Improve Nurses’ Engagement of Public Sector Hospitals in pandemic of COVID-19 through Authentic Leadership: Mediating role of Moral Emotions and Moderating role of Perceived Coronavirus Threat

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Research Article

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Abstract

Background: The study highlighted the issue of the engagement of nurses in the public hospital sector.

Objectives: The objective of the current study was to determine the impact of authentic leadership on the engagement of nurses in the mediating role of moral emotions. The perceived threat of coronavirus was considered to be a boundary condition of the relationship. Design

Method: The study was conducted in accordance with the Positivism Research Philosophy Guidelines, followed by a deductive approach and data was collected through self-directed questionnaires. 134 responses were collected from nurses working in various public sector hospitals operating in twin cities in Pakistan, in particular public sector hospitals where coronavirus patients are being treated. There are 277,402 confirmed cases of Coronavirus, being treated in 11 designation hospitals in twin cities of Pakistan.

Results: The result was produced with the help of Amos. Path diagrams for mediation and moderation hypotheses were obtained and interpreted accordingly. The results showed that compassionate individuals were selfless even in the Covid-19 pandemic. Elevation and gratitude as a moral emotion have a more serious effect on the perceived threat to coronavirus.

Conclusion: In the current scenario, the organization should identify the nursing staff with full compassion as it has been identified that the compassionate individual performs his or her duties even in the worst situation or during the Covid-19 pandemic.

What is already known about the topic?

Authentic Leadership are having the potential to influence their followers through personal and organizational Identification and then effect their cognitions.

What this paper adds:

The current study add novelty and expanded the knowledge about authentic leadership and theory of authentic leadership since it add:

- Perceived coronavirus threat as boundary condition
- Moral Emotions
- Engagement

Introduction

The world is currently facing a global Covid-19 pandemic. This pandemic effect 17,201,277 lives globally and continues to increase. The virus that causes COVID-19 is mainly transmitted through droplets
generated when an infected person coughs, sneezes, or exhales. These droplets are too heavy to hang in
the air, and quickly fall on floors or surfaces. The novel coronavirus' case fatality rate has been estimated
at around 2%, in the WHO press conference held on January 29, 2020 (Who, 2020). To date, Pakistan has
reported 277,402 coronavirus cases that are being treated in government / public sector hospitals across
the country. This Covid-19 pandemic has significantly affected both the physical and psychological
condition of individuals (Galea et al., 2020).

Among all other individuals, nursing staff are those directly affected by the novel coronavirus (Kang et al.,
2020). This has had an impact on the psychological capabilities of nursing staff, particularly those
involved in coronavirus treatment. Nursing staff in public sector hospitals are actively involved in this
treatment. Regardless of hospitals, public sector organizations have shown their importance to the
economy of the country. Due to certain factors, public sector organizations that have created barriers to
economic growth in a country can never achieve the desired level of performance (Malik & Khan, 2020),
and these organizations are also responsible for the slower growth of the country. Employee
disengagement is the primary reason for failing to achieve a level of desire for performance (Malik & Khan, 2020).
The concept of employee engagement is comparatively new and has been widely discussed
by different organizational behavior consultants, with researchers also joining forces, and both sides
(consultants and researchers) are steeped in competing and inconsistent interpretations of the meaning
of the construct. Recently, organizations are also accepting that employee engagement is producing
bottom-line results. There is sufficient literature available to define strategies for the promotion of
employee engagement in the organization of different sectors (Shen & Jiang, 2019; Wu et al., 2020).
Organizations also use different terms for the engagement of employees according to the working nature
of the organization (Jha et al., 2019). The term of nurse's engagement is a term that is popular and widely
used in the health sector (Heath, & Clendon, 2019). The concept of nurse's engagement nurses is used to
describe how the nurses are fulfilled and committed to their particular position. The concept is directly
related to key outcomes related to patient experience, efficacy and health. Nurse's engagement has been
influenced by a number of organizational, psychological and management factors. These factors play a
key role in transforming the attitudes of nurses towards positive or negative work-related outcomes.
Among all other factors, the working environment is a factor that directly affects the attitude of nurses
towards their work (Malik & Khan, 2020).

The working environment of an organization closely linked to the prevailing leadership, which is solely
responsible for creating a healthy working environment. Positive and strong leadership practices are
important for addressing the challenges of hectic pace, economic pressure, conflict resolution, and
dealing with staff shortages. Leadership role is also important for providing safe care for patients and
quality working environment for staff. Leadership has been adopted by researchers as a process in which
individuals inspire others to achieve some common goals. Laschinger et al., (2009) defined that the
leaders in the sector of healthcare organizations are liable for making the requirements for the work of
nurses and other professionals simpler by identifying the level of support, knowledge and services in the
work. Nursing staff respond favorably to their work and trust their leaders when they feel that they are
honest, accessible, frank and eager to allow them to take part in decisions (Wong et al., 2013). In fact,
nurses who believe their leaders are authentic feel support, confident, and empowerment in the workplace (Laschinger et. al., 2009). Authentic leadership is grounded in the humanistic ideals that are fundamental to healthcare and other careers. Authentic leadership encourages a safe workforce that values, supports and rewards everyone for their work (Blake & Isard, 2012). Based on the facts, healthcare organizations particularly need to suggest authentic leadership in order to achieve the optimum level of workforce performance and nurse's engagement. In addition, this leadership is also necessary to demonstrate moral virtue. For nursing staff, moral virtue or moral emotions are important due to their delicate nature of work. In the family of moral emotions, compassion, gratitude, and elevation emotions have been identified and used. As authentic leaders have shown moral virtue, their in-group followers also display the same virtue. These moral emotions also have an impact on the engagement of nursing staff. However, a perceived threat may influence the propensity of moral emotional effect on engagement. Since leaders have the potential to create a framework for professional growth and development, and the environments in which participants feel affected are encouraged to thrive. Leaders stand out who left a lasting impression on us in our professional lives, and if the leaders were brave, speaking out without fear, when there was a need for a strong voice, and they were able to attract followers who had earned a high level of job satisfaction by working with them. In nursing, genuine leaders are needed to obtain the maximum output from the staff, particularly in the prevailing situation.

