledge and experience, are more likely to exhibit high levels of EQ. This may be because individuals who effectively manage their emotions are also more adaptable in interactions with people from diverse cultures.

Studies conducted in the South African context have consistently found a strong positive relationship between AL and PWB, with AL exerting a significant impact on PWB (Munyaka et al., 2017). Similar positive correlations between AL and PWB have been observed in various industries and contexts worldwide (Adil & Kamal, 2019). According to Kim (2018), AL has a positive influence on the work environment, leading to increased overall PWB at work (Maximo et al., 2019). Multiple studies consistently demonstrate that positive forms of leadership, including AL, are associated with beneficial effects on the work environment and overall PWB in the workplace (Kim, 2018; Maximo et al., 2019). Moreover, research suggests that AL fosters trust and confidence among followers, contributing to positive PWB (Iqbal et al., 2020). This reciprocal relationship reinforces AL's significance and highlights promising approaches to enhance the work environment and subsequently improve the PWB of both managers and personnel (Bakari et al., 2017; Weiss et al., 2017). The following hypotheses can therefore be formulated:

H3: A positive relationship exists between EQ and CQ.

H4: A positive relationship exists between AL and PWB.

According to Walumbwa et al. (2008), the theory of AL contributes to the development of CQ because AL encompasses dimensions such as self-awareness, rational transparency, moral perspective, and balanced processing. This connection arises as CQ and AL share common components, including self-awareness (Barass, 2014), and

research has shown a strong positive relationship between CQ and AL (Solomon & Steyn, 2017). Solomon and Steyn (2017) further assert that the combination of AL and CQ empowers global leaders to adapt to diverse cultures without compromising their personal values and beliefs. Cultural intelligence assists leaders in effectively interacting with individuals from various cultures and behaving appropriately in new cultural settings (Rüth & Netzer, 2020), enabling authentic leaders to fully understand differences, such as thoughts, behaviour, culture, beliefs, among others, between individuals (Luenendonk, 2020). Duncan et al. (2017) also agree, stating that neglecting CQ can lead to unproductive management and potential conflict situations that become challenging to resolve. Based on the above, the following hypothesis can be formulated:

H5: A positive relationship exists between AL and CQ.

The mediating role of authentic leadership

Extensive research has thoroughly investigated the concepts of AL, EQ, and PWB, both independently and in combination (Fannon, 2018; Miao et al., 2018). Studies consistently demonstrate a robust positive correlation between EQ and PWB, indicating that individuals with high EQ tend to experience greater levels of PWB and fewer emotional deficits (Guerra-Bustamante et al., 2019). Among various individual difference variables, Miao et al. (2018) found that EQ exerts the most significant influence on AL. Furthermore, studies have reported a significant positive relationship between EQ and AL (Fannon, 2018).

Numerous studies have consistently shown that AL has a positive impact on PWB (Kim, 2018; Munyaka et al., 2017). Managers play a vital role in creating a positive work environment that fosters PWB among employees and themselves (Iqbal et al., 2020; Weiss et al., 2017). Embracing AL leads to enhanced PWB for both leaders and employees, establishing it as a potential determinant of PWB, especially in the workplace (Semedo et al., 2019). Consequently, hypothesis 6a can be formulated:

H6a: AL mediates the relationship between EQ and PWB.

Researchers have investigated the connections between AL, EQ, and CQ, revealing a strong positive relationship between EQ and CQ, particularly in studies by Fannon (2018), Miao et al. (2018), and Putranto et al. (2018). Moreover, Barile (2018) emphasised that both EQ and CQ play a positive role in communication with others, aligning with the self-awareness component of EQ and CQ. The importance of self-awareness is underscored by EQ and CQ, offering valuable insights into how individuals perceive themselves and others (Cabral et al., 2020). Barrass (2014) demonstrated a direct association between AL, EQ, and CQ, revealing that EQ and CQ also exert a positive influence on AL (Duncan et al., 2017). Furthermore, the combination of EQ and CQ plays a significant role in fostering a culturally safe work environment and assisting managers in addressing concerns while prioritising leader authenticity (Ertosun & Adiguzel, 2018;

