

The Relation between Authentic Leadership and Occupational Burnout among Nurses

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Abstract: Background: Authentic leadership had a positive effect on work life, which in turn resulted in lower burnout as authentic leadership encourages leaders to create positive and supportive environments that improve nurses' performance and organizational outcomes. **Purpose:** To assess the relation between authentic leadership and occupational burnout among nurses. **Design:** A correlational research design was used. **Setting:** The study was conducted at critical care units and general departments of Menoufia university hospital. **Subjects:** A simple random sample technique of 300 nurses constitutes the study sample. **Instruments:** Two instruments were used, which are authentic leadership inventory and Maslach Burnout Inventory. **Results:** About one half of studied nurses perceived their leaders as having moderate level of authentic leadership, while, about one quarter of them perceived their leaders as having high level of authentic leadership. Also, the highest percentage of studied nurses had low level of burnout and the lowest percentage of them had high level of burnout. **Conclusion:** There is an inverse moderate highly significant correlation between perceived authentic leadership and burnout among studied nurses. **Recommendations:** Conduct education program for nursing managers about positive leadership styles including authentic leadership, and its effect on productivity and quality of patient care, conduct training program for nurses about causes of burnout and how to eliminate it.

Keywords: *Authentic Leadership, nurses, occupational burnout*

Introduction

Nursing incorporates a number of several different roles that nurses assume as part of their practice, many of which occur simultaneously, an aspect that reflects the diverse nature of the profession. Irrespective of the role

assumed, whether in the clinical setting, as an administrator, as an advocate or assuming roles within the executive board of directors, or leading national, European, and international organizations, the possession of

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leadership skills is integral in the work of nurses across settings. A growing body of literature demonstrates the positive functions of nurse leaders on patient outcomes and nursing workforce outcomes, including better patient satisfaction, performance, quality of care, and turnover rate. (Akbiyik et al,2020)

The coronavirus disease 2019 (COVID-19) pandemic necessitates unprecedented crisis management by nurses working under pressure in the healthcare system, and nursing leaders have provided many ingenious solutions to limit the spread of the disease and respond to the pandemic (Wymer et al., 2021). Historically, the nursing profession has served as an important bridge between healthcare technology and science; moreover, nursing leaders have contributed to innovation and change by exhibiting leadership in chaotic and uncertain circumstances. Over the past decades, nursing profession has been investigated in various leadership styles, such as transactional, transformational, situational, and autocratic. Furthermore, authentic leadership is gaining attention as an effective leadership during the pandemic (Davidson et al., 2018; Ladak et al., 2021).

. The need for authentic leaders is especially apparent within the healthcare industry. Among other factors, the ongoing effects of the COVID-19 pandemic have led to an unprecedented demand for behavioral health services. At the same time, there has been a workforce shortage within the field, leading to an increased need

to attract and retain professionals who can undertake behavioral health leadership roles. There are still many uncertainties regarding regulations around telehealth and funding for services, leading to a demand for effective behavioral health leadership like never before. Behavioral health organizations need effective, authentic leaders who can guide the company through the uncertainties they face. Authentic leaders will be critical for the widespread delivery of effective behavioral health services and to the organization's overall success,(Kitzmilller, 2023)

Authentic leadership is a “root concept” upon which positive aspects of charismatic, transformational, spiritual, and ethical leadership theories are formed (Ilies et al., 2005). Authentic leaders must be self-assured, hopeful, optimistic, resilient, and moral/ethical, possess future-oriented psychological capacities, and prioritize developing associates to be leaders; thus, authentic leaders are true to themselves. Given these characteristics, most studies on authentic leadership in South Korea have been conducted in areas like business administration, sociology, and sports science. In addition, authentic leadership is receiving a great deal of attention in nursing authentic leadership has been shown to affect the safety climate in nursing, nurses' ability to thrive at work, burnout, intention to leave, and job satisfaction (.Lee et al,2023)

Occupational burnout occurs most often in professions of public trust that involve helping other people, which is

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especially the case in nursing. Nurses work with many people, including patients, families, and co-workers, which exposes them to occupational burnout. Therefore, occupational burnout is a pressing problem for health services worldwide], contributing significantly to employee departure. Possible causes of professional burnout may include handling additional requests from patients and families, feelings of disrespect, a lack of teamwork and cooperation with other healthcare professionals, and poor coping skills (Khatatbeh et al., 2022)

Occupational burnout causes employees to no longer feel satisfied with the work performed. This situation is accompanied by constant fatigue, irritability, and anxiety. Burned out employees perceive no positive results from their duties as a result of stressful working conditions, and the individual's strength is exhausted. The occurrence of burnout in nurses is negatively associated with work-related variables, such as spending more time with colleagues and patients and reporting good-quality relationships. Psychological variables such as stress factors (e.g., conflict, social acceptance, irritability, tension, and fatigue) and communication (informative) are identified as burnout risk factors. Conversely, communication skills, empathy, energy, and joy have a protective effect against burnout (Pérez-Fuentes et al., 2019).