The recent Covid-19 pandemic has had an impact on both the country's economic growth and the healthcare system. Most medical staff face uncertainty about their own health and perceived threat of Covid-19, specifically medical staff serving in public sector hospitals. The active disengagement of nursing staff is due to the threat posed by Covid-19, as well as their perception of job security provided by their organization. The current study is conducted with the aim of identifying factors that may have an impact on the engagement of the nurse despite the uncertain situation of the Covid-19. Previous literature suggested that authentic leaders are the leaders who share moral virtue, and that their followers share the same moral virtue as their leaders. Unfortunately, limited literature on the relationship of authentic leadership and emotion is available. The current study addresses the gap by integrating moral emotions and highlighting the issue of the disengagement of nursing staff in government hospitals in Pakistan. Based on the problem statement, the objective of the current study is to determine the impact of authentic leadership on the involvement of nurses. To find out about the mediating role of moral emotions in relation to authentic leadership and nurse engagement, and to find out about the moderating role of perceived threat of coronavirus in shaping moral emotions. In line with the objectives and problems identified, the current study is conducted under the guidance of authentic leadership theory, which claims that true leaders have the potential to shape emotions that further lead to positive attitudes. The said impact can, however, be materialized under boundary conditions. The perceived threat of coronavirus was taken as a boundary condition in the current study. The present study has significance as it adds more insights into the existing literature of authentic leadership through the inclusion of moral emotions. The study also provides new insights into theoretical improvement and provides guidance to practitioners on how to deal with the current situation. It will help to increase the involvement of nurses by providing them
with authentic leaders so that they can be guided by their leaders. This timely research will also provide guidance for management on the effective use of organizational resources.

Literature Review

Authentic Leadership, compassion and employee engagement

Broaden and Build’s Emotion Theory suggested that individuals experiencing positive hospital-related effects, such as open discussion of work-related issues, broaden their cognition and attitudinal repertoire and thus engage. Authentic leaders have a positive attitude towards their followers, which leads them to share feelings of compassion and leads them to engage in the fulfillment of their tasks. Compassion Emotion is very important for nursing staff because of their unique nature of work. It needs a sound mental and psychological state that can be guided by true leaders. It has been seen as a mediator in a different positive relationship. Previous researcher argued that the individual values or affective state guided by authenticity and it can further leads to engagement (Menard & Brunet, 2011). Authentic leaders are a potential force that guides the individual to develop compassionate emotions, and it has been identified that compassion has an impact on engagement in the workplace (Mason et al., 2014). The current study took compassionate emotion as a mediator in the relationship of authentic leadership and commitment to work. It has been observed that the vigor-component of engagement is closely influenced by compassion. Nursing staff who show a higher level of commitment to their work related activities tend to have compassionate feelings and enjoy a more positive relationship with their leaders. Current research has shown a positive relationship with authentic leadership and compassion in the workplace and enhanced work engagement. Researcher (e.g. Kanov et al., 2004) identified that employee-positive workplace experience appears to have the feelings of caring for others, compassion, and empathy towards others. In general, these workers foster participation and commitment to organizational well-being and ultimately psychological well-being. The compassionate emotion is spiritual and moral emotion that has emerged as important to nursing workers due to the special nature of their work. It has the impact on job related positive outcomes such as engagement, satisfaction and commitment towards the organization as well as the stakeholders. The compassionate emotion is spiritual and moral emotion that arose as important to nursing workers as it is the core demand of their job. Weng et al. (2013) defined the compassion emotion that is commonly recognized as an individual’s emotional reaction to those in distress. It’s essentially selfless thoughts. Nursing staff who assist doctors in the treatment of corona patients need such emotional reaction despite being able to witness the same disease in the latest coronavirus pandemic. Employees with caring feelings tend to have the stronger on-the-job commitment and it has more positive effects. Identifying the relationship is important within some well-established theories. Broaden and Build Theory has the framework to describe the relationship between authentic leadership, compassion, and employee engagement as authentic leadership structures are extended, compassion emotions are built, and engagement patterns are further established by members. Previous literature suggested that the authentic leadership is having the potential to transform the emotions and these emotions leads to engagement, satisfaction and commitment. Specifically, in the
current situation where most of the people are suffering with pandemic of Covid-19, nursing staff are continuously working for them to fight with the disease.

