



# Journal of Professional Nursing

journal homepage: [www.elsevier.com/locate/jpnur](http://www.elsevier.com/locate/jpnur)

## Emotional intelligence and authentic leadership among Saudi nursing leaders in the Kingdom of Saudi Arabia

Farhan Alshammari<sup>1,2</sup>, Eddieson Pasay-an<sup>\*,1,2</sup>, Ferdinand Gonzales<sup>2,3</sup>, Sheila Torres<sup>2,4</sup>

*College of Nursing, University of Hail, Saudi Arabia*

### ARTICLE INFO

**Keywords:**  
Authentic leadership  
Emotional intelligence  
Saudi nursing leaders

### ABSTRACT

**Background:** Previous studies have found that emotional intelligence has a remarkable influence on authentic leadership. However, the conceivable relationship between emotional intelligence and authentic leadership was unclear, as were the hypothetical bases used in previous studies.

**Purpose:** To determine the correlation between emotional intelligence and authentic leadership of the nursing leaders and the socio-demographic characteristics by which emotional intelligence and authentic leadership vary.

**Methods:** Data derived from 152 of the distributed 180 questionnaires were analyzed (84.44% response rate). Nurse leaders in the academy of the Kingdom of Saudi Arabia were assessed from April to July of 2019. *t*-Tests were used to test gender differences, while the Analysis of variance (ANOVA) tests were employed for age, position, and years of experience. The relationship between the emotional intelligence and authentic leadership scores was analyzed using Pearson's correlation coefficients (bivariate *r*). The relationships of the four dimensions in the emotional intelligence construct and overall emotional intelligence were assessed using multiple regression analysis and simple linear regression analysis.

**Results:** Age and years of experience significantly and positively related to emotional intelligence, whereas gender, age, and years of experience in the current position (*p* = 0.026) were significant regarding authentic leadership. The emotional intelligence total score strongly and positively related to authentic leadership. The regression results on the four emotional intelligence dimensions indicated that the extent of using emotions had the strongest influence on authentic leadership (*B* = 0.99) followed by appraisal of one's emotions (*B* = 0.70) and appraisal of others' emotions (*B* = 0.69). The simple regression analysis indicated that, for every one-point increase in total emotional intelligence score, authentic leadership score increased by 0.086.

**Conclusion:** Age and years of experience were significant factors explaining variation in emotional intelligence, whereas gender, age, and years of experience in the current position were significant for explaining variation in authentic leadership. Using emotions was the strongest influence on authentic leadership, and the emotional intelligence dimension measuring regulation of emotion had no significant influence on authentic leadership.

### Introduction

Leaders with emotional intelligence have the greatest impact on their organizational members (Hohlbain, 2015) because they are perceived as reliable and aware of behavioral and social norms (Kernis & Goldman, 2006). Leaders with emotional intelligence tend to employ emotional skills for self-management and to manage the emotions of

their followers. Consequently, emotional intelligence is a way to identify effective leaders (Batoor, 2013) because these individuals understand and relate well to themselves.

Influencing employees using emotional intelligence is an important way to improve organizational performance, and authentic leaders have the skills to appreciate individuals and help construct active bonds between management and subordinates (Gardner, Cogliser, Davis, &

\* Corresponding author.

E-mail address: [edspasayan@yahoo.com](mailto:edspasayan@yahoo.com) (E. Pasay-an).

<sup>1</sup> Farhan and Eddieson led the team and they were had a substantial contributions to conception and design, acquisition of data, and analysis and interpretation of data. Both of them drafted and revised the manuscript critically.

<sup>2</sup> Farhan, Eddieson, Ferdinand, and Sheila revised the manuscript critically for important intellectual content.

<sup>3</sup> Ferdinand made substantial contributions to analysis and interpretation of data.

<sup>4</sup> Sheila made a substantial contributions to conception and design, acquisition of data, and analysis and interpretation of data.

Dickens, 2011; Humphrey, Pollack, & Hawver, 2008). These leaders might be able to transform and sustain their organizations' success. Generally, previous studies have found that emotional intelligence has remarkable influences on authentic leadership (e.g., Ilies, Morgeson, & Nahrgang, 2005) to the extent that including it in any leadership style (Hohlbein, 2015) might influence organizational success and performance. Emotional intelligence has been defined by Mayer, Caruso, and Salovey (2016) as the "ability of the person to recognize and express emotion, assimilate emotion in thought, understand and reason with emotion, and regulate emotion in the self and others" (p.396). Authentic leadership is defined as the "process that draws from both positive psychological capacities and a highly developed organizational context, which results in both greater self-awareness and self-regulated positive behaviors on the part of leaders and associates, fostering positive self-development" (Luthans & Avolio, 2003, p.243). As such, these concepts of "emotional intelligence" and "authentic leadership" have emerged as significant in the literature because of their positive effects on leader behaviors (Rodriguez, 2016).

