

Work Environment and Its Relation on Patients Outcomes at Minia Oncology Center

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Abstract

Background: The nurses' work environment is getting global interest and concern because there is a growing consensus that identifying opportunities for improving working conditions in hospitals, adequate staffing, high-quality of patients care, and patient outcome. So **the aim of this research** was to assess relation of work environment on patients' outcomes at Minia oncology center. **Research design:** A descriptive correlational design was utilized in the current research. **Setting:** The research was conducted at Minia Oncology Center. **Sample:** Convenience sample (no.=66) of nurses as well as (no.=74) of patients. **Tools of data collection:** Two tools, the first tool was nurses' work environment scale and the second tool was patient outcomes scale. **Results:** the findings of the current research are (48.5%) of nurses have fair work environment, while (40.9%) of them have bad work environment. Moreover (89.2%) of patients have moderate level of patient's outcome, while (10.8%) of them have low level of patient's outcome. **Conclusion:** There were strongly positive correlation between nurse's practice work environment and patient's outcome ($p= 0.002^{**}$). **Recommendations:** Provide in-service training program for studied nurses about nurse practice environment and patient outcomes.

Keywords: Patients Outcomes, Relation, Work Environment.

Introduction

The working environment of nurses is getting global interest and concern because there is a growing consensus that identifying opportunities for improving working conditions in hospitals, it is essential to maintain adequate staffing, high-quality of patients care, nurses' work engagement and minimize their retention (**Khan, 2021**).

In addition, the quality of patient care services has been associated with the quality of work environment of nurses, It is therefore important to assess the work environment in order to acquire baseline data and enable the institution to benchmark their status from established quality standard, healthy work environments mutually benefit patients and health care providers such as nurses, nurse managers etc. (**Jarrar et al., 2021**).

Moreover, the hospitals with poor nurse practice environments were more likely to have higher mortality rates, higher nurse job dissatisfaction, and higher nurse turnover rate while, nurses working in hospitals with more favorable nurse practice environments reportedly had fewer needle-stick injuries, lower emotional exhaustion, lower depersonalization, and less intention to leave their current position and this affect on patient outcomes (**White et al., 2020**).

The nurses' work environment is defined as the characteristics of a practice setting that facilitate or constrain professional nursing practice and has been linked to patient outcomes. Nurses' work environment plays a key role in the quality and quantity of the care that they can provide as well as in workforce retention. When nurses perceived better working conditions, the intent to leave the job decreased and their work engagement increased, all of those issues reflect on the patients' outcomes (**Carthon et al., 2021**).

Nurses represent the largest percentage of healthcare providers. They play an important role in transforming healthcare. When nurses make autonomous decisions about care, they are questioning the status quo, they are looking to

find ways to improve the healthcare system, improve health outcomes, reduce adverse events, and improve patient satisfaction and quality. While providing quality care has always been paramount, quality of care is under particular scrutiny in the current healthcare system. Hospitals and healthcare providers are expected to deliver patient-centered and value based care, otherwise healthcare organizations are negatively impacted with financial penalties (**Rao et al., 2017**).

The positive work environment could significantly improve organizational outcomes. Identifying factors, which influence the positive environment, may reduce turnover intention and increase work engagement among nurses. These factors include autonomy, environmental control, the relationship between doctors, nurses and organizational support (**Rodriguez-Garcia et al., 2021**).

The dangers of unhealthy work environments in the health care setting have been demonstrated in the literature for decades. This came to the forefront when the Institute of Medicine (IOM) issued their report stating that as many as 98 000 patient deaths occur in hospitals every year owing to errors, the errors were attributed to failure to follow management practices designated for safety, unsafe staffing and education unsafe work and workplace design and punitive culture and error prevention (**Che Huei et al., 2020**).

Outcomes are the result of care in terms of the patient's health over time. Advancing patient outcomes should be the ultimate goal for patient care, both in humans and animals. Health care outcomes are a true measure of quality. In business, quality should always be measured from the customer's perception and not the supplier's point of view. Health care should not be any different, and outcomes should be centered on the patient (and owner) and not on the individual units or specialty services providing the care (**Pantaleon, 2019**).

Value is created by improving the outcomes of patients with a particular clinical condition over the full cycle

of care, which normally involves multiple specialties and care sites. To be successful, a key aspect of value based care is working as teams (integrated practice units) centered around the patient's clinical condition (Covid, 2020).

A new strategy has been introduced in human health care, namely, achieving the best outcomes for the lowest cost and thus maximizing value for patients. In value-based care, the only true measures of quality are the outcomes that matter to patients. When outcomes are measured and reported, it fosters improvement and adoption of best practices, thus further improving outcomes (Chopra et al., 2021).