**H1: Compassion mediates the relationship of authentic leadership and nurses engagement.**

**Authentic Leadership, gratitude and employee engagement**

Researchers concluded that authentic leaders have the capacity to influence the moral virtue of their followers, which further leads to a positive attitude (Leong et al., 2020). Authentic leaders also share the moral virtue that can be found in their followers and can help their followers to develop a positive attitude. Gratitude is the feeling of being thankful in response to a positive response from the boss or the organization. Employees with a feeling of gratitude tend to engage in the accomplishment of tasks or help leaders/organization to achieve goals. The relationship of authentic leadership, gratitude and commitment is supported from the point of view of interpersonal relationships, where the individual's inner motivation evokes, and then tries to fulfil his or her responsibilities. Such interpersonal relationships have been studied in literature under the aegis of the famous theory of social exchange. The theory suggests that leaders and the working environment are fundamental motivators for workers who can provide primary help in shaping emotions as well as engagement. The rule of reciprocity is clearly stated in the theory of social exchange, which states that "people should help those who helped them, and people should not harm those who helped them" (Blau, 1964). Emotions, based on the literature on social psychology, guide the decision of individuals on social exchange (Bartlett & DeSteno, 2006). In particular, gratitude and obligation form the core of reciprocity and act as a focal point for the development and maintenance of interpersonal relationships (Dewani et al., 2016). Researchers considered gratitude and obligation to be an independent antecedent of reciprocal behaviour (Goei & Boster, 2005). The current study builds a relationship of authentic leadership, gratitude and commitment to nursing based on the theory of social exchange. If nurses get positivity through authentic leadership, even if they are in an uncertain situation, they can show gratitude and engage in work-related activities. Researchers signifies the gratitude emotion as mediator in different studies and identify the significant results. Gratitude refers to one's feeling when someone else intentionally gave or tried to give something of value to someone else." (Bartlett & DeSteno, 2006). Employee's affective state, stemming from recognizing another's actions that trigger reciprocal behaviour (Bock et al., 2016). If the individual gets positive feelings from the leaders, it is by showing gratitude, which leads to nurse's engagement (Fehr et al., 2017). Authentic leadership is of great importance to nursing staff, which leads to an increase in the involvement of nurses. Relationships become stronger when gratitude emotions are shown.

**H2: Gratitude mediates the relationship of authentic leadership and nurses engagement.**

**Authentic Leadership, elevation and employee engagement**

Elevation (emotion) is an emotion elicited by witnessing exceptional moral goodness in virtuous behaviour. This is felt as a distinct feeling of warmth and expansion, accompanied by the person whose exemplary conduct is viewed with appreciation and affection. Elevated nurses demonstrate the principle
and usually involve more in the demonstration of pro-social behaviour. The psychologist and scholars have found the emotion of upliftment, if the person experiences morality than the individual displays (Klebl et al., 2020). Concept is most widely used in psychology for the more positive outcomes in mood and type of behaviour. Because it is a spiritual feeling, it is expressed by the followers of genuine leaders, since their leaders are having the same. It leads to a positive attitude and a pro-social attitude. Previous research shows that an individual with an uplifting emotion is becoming more kind to others. Such kindness emerge in the cognitions because they are experience the virtue from their leader's i.e. authentic leaders. They were inspired and motivated by the virtues of their leaders, which led them to display morality. In the context of hospital and nursing staff, nursing staff are becoming more kind to serve their patients while they are suffering with their health related issues (Sparks et al., 2019). The relationship between leaders and followers is much more important in this respect. In the current Covid-19 pandemic, nursing staff who are undergoing genuine leadership tend to feel the upsurge that leads them to engage in serving their patients. In principle, according to the theory of social exchange, they are reciprocating the same behaviour as their leaders do. The relationship of authentic leadership and engagement is mediated by the elevation emotion. The elevation emotion is guided through the intrinsic motivation of an individual. Motivation is considered complementary for adoption of pro-social behaviour. Elevation is the emotion evoked by spiritual beauty actions and can be the opposite of disgust. It is a constructive social emotion, caused by witnessing the actions of third parties (leaders) and helps the individual to adopt positive attitude towards the prevailing environment. It triggers the desire to be kind to others (patients). The situation now demands an increase in the number of nursing staff for their coronavirus patients. Yet credible leadership still needs to be learned. The partnership is endorsed on the basis of the principle of social exchange as the individual expresses the same value as the organisation. Elevation emotion as mediator may yield better results quite in isolation, since it is driven by previous actions (Shukla et al., 2020).

**H3: Elevation emotion mediates the relationship of authentic leadership and nurses engagement.**

**Moderating role of Perceived Coronavirus threat**

Threat in any form may be linked to individual's psychological state. Individual decisions and cognitions are positively related to the severity of the threat. It has a positive link with moral cognitions, unfortunately with regard to a specific disease that has not been studied in the literature. Haidt, (2007) noted that the perceived threat of disease plays an essential role in shaping moral judgment. It has a significant role for people who are morally vigilant. The perceived threat of disease is closely linked to the emergence of moral emotions (Wirtz et al., 2016). Growing body of knowledge related to moral emotions has identified that the threat of disease alters moral cognition and needs to be properly addressed (Constantin & Cuadrado, 2019). Researcher (e.g. Schaller & Park, 2011; Murray & Schaller, 2016) has rigorously studied and concluded that perceived disease threat has various implications for moral cognitions (moral emotions), emotional process, and behavior. The published literature suggested most of the emerging findings that link perceived disease threat to a set of affective components and characteristics that indicate behavioral caution and attitude conservatism, such as lower sociability levels.
and lower tolerance to non-conformity (Murray & Schaller, 2012). The disease that has been identified as a pandemic is a cause of health threats that have different impact on peoples’ psychological states (Murray & Schaller, 2012).