Significance of the study

Burnout is associated with worse patient's outcomes and reduced workplace satisfaction as well as productivity for healthcare professionals and trainees of all disciplines. In the healthcare system, burnout poses a risk to adequate staffing by contributing to absenteeism, higher workforce turnover, and greater likelihood that professionals will consider leaving their work. Moreover, authentic leadership plays a buffering role against the development of burnout among nurses. Authentic leadership is grounded in positive psychology, it is regarded as a way of leading ethically and truthfully, and it holds the promise of leveraging healthier, happier, and productive workplaces (Maunder et al, 2021).

Authentic leadership enables trustful relations between leaders and followers, promotes interpersonal collaboration between peers, and reduces the frequency of adverse patient outcomes (Hoch et al., 2018). Based on review of related literature, there are limited local studies done about authentic leadership. The field of authentic leadership is missing hard academic research to build what establishes effective authentic leadership and its relation to occupational burnout (Ou et al.,2022). So, this study was conducted to assess the relation between authentic leadership and occupational burnout among nurses at Menoufia university hospital.

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Purpose of the study

The purpose of this study is to assess the relation between authentic leadership and occupational burnout among nurses at Menoufia university hospital

Research Questions

- 1) What is authentic leadership level from nurses' perspective?
- 2) What is occupational burnout level from nurses' perspective?
- 3) What is the relation between authentic leadership and occupational burnout from nurses' perspective?

Method

The present study was conducted to assess the relation between authentic leadership and occupational burn out among nurses at Menoufia university hospital. This part includes the research design, setting, sample, instruments used in data collection, ethical consideration, pilot study, collection procedure and statistical test used.

Research Design:

A correlational research design was used to achieve the purpose of the study.

Setting:

This study was conducted in Menoufia University Hospital at Shebin El-Kom city. It is affiliated to university sector. It was established in 1993, it is considered one of the largest hospital in Delta region of Egypt. The bed capacity of the University hospital is 1070 beds. This hospital is divided into four buildings, three of these buildings are interlinked, and one separate

building namely oncology institution. The first main building is the general hospital which provides its services to the community through medical, urology, orthopedic, ophthalmology, ENT department, and hemodialysis unit. The second building is the emergency hospital, which provides its services to the community through the emergency department, neurosurgery, surgical department, intensive care units, burn unit, and operating theaters. Additionally, the third newest building is the specialized hospital which provides its services to the community through the outpatient clinics, pediatric unit, obstetrics and gynecology departments, premature unit, pediatric intensive care unit, and pediatric dialysis unit. Finally, the fourth building which is separate from the other hospital settings is the oncology institution, which provides its services through outpatient clinics, male and female adult inpatient departments, and chemotherapy outpatient clinics. The study was conducted in the critical care units and general departments of Menoufia university hospital.

Sampling technique:

A simple random sample technique of 300 nurses selected from critical care units and general departments from previously mentioned study setting constitutes the study sample. A list of all nurses working in Menoufia university hospital was prepared. Each staff nurse was marked with a specific number (from 1 to 1200). Using the ideal bowl method, the investigator assigned a number to each member of the staff nurses in a consecutive manner, writing the numbers on

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separate pieces of paper. These pieces were folded in the same way and mixed in the container. Finally, samples were taken randomly from the box by randomly selecting folded pieces of paper with replacement so that each staff nurse had an equal chance to be included in the study sample size.

Sample size:

The total population at menoufia university hospital is 1200 nurses are distributed in to 800 nurses at critical units and 400 in medical departments.

The Sample Size was calculated using the following equation:

$n = \frac{DEFF * N * P * (1-P)}{\{d^2 / Z^2 * (1-p)\}}$ (Kevin, & Sullivan, 2018) at power 80% and CI 95%.

$n = \frac{DEFF * N * P * (1-P)}{\{d^2 / Z^2 * (1-p)\}}$

- **n** is sample size
- **N** is population size
- Population size (N) = 1200
- **Z** is Z score = fixed value = 1.96
- **P** is the population proportion
- % frequency of high nurse's productivity in the population (P): 50% +/- 5
- Confidence limits as % of 100(absolute +/- %) (d): 5%
- Design effect (for cluster surveys- DEEF):1
- A power (1-β) or (% chance of detecting): 80%

The minimum sample size required for correlation analysis was 292 participants.

The total sample size of this study was increased to 300 participants to avoid attrition errors and missed data.