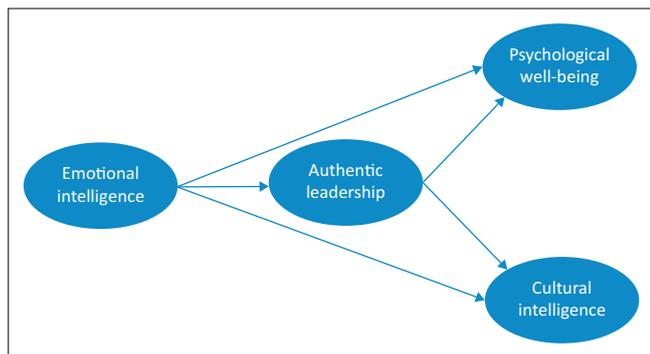


FIGURE 1: Conceptual model.

Heatfield, 2020). As a result, hypothesis 6b can be formulated as follows:

H6b: AL mediates the relationship between EQ and CQ.

The model depicted in Figure 1 reflects the proposed link between the constructs.

Research design

Research approach and participants

The study targeted 720 managers at different levels in various South African organisations. The number of items extracted can thus influence the sample size (Vasileiou et al., 2018). A quantitative, cross-sectional design with a convenience sampling method was implemented, resulting in a population size of $n = 279$. Participation in the study was entirely voluntary and all participants completed an online survey. The survey included an introduction explaining the study's purpose and ensuring participants of anonymity and confidentiality. Additionally, a section for obtaining informed consent was included in the survey. Most of the sample consisted of female respondents (62.7%). The age group falling between 40 and 49 years represented the highest (44.8%), and the most management representation was from the senior management staff (47.3%), while 41.6% consisted of middle management and only 11.1% were low management.

Ethical considerations

The study adhered to the ethical guidelines mandated by the North-West University for obtaining approval. Following approval under reference number: EMSMHW16/08/25-01/01, data collection commenced. Participants were provided with a clear explanation of the study's purpose and their informed consent was obtained. Participation in the study was voluntary, and participants were assured of confidentiality and anonymity.

Measures

A section was included in the measurements with a view to obtain biographical information from the participants. In the biographical section, gender, home language, age, highest qualification, level of management, household status, and English reading ability were recorded.

The authentic leadership scale

The Authentic Leadership Scale (ALS) is a survey developed and validated by Walumbwa et al. (2008) consisting of 16 items. Initially, 22 items underwent content validity assessment and most of them (more than 80%) were found to fit well. However, 6 items did not align properly with any of the 4 *a priori* categories and were subsequently removed, resulting in a final set of 16 items. The ALS is structured into five factors, namely: knowing your true authentic self, leading with integrity, communicating without pretence, having an others orientation, and developing others. The ALS items were rated using a 4-point Likert response scale, ranging from 0 (not at all) to 4 (frequently if not always). Higher scores indicate higher levels of AL. The recorded alpha (α) value of 0.92 reflects high reliability of a previous study (Ahmad et al., 2015). The internal consistency coefficient score obtained from the ALS in the present study was reported to be 0.91.

The cultural intelligence scale

The Cultural Intelligence Scale (CQS), developed by Van Dyne et al. (2009) and validated by Linn van Dyne, was employed to assess respondents' CQ. This 20-item survey measures CQ and is categorised into four factors: CQ-strategy, CQ-knowledge, CQ-motivation, and CQ-behaviour. Participants rated the items on the CQS using a five-point Likert response scale, ranging from 0 (not at all) to 4 (frequently if not always). Previous research has indicated generally acceptable reliability coefficients for the four underlying subscales, ranging from 0.89 to 0.92 (Imai & Gelfand, 2010). In the current study, the internal consistency of Cronbach's alpha coefficient for the CQS was found to be 0.81.