Recently, the global coronavirus pandemic is a threat to every person's life, which also affects their psychological health, particularly those in health care who have to deal with the threat of coronavirus every day. Nursing staff who are the followers of authentic leaders are displaying the moral emotions (compassion, gratitude, and elevation) which further leads to adoption of positive attitude, but the perceived threat of coronavirus decrease the intensity of the relationship. The said sequential path (authentic leadership, moral emotions and engagement) is weakened by the coronavirus threat. The researchers e.g. Matavelli et al., (2020) took financial threat as moderator and got significant results for altering the defined relationship. The Covid-19 pandemic even affected the psychological state of the nursing staff who were identified with a lot of moral emotions. Since coronavirus has been identified as a disease, it spreads through interactions with individuals who are already suffering, so that most individuals avoid people who are affected by coronavirus, despite being responsible for treating people. The threat of coronavirus is significantly moderating the relationship of authentic leadership, elevation, compassion and gratitude and weaker the said relationship. Authentic leaders are the leaders with the component of moral integrity and share the same with their followers. The followers also shading the same moral virtue and the impact has been signifies by previous literature (for reference: Cianci et al., 2014; Malik & Khan, 2019). Wong and Walsh (2020) carried out a relationship review, particularly in the healthcare sector, identifying that nursing staff issues can be addressed through the inclusion of genuine leadership. Because nurses are reportedly facing some form of harassment and incivility (Hutchinson, 2018). These issues can be overcome by leaders who have a moral imperative (Berry, Gillespie, Fisher, Gormley, & Haynes, 2016). But these strategies worked only in normal circumstances where the individual was psychologically stable, not in the event of a pandemic. It has been identified that the perceived threat has immediate and large influence on the affective components of individual attitude. In the light of different theories, including the theory of reactivity, it can be predicted that the perceived threat of COVID-19 will reduce moral emotions and weaken defined relationships. Recently, there is a research conducted on pandemic of Covid-19, with the identification that it has already influence the social and daily lives of individuals and they are trying to protect themselves (Woodside, 2019; Convey et al., 2020) even the nursing staff.

**H4: Perceived Coronavirus threat moderate the relationship of authentic leadership and elevation in such a way that the threat increases the relationship becomes weak.**

**H5: Perceived Coronavirus threat moderate the relationship of authentic leadership and compassion in such a way that when the Coronavirus threat related perception increases the strength of authentic leadership and compassion decrease.**

**H6: Perceived Coronavirus threat moderate the relationship of authentic leadership and gratitude in such a way that when the perceived Coronavirus threat increases the strength of authentic leadership and
Methods

Research Setting

Data were collected from public sector hospitals where Coronavirus patients are being treated for empiric testing of the developed model. It serves as an appropriate research setting to test our hypotheses for a number of reasons. First, public sector hospitals limit their activities to coronavirus patients and separate medical and isolation wards have been established and staff has been deployed to treat these patients. According to government instructions, most patients have been treated in the designated hospital and most of them are government-owned. Second, the nursing staff and doctors in government hospitals bear the burden of Coronavirus patients all alone, so they can share their experience of authentic leadership, moral emotions, perceived threat of coronavirus and engagement better than others. In addition, it has been noted that nursing staff are those who are full of compassion, gratitude and elevation, so that they can explain the situation of the current pandemic. Moreover, authentic leadership theory has had significant results in nursing related studies, but public sector related hospitals where employee engagement related issues have been specifically overlooked in developing countries such as Pakistan.

Research Design and Data Collection

The current study was conducted in accordance with the guidelines for quantitative research techniques, followed by a deductive approach, and a survey method was used for data collection. Survey method requires a questionnaire and self-administrated questionnaires have been used for data collection purposes. There were two parts to the questionnaires. First part consisted of demographic analysis (i.e. age, gender, and experience). Second part was consisted on the questions related to authentic leadership, compassion, gratitude, elevation, nurses’ engagement and perceived threat of Coronavirus. 150 questionnaires were distributed to nurses in public sector hospitals operating in Islamabad, and 139 questionnaires were received at a response rate of 92.6%. However, there were five questionnaires containing an unattended answer to the question, so we would discard those questionnaires and 134 questionnaires have been finalized for analysis. Out of 134 responses, 64.2% were male and 35.8% female. The nursing staff reported their age bracket 25-30 (24.6%), 31-35 (44.8%) and (30.6%) reported their age between 36- 40. 11.2% (15) nursing staff reported their hand on experience between 1-5 years, 56.7% reported 6-10 years and 32.1% report their experience 11-15 years.

Measures

Authentic leadership related items were adopted from the study of Walumbwa et al., (2008) which consisted on 14 items. The dependent variable nurses engagement was assessed with the help of adopted scale of Schaufeli and Bakker, (2003). The said scale consisted on 09 items. Vianello et al., (2010) elevation scale was used in order to assess the elevation emotion with 3 items. Other moral emotion i.e. gratitude was measured with the help of Chen, Chen, Kee, and Tsai (2009) scale, consists of
05 items. Compassion was measured through adopted questionnaire of Neff, (2003). This scale consists of 5-items. The perceived coronavirus threat was measured using adopted version of Conway et al., (2020) questionnaire. It was short version scale contained 3 items. The sample items are “Thinking about the coronavirus (COVID-19) makes me feel threatened”, “I am afraid of the coronavirus (COVID-19)” and “I am stressed around other people because I worry I’ll catch the coronavirus (COVID-19)”. All the items were rated on 5-point Likert scale ranging from 1= strongly disagree to 5= strongly agree.

**Ethical Approval**

The Ethical Approval was not required because it is original research, no third party involved and rest of the research ethics were followed where required.

**Informed Consent**

This is an original research, data collected from the nursing staff and formal consent was included on the questionnaires, however, the participants were informed about the study and consent was obtained.

**Results**

**Instrument Validation**

Before validation the instrument internal consistency of the measure was tested by applying reliability test and the results for each variables revealed that cronbach’s alpha of all variables is in the range defined by difference researchers i.e. 0.70 and 0.90. Further, Exploratory Factor Analysis and Confirmatory Factor Analysis were applied in order to validate the instrument. Table 1 is displaying the results of factor loading. Factor loading against each items are significant at the level 0.01. Moreover, the AVE (Average Variance Explained) values were also found in the range i.e. >.50. Model fit measures were also displaying in the table 1 where RMSEA= .067, GFI=.750, CFI=.922 and TLI=.915 which are also according to the range defined by Hair et al., (2009). The detail of instrument validation is displaying in Table 2.