Data collection instruments:

To achieve the study purpose, two instruments were used for data collection which are authentic leadership inventory and Maslach burnout inventory

Instrument I: Authentic leadership inventory:

It consists of two parts:

- **Part one:** Personal data: It contains data about studied nurses including (age, sex, marital status, years of experience and working unites).
- **Part two:** Authentic Leadership Inventory (ALI):(Appendix II) : This instrument was adopted from Neider & Schriesheim (2011) to assess nurses' opinion about their leaders' characteristics. It is a self-administered questionnaire of 14 descriptive items. Each item is rated on a five-point Likert scale ranging from '1' (strongly disagree) to '5' (strongly agree). These items were divided into 4 dimensions as follows self-awareness (3 items); internalized moral perspective (4 items); balanced processing (4 items) and relational transparency (3 items).

Scoring system:

Subjects' responses were scored on a five- point Likert scale as the following: (5) for strongly agree, (4) for agree, (3) for Neutral, (2) disagree, and (1) for strongly disagree. The scores of items was summed up and converted into percent scores and the total divided by the number of the items, giving the mean score. The total score of AL ranged from (14 – 70),

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which is the sum of all nurses' responses in this scale. Scores from (14– 41) are considered low authentic leadership, scores from (42- 55) are denoted as moderate authentic leadership, and scores from (56-70) are considered high authentic leadership (Needier & Schriesheim,2011).

Instrument II: Maslach Burnout Inventory (MBI):(Appendix II)

This instrument was adopted from Maslach et al., (1996). It is a self-administered questionnaire of 22 descriptive items, which assess the perceived frequency of: emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PA). The EE subscale consisted of 9 items, the DP subscale included 5 items and the PA subscales were 8 items.

Scoring system:

Subjects' responses were assessed on a seven- point Likert scale ranging from (6) for every day, (5) for several times a week, (4) for once a week, (3) for several times a month, (2) for once a month at least, (1) for at least several times a year and (0) for Never. The score of items was summed up and converted into percent scores and the total divided by the number of the items, giving the mean scores.

The total score ranges from (0 – 132), which is the sum of all nurses' responses in this scale. High scores on the EE and DP subscales and low scores on PA represent burnout. Scores from (0– 79) points are considered low burnout, scores from (80- 98) are moderate burnout, and scores from

(99-132) are considered as high burnout (Maslach et al., 1996).

Validity of instruments

Instruments were translated into Arabic language to be clear for all participants and reviewed by a panel of five experts in the field of nursing administration including; three professors and one assistant professor of nursing administration at faculty of nursing, Menoufia University, and one assistant professor in nursing administration from Benha Nursing University to assess the face and content validity. Face and content validity of the instruments aimed to judge its clarity, relevance, and accuracy. The panel examined instruments relevance to the purpose of the study, grammar and ordering. Minor modifications and rephrasing of some statements were done based on jury's opinions. The instruments were considered valid from the experts' perspective.

Reliability of instruments:

The study instruments were tested for reliability to estimate the consistency of measurement. Reliability of the instruments indicates its accuracy with respect to stability and repeatability in gathering data. Reliability performed using alpha coefficient test (Cronbach alpha). Internal consistency of the first instrument (authentic leadership inventory) with Cronbach alpha coefficient is ranging from (0.70-0.85). Internal consistency of the second instrument (Maslach burnout inventory) with Cronbach alpha for the three subscales being: 0.88 for EE, 0.78 for DP, and 0.89 for PA.

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Ethical Considerations:

The study was conducted with careful attention to ethical standards of research N (920) and rights of the studied nurses before any attempt to collect data, an official approval letter was submitted from the Dean of faculty of nursing to the director of Menoufia University Hospital to collect data from the pre-mentioned study setting. The letter contained the title and purpose of the study. The findings were undertaken in a manner designed to protect confidentiality of studied nurses. The respondents' rights were protected by ensuring voluntary participation; so that informed consent was obtained by explaining the purpose, nature, time of conducting the study, benefits of the study and how data was collected. The respondents were assured that the data was treated as strictly confidential; furthermore, the respondent anonymity was maintained as they weren't required to mention their names.

Pilot study:

After reviewing the instruments by the experts, the investigator conducted a pilot study before using the instruments. The purpose of the pilot study was to ascertain clarity, relevance, applicability of the study instruments and to determine the obstacles that may be encountered during data collection. The pilot study was carried out on 10% of the study subjects (30 nurses). No modifications were done, so sample of the pilot study were included in the main study sample.

Data collection procedures:

An official permission was obtained from Dean of Faculty of Nursing, Menoufia University to carry out the study. This is done by sending a letter containing title and explaining the purpose of study. The questionnaires were distributed by the investigator. Filling the questionnaire by nurses was carried out through distribution of the questionnaires to the nurses after explanation of the purpose of the study and were handled back to the investigator upon completion. The investigator was available during data collection to answer and clarify any inquiry. The time required to fill the two questionnaires was 20-30 minutes. Data was collected in a period of three months from the beginning of April 2023 till the end of June 2023 during the day shift. The average number of filled instruments were 10-12 per day. Completed questionnaires were entered into an electronic database that was password-protected.