Significance of the research:

The commonly assumed that oncology nurses experience high job-related burnout and high turnover because their work involves inherent stressors such as caring for patients with serious and often life-threatening illness which affect negatively on patient outcomes so, it is important to maintain healthy work environment (Shang et al., 2013)

. According to study done by (Purdy et al., 2011) that found in their study at the University of Western Ontario, Canada positive relationship between healthy work environment and nurse work effectiveness as manifested in both nursing and patient outcomes

According to study done by(Duffield et al., 2011)which found in their study negative relation between unstable work environment and negative patient outcomes Moreover, the study done by(Almalki et al , 2012)that found in their study at the jazan region 40%of nurses indicating a turnover intention from their current PHC(Primary Health Center) centers due to poor work environment which result in negative patient outcomes

In Egypt, a study done by (Ibrahim & Aly, 2017) at Children’s Cancer Hospital Egypt (CCHE 57357) delineated that about 26% of nurse job satisfaction and 8% of nurse-assessed quality of care was explained by the predictors (work environment , psychological empowerment, empowered behaviours and years nursing experience Of this group, psychological empowerment contributed the strongest effect on job satisfaction and nurse-assessed quality of care.

Through my working as a supervisor at Minia oncology center. I found that some of nursing staff are complaining from bad current working condition that are characterized by heavy workloads, limited participation in decision making and lack of development opportunities, etc. also all these issues may affect on the nurses and patient's outcome negatively. So, the researcher is introducing this study about the relation of work environment on patient's outcomes because it is vital in nursing practices. In which effective working environment helps in maintaining nursing staff and provide high quality of patient care.

Aim of the research

The aim of this research is to assess relation of work environment on patients' outcomes at Minia oncology center.

Research question:

- What is the relation of work environment on patients' outcomes at Minia oncology center?

Subject and Method

Research Design:

The present research utilized a descriptive correlational research design to achieve the aim

Setting:

The research was conducted on Minia Oncology Center, Minia governorate, Egypt.

Minia Oncology Center is one of the best hospitals in the Corniche. The address is in El Horreya St. off Corniche El Nil St., Corniche, and Minia. The center receives more than 350 cases daily, so started of expanding the Minia Oncology Center.

Sample type:

Convenience sample which included nurses who working at Minia Oncology Center during the period of research data collection.

Subjects:

The research subjects were included all nurses (no.=66) as well as the patients(no.=74) who presented on (ICU) intensive care unit, Chemotherapy internal for women as well as men ,and Surgical unit) at Minia Oncology Center during the time of data collection as following.

Table (1): distribution of the research sample

Unit	no. of nurses	no. of patients
I C U	16	9
Chemotherapy internal for women	22	27
Chemotherapy internal for men	6	12
Surgical unit	22	26
Total	66	74

Data Collection Tools:

Two tools were used to collect the research’s data as follows:

Tool (I) Nurses’ Work environment scale: it was translated into Arabic language by the researcher and included two parts:

Part 1: Personal data: it attached with tool to get information from nurses, it included six items related to gender, age, marital status, educational qualifications, years of experience, and department

Part 2 : Nurses’ work environment scale: this scale was developed by(Lake, 2002), it included 31 items with 4-point responses, the response ranging from 1 (strongly disagree) to 4 (strongly agree).. it included five dimensions as following : Nurse participation in hospital affairs(9 items); Nurse foundations for quality care(10 items); Nurse manager ability, leadership, and support nurses(5 items); Staffing and resource adequacy(4 items); and Collegial nurse-physician relations(3 items).

So the scoring system for this scale was ranged between 31 to 124 as following:

- Bad work environment ranged from 31:61
- Fair work environment ranged from 62:92
- Good work environment ranged from 93:124

Tool (II): Patient outcomes scale: it was translated into Arabic language by the researcher and included three parts as follows:

Part 1 Personal data: it attached with tool to get information from patients. It included six items related to gender, age, marital status, education quantifications, length of stay and department.

Part 2 Patient Satisfaction: was measured by the patient satisfaction with nursing care quality questionnaire that was developed by (Laschinger et al., 2005). It included 22 items with five point likert scale ranged from (1) = poor to (5)= excellent. Scoring system for this ranged between 22-110 as following :

- Low patient satisfaction ranged from 22:51
- Moderate patient satisfaction ranged from 52:81
- High patient satisfaction ranged from 82:110

Part 3 Therapeutic Self Care: was measured by the therapeutic self-care questionnaire that was developed by (Sidani et al., 2004) To measure quality of patient care, it included 12 items with five point likert scale ranged from (0) = not at all likely to (5) = very much likely. Scoring system for this ranged between 12- 60.