The emotional intelligence scale

The Greek Emotional Intelligence Scale (GEIS), developed by Tsaoasis (2007), assesses four fundamental emotional skills: expression and recognition of emotion, control of emotions, use of emotions to facilitate thinking, and caring and empathy. The instrument consists of 52 items and demonstrates acceptable psychometric properties, justifying its reliability and validity as a measure of EQ (Tsaoasis, 2007). The Cronbach alpha coefficients for the four factors range between 0.80 and 0.92, indicating high internal consistency and homogeneity in measurements. Test-retest data over 4 weeks also demonstrate temporal reliability, with correlation coefficients ranging between 0.79 and 0.91 (Tsaoasis, 2007). In a study with a South African sample, Cronbach's alpha coefficients confirmed values ranging between 0.71 and 0.84 (Botma, 2009). For the current study, the GEIS displayed an internal alpha coefficient of 0.78.

The psychological well-being scale

The Ryff Scales of Psychological Wellbeing, developed by Seifert (2005), is a comprehensive instrument designed to measure various facets of PWB. This scale specifically focuses on assessing different aspects of PWB, including self-acceptance, quality connections with others, autonomy in

thoughts and actions, adaptability in managing complex environments according to personal values, pursuit of meaningful goals, and a sense of purpose in life, as well as ongoing personal growth and development.

The Ryff scale consists of 32 items, with statements reflecting the six areas of PWB: autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance. Respondents rate these statements on a scale of one to five, with one indicating strong disagreement and five indicating strong agreement. The internal consistency coefficients of the scale were found to be quite high, ranging between 0.86 and 0.93. Additionally, the test-retest reliability coefficients, were also high, ranging from 0.81 to 0.88.

In this study, a lower alpha coefficient of 0.65 was observed, which is still considered acceptable as it exceeds the threshold of 0.60.

Statistical analysis

The study utilised Mplus 8.1 (Muthén & Muthén, 2017) and employed Structural Equation Modelling (SEM) methods to investigate the research hypotheses. Latent variable models were utilised to elucidate intricate relationships between variables by using simple relationships with unobservable underlying variables (Lauritzen, 1996). For models containing ordinal categorical items, the mean and variance-adjusted weighted least-squares method was the default estimator in Mplus (Muthén & Muthén, 2017). Model fit was assessed using indices like Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Root Mean Square Error of Approximation (RMSEA). To explore potential indirect effects, a mediation model was employed to address the nature of the hypothesised model. Bootstrapping resampling, with 5000 resampling draws, was used to obtain 95% confidence intervals (CI) for the potential indirect effects (Hayes, 2009). Additionally, correlations between variables were examined. Statistical significance was indicated by a two-tailed p -value below 0.05, demonstrating evidence of relationships between the measured variables.

The SEM analysis consisted of two parts: the measurement model, using confirmatory factor analysis (CFA) to relate measured indicators to latent variables, and the structural model, determining relationships among latent variables by adding regressions to the measurement model (Wuensch, 2009). The measurement model, with categorical indicator variables in Mplus (Muthén & Muthén, 2017), demonstrated an acceptable fit with CFI and TLI exceeding 0.90, indicating a good model fit. The TLI was employed to address the sensitivity of Non-Normed Fit Index (NFI) to sample size, which may lead to underestimating model fit in a specific study (Hooper et al., 2007).

Results

Reliability and validity assessment

Before conducting the SEM analysis, the researchers performed reliability tests and CFA to assess the dataset's

suitability. Cronbach's alpha coefficients (see Table 1) were calculated to determine the constructs' reliability, with values between 0.60 and 0.80 considered acceptable reliability and values above 0.80 indicating high reliability (Taber, 2018).

Based on the data in Table 1, it can be concluded that all the constructs, including EQ, PWB, CQ, and AL, are reliable, showing internal consistency with Cronbach Alpha values above 0.6.