Analysis of the result:

Data was entered, analyzed and tabulated by using SPSS (Statistical Package for Social Science) statistical package version 22. Graphics were done using Excel program. Quantitative data was presented by mean (X), standard deviation (SD). Qualitative data was presented in the form of frequency distribution tables, number and percentage. It was analyzed by chi-square (χ^2) test. However, if an expected value of any cell in the table was less than 5. Level of significance was set as P value <0.05 for all significant tests.

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Results:

Table (1): Demonstrates distribution of the studied nurses regarding their personal characteristics. As evident from the table, less than half (48,7%) of studied nurses were in the age group range from 20 to less than 30 years. As regarding to their sex, less than three quarters (71.3) of them were female. Regarding to their marital status, the majority (88%) of them were married, less than half (42%) of them had experience range from 5 years to less than 10 years of experience. Regarding to their educational level less than half (43, 7%) of them had Bachelor degree.

Table (2): Reveals mean scores and ranking of dimensions of authentic leadership of the studied nurses .As evident from table, the highest mean percent (69.85%) was for internalized moral perspective, while the lowest mean percent (64,73%) was for self-awareness. Moreover, the total mean percent of authentic leadership domains was (68.59%).

Figure (1): Shows level of authentic leadership as perceived by studied nurses. As noticed from the figures, about one half of studied nurses(49%) perceived their leaders as having moderate level of authentic leadership, while, about one quarter of them (23%) perceived their leaders as having high level of authentic leadership.

Table (3): Illustrates mean scores and ranking of burnout dimensions of the studied nurses. As evident from this table, the highest mean (26.62) of burnout dimensions of the studied

nurses was self- accomplishment. While, the lowest mean (13.65) was depersonalization. Moreover, the highest mean percent (55.46%) was for self-accomplishment and the lowest mean percent (44.04%) was for emotional exhaustion.

Figure (2): Shows distribution of the studied nurses regarding levels of burnout dimensions. As noticed from this figure, regarding emotional exhaustion the highest percentage (44%) of studied nurses had low level of burnout. While, the lowest percentage (18.7%) of studied nurses had moderate level of burnout. Regarding depersonalization, the highest percentage (61%) of studied nurses had high level of burnout. While, non (0%) of them had low level of burnout. Regarding to self-accomplishment, the highest percentage (68.3%) of studied nurses had low level of burnout. While, the lowest percentage (8.7%) of studied nurses had high level of burnout. Regarding total level of burnout, the highest percentage (86%) of studied nurses had low level of burnout and lowest percentage (5.3%) of them had high level of burnout.

Table (4): Illustrates correlation between authentic leadership level of the studied nurses and their burnout level. As evident from table, there is an inverse moderate highly significant correlation between perceived authentic leadership and burnout ($r=0.259$, $p=0.00^{**}$) among studied nurses.

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Table (1): Distribution of the studied nurses regarding their personal characteristics (n=300).

| Personal Characteristics | The studied nurses (n=300) | |
|--------------------------------|----------------------------|------|
| | N | % |
| Age (in years) | | |
| – (20-<30) | 146 | 48.7 |
| – (30-<40) | 113 | 37.7 |
| – (40-50) | 41 | 13.7 |
| Range | (21-49) | |
| Mean ± SD | 30.91±6.293 | |
| Sex | | |
| – Male | 86 | 28.7 |
| – Female | 214 | 71.3 |
| Marital status | | |
| – Married | 264 | 88.0 |
| – Unmarried | 36 | 12.0 |
| Experience (in years) | | |
| – (<5) | 90 | 30.0 |
| – (5-<10) | 126 | 42.0 |
| – (10-<15) | 32 | 10.7 |
| – (15-<20) | 19 | 6.3 |
| – (≥20) | 33 | 11.0 |
| Range | (1-29) | |
| Mean ± SD | 8.85±6.734 | |
| Nursing qualification | | |
| – Nursing school diploma | 53 | 17.7 |
| – Associated degree in nursing | 114 | 38.0 |
| – Bachelor of nursing | 131 | 43.7 |
| – Other | 2 | 0.7 |
| Work units | | |
| – Other departments | 122 | 40.7 |
| – Critical care unit | 178 | 59.3 |

M=mean SD=standard deviation

Table (2): Mean scores and ranking of dimensions of authentic leadership of the studied nurses (n=300).

| Authentic leadership dimensions | The studied nurses (n=300) | | | | | | |
|-------------------------------------|----------------------------|-----|-----|-------|-------|-------------------|---------|
| | No items | Min | Max | Mean | SD | Mean Percentage % | Ranking |
| 1. Self-awareness | 3 | 5 | 15 | 9.71 | 2.370 | <u>64.73</u> | 4 |
| 2. Relational transparency | 3 | 3 | 15 | 10.13 | 3.248 | 67.53 | 3 |
| 3. Internalized moral perspective | 4 | 8 | 20 | 13.97 | 2.262 | <u>69.85</u> | 1 |
| 4. Balanced processing | 4 | 5 | 20 | 13.51 | 4.111 | 67.55 | 2 |
| Total score of authentic leadership | 14 | 28 | 69 | 47.33 | 9.672 | | |

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Figure (1): Distribution of the studied nurses regarding level of authentic leadership.