- Low patients' therapeutic self care ranged from 12:27
- Moderate patients' therapeutic self care ranged from 28:43
- High patients' therapeutic self care ranged from 44:60

So the scoring system for this scale was ranged between 34 to 170 as following:

- Low patient outcomes ranged from 34:79
- Moderate patient outcomes ranged from 80:125
- High patient outcomes ranged from 126:170

Validity of the research's tools:

The scales were tested for the content validity by a jury of three experts in the field of Nursing Administration and necessary modifications were done as the paraphrase of some sentence and some modification in the Arabic language. The jury composed of one assistant professors, as well as one professor from Faculty of Nursing, Minia University and one professor from Faculty of Nursing, Assuit University. Each of the expert panel was asked to examine the scales for content coverage, clarity, wording, length, format and overall appearance.

Reliability of the research's tools

Reliability of the scales was performed to confirm consistency of tools. The internal consistency measured to identify the extent to which the items of scales measured the same concept and correlate with each other by Cronbach's alpha test that revealed good internal reliability for the tools in the current research; and distributed as follows

Table (2): Reliability of the research tools

Tools	α
Work environment scale	0.913
Patient outcomes scale	0.930

Pilot Study:

A pilot study was conducted on 10% of nurses as (7) nurse as well as (8)patients to ascertain the clarity, comprehensiveness and applicability of the tools as well as to estimate the appropriate time required to fill the tools. Based on pilot study there was no modification done, and it was excluded from final results.

Data Collection Procedure:

- Official letters to obtain the approval was introduced to Faculty Dean; and Research Ethics Committee; these letters were included a brief explanation of the objectives of the research.
- Written approvals were obtained from Director of the Minia Oncology Center, Nursing Director of the Center, and Head Nurses of departments after explaining the purpose of the research.
- The two tools were translated into Arabic; then collect the jury approval for the tools were obtained to collect data of the research.
- The first scale was distributed to all the nurses after explaining the purpose and process of data collection. On the same line the second scale was distributed to patients after explaining the purpose and process of data collection. The scales were directly administered and supervised by the researcher.
- The researcher interviewed with nurses as well as the patients through morning shift.
- Nurses were given from 20 to 25 minutes to answer the scale.
- Patients were given from 25 to 35 minutes to answer the scale
- The data collection was performed from the nurses as well as the patients during the period from the beginning of October 2021 to January of 2022.

Administrative design:

- A written initial approval was obtained from the Research Ethics Committee of the Faculty of Nursing, Minia University.
- An official letter was granted from Faculty Dean, of the Faculty of Nursing, Minia University.
- Written approvals were obtained from Director of the Minia Oncology Center, Nursing Director of the center, and Head Nurses of Departments.

Ethical Considerations:

- The nurses were informed that their participation in this research was completely voluntary and there was no harm if they not participate in this research.
- Oral consent was obtained from head nurses and nurses after explaining the nature and purpose of this research.
- The nurses assured that the data of this research was not be reused without second permission. Anonymity and confidentiality were assured.

Statistical analysis

The collected data was tabulated, computerized, analyzed and summarized by using descriptive statistical tests to test research questions by using SPSS version (25). Qualitative data were expressed as frequency and percentage. Probability (P-value) is the degree of significance, less than 0.05 was considered significant. The smaller the P-value obtained, the more significant is the result (*) and less than 0.001 was considered highly significant (**).

Numerical data were expressed as mean and SD. Qualitative data were expressed as frequency and percentage. Fisher's exact test: they are alternatives for the Pearson's chi square test if there were many small expected values.

Correlation is a statistical method for determining the nature and strength of a relationship between two numerical variables. The sign of the co-efficient denotes the nature of the relationship (positive/negative), and the value denotes its

strength, as follows: Rho values less than 0.25 have a weak correlation, 0.25-0.499 have a reasonable correlation, 0.50-0.74 have a moderate correlation, and values greater than 0.74 have a strong correlation.

Results

Table (1) Distribution of the nurse’s personal data at Oncology Center (no.=66).

Characteristics	(N=66)	%
Age		
• 20-29yrs	33	50
• 30-39yrs	24	36.4
• ≥40yrs	9	13.6
Mean±SD = 30.2±6.87		
Gender		
• Male	17	25.8
• Female	49	74.2
Marital status		
• Single	13	19.7
• Married	53	80.3
Years of experience		
• 1-9yrs	37	56.1
• 10-19yrs	22	33.3
• 20-29yrs	6	9.1
• > 29yrs	1	1.5
Mean±SD =8.95±6.93		
Educational qualifications		
• Bachelor of nursing	29	43.9
• Technical institute of nursing	19	28.8
• Secondary school nursing diploma	18	27.3
Department		
• I C U	16	24.2
• Chemotherapy internal for women	22	33.3
• Chemotherapy internal for men	6	9.2
• Surgical unit	22	33.3

Table (1) illustrates that (50%) of nurses are in the age group (20-29)years old with mean age 30.2±6.87years. Moreover (74.2%) of them are females and (25.8%) of them are males, (80.3%) of them are married and (19.7%) of them are single, and (56.1%) of them have experience (1-9) years. Concerning educational qualification about (43.9%) of them have bachelor of nursing. Also this table indicates that there are (33.3%) of nurses are working in the surgical unit as well as internal chemotherapy for women, also (24.2%) of them are working in intensive care unit, while (9.2%) of them are working in internal chemotherapy for men.