**Table 1:**  *EFA/CFA, Composite Reliability and Average Variance Extracted outcomes*
| Constructs & Items     | \( \rho \) | \( \lambda \) | CR   | AVE   |
|-----------------------|-----------|-------------|------|-------|
| **Authentic Leadership** |           |             |      |       |
| AL1                   | .876      | .847**      | 0.967| 0.681 |
| AL2                   | .818      | .884**      |      |       |
| AL3                   | .874      | .886**      |      |       |
| AL4                   | .903      | .837**      |      |       |
| AL5                   | .899      | .938**      |      |       |
| AL6                   | .823      | .736**      |      |       |
| AL7                   | .796      | .699**      |      |       |
| AL8                   | .861      | .819**      |      |       |
| AL9                   | .812      | .872**      |      |       |
| AL10                  | .848      | .860**      |      |       |
| AL11                  | .894      | .816**      |      |       |
| AL12                  | .879      | .914**      |      |       |
| AL13                  | .797      | .711**      |      |       |
| AL14                  | .778      | .685**      |      |       |
| **Compassion**        |           |             |      |       |
| C1                    | .874      | .810**      | 0.936| 0.605 |
| C2                    | .954      | .997**      |      |       |
| C3                    | .781      | .665**      |      |       |
| C4                    | .788      | .715**      |      |       |
| C5                    | .585      | .617**      |      |       |
| **Employee Engagement**|           |             |      |       |
| EE1                   | .775      | .627**      | 0.931| 0.667 |
| EE2                   | .921      | .997**      |      |       |
| EE3                   | .764      | .619**      |      |       |
| EE4                   | .918      | .912**      |      |       |
| EE5                   | .915      | .948**      |      |       |
| EE6                   | .752      | .578**      |      |       |
### Extraction Method:
Principal Axis Factoring.

### Rotation Method:
Promax with Kaiser Normalization.

*a. Rotation converged in 6 iterations.*

### Measurement model fit statistics:

*a. Absolute fit indices*

\[ \chi^2 = 4411.198, \text{DF} = 1680, \text{CFI} = .922, \text{RMR} = .056, \text{CMIN/DF} = 2.626, \text{GFI} = .750, \text{AGFI} = .718, \text{TLI} = .915, \text{and RMSEA} = .067 \]

**Note.** \( p < .01, \rho = \text{Factor loadings at .4 using EFA}; \lambda = \text{standardized factors loadings using CFA}; \text{CR} = \text{Composite Reliability}; \text{AVE} = \text{average variance extracted}. \)

### Hypothesis Testing

The results displayed in table 2 are proving a support for all the mediation related hypothesis. The relationship of Authentic Leadership with Nurses Engagement got insignificant results in the absence of Elevation, Compassion and Gratitude, interpreted as full mediation. So the formulated hypothesis 1, hypothesis 2, and hypothesis 3 has been supported by the collected data.

**Table 2: Hypotheses Results for Direct Effects**

|                | EE7  | .918 | .912** |
|----------------|------|------|--------|
| **Perceived Coronavirus Threat** |      |      |        |
| PT1            | .720 | .656**| .926   | .646   |
| PT2            | .941 | .997**|        |        |
| PT3            | .834 | .752**|        |        |
| **Gratitude**  |      |      |        |
| G1             | .720 | .656 | .926   | .646   |
| G2             | .941 | .997 |        |        |
| G3             | .834 | .752 |        |        |
| G4             | .858 | .791 |        |        |
| G5             | .822 | .691 |        |        |
| **Elevation**  |      |      |        |
| E1             | .787 | .725 | .814   | .522   |
| E2             | .814 | .754 |        |        |
| E3             | .811 | .711 |        |        |
| Hypotheses             | Path Coefficients | S.E  | T-Value | P-value |
|------------------------|-------------------|------|---------|---------|
| AL -->Elevation        | .423              | .065 | 6.537   | ***     |
| AL -->Compassion      | .584              | .066 | 8.855   | ***     |
| AL -->Gratitude       | .598              | .055 | 10.967  | ***     |
| Elevation --> NEng    | .254              | .035 | 7.318   | ***     |
| Compassion--> NEng    | .244              | .034 | 7.171   | ***     |
| Gratitude --> NEng    | .146              | .041 | 3.536   | ***     |
| AL --> N Engagement   | .005              | .049 | .110    | .913 n.s |

† p < 0.100, * p < 0.05, ** p < 0.01, *** p < 0.001, n.s= not significant, AL= Authentic Leadership, NEng= Nurses Engagement

Moreover, Figure 2 is also displaying the role of moral emotions in the relationship of authentic leadership and nurses engagement.

**Table 3: Moderation Results**

| Hypotheses             | Path Coefficients | S.E  | T-Value | P-value |
|------------------------|-------------------|------|---------|---------|
| AL_PT -->Elevation     | -.007             | .016 | -.417   | .677 n.s|
| AL_PT -->Compassion   | .080              | .016 | 5.003   | ***     |
| AL_PT -->Gratitude    | -.016             | .014 | -1.121  | .262 n.s|
| ALeader -->Elevation  | .447              | .087 | 5.162   | ***     |
| ALeader -->Compassion | .305              | .084 | 3.629   | ***     |
| ALeader -->Gratitude  | .652              | .073 | 8.959   | ***     |

† p < 0.100, * p < 0.05, ** p < 0.01, *** p < 0.001, n.s= not significant, AL= Authentic Leadership, NEng= Nurses Engagement

Table 3 and Figure 3 provided the values for the moderating role of perceived threat. Beta values for authentic leadership and compassion, elevation and gratitude in the presence of perceived threat have decreased, providing support for the moderating role of perceived threat of coronavirus.