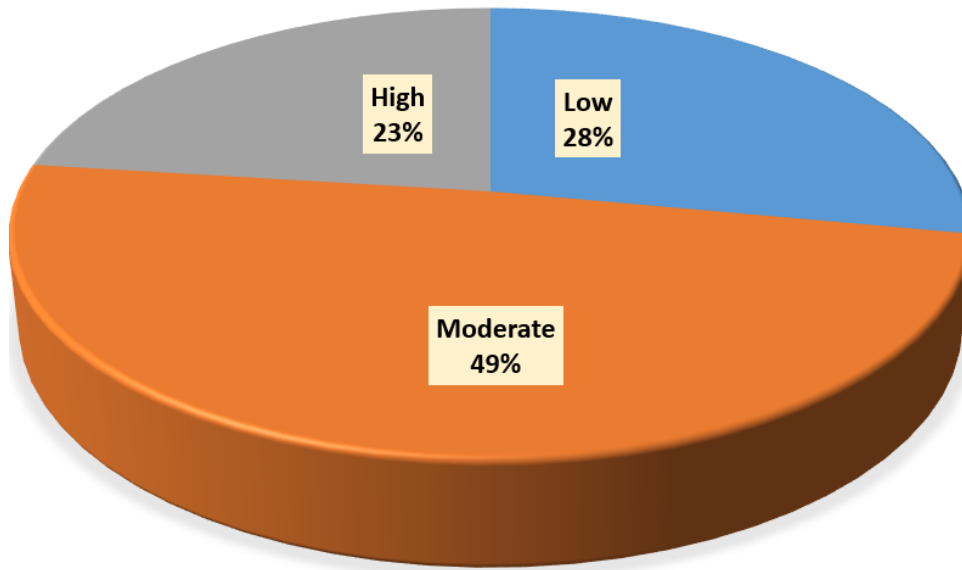
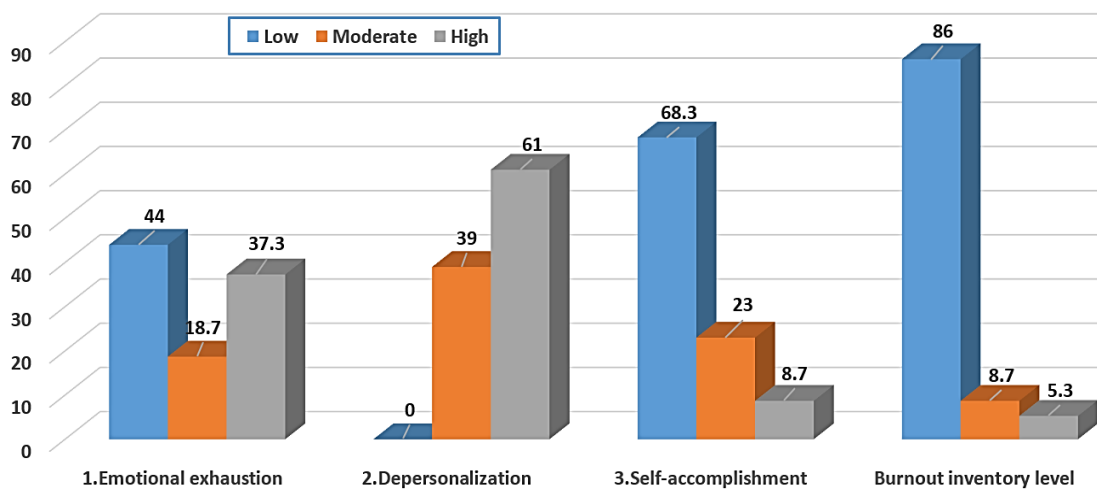


Table (3): Mean scores and ranking of burnout dimensions of the studied nurses (n=300)

| Burnout Inventory domains | The studied nurses (n=300) | | | | | | |
|---------------------------|----------------------------|-----|-----|-------|-------|-------------------|---------|
| | No items | Min | Max | Mean | SD | Mean Percentage % | Ranking |
| 1. Emotional exhaustion | 9 | 0 | 54 | 23.78 | 15.92 | 44.04 | 3 |
| 2. Depersonalization | 5 | 6 | 29 | 13.65 | 4.41 | 45.50 | 2 |
| 3. Self-accomplishment | 8 | 3 | 48 | 26.62 | 11.15 | 55.46 | 1 |
| Total score burnout | 22 | 38 | 120 | 64.06 | 16.17 | | |

Figure (2): Distribution of the studied nurses regarding levels of occupational burnout dimensions (n=300).