Table (2) Distribution of the patient’s personal data at Oncology Center (no.=74).

Characteristics	(N=74)	%
Age		
• 20-35yrs	10	13.5
• 36-50yrs	16	21.6
• 51-66yrs	7	9.5
• ≥67yrs	41	55.4
Mean±SD = 58.2±17.2		
Gender		
• Male	30	40.5
• Female	44	59.5
Marital status		
• Single	6	8.1
• Married	48	64.9
• Widow	20	27
Level of education		
• Illiterate	10	13.5
• diploma	19	25.7
• Institute	27	36.5
• University	18	24.3
Length of stay		
• < one yr.	63	85.1
• 1-4yrs.	5	6.8
• ≥5yrs.	6	8.1
Department		
• I C U	9	12.2
• Chemotherapy internal for women	27	36.5
• Chemotherapy internal for men	12	16.2

Characteristics	(N=74)	%
• Surgical unit	26	35.1

Table (2) explains that (55.4%) of patients are in the age more than 67 years old with mean age 58.2 ± 17.2 years, also (59.5%) of them are females and (40.5%) of them are males. Moreover (64.9%) of them are married and (27%) of them widow, while (8.1%) of them are single. Also in relation to level of education (36.5%) of them have technical institute, also (85.1%) of them length of stay in the Oncology Center less than one year. Concerning the department (36.5%) of them are in internal chemotherapy for women, also (35.1%) of them are in the surgical unit, (16.2%) of them are in internal chemotherapy for men, while (12.2%) of them are in intensive care unit.

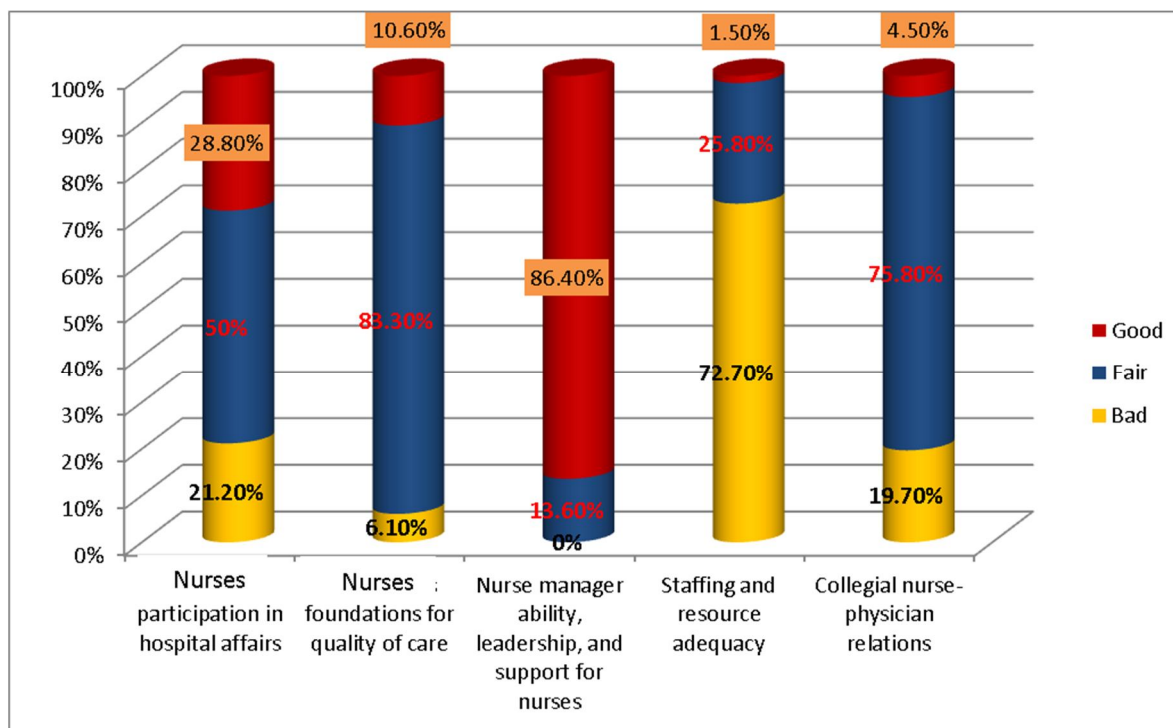


Figure (1) Distribution of nurse's total scores regarding to nurses' work environment dimensions at Oncology Center (no.=66).