Leaders with strong emotive perceptions tend to be skilled at interpreting others' feelings (Mayer et al., 2016) and able to create standardized connections grounded on constructive societal variations (Ilies et al., 2005). These leaders might express relatively more authentic leadership. Being honest with oneself, others, and using emotional intelligence might lead employees to achieve great things at work, and previous studies found that emotional intelligence is an essential part of leaders' attitudes that maintain workplace relationships (Jordan & Troth, 2004). However, Antonakis, Ashkanasy, and Dasborough (2009), argued that emotional intelligence is not required for good governance, and, although other studies demonstrated strong connections between emotional commitment and authentic leadership for organizational performance (e.g., Gardner et al., 2011), that finding might not be relevant in a monoculture, such as Saudi Arabia. For example, Saudi Arabia's patriarchal culture, which still prevails in the present day (Alghowinem, Goecke, Wagner, & Alwabil, 2019), sends a strong message that males are more dominant in all aspects. Such strong cultural standards can create barriers to open communication in therapeutic relationships between male and female leaders and employees. Other fields of research have suggested a need to explore the context of leadership authenticity in non-Western cultures (Kokkoris & Kühnen, 2014); this is also likely regarding emotional intelligence. A good nurse leader is somebody who can motivate others to work collectively in pursuit of a common goal, such as enhanced patient care and has a distinctive set of personal qualities: initiative, integrity, courage and an ability to handle stress (Meliniotis, 2015). These nurses must use their leadership actions to constructively impact organizational outcomes and need to appreciate the inter-relationship between advancing nursing practice, improving quality of care and enhancing patient outcomes (Lamb, Martin-Misener, Bryant-Lukosius, & Latimer, 2018). It is important to appreciate that leadership roles are different from management functions.

This study is of significance to further advance our understanding of nurse leaders in the academy (universities/colleges) in relation to emotional intelligence and authentic leadership. Indeed, this study is particularly relevant as many factors (e.g. cultural, staff characteristics) have emerged leading to more complex roles in achieving organizational goals. Such complexities can result in pressure on the workforce, leading to dissatisfaction and correlated to high attrition rates. In this context, nurse leaders need to respond in a distinctive way by understanding how to use emotion in an authentic way.

It is assumed, therefore, that using emotional intelligence and authentic leadership can encourage people to work proactively and respond to organizational challenges. The impact of authentic leaders, who demonstrate emotional intelligence in their actions, within the nursing profession may influence others their follower to become emotionally intelligent as well (Gragg, 2008). This study aims at determining the correlation between emotional intelligence and authentic

leadership in nursing leaders in schools (academe), as well as the socio-demographic characteristics by which emotional intelligence and authentic leadership vary.

#### *Review of the literature*

Previous studies indicated that emotional intelligence is the prerequisite of leadership (Walter, Cole, & Humphrey, 2011). Indeed, recent research demonstrated that emotional intelligence allows leaders to apply effective leadership styles, and one effective leadership style that emotionally intelligent leaders may exhibit is authentic leadership (Kotzé & Nel, 2017). Leaders who are high on the emotional perception branch of emotional intelligence are capable of reading others' emotions (Mayer et al., 2016). This capacity to read others facilitates the formation of empathic bonds with followers, and heightens perceptions of leader authenticity (Gardner et al., 2011). Leaders can utilize their emotional intelligence to expand their own vision and thinking, so that they are receptive to diverse ideas and perspectives that may confront their profoundly held beliefs (Miao, Humphrey, & Qian, 2018). Leaders showing emotions and related behaviors have been known to profoundly influence followers' emotional reactions (Bono & Ilies, 2006; Sy, Côté, & Saavedra, 2005). When emotionally intelligent leaders can precisely construe their followers' feelings and distinguish the reasons underlying their emotions, they are able to nurture actual social exchanges and to build intimate relationships with their followers so that they can project their values and vision onto them (Miao et al., 2018).

Studies of emotional intelligence (hereafter EI) have previously focused on leadership emergence (Côté, Lopes, Salovey, & Miners, 2010; Kellett, Humphrey, & Sleeth, 2006) and leadership behaviors (Rubin, Munz, & Bommer, 2005; Walter & Bruch, 2007; Weinberger, 2009). However, not all studies have reinforced the assumed correlation between EI and leadership. Indeed, from an academic standpoint, the role of emotional intelligence as regards leadership has been continuously debated (Antonakis et al., 2009). However, it was positively concluded by Walter et al. (2011) that the concept of EI is likely to be relevant in scholarly examinations of leadership emergence, especially in relation to leadership behaviors and leader effectiveness. Relatedly, those who encounter find themselves in more positive affective states are more likely to be authentic leaders (Ilies et al., 2005). Emotionally intelligent leaders can influence their followers' emotions to create warm, positive feelings, and these positive feelings can lead to perceptions of leader authenticity (Gardner et al., 2011). However, the conceivable relation between emotional intelligence and authentic leadership, as well as the hypothetical bases used in previous studies exploring that correlation have been left unclear. As such, Walter et al. (2011) recommended that the relationship between EI and leadership be scrutinized, with the aim to further promote the relevance of EI. To clarify this complexity of empirical outcomes, this research was conducted in order to determine the correlation between emotional intelligence and authentic leadership in nursing leaders, and the socio-demographic characteristics by which emotional intelligence and authentic leadership vary.