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Table (4): Correlation between authentic leadership level of the studied nurses and their burnout level (n=300).

| Burnout inventory level | The studied nurses (n=300) Authentic leadership inventory level | | | | | | χ^2 P |
|-------------------------|--|------|----------|------|------|------|----------------|
| | Low | | Moderate | | High | | |
| | N | % | N | % | N | % | |
| - Low | 79 | 26.3 | 119 | 39.7 | 60 | 20.0 | 8.286 0.082 |
| - Moderate | 2 | 0.7 | 18 | 6.0 | 6 | 2.0 | |
| - High | 3 | 1.0 | 10 | 3.3 | 3 | 1.0 | |
| r , P | -0.259 , 0.000** | | | | | | |

Discussion

The present study was conducted to assess the relation between authentic leadership and occupational burnout among nurses.

Discussion of the study results is presented in the following sequence; the 1st part: distribution of studied nurses according to their personal characteristics, the 2nd part: Authentic leadership as perceived by the studied nurses, the 3rd part: burnout as perceived by the studied nurses, the 4th part: correlation between dimensions of authentic leadership and dimensions of burnout as perceived by studied nurses.

Part I: Authentic leadership as perceived by the studied nurses:

Regarding level of authentic leadership as reported by the studied nurses, the current study revealed that, about one half of studied nurses perceived their leaders as having moderate level of authentic leadership, while, about one quarter of them perceived their leadership as having high level of authentic leadership. From the research investigator point of view, this might

be attributed to when the managers display openness and clarity in sharing information and disclosing their true thoughts, motives, and feelings, they enable followers to identify managers' authentic leadership behaviors.

This result was similar to Wong et al., (2020) who conducted a study in Canada to assess authentic leadership and job satisfaction among long-term care nurses, and found that more than half of studied nurses perceived moderate authentic leadership. Also, this result was supported by Teo et al., (2023) whose study aimed to investigate how authentic leadership influences the psychological well-being of Australian nurses, and stated that nurses reported their immediate supervisor's leadership behavior to be moderately authentic.

In the same context, a study done by Elkholy et al., (2020) To examine nurses' perspective of authentic leadership and its relation to structural empowerment and work environment in critical care units at Shebin El-Kom teaching hospital and reported that the majority of nurses considered their

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leaders to be practicing moderate to high authentic leadership

On the other hand, these findings were contradicted with a study conducted by Baek et al., (2019) in Korea to examine the associations between unit managers' authentic leadership with job satisfaction and organizational commitment and to investigate whether nurse tenure has a moderating effect on these associations and reported that most of the studied nurses rated their unit managers' authentic leadership as high. Another cross-sectional study performed by Lee et al., (2019) about "Relationship between authentic leadership and nurses' intent to leave: The mediating role of work environment and burnout" and stated that the nurses often perceived that there was high authentic leadership from the head nurse.

Also, Allah & Nassar, (2021) who studied Authentic leadership and behavioral integrity as drivers of staff nurses' commitment and work engagement and declared that the highest percentage of studied nurse rated their managers in high category of authentic leadership. In the opposite line, a study performed by Qureshi & Aleemi, (2018) entitled "Authentic Leadership and Turnover Intention: Mediating role of Work Engagement and Job Satisfaction in the Healthcare Sector of Pakistan" and declared that the highest percentage of the studied participants perceived low authentic leadership.

Concerning Mean scores and ranking of the studied nurses' authentic leadership domains, the present study clarified that the highest mean was

internalized moral perspective, while the lowest mean was self-awareness. Moreover, the total mean of Authentic leadership inventory domains was (47, 3). This may be attributed to leader's internal effort to achieve consistency between his or her values and actions by integrating his or her internal moral standard and values by adhering to their internal value system and avoiding internal and external pressures. In order to become an authentic leader, one must be aware of one's own strengths and weaknesses, values, and what one stands for, as well as demonstrate to others the significance of their leadership. Such leaders act genuinely and consistently in public and private, and are not afraid to admit their flaws and mistakes, as evidenced by their self-awareness (Mbata et al., 2023).

In the same line, a study performed by Puni et al., (2020) to investigate the causal relationships between the dimensions of authentic leadership and patient care quality in the nursing profession of Ghana, and stated that internalized moral perspective is the most exhibited authentic leadership dimension among nursing managers and supervisors, followed by balanced processing and relational transparency, while self-awareness was the least exhibited authentic leadership dimension. These findings imply that managers or supervising nurses use more of their internal moral standards and values to guide behaviors instead of allowing outsiders behaviors to influence their behaviors.