Figure (1) demonstrates that the high percent of nurses have high good work environment in dimensions of (nurse's manager ability, leadership, and support for nurses as well as nurse's participation in hospital affairs) as (86.4% & 28.8% respectively). While the high percent of them have fair work environment in dimensions of (nurse's foundations for quality of care; collegial nurse-physician relations & nurse's participation in hospital affairs) as (83.3%; 75.8% & 50% respectively). Finally the high percent of them have bad work environment in dimensions of (staffing and resource adequacy & nurse's participation in hospital affairs) as (72.7% & 21.2% respectively).

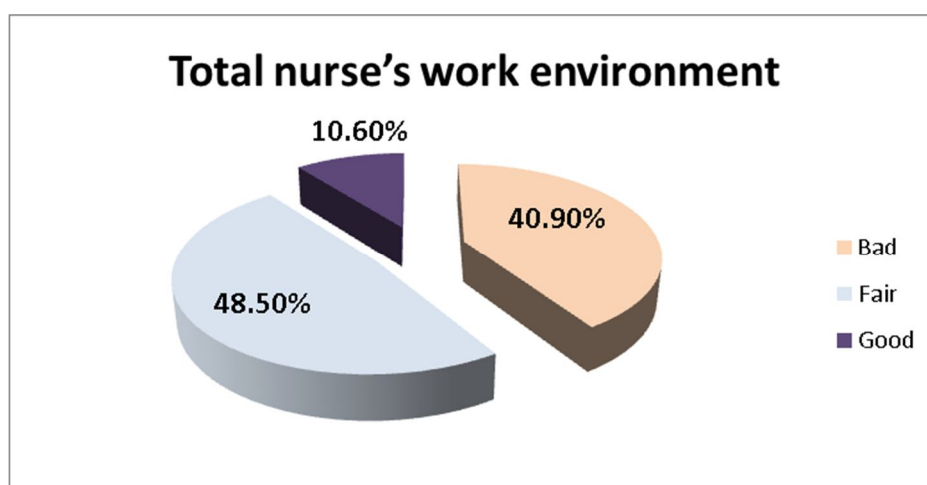


Figure (2) Distribution of nurse's total scores regarding to practice work environment at Oncology Center (no.=66).

Figure (2) indicates that the high percent of nurses have fair work environment as (48.5%), while (40.9%) of them have bad work environment. Finally (10.6%) of them have good work environment.

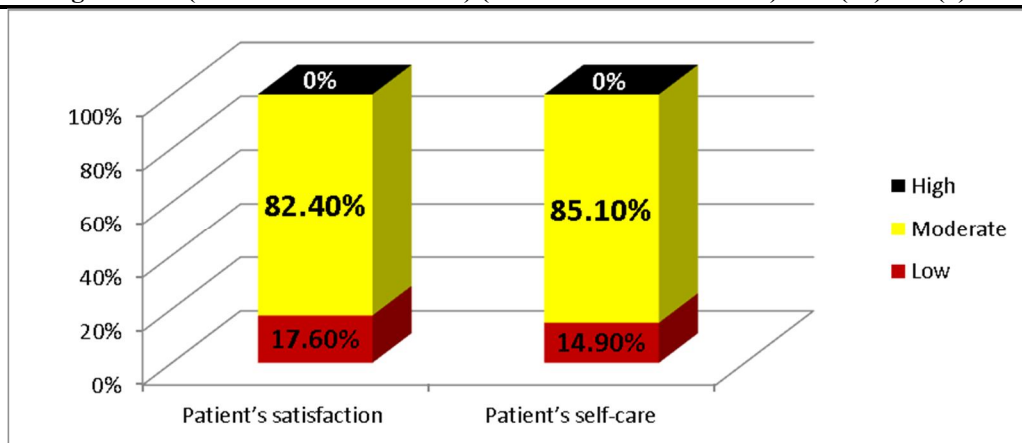


Figure (3) Distribution of patient's total scores regarding to outcome parts at Oncology Center (no.=74).

Figure (3) demonstrates that the high percent of patient have moderate level in parts of (patient's self care and patient's satisfaction) as (85.1% & 82.4% respectively). While the little percent of them have low level in parts of (patient's satisfaction and patient's self care) as (17.6%& 14.9% respectively). Finally none of them have high level in parts of (patient's satisfaction and patient's self care).