**Discussion**

The objective of the current study was to investigate the impact of authentic leadership on the participation of nurses in the mediating role of moral emotions (compassion, elevation, gratitude) and the
moderating role of perceived coronavirus threat. Authentic leadership identified as a potential influencer of emotion (Gardner et al., 2005; Malik & Khan, 2020). Researchers have identified moral emotions as a result of the experience of moral virtue (Prinz & Nichols, 2010; Harvey et al., 2017). Authentic leaders share the same moral virtue as a component of internalized moral perspectives (Walumbwa et al., 2008). Most of the studies have been conducted on authentic leaders in nursing related settings (Alilyyani et al., 2018; Malik, 2018). The current study has taken moral emotions as a mediating mechanism for authentic leadership and engagement of nurses, and the results are very close to previous thoughts published at different times. Previous literature identified and indicates that authentic leadership has a significant impact on the attitudes of their followers through the mediating mechanism of emotions, psychological abilities and trust (Walumbwa et al., 2008; Malik & Khan, 2019).

The results of the present study justify the fact that authentic leaders have a potential mechanism to evoke moral emotions that further lead to the engagement of nurses. Nursing staff generally make discretionary efforts towards patients with gratitude, elevation and compassion in normal circumstance (Gordon et al., 2008; Bolino & Grant, 2016; Gunwan et al., 2020). Hospital nurses have an essential role to play in health care activities and without them it is impossible for doctors to treat patients (Gordon, 2005; Siren et al., 2020). In line with the rationale, hospitals need nursing staff who are actively engaged in work related activities. Unfortunately, public sector-related hospitals have not been given the maximum engagement from their nursing staff to create barriers for patients as well as for hospital performance. Previous researchers have highlighted the issue of nurses' involvement in public sector hospitals, but have not yet been empirically tested, specifically in the current pandemic of covid-19. Hospital management is continuously taking some serious steps to increase the engagement of nurses, and the inclusion of authentic leaders is one of the best steps hospital management has taken. The results suggest that authentic leaders have a direct impact on compassion, elevation and gratitude, and that these emotions also have an impact on the involvement of nurses. However, there was no significant role to play in the direct relationship of genuine leadership and the involvement of nurses. Authentic leaders, even in the Covid-19 pandemic, have been shown to have the potential to alter the perceptions of their followers in such a way as to obtain the necessary and maximum engagement to work related activities. Despite the fact that nurses are in danger of suffering from coronavirus due to close interactions with their patients, genuine leaders can motivate them to take part in the treatment of patients with the disease.

The perceived threat of coronavirus was seen as a boundary condition in the current relationship of genuine leadership and moral emotion. Leadership studies required some kind of boundary conditions to identify the true impact of the relationship (Menges et al., 2011; Walter et al., 2012). The current Covid-19 pandemic has been identified as a potential influencer capable of altering any defined relationship. Because of coronavirus, every individual from any profession living in an uncertain situation is threatened. Occupational behavior and attitude have also been affected by this uncertainty. The current study has shown that the relationship of authentic leadership and moral emotions (elevation, compassion, gratitude) has become weaker in the presence of perceived coronavirus threats. The cognitive elements of nursing staff have been changed due to the threat of coronavirus. They may have a
greater impact on the threat as they continue to monitor the health conditions of coronavirus patients. In addition, they avoid interacting with such patients because Covid-19 has been identified as a spread of the plague with close interactions (Gardner et al., 2020). In view of the spill over theory, the threat of coronavirus has the ability to change the attitude of nurses (Choi et al., 2020). Choi et al. (2020) also noted that the threat of coronavirus has a negative effect on the mental health of individuals. However, the results of the current study have been interesting since it has been shown that the relationship of authentic leadership and compassion remains positive despite the presence of coronavirus threats as a moderation.

The result can be interpreted as compassionate individuals who remain selfless in the Covid-19 pandemic. Elevation and gratitude as moral emotion have a more serious effect on the perceived threat to coronavirus. Previously, Von Dietze, and Orb, 2000 research found that health care workers are more compassionate than others. Dewar et al. (2014) also defines healthcare workers' compassion for the term compassionate care. On the basis of studies and literature, it can be defined that compassion emotions cannot be affected by any threat because they are the core emotions of healthcare workers. The other moral emotions significantly declined because of coronavirus threat as displayed in the figure 3. Elevation and gratitude in the presence of a coronavirus threat identified with more negative values, even if individuals experience authentic leadership in an organization or work setting. It has been recognized that leaders can create a perfect context for professional development, growth and the environment in which nursing staff feel psychological safety but, in the presence of life-threatening disease, moral emotions are eliminated from the attitude of nursing staff.

Limitations and Direction for Future Research

Although the current study covered a novel area and accepted formulated hypotheses, there is some limitation in the study. First, the study is limited only to the public sector where the issue of the participation of nurses has been identified. Second, due to the current situation and the chosen population, only 134 respondents were selected for analysis. Third, the population of the study was limited to two cities. Forth, the present study took only three moral emotions that are closely related to phenomena. On this basis, there are some recommendations for future researchers. First, the same model can also be implemented in private hospitals in the future. Second, the researcher can compare the tendencies of the female male to the threat of coronavirus. Third, the model can be used in other sectors that can produce interesting results.

Conclusion

More recently, organizational behavior has emerged as a reflection of the positive psychological shift in the field of organizational studies, which focuses on measurable and observable positive skills of employees. The current study provided important insights into nurse engagement strategies, and authentic leaders have been identified as an important predictor of nurse engagement specifically in hospitals. In addition, the study provided insights that moral emotions are important to nurses and
cannot be separated from the cognition of such staff. The inclusion of genuine leadership and the acceptance of moral emotions can lead to the engagement of nurses, even at the risk of diseases such as coronavirus. The organization should train its human faces (supervisors, leaders) in such a way as to produce authenticity, so that employees can do their best in the workplace. In the current scenario, the organization should identify the nursing staff with full compassion, as it has been identified that the compassionate individual performs their duties even in the worst situation or during the Covid-19 pandemic.