On contrary, a study conducted by Alilyyani, (2022) in Saudi Arabia, who

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conducted a study to analyze the effect of authentic leadership on nurses' trust in managers and job performance, and noticed that mean score of self-awareness dimension of authentic leadership was the highest followed by internalized moral perspective domain. Also, Fallatah, (2020) who carried out a study in Ontario to investigated the effect of authentic leadership on new graduate nurses' organizational identification, trust in the manager, patient safety climate, and willingness to report errors, and affirmed that the highest rating of new graduate nurses' views of the manager's authentic leadership was associated with the manager's relational transparency. Conversely, this result was incongruent with Mbata et al., (2023) who carried out a study to investigate the effect of organizational identification in the relationship between authentic leadership and ethical behavior of employees in Kenya and reported that the mean score of relational transparency domain was the highest, while balanced processing domain was the lowest.

Part II: burnout as perceived by the studied nurses:

As regard the studied nurses' levels of burnout domains, the current study demonstrated that most of studied nurses had low level of burnout and low percentage of them had high level of burnout. From the research investigator point of view, this result may be attributed to the highest percentage of the studied sample ranged in age between 20 to 30 years old, most of them had more than 5

years of work experience and hold Bachelor of nursing, these factors allow them to work in different stressful circumstances. As well, nurses working unit considered as a factor that contributing to nurses' level of burnout.

This finding supported by a research conducted by Justine et al., (2018) to investigate work related stress among staff nurses at a private hospital in Singapore, which reflected that most the studied nurses showed a low level of burnout. Also, this result agreed with Adbaru et al., (2019) whose study entitled "Magnitude of burnout and its associated factors among nurses working in public hospitals of Amhara regional state", reported that most of the studied subjects reported low level of burnout.

In the opposite line, a study carried out by Feleke et al., (2022) to assess levels of burnout and its determinant factors among nurses in private hospitals of Addis Ababa, Ethiopia and stated that the highest percentage of the studied participants stated that more than half of the studied nurses reported suffering from a high level of burnout. On the other hand, Dechasa et al., (2021) who studied burnout and associated factors among nurses working in public hospitals, argued that the nurses' burnout in the study was high. Also, this result was contradicted with Zhang et al., (2023) who adopted a cross-sectional study on burnout and its individual and environmental correlates among hepatological surgery nurses in Hunan Province, China, and mentioned that nurses were suffering from high levels of burnout.

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On contrary, a study conducted by Soltan et al., (2020) about burnout and work stress among medical oncologists, whose results showed that most of the studied participants experienced high burnout levels. Conversely, the study result was contradicted with a study conducted by Abdelhafiz et al., (2020) about Prevalence, associated factors, and consequences of burnout among Egyptian physicians during COVID-19 pandemic, declared that more than two thirds of the study participants reported having a moderate level of burnout and added that, this can be attributed to nursing understaffing along with overburdened critical care sector, including loaded schedules, frequent shifts, lack of resources, and financial un appreciation.

The possible explanation for the difference in burnout levels may be due to the difference in study setting, study population, tools and methodological differences. As well, difference in work load and difference in time in which the study was conducted. In addition, tis may be attributed to imbalance between nurses and patient ratio which increases the responsibility, level of duty, and stress on nurses.

Related to the studied nurses' levels of burnout domains, the current study declared that more than two fifths of the studied nurses had low level of burnout regarding emotional exhaustion, while the low percentage of them had moderate level. In addition, about three fifths of them had high level of burnout regarding depersonalization, while almost two

fifths of them had moderate level. Besides, mo more than two thirds of them had low level of burnout regarding self-accomplishment, while the low percentage of them had high level.

Similarly, this result was in harmony with a study carried out by Amede et al., (2023) about prevalence and associated factors of burnout among midwives in governmental hospitals, Eastern Amhara, Ethiopia and stated that the studied respondents had scored the low level of Emotional Exhaustion (EE), high Depersonalization (DP) and low personal achievement (PA) sub-scales of burnout respectively. Likewise, a study done by Qedair et al., (2022) aimed to assess the prevalence and factors associated with burnout among nurses in Jeddah and declared that the studied nurses had low and high scores of EE and DP respectively, with low ones in PA.

On the other hand, a study done by Madinah, (2021) to evaluate burnout and associated factors among nurses working in a mental health hospital, Madinah, Saudi Arabia, it was noticed that that low level of EE was found among more than two thirds of the nurses. High level of PA was found in nearly half of nurses and Low level of DP was found in more than two thirds of the nurses.

Also, Elsheikh & Naga, (2021) who conducted a study entitled "Burnout among Egyptian health care workers and its associations" and stated that almost two thirds of respondents had a high EE score, more than one third of them had a high DP score and less than one third of them had a low PA score.