Confirmatory factor analysis

A CFA was performed to evaluate the properties and validity of the underlying constructs in the theoretical model. The analysis was guided by the theoretical relationships among the variables. The constructs examined were EQ, CQ, PWB, and AL. The factor loadings were used to assess the extent to which each measurement effectively captures the corresponding construct it is associated with (De Roover & Vermunt, 2019). All the items' factor loadings were found to be statistically significant ($p < 0.001$), indicating their significant contribution to the theoretical model.

The fit statistics for the proposed four-construct measurement model are presented in Table 2.

Based on the results in Table 2, the CFI and TLI values are 0.931 and 0.916, respectively, both exceeding the recommended threshold of 0.90. Furthermore, the RMSEA value obtained in this study was 0.060, which also indicates an adequate model fit as it is below 0.1. Consequently, the discussion above confirms that the CFA fit statistics for the four-component measurement model demonstrate a good model fit.

Convergent validity

Convergent validity pertains to the extent to which the constructs are positively correlated with each other.

Table 3 displays the positive correlations between the constructs. With the exception of the correlation between EQ and PWB, all other correlations exhibited practically visible correlations or medium effects ($r = 0.28$ – 0.35). A correlation below 0.30 is considered a small effect, but the values of 0.28

TABLE 1: Cronbach alpha values.

Construct	Cronbach alpha values
Emotional intelligence	0.78
Psychological well-being	0.65
Cultural intelligence	0.81
Authentic leadership	0.91

α , alpha.

TABLE 2: Model fit analysis.

Model	TLI	CFI	RMSEA
Suggested value	> 0.90	> 0.90	< 0.080
Acquired value	0.916	0.931	0.060

TLI, Tucker-Lewis index; CFI, comparative fit index; RMSEA, root mean square error of approximation.

TABLE 3: Correlation matrix.

	EQ	PWB	CQ	AL
Emotional Intelligence	1.00	-	-	-
Psychological Well-being	0.22	1.00	-	-
Cultural Intelligence	0.28	0.35	1.00	-
Authentic Leadership	0.29	0.33	0.31	1.00

EQ, Emotional intelligence scale; PWB, Psychological well-being scale; CQ, Cultural intelligence scale; AL, Authentic leadership scale.

Note: All correlations are statistically significant $p \leq 0.01$. $r \geq 0.30$ is practically significant (medium effect); $r \geq 0.50$ is practically significant (large effect).

TABLE 4: Fit of the model.

Model	TLI	CFI	RMSEA
Suggested value	> 0.900	> 0.900	< 0.100
Acquired value	0.916	0.931	0.061

TLI, Tucker Lewis index; CFI, Comparative fit index; RMSEA, root mean square error of approximation.

TABLE 5: Structural paths: Direct path.

Structural paths: Direct path	β	SE	p	Result
EQ–PWB	0.14	0.08	0.098	Non-significant
EQ–AL	0.29	0.07	< 0.001	Significant
EQ–CQ	0.20	0.07	0.005	Significant
AL–PWB	0.29	0.08	< 0.001	Significant
AL–CQ	0.27	0.07	< 0.001	Significant

β , Standardised beta coefficient; SE, Standard error; p , Two-tailed statistical significance; EQ, Emotional intelligence; PWB, Psychological well-being; AL, Authentic leadership; CQ, Cultural intelligence.

for CQ and 0.29 for AL are very close to the cut-off of 0.30, indicating visible correlations or medium effects. The correlation between EQ and PWB was small (0.22) and lacked practical significance.

Structural equation modelling and mediation analysis

The proposed theoretical model in Figure 1 was tested using SEM in this study. Confirmatory factor analysis was performed, and the results indicated that all the constructs under investigation exhibited good reliability and showed both convergent and discriminant validity. With these satisfactory results, the SEM analysis could proceed. Table 4 provides a summary of the statistical measures used to assess the goodness of fit of the proposed models to the data.