Data Availability Statement

The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

Declarations

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Conflict of interests

None

References

1. Alilyyani, B., Wong, C. A., & Cummings, G. (2018). Antecedents, mediators, and outcomes of authentic leadership in healthcare: A systematic review. International journal of nursing studies, 83, 34-64.
2. Bartlett, M. Y., & DeSteno, D. (2006). Gratitude and prosocial behavior: Helping when it costs you. Psychological science, 17(4), 319-325.
3. Berry, P. A., Gillespie, G. L., Fisher, B. S., Gormley, D., & Haynes, J. T. (2016). Psychological distress and workplace bullying among registered nurses. OJIN: The Online Journal of Issues in Nursing, 21(3), 4.
4. Blake, A., & Isard, M. (2012). Active contours: the application of techniques from graphics, vision, control theory and statistics to visual tracking of shapes in motion. Springer Science & Business Media.
5. Blau, P. M. (1964). Social exchange theory. Retrieved September, 3(2007), 62.
6. Bock, D. E., Folse, J. A. G., & Black, W. C. (2016). When frontline employee behavior backfires: Distinguishing between customer gratitude and indebtedness and their impact on relational behaviors. Journal of Service Research, 19(3), 322-336.
7. Bolino, M. C., & Grant, A. M. (2016). The bright side of being prosocial at work, and the dark side, too: A review and agenda for research on other-oriented motives, behavior, and impact in organizations. Academy of Management Annals, 10(1), 599-670.
8. Chen, L. H., Chen, M. Y., Kee, Y. H., & Tsai, Y. M. (2009). Validation of the Gratitude Questionnaire (GQ) in Taiwanese undergraduate students. Journal of happiness Studies, 10(6), 655.

9. Choi, K. R., Heilemann, M. V., Fauer, A., & Mead, M. (2020). A second pandemic: Mental health spillover from the novel coronavirus (COVID-19). Journal of the American Psychiatric Nurses Association, 1078390320919803.

10. Cianci, A. M., Hannah, S. T., Roberts, R. P., & Tsakumis, G. T. (2014). The effects of authentic leadership on followers' ethical decision-making in the face of temptation: An experimental study. The Leadership Quarterly, 25(3), 581-594.

11. Sirén, C., He, V. F., Wesemann, H., Jonassen, Z., Grichnik, D., & von Krogh, G. (2020). Leader emergence in nascent venture teams: the critical roles of individual emotion regulation and team emotions. Journal of Management Studies.

12. Constantin, A. A., & Cuadrado, I. (2019). Perceived intergroup competition and adolescents’ behavioural intentions toward minorities: the role of threat, stereotypes and emotions. Current Psychology, 1-11.

13. Conway III, L. G., Woodard, S. R., & Zubrod, A. (2020). Social psychological measurements of COVID-19: Coronavirus perceived threat, government response, impacts, and experiences questionnaires.

14. Dewani, P. P., Sinha, P. K., & Mathur, S. (2016). Role of gratitude and obligation in long term customer relationships. Journal of Retailing and Consumer Services, 31, 143-156.

15. Dewar, B., Adamson, E., Smith, S., Surfleet, J., & King, L. (2014). Clarifying misconceptions about compassionate care. Journal of Advanced Nursing, 70(8), 1738-1747.

16. Fehr, R., Fulmer, A., Awtrey, E., & Miller, J. A. (2017). The grateful workplace: A multilevel model of gratitude in organizations. Academy of Management Review, 42(2), 361-381.

17. Galea, S., Merchant, R. M., & Lurie, N. (2020). The mental health consequences of COVID-19 and physical distancing: The need for prevention and early intervention. JAMA internal medicine, 180(6), 817-818.

18. Gardner, W. L., Avolio, B. J., & Walumbwa, F. O. (2005). Authentic leadership development: Emergent trends and future directions. Authentic leadership theory and practice: Origins, effects and development, 387-406.

19. Gardner, W., States, D., & Bagley, N. (2020). The coronavirus and the risks to the elderly in long-term care. Journal of Aging & Social Policy, 1-6.

20. Goei, R., & Boster, F. J. (2005). The roles of obligation and gratitude in explaining the effect of favors on compliance. Communication Monographs, 72(3), 284-300.

21. Gordon, S., Buchanan, J., & Bretherton, T. (2008). Safety in numbers: nurse-to-patient ratios and the future of health care. Cornell University Press