Research questions were the following:

1. What are the socio-demographic characteristics of nurse leaders in the academe as to:
  - a. gender,
  - b. age,
  - c. position held, and;
  - d. years of experience, and how do they impact emotional intelligence and authentic leadership?
2. What is the relationship between the emotional intelligence and authentic leadership of nursing leaders?

## Methods

### Design

This study employed a quantitative comparative-correlational approach to examine the relationship between emotional intelligence and authentic leadership.

### Participants

The sample comprised nurse leaders (deans, vice deans, and department heads) in the KSA nursing academy. A two-stage cluster sampling method was used in which the KSA was divided into regions and the region with the most universities employing nurse leaders was selected. Then, a simple random sampling method was used. Sample size was determined using the Lynch formula (Hulley, Cummings, et al., 2001) with 95% confidence, and a sample size of 152 participants was identified. Participants were contacted via the email address that they provided when invited to join this study.

### Data collection

A survey using a self-administered questionnaire was used to collect the data. The instrument included an informed consent form explaining the study, study procedure, purpose, risk and benefits, and voluntary participation. The author(s)' contact information was included to allow the participants to contact the researchers if clarifications were needed. The data were collected from April 12 through July 2, 2019.

### Questionnaires

The Authentic Leadership Self-assessment Questionnaire (Northouse, 2010) and the Emotional Intelligence Questionnaire (Law, Wong, & Song, 2004) were used with the developers' permission. The Authentic Leadership Self-Assessment Questionnaire has 16 items covering four authentic leadership dimensions: self-awareness, internal moral perspective, balance processing, and relational transparency. The responses to all the items were measured on a five-point scale where 1 = *strongly disagree*, 2 = *disagree*, 3 = *neutral*, 4 = *agree*, and 5 = *strongly agree*.

The Emotional Intelligence Questionnaire has 16 items in four dimensions: personal emotions, others' emotions, use of emotions, and regulation of emotions. The nurse leaders were asked to answer on a seven-point scale where 1 = *strongly disagree*, 2 = *disagree*, 3 = *slightly disagree*, 4 = *neutral*, 5 = *slightly agree*, 6 = *agree*, and 7 = *strongly agree*.

Before conducting the survey, six nursing leaders with doctoral degrees validated the questionnaires' contents. Their average mean score was 4.6, indicating that the instruments were highly valid. Then, the questionnaires were pilot tested on a sample of 20 nursing leaders who were not part of the actual study. Cronbach's alpha coefficient for 16 items for authentic leadership self-assessment questionnaire was 0.96, while the 16-item emotional intelligence questionnaire was 0.94 which means the two instruments were highly reliable.

### Ethical considerations

The Ethics Review Board of the XXX approved this study (number H-2016-058). Written consent was obtained from the respondents when they completed the questionnaires.

### Data analysis

SPSS Version 21 was used to analyze the data. Frequency and percentage were used to determine the demographic characteristics of the nurse leaders. A *t*-test was used to determine the relationship between

**Table 1**  
Socio-demographic characteristics of the nurse leaders.

Socio-demographic	Frequency	Percentage
Gender		
Female	99	65
Male	53	35
Age		
30 and under	24	15.78
31–35	26	17.15
36–40	55	36.4
41–45	23	15.13
46 and over	24	15.78
Position		
Dean	6	3.95
Vice dean	5	3.29
Department head	141	92.76
Years of experience in the position		
1	48	31.57
2	21	13.80
3	18	11.84
4	20	13.6
5	45	29.60

emotional intelligence and authentic leadership with regard to gender differences. Age and hierarchical position were tested using analysis of variance (ANOVA) tests. The relationship between the emotional intelligence and authentic leadership scores was analyzed using Pearson's correlation coefficients (bivariate *r*). The relationships of the four dimensions in the emotional intelligence construct and overall emotional intelligence were assessed using multiple regression analysis and simple linear regression analysis. Statistical significance was set at *p* < 0.05.

## Results

The majority of the respondents were female (64.9%), and they were most likely (36.4%) to be 36 to 40 years old followed by 31 to 35 years old (17.5%). The respondents were most likely to be department heads (93%), and they were most likely to have been in that position for one year (31.57%) followed by five years (29.60%) (Table 1).

Table 2 presents the relationship between emotional intelligence, authentic leadership and the demographic information.

There was no significant gender difference in emotional intelligence (males: mean = 2.108, SD = 0.218; females: mean = 2.027, SD = 0.275; *t* (150) = 1.852, *p* = 0.06). However, emotional intelligence was significantly related to the five age groups (*F* (4, 147) = 5.430, *p* = 0.00). There was no significant relationship between nursing position and emotional intelligence among the three types of positions such as dean, vice dean, and department head (*F* (2, 149) = 0.768, *p* = 0.466), but the relationship between years of experience and emotional intelligence was statistically significant (*F* (4, 147) = 2.870, *p* = 0.025).