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Another study contradicted with the current study result which was performed by Shahin et al., (2020) about relationships among organizational identification, cynicism, job Burnout among nurses working in the primary health care centers in Saudi Arabia, stated that more than one third of the studied nurses had high emotional exhaustion and high depersonalization, respectively and most of them had low personal accomplishment.

Regarding mean scores and ranking of burnout domains of the studied nurses, the current study result reflected that the studied nurses' highest mean of burn out inventory domain was self-accomplishment, while the lowest mean was emotional exhaustion domain. This finding was consistent with Zhang et al., (2023) whose study stated that the prevalence of high burnout ranged from 90.37% for decreased personal achievement to 52.81% for emotional exhaustion.

On contrary, results reported by Osman & Abdlrheem, (2019) who assessed burnout and job satisfaction among healthcare providers in Aswan University hospital, Upper Egypt and mentioned that the highest score of burnout related to emotional exhaustion dimension and depersonalization dimension was the lowest. Also, Filipaska-Blejder et al., (2023) conducted a cross sectional study entitled Burnout Levels in Nurses and Associated Factors during the COVID-19 Pandemic and found that emotional exhaustion had the highest mean score of burnout

dimensions and personal accomplishment was the lowest.

Part III: Correlation between domains of authentic leadership and domains of burnout out as perceived by studied nurses:

Pertaining correlation between authentic leadership level of the studied nurses and their burnout level, the present study indicated that there was inverse highly significant correlation between perceived authentic leadership and burnout scores. This explains that the more a leader is perceived to be authentic, the more promoter ownership his/her followers are likely to experience, which in turn leads to reduced chances of burnout.

In the same context, Maziero et al, (2020) who studied Positive aspects of authentic leadership in nursing work affirmed that authentic leadership was found to have an indirect effect on attitudes toward reporting errors and highlighted the importance of personal identification in strengthening the influence of authentic leadership on nurses' perceptions of reporting error. This can be interpreted as there are several possible ways that authentic leadership reduces burnout and enhances wellness in healthcare providers. Organizational factors are associated with increased symptoms of burnout including leadership styles. Leadership styles can shift the balance between compassion satisfaction and compassion fatigue thereby combatting the onset of emotional exhaustion and psychological stress.

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This result was supported by McPherson et al., (2022) whose study declared that there was negative significant correlation between the association between authentic leadership traits and experiences of burnout amongst the studied participants. In this concern, Adil & Kamal, (2018) argued that authentic leaders inculcate an enhanced sense of self-awareness and emphasize the need of being open and transparent in their decisions and relationships with employees. They also strive hard for fostering the same characteristics in their followers and capitalize their positive psychological capacities for establishing an ethical, positive, and trust worthy work environment, which impedes the development of burnout.

Likewise, a study carried out by Lee et al., (2019) and stated that authentic leadership had a positive direct effect on work environment, which in turn had a direct negative effect on emotional exhaustion component of burnout and concluded that leaders with authentic attitudes create positive work environments that decrease burnout. Also, a study conducted by Na & Park, (2019) who carried out a study about "The effect of nurse's emotional labour on turnover intention: mediation effect of burnout and moderated mediation effect of authentic leadership" and found that the establishment of strong authentic leadership by head nurses would help nurses reduce their burnout. Also, Al Sabei et al., (2023) who studied the influence of nurse managers' authentic leadership style and work environment characteristics on job burnout among

emergency nurses, reported that authentic leadership was significantly associated with lower job burnout.

Conclusion:

The finding of present study emphasized that about one half of studied nurses perceived their leaders as having moderate level of authentic leadership, while, about one quarter of them perceived their leaders as having high level of authentic leadership. There is a statistically significant negative correlation among all dimensions of authentic leadership and emotional exhaustion and depersonalization dimensions of burnout, while statistically significant positive correlation among all dimension of authentic leadership and self- accomplishment dimension of burnout. Also, the highest percentage of studied nurses had low level of burnout and the lowest percentage of them had high level of burnout. Finally, there is an inverse moderate highly significant correlation between perceived authentic leadership and burnout among studied nurses.

Recommendation:

Based on the findings of this study, the following recommendations are proposed:

I. At practical level:

- 1) Conduct training program for nurses about causes of burnout and how to eliminate it.
- 2) Conduct training program for future managers in terms of behaviors and ethical standards in management and leadership.

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- 3) Encourage staff nurses to participate in decision making and problem solving in the unit to increase nurses' autonomy.

II. At educational level:

- 1) Nursing curricula need to be evaluated and updated annually to include new trends in leadership.
- 2) Conduct education program for nursing managers about positive leadership styles including authentic leadership, and its effect on productivity and quality of patient care.

III. At research level:

- 1) Replicate this study in different health care sectors with all healthcare professionals to generalize the results.
- 2) Further study on the relation between authentic leadership, decision making and problem-solving abilities among nurses.

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