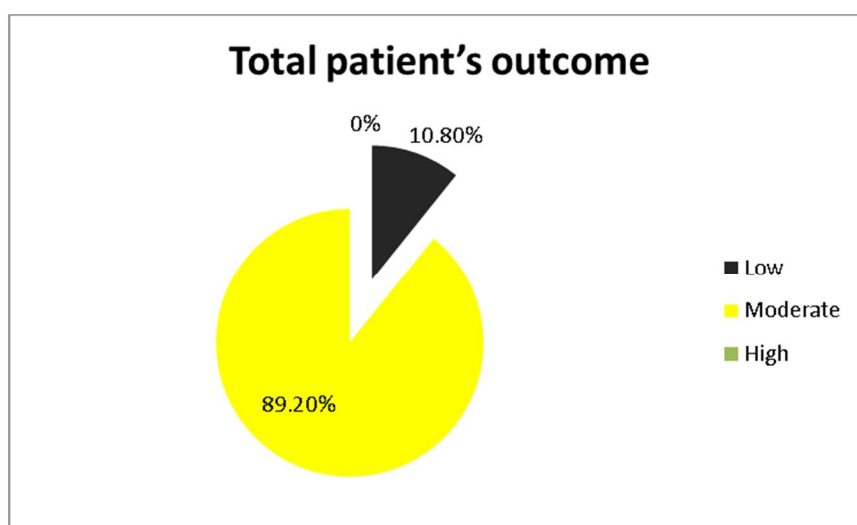


Figure (4) Distribution of patient's outcome total scores at Oncology Center (no.=74).

Figure (4) indicates that the high percent of patients have moderate level of patient's outcome as(89.2%), while (10.8%) of them have low level of patient's outcome. Finally none (0%) of them have high level of patient's outcome

Table (3): Correlation between work environment and patients outcome at Oncology Center

Variable	Work environment		Patients outcome	
	r	p	r	p
Work environment	1		.985	.002**
Patients outcome			1	

Table (3) reveals that there are strongly positive correlation between nurse's practice work environment and patient's outcome (p= 0.002**).

Discussion:

Health care organizations with better work environments have been found to have a lower death following a complication, higher patient satisfaction, and reduced length of stay. The nursing work environment defined as the organizational characteristics of the workplace that facilitate or restrict professional nursing practices. In recent decades the nursing work environment has gained attention associations with patient safety culture (Lake et al., 2020)

Regarding personal data of nurses, the present research revealed that half of the nurses' staff age group ranged between (20-29) yrs., more than half of them was female; also the majority of them were married. Regarding their years of experience, more than half ranged between (1-9)

yrs. concerning their educational qualifications it was noted that more than two-fifths of them have a Bachelor of Nursing; also about one third of them worked in the surgical unit.

Regarding personal data of patients, the present research revealed that half of the patients' age was 67 yrs., more than half of them were female, and also more than two thirds of them were married. Concerning their educational qualifications it was noted that more than one third of them have technical institute, the majority of them stay less than one year in the hospital. Also more than one third of them treated in internal chemotherapy for women.

Regarding the total scores of nurses' work environment dimensions at the Oncology Center. Concerning to "nurse's participation in hospital affairs

dimension” the current research revealed that half of the nursing staff had a fair level, while more than one-quarter of them had a good level of participation in hospital affairs. This could be due to the ability and power of nurse managers to be present in the hospital administrative and executive meetings, and decisions that made nursing staff abler to participate and become a part of chief policy and procedures.

Also, the promotion of nursing staff members to head nurses made them more willing to understand hospital affairs that will become responsible for later. Additionally, they looking to find ways to improve the healthcare system, improve health outcomes, reduce adverse events, and improve patient satisfaction and quality.

This finding is in the same line with **Kutney-Lee et al.(2017)**, who stated that nurses’ ability to participate in and control essential clinical practices and personnel policies and decision-making procedures leads to an increase in their autonomy and turn increases their work engagement.

The present research also, revealed that more than one-fifth of the nursing staff had a bad level of participation in the hospital affairs dimension; this could be due to a lack of nurse managers' support and sharing their staff in important decisions and situations. This made most of the nursing staff away from hospital affairs and administrative committees. This finding is supported by **Ross et al. (2017)**, who reported that nursing staff suffers from negative managerial support that can hinder the practice of nurses' health-promoting behaviors.

Also, the research result aligned with **Moisoglou et al. (2020)**, who conducted a study about “Assessment of the nursing practice environment in Greek Hospitals: a cross-sectional study” reported that the Greek work settings had a significantly lower mean score than US non-Magnet settings regarding nurses’ participation in hospital affairs

Concerning to “**nurse’s foundations for quality of care dimension**” the current research revealed that the majority of nursing staff members had a fair level. the proper rationale for this is the availability of efficient and competent nursing staff education level that reflected on their level of practices and patient outcomes. Also, staff supervisors, continuous education, and quality unite roles in hospital daily activities which, lead to continuous improvement of existing staff and adequate training of new nursing personnel. Moreover, it is related to the effective administration authority and standard of care that obligate all hospital personnel to be committed with.