In contrast, authentic leadership was significantly different between males (*M* = 0.322, SD = 0.045) and females (*M* = 0.302, SD = 0.059) (*t* (150) = 2.012, *p* = 0.046), and there was a significant relationship between age and authentic leadership (*F* (4, 147) = 5.044, *p* = 0.000). There was no significant relationship between nursing position and authentic leadership (*F* (2, 149) = 0.740, *p* = 0.479), but authentic leadership significantly differed across the years of experience (*F* (4, 147) = 2.857, *p* = 0.026).

Regarding the relationships between emotional intelligence and authentic leadership, there were statistically significant relationships between understanding of one's personal emotions and authentic leadership (*r* = 0.475, *p* = 0.001), appraisal of others' emotions and authentic leadership (*r* = 0.415, *p* = 0.001), and the extent of using emotion and authentic leadership (*r* = 0.662, *p* = 0.001). However, the

**Table 2**

The Relationship between Emotional Intelligence, Authentic Leadership and the Demographic Information.

N = 152.

Variable		Mean	SD	Test Value	df	p-Value	Interpretation
<b>Emotional intelligence</b>							
Gender	Male	2.108	0.218	(t) 1.852	150	0.066	There is no significant difference
	Female	2.027	0.275				
Age	30 and under	1.894	0.207		SSB = 4		
	31–35	1.991	0.183		SSW = 147		
	36–40	2.145	0.304		SST = 151		
	41–45	2.000	0.184				There is a significant difference
	46 and over	2.111	0.227	(F) 5.430		0.001	
Position	Dean	2.016	0.295		SSB = 2		
	Vice Dean	2.091	0.275		SSW = 149		
	Department Head	2.038	0.259		SST = 151		There is no significant difference
Years of experience in current position	1	2.067	0.249	(F) 0.768		0.466	
	2	1.995	0.309		SSB = 4		
	3	2.068	0.207		SSW = 147		
	4	2.241	0.242		SST = 151		There is a significant difference
	5	2.004	0.259			0.025	
<b>Authentic leadership</b>							
Gender	Male	0.322	0.045	(t) 2.012	150	0.046	There is a significant difference
	Female	0.303	0.059				
Age	30 and under	0.275	0.482		SSB = 4		
	31–35	0.297	0.040		SSW = 147		
	36–40	0.327	0.634		SST = 151		
	41–45	0.299	0.408				There is a significant difference
Position	46 and over	0.322	0.466	(F) 5.044		0.001	
	Dean	0.298	0.071		SSB = 2		
	Vice Dean	0.317	0.056		SSW = 149		
	Department Head	0.306	0.053		SST = 151		There is no significant difference
Years of experience in current position	1	0.312	0.517	(F) 0.740		0.479	
	2	0.295	0.067		SSB = 4		
	3	0.313	0.046		SSW = 147		
	4	0.348	0.050		SST = 151		There is a significant difference
	5	0.299	0.053			0.026	

**Table 3**

Relationship between emotional intelligence and authentic leadership score.

N = 152.

	Variable	r	p	Interpretation
Authentic leadership score	Understanding own emotion	0.475	0.001	Positive relationship
	Appraisal of others' emotion	0.415	0.001	Positive relationship
	Use of emotion	0.662	0.001	Positive relationship
	Regulation of emotion	-0.078	0.337	No significant relationship
	Overall emotional intelligence	0.996	0.001	Strong positive relationship

Correlation is significant at the 0.01 level (2-tailed).

regulation of the emotion dimension of emotional intelligence did not significantly relate to authentic leadership ( $r = 0.078$ ,  $p = 0.337$ ) showed that there was no relationship between the use of emotion and the authentic leadership score or vice versa. Regarding the overall emotional intelligence score, the relationship to authentic leadership was strong and positive ( $r = 0.996$ ,  $p = 0.001$ ) (Table 3).

Table 4 presents the results of the multiple regression analysis. Using emotion had the strongest influence on authentic leadership ( $B = 0.99$ ) followed by the appraisal of one's personal emotions ( $B = 0.70$ ) and appraisal of others' emotions ( $B = 0.69$ ). Regulation of emotion was not statistically significant. The simple regression analysis revealed that, for each one-point increase in total emotional intelligence score, authentic leadership score increased by 0.086.

## Discussion

This study investigated the influences of the dimensions of emotional intelligence on authentic leadership. First, we did not find a

significant gender difference in emotional intelligence but significant to authentic leadership. This means that whether the nurse leaders in the academe are male or female, they both display similar levels of emotional intelligence. However, gender demonstrates significant difference in authentic leadership which implies that male is more authentic leader compared to female. Having no significant gender difference in EI differs from previous studies' findings (Snowden et al., 2018; Stami, Riton, & Dominique, 2018). Most previous studies argued that females have higher emotional intelligence than males, possibly because females learned behaviors and how to manage interpersonal relationships through nurturing experiences, which helps them to adapt their feelings. The finding can advance the literature on gender differences by posing additional questions. The present research gives rise to the question of why no gender difference in emotional intelligence was found despite literature found otherwise. Why do females display characteristics similar to females in other parts of the world? Such findings can help enrich the lives of both males and female nurses in the academe and assist them to live emotionally intelligent lives each in

**Table 4**

Multiple regression and simple linear regression analysis of the contribution of the components of emotional intelligence and overall emotional intelligence.  
N = 152