As shown in Table 4, the TLI calculated for this study is 0.916, indicating a good fit as it exceeds the threshold of 0.90 (Van de Schoot et al., 2012). According to Van de Schoot et al. (2012), a CFI equal to or greater than 0.90 indicates a good model fit. In this study, the CFI was calculated as 0.931, confirming a good model fit. The RMSEA value obtained was 0.061, also suggesting a good model fit as it is below the maximum cut-off value of 0.10 (Shi et al., 2019). Considering all the values discussed above, it can be concluded that the mediation model fits the observed data well.

As shown in Table 5, all direct paths were statistically significant ($p < 0.05$) except for the path between PWB and EQ ($p = 0.098$).

Table 6 presents the calculated indirect paths for the model, and both of these paths were found to be statistically

TABLE 6: Structural paths: Indirect path.

Structural paths: Indirect path	β	SE	p	Result
EQ–CQ	0.077	0.034	0.024	Significant
EQ–PWB	0.083	0.035	0.017	Significant

β , standardised beta coefficient; SE, standard error; p , two-tailed statistical significance; EQ, Emotional intelligence; PWB, psychological well-being; CQ, cultural intelligence.

significant. The results indicate that there is full mediation via AL when examining the relationship between EQ and PWB, whereas only partial mediation is observed when considering the relationship between EQ and CQ.

Discussion

The study observed that the proposed model, aimed at investigating the impact of EQ and CQ on AL and PWB, demonstrated a good fit. However, the results pertaining to hypothesis 1 revealed a modest and practically insignificant correlation between EQ and PWB. This finding differs from some other studies, such as those by Guerra-Bustamante et al. (2019) and Miao et al. (2018), which reported a positive relationship between EQ and PWB. The lack of a significant association between EQ and PWB could be attributed to various factors, such as the unique characteristics of the sample, limitations in the measurement methods, contextual influences, mediating variables, and the relatively small sample size. This outcome suggests that further research is warranted to delve deeper into these aspects and to gain a more comprehensive understanding of the relationship between EQ and PWB.

The study provided evidence in support of hypothesis 2, revealing a significant positive correlation between EQ and AL. These findings align with previous research conducted by Duncan et al. (2017) and Maric et al. (2018), which also demonstrated that individuals with higher EQ tend to exhibit stronger AL competencies. Furthermore, the study underscored the crucial role of EQ and AL in effectively managing subordinates and comprehending both personal and others' strengths, weaknesses, and values. It emphasised that individuals with low EQ and a lack of AL might experience reduced employee engagement and higher staff turnover, highlighting the significance of these competencies for achieving organisational success (Chauvet, 2016; Landry, 2019).

Hypothesis 3 postulated a positive association between EQ and CQ. The results of the study supported this hypothesis, revealing a statistically significant positive correlation between EQ and CQ. Similar positive relationships have been found in other studies as well, as demonstrated by Cabral et al. (2020) and Putranto et al. (2018). Emotional intelligence and CQ are interconnected and complement each other, allowing managers with high levels of both competencies to grasp the essence of humanity and recognise the uniqueness of everyone. Prioritising the recruitment of individuals based on values and behaviours rather than solely technical skills can foster a thriving organisational environment and culture (Issah, 2018; Solomon, 2017).

Hypothesis 4 asserts that AL exerts a positive influence on PWB. The study yielded significant findings, indicating a

positive correlation between AL and PWB, thereby providing support for the hypothesis. These results are consistent with prior research, which also established that enhanced AL not only positively impacts the well-being of the leader but also extends to their subordinates and co-workers (Bannay & Hadi, 2020; Kim, 2018). The outcomes of the study suggest that being an authentic leader can foster positive PWB and serve as a source of inspiration for employees, motivating them to work diligently and communicate effectively (Bannay & Hadi, 2020; Sigwela, 2020).

The study revealed a positive correlation between AL and CQ, lending support to Hypothesis 5. The results indicate that a higher level of CQ can contribute to the attainment of greater AL. For managers, it becomes crucial to cultivate or enhance their CQ to become more authentic leaders in their daily responsibilities, as emphasised by Solomon (2017). Managers who possess both AL abilities and CQ can exert a significant influence on employees and fellow managers, fostering a deeper understanding of behaviours deemed as immoral within the organisation and the team. This, in turn, enhances their self-awareness and provides them with a better grasp of their core values while adapting to diverse cultures (Khan & Smith-Law, 2018; Klein & Shtudie, 2020).