This finding is supported by **Brofidi et al.(2018)**, who revealed that the highest percentage of (United States) US non-Magnet hospital nurses reported a moderate level of nursing foundations for quality of care. While the finding is incongruent with **Al-Maaitah et al. (2018) and Moisoglou et al.(2020)**, who stated that nursing foundations for quality of care were considered the lowest favorable trait by Greek hospital nurses.

Concerning “**nurse’s manager ability, leadership, and support for nurse’s dimension**” the current research revealed that the majority of nursing staff members had a good level. This could be due to the ability of the nurses’ supervisors and managers to balance their roles as evaluators and educators for nursing staff members and their staff need and problems that can affect their level of care provided. So, when supervisors and directors advocate, support, listen, appreciate, and reward their staff members this lead to an

increase in staff level of satisfaction and competence in clinical practices.

This finding aligned with **Wen et al.(2019)**, who revealed that organizational support and managers’ leadership roles are known as key factors in increasing job satisfaction and the organizational commitment of employees. Also, **Qi et al. (2019)** highlighted that managerial support is treated as a guarantee that will help employees fulfill their tasks, do their job efficiently, and handle stress.

Concerning to “**staffing and resource adequacy dimension**” the current research revealed that nearly three-quarters of the nursing staff had a bad level. This could be due to oncology center demands always being more than other healthcare facilities, and this is related to critical care provided by staff personnel in this center. Therefore, it requires highly professional nursing staff and supervisors who understand and can provide high-quality patient care. Additionally, in need of new modern and adequate equipment and supplies that assist in the delivery of effective care to the patient. So, nursing staff always need additional staff and resources for the completion of care in the center.

This result is supported by **Moisoglou et al.(2020)**, who reported that the staffing and resource adequacy subscale was the least favorable. Also, the finding aligned with **Lake et al. (2019)**, who stated that supports include such factors as enough time to discuss client care, sufficiently qualified staff, and an immediate supervisor who is a good manager and leader, can provide an environment where nurses are better able to manage the demands of their practice.

Concerning to “**collegial nurse-physician relations dimension**” the current research revealed that about three-quarters of the nursing staff had a fair level. This could be because of understanding and appreciation from physician staff members of the nurses’ roles in patients’ outcomes. Specifically, nursing specialists' level of knowledge and skills, and practices reflect a good background in the nursing profession nowadays. So, the improvement of nurse and physician relations, coordination, and cooperation during planning and implementing patient care leads to fewer clinical problems and mistakes developed from both and increases the patient's level of satisfaction too.

The finding of the current research is supported by **Hegazy et al. (2021)**, who revealed that collegial nurse-physician relations were the most favorable element of nurses' work environment. This finding is consistent with the findings of **Brofidi et al. (2018)** who also, reported that the collegial nurse-physician was rated with the highest score

Moreover, the finding aligned with **Forbes et al., (2020)** who highlighted that a true partnership must be formed to begin a collaborative effort between the nurse and physician. The connection is rooted in trust and best communication practices. The link can be achieved when each profession starts to relate to one another with mutual purpose and respect.

Regarding total scores of the practice work environment at the Oncology Center, the current research revealed that near to half of nurses had a fair level of the work environment. This could relate to nurses’ satisfaction and their abilities to engage in the hospital rules and policies, the nurse manager’s principles and suggestions, well-accepted relation with other hospital personnel, and their level of practice and competence in delivering patient care and patients' outcome too.

This finding is supported by **Liu et al. (2019)**, who reported that improving work environments lead to improve nurses' outcomes and patient outcomes such as job satisfaction, and work engagement decreases missed nursing care and patient safety, less burnout, higher quality of care, and safer care. Also, **Al Sabei et al. (2020)** identified factors, which influence the positive environment, which may reduce turnover intention, and increase work engagement among nurses. These factors include autonomy, environmental control, the relationship between doctors and nurses, and organizational support.

While the finding is not aligned with **Brofidi et al. (2018)**, who Compared Greek (the nursing practice environments) NPEs in certified (United States) US Magnet and non-Magnet hospitals and has shown that Greek nursing work environments are significantly unfavorable settings.

The present research also, revealed that about two-fifths of them had a bad level of the work environment. The proper rationale for this is that several nurses staff still suffer from the practice workload, lack of available resources, lack of managers and administrator's appreciation and reward, poor communication and decision making, lack of other staff personnel respect and cooperation especially physicians, poor training and improvement programs this all affect their level of work environment satisfaction.