Dependent variable	Independent variable	R <sup>2</sup>	F	df	P	Unstandardized	
						Constant	B
Authentic leadership	Understanding of own emotion			Regression = 4			0.013
	Appraisal of others' emotion			Residual = 144			0.014
	Use of emotion			Total = 151			0.018
	Regulation of emotion	0.877	262.060		0.001	-0.083	0.000
t							-5.791
p							0.001
Overall Emotional Intelligence		0.993	21,084.845	Regression = 1	0.001	-0.125	0.211
t				Residual = 150			
p				Total = 151			
							-41.462
							0.001

their own way. On the other hand, the patriarchal society that still exists in Saudi Arabia might explain this study's significant gender difference in authentic leadership. This accounts for the perception of male nurse leaders as dominant and strong fulfills the presumed role of "father" within the organization. Ibarra (2015) asserted that the operational definition of authentic leadership has been construed in relation to masculine rather than feminine gender roles. The present study demonstrates that, despite challenges, male and female nurse leaders alike can be authentic leaders. Further, our findings draw attention to the necessity of undergoing training in order to become an authentic leader.

In this study, we found that age has a significant impact on a subject's emotional intelligence and authentic leadership: as age increased in the sample, emotional intelligence and authentic leadership scores increased. This was expected because people tend toward increased self-awareness, self-management, social awareness, and have better social skills as they age. These are common findings in the literature (Snowden et al., 2018), but their practical benefit for nursing is not obvious. Snowden et al. (2018) argued that older nurses seem to possess a superior emotional skillset compared to younger nurses and should be prioritized for employment. The finding implies that nursing leaders can adapt this practice as they are trained to recognize emotionally intelligent individuals. This process, besides supporting and accomplishing goals within their organization, can have a positive influence on career development.

This study found no significant relationship between hierarchical position, and emotional intelligence and authentic leadership. Indeed, while these nurse leaders are getting higher with their position, they acquired more experiences and gained knowledge. Thus, they have acquired years of cumulated knowledge, they need role models less, and they have relatively more self-awareness (Wong & Laschinger, 2013). In context, this finding is of concern to the educational developers in considering demographic information as part of the continuing professional development training.

However, the number of years of experience in the current position had a significant relationship to emotional intelligence. This means that as nurse leaders gain experience, they become more acquainted with emotional intelligence and authentic leadership. Previous scholars have investigated these relationships (Bikmoradi, Abdi, Soltanian, Dmoqadam, & Hamidi, 2018; Shipley, Jackson, & Segrest, 2010; Van Dusseldorf, Van Meijel, & Derkens, 2011; Yoke & Panatik, 2016). This research finding has an influence to nursing leaders as this can be exercised through engaging their time managing relationships. For experienced nurses, it is important to recognize for their expertise and this is what nursing leaders should accomplish. Consequently, promoting an organizational culture that values the knowledge, experience, and skills of the experience nurse is essential in building an environment that

fosters the satisfaction and retention of experienced nurses.

The results on the relationships between the emotional intelligence dimensions and authentic leadership score were positive, indicating that as emotional intelligence in the sample increased, authentic leadership increased. Regarding understanding one's personal emotions, this study supports Triola (2007a, 2007b) and Stichler (2006) studies. Authentic leadership seems to begin with emotional intelligence, and nurses should examine themselves to find their leadership qualities for serving others (Triola, 2007a, 2007b). Stichler (2006) proposed emotional intelligence, EI is an important characteristic that might improve through training; a keen characteristic acquired through a process of motivation, implementation, and feedback; and that requiring self-knowledge. Concerning appraisal of others' emotions, Horton-Deutsch and Sherwood (2008) deduced that reflection is a vital way to train authentic nurse leaders for handling multiple distinct settings and managing direct patient care. The present finding contributes to nursing education as it maximizes the impact of educational experiences to shape knowledge. It is encouraging to note that the educators can build on situations they have already established. Engaging in reflective practice themselves, educators can establish profound reflective activities for the learner.

Regulation of emotion apparently relates to authentic leadership because managing personal emotions is an aspect of caring behavior (Drath et al., 2008). According to O'Connor (2008), caring competency is increasingly important in nurse leadership, which might relate to nurses' increasing need to care as well as nurture by building and promoting open, trusting, and caring relationships (Wong & Laschinger, 2013). The findings of the present study revealed a strong positive relationship between emotional intelligence and authentic leadership, which supports the results of previous studies (e.g., Batool, 2013; Benson, Martin, Ploeg, & Wessel, 2012). Such finding can greatly contribute to the understanding of the nurse leaders in the academy. Emotional intelligence is a tool to improve performance (Brackett, Rivers, & Salovey, 2011) and sense of achievement by motivating the subordinates within the organization (Batool, 2013). In turn, it helps to enhance the productivity of the employees to meet organizational end goals in an ethical way by putting positive impacts on the society as a whole. Implementation of emotions intelligently in any organization by a leader to be effective and efficient plays a vital role to authentically lead effectively.