The study delved into examining the mediation effect of AL in the association between EQ and PWB. The results revealed that the influence of AL through EQ and PWB exhibited statistical significance, indicating full mediation. This suggests that incorporating AL into the relationship further enhanced PWB. The confirmed mediation of AL between EQ and PWB is likely to foster a positive work environment that promotes a sense of well-being among employees and leaders (Bakari et al., 2017; Iqbal et al., 2020; Weiss et al., 2017). Therefore, H6a was supported. Hypothesis 6b suggests that AL acts as a mediator in the relationship between EQ and CQ. The analysis of indirect paths in the model revealed that this particular path was statistically significant, indicating a partial mediation between EQ and CQ. Existing research provides support for the positive impact of both EQ and CQ on AL (Ackerman, 2020; Duncan et al., 2017; Gallo, 2019). Emotional intelligence and CQ are considered fundamental components of AL (Ferry, 2020). Furthermore, EQ and CQ play a role in fostering a culturally safe work environment, helping managers to address concerns and emphasise leader authenticity (Ertosun & Adiguzel, 2018; Heatfield, 2020; Zydziunaite, 2018).

Practical implications

The study's implications for managers, employees, and organisations are significant. Organisations can design leadership development programmes that focus on enhancing EQ and CQ among managers (Duncan et al., 2017; Landry, 2019), fostering AL qualities and positively impacting PWB (Nikolić et al., 2020). Additionally, implementing employee well-being initiatives addressing PWB can create a supportive work environment, including mindfulness programmes, stress management workshops, and work-life balance resources.

To enhance CQ, cultural sensitivity training can be conducted, promoting better communication and collaboration among diverse team members. Considering EQ and CQ during the recruitment process for leadership roles can identify individuals more likely to exhibit AL traits.

Leadership coaching can support managers' AL development, focusing on self-awareness, empathy, and cultural understanding. Regular feedback and evaluation can guide managers' improvement in EQ and CQ. Organisations should continuously monitor and adapt their strategies based on research findings and best practices, fostering a workplace culture that nurtures AL, positive well-being, productivity, and employee satisfaction.

Limitations of the study

This study is subject to certain limitations that warrant consideration and acknowledgment. The first limitation of this study that should be discussed is that the sample size was relatively small; a suggestion for future research is that a larger number of participants be included in the study. The sample size also did not encompass all sectors throughout South Africa, and the distribution of participants across the three management levels was uneven.

Additionally, the reliance on self-reported data might account for some limitations. Self-report measures can sometimes lead to inflated associations between constructs. Nevertheless, the use of self-report questionnaires to investigate the impact of EQ and CQ on AL, and its potential influence on PWB is reasonable.

Ultimately, the limitations encountered in this study imply that the findings cannot be generalised beyond the specific context of this research. It is crucial to acknowledge and consider the variations between management levels, and future research should delve into exploring these differences among management tiers.

Conclusion

In conclusion, this study aimed to investigate the relationship between AL, EQ, CQ, and PWB, while also exploring the mediating role of AL in the model. The findings revealed positive relationships between EQ, CQ, and PWB with AL. Additionally, the mediation analysis indicated that AL mediated the associations between EQ and both PWB and CQ. The study's results emphasise that authentic leaders who exhibit EQ, CQ, and PWB establish stronger connections with their employees and teams within the organisation, ultimately contributing to improved organisational performance and economic outcomes.

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Competing interests

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Authors' contributions

B.E. was responsible for conceptualisation, formal analysis, writing the original draft, and resources. M.J. was responsible for writing, reviewing, and supervision.

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Data availability

The associated analysis and data for the current study can be requested from the corresponding author. All reasonable requests will be considered.

Disclaimer

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