22. Gunawan, J., Aungsuroch, Y., Fisher, M. L., & McDaniel, A. M. (2020). Comparison of managerial competence of Indonesian first-line nurse managers: a two-generational analysis. Journal of Research in Nursing, 25(1), 5-19.
23. Haidt, J. (2007). The new synthesis in moral psychology. Science, 316(5827), 998-1002.
24. Heath, S., & Clendon, S. J. (2019). Explaining the real world of nurses’ engagement with continuing professional development: A mixed methods study.
25. Hutchinson, J. (2018). Champions of charity: war and the rise of the Red Cross. Routledge.
26. Jha, N., Sareen, P., & Potnuru, R. K. G. (2019). Employee engagement for millennials: considering technology as an enabler. Development and Learning in Organizations: An International Journal.
27. Kang, L., Ma, S., Chen, M., Yang, J., Wang, Y., Li, R., ... & Hu, S. (2020). Impact on mental health and perceptions of psychological care among medical and nursing staff in Wuhan during the 2019 novel coronavirus disease outbreak: A cross-sectional study. Brain, behavior, and immunity.
28. Kanov, J. M., Maitlis, S., Worline, M. C., Dutton, J. E., Frost, P. J., & Lilis, J. M. (2004). Compassion in organizational life. American Behavioral Scientist, 47(6), 808-827.
29. Klebl, C., Dziobek, I., & Diessner, R. (2020). The role of elevation in moral judgment. Journal of Moral Education, 49(2), 158-176.
30. Laschinger, H. K. S., Finegan, J., & Wilk, P. (2009). Context matters: The impact of unit leadership and empowerment on nurses’ organizational commitment. JONA: The Journal of Nursing Administration, 39(5), 228-235.
31. Leong, Y. C., Chen, J., Willer, R., & Zaki, J. (2020). Conservative and liberal attitudes drive polarized neural responses to political content. bioRxiv.
32. Malik, M. F., & Khan, M. A. (2020). “Tracking Engagement through Leader” Authentic Leadership’s Consequences on Followers’ Attitudes: A Sequential Mediated Mode. International Journal of Public Administration, 43(10), 831-838.
33. Mason, V. M., Leslie, G., Clark, K., Lyons, P., Walke, E., Butler, C., & Griffin, M. (2014). Compassion fatigue, moral distress, and work engagement in surgical intensive care unit trauma nurses: a pilot study. Dimensions of Critical Care Nursing, 33(4), 215-225.
34. Matavelli, R. D., de Jesus, S. N., Pinto, P., & Viseu, J. (2020). Social Support as a Moderator of the Relationship between Financial Threat and Life Satisfaction. Journal of Spatial and Organizational Dynamics, 8(1), 16-28.
35. Ménard, J., & Brunet, L. (2011). Authenticity and well-being in the workplace: A mediation model. Journal of Managerial Psychology.
36. Menges, J. I., Walter, F., Vogel, B., & Bruch, H. (2011). Transformational leadership climate: Performance linkages, mechanisms, and boundary conditions at the organizational level. The Leadership Quarterly, 22(5), 893-909.
37. Murray, D. R., & Schaller, M. (2016). The behavioral immune system: Implications for social cognition, social interaction, and social influence. In Advances in experimental social psychology (Vol. 53, pp. 75-129). Academic Press.
38. Neff, K. D. (2012). The science of self-compassion. Compassion and wisdom in psychotherapy, 1, 79-92.
39. Prinz, J. J., & Nichols, S. B. (2010). Moral emotions. In The moral psychology handbook. Oxford University Press.

40. Schaller, M., & Park, J. H. (2011). The behavioral immune system (and why it matters). Current directions in psychological science, 20(2), 99-103.

41. Schaufeli, W. B., & Bakker, A. B. (2003). UWES–Utrecht work engagement scale: test manual. Unpublished Manuscript: Department of Psychology, Utrecht University, 8.

42. Shen, H., & Jiang, H. (2019). Engaged at work? An employee engagement model in public relations. Journal of Public Relations Research, 31(1-2), 32-49.

43. Shukla, M., Lau, J. Y., Lissek, S., Pandey, R., & Kumari, V. (2020). Reduced emotional responsiveness in individuals with marginal elevation in blood pressure within the normal range: Evidence from altered affect-modulated startle response. International Journal of Psychophysiology.

44. Sparks, T. C., Crossthwaite, A. J., Nauen, R., Banba, S., Cordova, D., Earley, F., ... & Kennedy, R. (2020). Insecticides, biologics and nematicides: Updates to IRAC’s mode of action classification-a tool for resistance management. Pesticide Biochemistry and Physiology, 104587.

45. Vianello, M., Galliani, E. M., & Haidt, J. (2010). Elevation at work: The effects of leaders’ moral excellence. The Journal of Positive Psychology, 5(5), 390-411.

46. Von Dietze, E., & Orb, A. (2000). Compassionate care: a moral dimension of nursing. Nursing Inquiry, 7(3), 166-174.

47. Walumbwa, F. O., Avolio, B. J., Gardner, W. L., Wernsing, T. S., & Peterson, S. J. (2008). Authentic leadership: Development and validation of a theory-based measure. Journal of management, 34(1), 89-126.

48. Weng, H. Y., Fox, A. S., Shackman, A. J., Stodola, D. E., Caldwell, J. Z., Olson, M. C., ... & Davidson, R. J. (2013). Compassion training alters altruism and neural responses to suffering. Psychological science, 24(7), 1171-1180.

49. Who: "Live from Geneva on the new #coronavirus outbreak"

50. Wirtz, C., van der Pligt, J., & Doosje, B. (2016). Negative attitudes toward Muslims in The Netherlands: The role of symbolic threat, stereotypes, and moral emotions. Peace and Conflict: Journal of Peace Psychology, 22(1), 75.

51. Wu, X., Hayter, M., Lee, A. J., Yuan, Y., Li, S., Bi, Y., ... & Zhang, Y. (2020). Positive spiritual climate supports transformational leadership as means to reduce nursing burnout and intent to leave. Journal of Nursing Management, 28(4), 804-813.

52. 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.

53. Wong, C., Walsh, E. J., Basacco, K. N., Domingues, M. C. M., & Pye, D. R. (2020). Authentic leadership and job satisfaction among long-term care nurses. Leadership in Health Services.

54. Woodside, J. M. (2019). Advances in Information, Security, Privacy and Ethics: Use of Cloud Computing for Education. In Cloud Security: Concepts, Methodologies, Tools, and Applications (pp.
Figures

Figure 1
Research Framework

Figure 2
Path Model
Figure 3

Path Model with Moderating role of Perceived Coronavirus Threat