Notably, the extent to which the respondents used emotion had the strongest influence on authentic leadership. Based on this finding, some practical implications are proposed, such as the implementation of training initiatives in order to provide nursing education with a better understanding of the authentic leadership. Despite the increasing interest in emotions at work, there is still a need for more research that focus on the antecedents of emotions in organizational change contexts.

The finding of an overall positive relationship between emotional intelligence and authentic leadership suggests a pathway along which nurses' capacity to understand and manage emotions might increase their expectations for job satisfaction, which, in turn, might decrease their risk of work burnout, and, ultimately, increase the organization's positive outcomes. Previous studies recommended that effective leadership might be predicted by the level of emotional skills and social and/or cognitive intelligence (Amdurer, Boyatzis, Saatcioglu, Smith, & Taylor, 2014). Other studies found emotional intelligence, EI positively related to workplace wellbeing and negatively related to workplace stress (Karimi, Leggat, Donohue, Farrell, & Couper, 2014), as well as significantly associated with healthier and higher satisfaction at work and reduced odds of job burnout (Powell, Mabry, & Mixer, 2015) and attrition (Wallis & Kennedy, 2013). Authentic leadership has been linked to group cohesiveness (Wang & Huang, 2009) and progressive organizational outcomes, such as leader effectiveness (Wang & Hsieh, 2013). Other studies found that emotional intelligence somewhat increased managers' capacity to adjust leadership style to fit situations (Moss, Ritossa, & Ngu, 2006). This study has vital implications for practitioners. It is also argued that as EI and leadership skills can decline over time they should be offered to all qualified nursing staff on an ongoing basis as part of professional development. Therefore, long-term EI development training can be effective in nurse leaders. On the other hand, the EI tradition may deprive rather than enhance the understanding of the intricacy of emotions in nursing leadership, hindering the kind of education that is vital for structural efficiency and pioneering developments.

## Limitation

The researchers acknowledged that this study was a self-reported in nature and thus answers were predisposed to biases. As such, this can be addressed by including qualitative views of the subordinates to validate the reported perception of the nursing leaders. Further, the sample for this study came from a single region of Saudi Arabia, which resulted in a small sample size. This particular limitation can be addressed in conducting a study in a wider context. Lastly, the reliability and validity of the questionnaire used in this study can be improved by way of content validity.

## Implication for nursing education

This study has wider implications for the teaching of emotional intelligence and authentic leadership in nursing education, at the undergraduate and graduate levels. Integrating emotional intelligence into the curriculum would give students more time to develop this ability before entering the profession, rather than expecting their emotional intelligence to develop in the workplace. It would give learners the opportunity to better understand themselves, and how they can be more effective in the therapeutic use of self and in forming relationships with patients ahead of time.

Furthermore, authentic leadership could benefit schools themselves by increasing their productivity, and applying innovative approaches within the institution. As such, school leaders could develop heightened positive psychological capacities and increased transparency. This process would result in building trust between various bodies of employees, who in turn would translate these benefits to the learners. Optimism could be easily generated, even in difficult and challenging times, with the help of authentic leadership. Authentic leadership can implicate employees' in the running of their schools, maintain a flexible and realistic perspective, and nurture future opportunities for the leaders.

## Future research

Our study calls for further research to refine and validate the

concepts that emerged from our analysis. For instance, our findings have displayed a difference related to some of the personal characteristics of the nursing leaders (age and years of experience were thus significantly and positively related to emotional intelligence, whereas gender, age, and years of experience in the current position were significant regarding authentic leadership). One could investigate whether this is true of nursing leaders in different countries.

Since this study is based on self-evaluation by the nursing leaders, there is a high chance that the respondents were subjective in their differing opinions: this is another variable worthy of interrogation.

## Conclusion

In a sample of nursing leaders in academia, using emotional intelligence was particularly associated with authentic leadership, which might improve organizational outcomes. The extent to which emotional intelligence was used was influenced by age and years of experience, whereas variation in authentic leadership differed by gender, age, and years of experience.

## Acknowledgments

This research was funded by the Vice Deanship for Scientific Research and Post Graduate Studies of the University of Hail(Grant No. 160698), Hail City, Kingdom of Saudi Arabia.

## Funding

This research was funded by the University of Hail, Scientific research department at Hail Region, Kingdom of Saudi Arabia.

## Declaration of competing interest

The authors declare no potential conflict of interest.