This finding is attributed to **Olds et al. (2017)**, who report that many nurses' opinions disengagement and dissatisfaction with their jobs for reasons that can be attributed to the work environment. Also, **Hegazy et al. (2021)**, stated that there are negative factors such as increased workloads, an insufficient number of nurses, communication problems within teams, insufficient equipment, and a lack of managerial support that result in an unhealthy work environment.

Regarding total scores of patient's outcome parts at the Oncology Center: Concerning to "patient's satisfaction part", the current research revealed that the majority of patients had a moderate level of satisfaction. This could be due to improved techniques and strategies used by nursing staff personnel during delivering patient care, and proper following of patients' rights and ethical considerations. Which at the same time enhances patients' information, privacy and confidentiality, trust, cooperation, and recognition of nurses' roles in improving their outcome level.

This finding is supported by **Eisenmann, (2021)** who highlighted that nursing roles and responsibilities expanded to become abler to provide holistic care for patients that were not limited to traditional nursing boundaries which lead to a higher patient satisfaction rate. Also, **Barnett et al. (2022)**, found that nurses often provide cost-effective patient care and equal high-quality patient care compared to primary care physicians, even with higher patient satisfaction.

While the finding is rejected by **Purdy et al.(2011)**, who stated that no significant connections between nurses' outcomes and patient satisfaction or patient self-care were reported.

Concerning to "patient's therapeutic self-care part", the current research represented that the majority of patients had a moderate level of therapeutic self-care. This could be due to increase and repeated oncology patients' visits to the oncology center for treatment and follow-up, which makes them more contact with nurses and physicians staff during receiving their needed care. This allows them to become more understanding of their self-care procedures, reasons, effects, complications, and outcomes of each

medication or care provided. Also, it is related to highly qualified nursing staff who initiate, educate, and train patients to become abler to perform their self-care procedures.

This finding is attributed to **Zeb et al.(2023)**, who conducted a study about "Perceived therapeutic self-care ability of patients in surgical units: a multisite Survey" and stated that The mean self-care ability score was 20.05 ± 4.3 therefore, patients felt more prepared to take their medications.

Regarding the total score of patient outcomes at the Oncology Center: the present research revealed that the majority of the oncology center patients have a moderate level of patients' outcome. This could be due to moderate patients' level of satisfaction with care delivered at the oncology center by well-qualified and trained personnel. Also, health care programs and professional instruction that are provided for patients enable them to become more controllable for the disease process and anticipate a better outcome. Additionally, a positive and proper work environment leads to effective results and outcomes.

This finding is supported by **Copanitsanou et al. (2017)** and **Whitehead et al. (2019)**, who reported that the highest percentage of patients are fair satisfied when they were hospitalized in small wards, when they knew that one nurse was in charge of their care, and when nurses did not experience time pressure and were able to provide information.

Regarding the correlation between the work environment and patients' outcomes at Oncology Center. The current research revealed that there was a highly positive statistically correlation between nurses' practice work environment and patient outcomes. This could be due to the great consequences of the nurse work environment on the patient's level of outcome and satisfaction. The more nurses and staff engaged in their work and abler to provide high-quality care the more patients' outcome levels increased and improved.

This finding is supported by **Huang et al.(2021)**, who stated that the work environment is acknowledged as a key predictor of work-related outcomes, such as higher patients outcome. Also, the finding aligned with **McCauley et al. (2020)**, who revealed that a positive work environment could significantly improve organizational and patient outcomes. Moreover, **Ambani et al. (2020)**, reported that poor practice environments were found to have negative consequences not only on nurses but also on patients' outcome levels

Conclusion:

The current research concluded that about fifty-percent of nurses had fair work environment, while less than fifty-percent of them had bad work environment. Also the majority of them had moderate level of patient's outcome as, while (10.8%) of them had low level of patient's outcome. More there were strongly positive correlation between nurse's practice work environment and patient's outcome ($p=0.002^{**}$).

Recommendations:

- Enhance a supportive work environment by the nurse manager as effective way to increase nurses' psychological bonding and enhancing positive work-related outcomes that may, in turn, enhance their performance and the outcome of the patients.

- Conduct effective and continuous training programs for managers as well as the leaders to improve their managerial as well as leadership skills and work effectiveness.
- Use effective leadership styles should be used according to different situations
- Provide effective and enough resources as well as facilities to enhance work environment condition.
- Encourage nurse's participation in hospital affairs to encourage nurses' satisfaction.
- Enhance the collegial nurse-physician relations to enhance the work environment
- Provide in-service training program for studied nurses about nurse practice environment and patient outcomes..
- Conduct further research about the relation between work environment and its patient's outcomes on the multi setting to generalized the results of the study.

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