## References

- Alghowinem, S., Goecke, R., Wagner, M., & Alwabil, A. (2019). Evaluating and validating emotion elicitation using English and Arabic movie clips on a Saudi sample. *Sensors*, 19, 2218 2019.
- Amdurer, E., Boyatzis, R. E., Saatcioglu, A., Smith, M. L., & Taylor, S. N. (2014). Long term impact of emotional, social and cognitive intelligence competencies and GMAT on career and life satisfaction and career success. *Frontiers in Psychology*, 5, 1447.
- Antonakis, J., Ashkanasy, N. M., & Dasborough, M. T. (2009). Does leadership need emotional intelligence? *The Leadership Quarterly*, 20, 247–261.
- Batool, B. F. (2013). Emotional intelligence and effective leadership. *Journal of business studies quarterly*, 4(3), 84.
- Benson, G., Martin, L., Ploeg, J., & Wessel, J. (2012). Longitudinal study of emotional intelligence, leadership, and caring in undergraduate nursing students. *Journal of Nursing Education*, 51(2), 95–101.
- Bikmoradi, A., Abdi, F., Soltanian, A., Dmoqadam, N. F., & Hamidi, Y. (2018). Nurse managers' emotional intelligence in educational hospitals: A cross-sectional study from the west of Iran. *Journal of Clinical & Diagnostic Research*, 12(10).
- Bono, J. E., & Ilies, R. (2006). Charisma, positive emotions and mood contagion. *Leadership Quarterly*, 17, 317–334.
- Brackett, M. A., Rivers, S. E., & Salovey, P. (2011). Emotional intelligence: Implications for personal, social, academic, and workplace success. *Social and Personality Psychology Compass*, 5, 88–103. <https://doi.org/10.1111/j.1751-9004.2010.00334.x>.
- Coûte, S., Lopes, P. N., Salovey, P., & Miners, C. T. H. (2010). Emotional intelligence and leadership emergence in small groups. *The Leadership Quarterly*, 21(3), 496–508.
- Drath, W. H., McCauley, C. D., Palus, C. J., Van Velsor, E., O'Connor, P. M., & McGuire, J. B. (2008). Direction, alignment, commitment: Toward a more integrative ontology of leadership. *The Leadership Quarterly*, 19(6), 635–653.
- Gardner, W. L., Cogliser, C. C., Davis, K. M., & Dickens, M. P. (2011). Authentic leadership: A review of the literature and research agenda. *The Leadership Quarterly*, 22(6), 1120–1145.
- Gragg, P. (2008). From theory to practice: Operation emotional intelligence. *Legal Reference Services Quarterly*, 27(2–3), 241–253.
- Hohlbein, P. J. (2015). *The power of play in developing emotional intelligence impacting leadership success: A study of the leadership team in a midwest private, liberal arts university*. Pepperdine University.
- Horton-Deutsch, S. A. R. A., & Sherwood, G. (2008). Reflection: An educational strategy to develop emotionally-competent nurse leaders. *Journal of Nursing Management*, 16(8), 946–954.

- Hulley, S. B., Cummings, S. R., et al. (2001). *Designing clinical research* (2nd ed.). Lippincot Williams and Wilkins.
- Humphrey, R. H., Pollack, J. M., & Hawver, T. H. (2008). Leading with emotional labor. *Journal of Managerial Psychology*, 23, 151–168.
- Ibarra, H. (2015). The authenticity paradox: Why feeling like a fake can be a sign of growth. *Harvard Business Review*, 93, 52–59.
- Ilies, R., Morgeson, F. P., & Nahrgang, J. D. (2005). Authentic leadership and eudemonic wellbeing: Understanding leader-follower outcomes. *Leadership Quarterly*, 16, 373–394.
- Jordan, P. J., & Troth, A. C. (2004). Managing emotions during team problem solving: Emotional intelligence and conflict resolution. *Human Performance*, 17(2), 195–218.
- Karimi, L., Leggat, S. G., Donohue, L., Farrell, G., & Couper, G. E. (2014). Emotional rescue: The role of emotional intelligence and emotional labour on well-being and job-stress among community nurses. *Journal of Advanced Nursing*, 70(1), 176–186.
- Kellett, J. B., Humphrey, R. H., & Sleeth, R. G. (2006). Empathy and the emergence of task and relations leaders. *Leadership Quarterly*, 17, 146–162.
- Kernis, M. H., & Goldman, B. M. (2006). A multicomponent conceptualization of authenticity: Theory and research. In M. P. Zanna (Vol. Ed.), *Advances in experimental social psychology*. Vol. 38. *Advances in experimental social psychology* (pp. 283–357). San Diego: Academic Press.
- Kokkoris, M. D., & Kühnen, U. (2014). "Express the real you": Cultural differences in the perception of self-expression as authenticity. *Journal of Cross-Cultural Psychology*, 45(8), 1221–1228.
- Kotzé, M., & Nel, P. (2017). Personal factor effects on authentic leadership. *Journal of Psychology in Africa*, 27(1), 47–53.
- Lamb, A., Martin-Misener, R., Bryant-Lukosius, D., & Latimer, M. (2018). Describing the leadership capabilities of advanced practice nurses using a qualitative descriptive study. *Nursing Open*, 5(3), 400–413. <https://doi.org/10.1002/nop2.150>.
- Law, K. S., Wong, C. S., & Song, L. J. (2004). The construct and criterion validity of emotional intelligence and its potential utility for management studies. *Journal of Applied Psychology*, 89(3), 483–496.
- Luthans, F., & Avolio, B. J. (2003). Authentic leadership development. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.). *Positive organizational scholarship* (pp. 241–258). San Francisco: Berrett-Koehler.
- Mayer, J. D., Caruso, D. R., & Salovey, P. (2016). The ability model of emotional intelligence: Principles and updates. *Emotion Review*, 8(4), 290–300. <https://doi.org/10.1177/1754073916639667>.
- Meliniotis, C. (2015, Mar. 30). Resource Center. *Effective Nursing Leadership*. Retrieved from <https://www.elitecme.com/resource-center/nursing/effective-nursing-leadership/>.
- Miao, C., Humphrey, R., & Qian, S. (2018). Emotional intelligence and authentic leadership: A meta-analysis. *Leadership & Organization Development Journal*. <https://doi.org/10.1108/LODJ-02-2018-0066>.
- Moss, S., Ritossa, D., & Ngu, S. (2006). The effect of follower regulatory focus and extraversion on leadership behavior: The role of emotional intelligence. *Journal of Individual Differences*, 27, 93–107.
- Northouse, P. G. (2010). *Leadership: Theory and practice* (5th ed.). Thousand Oaks, CA: Sage Publications.
- O'Connor, M. (2008). The dimensions of leadership; a foundation for caring competency. *Nursing Administration Quarterly*, 32(1), 21–26.
- Powell, K. R., Mabry, J. L., & Mixer, S. J. (2015). Emotional intelligence: A critical evaluation of the literature with implications for mental health nursing leadership. *Issues in Mental Health Nursing*, 36(5), 346–356.
- Rodriguez, J. (2016). Emotional intelligence and authentic leadership: An empirical exploration of two emerging theoretical constructs. Dissertation. Our Lady of the Lake University. Retrieved from <https://search.proquest.com/docview/1860703377/668E40CF81DD4E89 PQ/2?accountid=35493>.
- Rubin, R. S., Munz, D., & Bommer, W. H. (2005). Leading from within: The effects of emotion recognition and personality on transformational leadership behavior. *Academy of Management Journal*, 48, 845–858.
- Shipley, N. L., Jackson, M. J., & Segrest, S. L. (2010). The effects of emotional intelligence, age, work experience, and academic performance. *Research in Higher Education Journal*, 9, 1–18.
- Snowden, A., Stenhouse, R., Duers, L., Marshall, S., Carver, F., Brown, N., & Young, J. (2018). The relationship between emotional intelligence, previous caring experience and successful completion of a pre-registration nursing/midwifery degree. *Journal of Advanced Nursing*, 74(2), 433–442.
- Stami, T., Ritin, F., & Dominique, P. (2018). Demographic predictors of emotional intelligence among radiation therapists. *Journal of Medical Radiation Sciences*, 65(2), 114–122.
- Stichler, J. F. (2006). Emotional intelligence: A critical leadership quality for the nurse executive. *AWHONN Lifelines*, 10(5), 422–425.
- Sy, T., Co-te', S., & Saavedra, R. (2005). The contagious leader: Impact of the leader's mood on the mood of group members, group affective tone, and group processes. *Journal of Applied Psychology*, 90, 295–305.
- Triola, N. (2007a). Authentic leadership begins with 2008. Emotional intelligence. *AACN Advanced Critical Care*, 18(3), 244–247.
- Triola, N. (2007b). Authentic leadership begins with emotional intelligence. *AACN Advanced Critical Care*, 18(3), 244–247.
- Van Dusseldorp, L. R., van Meijel, B. K., & Derkzen, J. J. (2011). Emotional intelligence of mental health nurses. *Journal of Clinical Nursing*, 20(3–4), 555–562.
- Wallis, A., & Kennedy, K. I. (2013). Leadership training to improve nurse retention. *Journal of Nursing Management*, 21(4), 624–632.
- Walter, F., & Bruch, H. (2007). Investigating the emotional basis of charismatic leadership: The role of leaders' positive mood and emotional intelligence. In N. M. Ashkanasy, & W. J. Zerbe (Vol. Eds.), *Research on emotion in organizations*: . Vol. 3. C. E. J. ha'rel, 58 February academy of management perspectives (pp. 55–85). Amsterdam, NL: Elsevier.
- Walter, F., Cole, M. S., & Humphrey, R. H. (2011). Emotional intelligence: Sine qua non of leadership or folderol? *Academy of Management Perspectives*, 25(1), 45–59. <https://doi.org/10.5465/AMP.2011.59198449>.
- Wang, D. S., & Hsieh, C. C. (2013). The effect of authentic leadership on employee trust and employee engagement. *Social Behavior and Personality: An International Journal*, 41(4), 613–624.
- Wang, Y.-S., & Huang, T. C. (2009). The relationship of transformational leadership with group cohesiveness and emotional intelligence. *Social Behavior and Personality: An International Journal*, 37, 379–392.
- Weinberger, L. A. (2009). Emotional intelligence, leadership style, and perceived leadership effectiveness. *Advances in Developing Human Resources*, 11(6), 747–772. <https://doi.org/10.1177/1523422309360811>.
- Wong, C. A., & Laschinger, H. K. (2013). Authentic leadership, performance, and job satisfaction: The mediating role of empowerment. *Journal of Advanced Nursing*, 69(4), 947–959.
- Yoke, L. B., & Panatik, S. A. (2016). School teachers' emotional intelligence in relation to demographic characteristics and job outcomes. *International Business Management*, 10(6), 858–864.