Effectiveness of Synergies System Implementation on Staff Nurses' Competency, Performance and Patients' Satisfaction

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Abstract

Background: The Synergy system implementation is a novel language founded on eight universal characteristics: predictability, complexity, stability, vulnerability, resilience, and involvement in decision-making and caregiving. **Aim**: To evaluate the effectiveness of synergies system implementation on staff nurses' competency, performance, and patient satisfaction. **Study design**: A quasi-experimental research design was used to achieve the aim of the current research. **Setting**: The study was conducted in the Critical Care Unit at South Valley University Hospital. **Subject**: A convenience sample of Staff Nurses (N= 50) working in the previously selected setting and this study included 50 patients. **Tools**: Three tools were used for data collection: Tool (I) Synergies System Scale which consisted of two parts; Part (I) Nurses' data and Part (II) Nursing Competency Scale; Tool (II) Patients' demographic data; and Tool (III): Patient' Satisfaction assessment tool. **Results**: The study revealed that staff nurses had an unsatisfactory knowledge level in pre-synergies system implementation but satisfactory in post-synergies system implementation (76%) with a statistically significant relation. Also, most patients reported their satisfaction with nurses' communication & nurses' skills and competencies. **Conclusion**: Synergies system implementation positively affects staff nurses' competency, performance, and patient satisfaction. **Recommendation**: Continuous training about the synergies system for all nurses is recommended to be applied. Replication of the current study with a larger sample of nurses in different settings is required to generalize the results.

Keywords: Ethical climate, Moral distress, Nurses green behavior.

Introduction

Continuity in care is a fundamental component of quality care, and it is facilitated by profound therapeutic relationships with patients and their families. A restricted number of nurses are assigned to each patient/family to facilitate the development of therapeutic patient/family-nurse connections and to provide continuity in nursing care throughout the patient's illness trajectory. More seasoned nurses mentor their less seasoned counterparts as coworkers. Patient requirements differ throughout the system, therefore, the amount of staff nurses and Advanced Practice Nurses on each unit varies, allowing for different degrees of experience to adequately meet patient demands According to (**Viejo et al., 2018**).

Based on eight universal characteristics— stability, complexity, predictability, resilience, vulnerability, participation in decision-making, participation in care, and resource availability— the Synergy Model is a nursing professional practice model developed by the American Association of Critical Care Nurses (AACN). Nurses can apply the model to analyze patient characteristics and weigh the impact on workload to determine which nurse is best suited to meet the patient's care needs. Depending on the clinical area, nurses can use it as a daily decision-making tool at every shift, or leaders and administrators can use it for long-term planning. Point-of-care nurses in their respective areas can successfully apply the Synergy concept, which is based on an empowerment concept. The Synergy Model has been applied across a range of care settings in Canada, including acute care, mental health, residential care, emergency departments, and

community health settings (**Kerfoot et al., 2020).**

Staff competency and patient care needs are the two parts of the Synergy Model. By the three-factor structure established by the College of Nurses of Ontario (**CNO, 2018**), we incorporated a third component for our project, which is the environment. For us to comprehend the context in which care is offered better, the environmental aspect must be added. Care needs are identified once all three components have been established. Based on these needs, the best nurse to manage the patient can then be found. Thus, this contributes to the understanding of the nursing skill mix and interprofessional nursing resource allocation decisions (**Kaplow et al., 2022**).

The advantage that arises from multiple agents cooperating to accomplish a goal that none of them could have accomplished alone is known as synergy. That idea is that the total is always bigger than the sum of its parts. Interactions across management teams may foster synergies that enhance capacity and streamline processes beyond what could be achieved with separate team operations (**Paul, 2022**). To help nurses understand and communicate patients' requirements, the organizational synergies system can help them develop a shared vocabulary. It offers a workable way to distinguish how professional nurses actively influence patient outcomes and, eventually, the general prosperity of healthcare institutions (**Reed, et al., 2019**).

Nurses and patients, as well as other nurses and other members of the care team, can communicate thanks to organizational synergies. This method creates a standard vocabulary for nurses to use when defining and connecting patients' requirements. According to **Barbosa et al. (2019)**, this framework is ideal for setting up the patient care functions inside the healthcare system. According to **Johannes (2021)**, the mechanisms and enablers of synergy combine to generate a synergistic interaction. To enable the emergence of new skills, a synergistic connection is required.

Organizational synergy is the result of people and systems working together harmoniously to continuously increase an organization's capacity to provide goods and services to its clients while keeping a competitive edge. The following performance indicators for nurses regarding the Organizational Synergy System of Concern to Patients, and Clinical Units, were provided by the American Association of Care Nursing (AACN). The knowledge, abilities, experience, and attitudes required to satisfy the needs of patients and families are integrated into nursing care. Clinical judgment is the process of combining formal and informal experiential knowledge with evidence-based recommendations to combine nursing abilities with clinical reasoning. This reasoning involves clinical decision-making, critical thinking, and a comprehensive understanding of the issue (**AACN, 2023**).

Serving as a moral agent in recognizing and assisting in the resolution of ethical and clinical issues both inside and outside of the clinical setting, advocacy, and moral agency involve speaking up for the interests of others and advocating for the patient, family, and nursing staff. To promote comfort and healing and avoid needless suffering, caring practices are those aspects of nursing that involve providing a therapeutic, caring, and supporting atmosphere for both patients and staff. include family members and medical staff as well as the attentiveness, involvement, and alertness of caretakers. Working together to achieve optimal/realistic patient/family goals by promoting and encouraging each person's contributions is known as collaboration. Examples of these people are patients, families, and healthcare practitioners. It entails working across disciplines with peers and the community. Systems thinking refers to the set of skills and information that a nurse needs to manage the resources in the environment and systems for staff, patients, and families, either inside or outside of healthcare and non-healthcare systems (**AACN, 2023**).

The ability to identify, value, and take into account differences in the way that care is provided is known as the "reaction to diversity." Cultural, spiritual, gender, racial, ethnic, lifestyle, financial, age, and value distinctions are only a few examples of the many possible variances. The ability to assist patients and their

families, staff nurses, other members of the healthcare team, and the community in learning is known as facilitation of learning. It covers learning facilitation in both formal and informal contexts. The continuous process of challenging, assessing, and offering informed practice is known as clinical inquiry (innovator/evaluator). Using research and experiential learning to transform practices (**AACN, 2023).**

In the context of managing corporate performance, feedback is a crucial communication tool. Constructive feedback is one of the best methods to improve things. However, every kind of feedback requires information to be shared and received, thus the evaluation's benefits are lost if head nurses assess staff performance without also providing ongoing feedback (**Cziraki, 2019**). Between the head nurse and her/his staff nurses, performance feedback is a continuous process. Performance expectations, or what staff nurses are expected to do by standards, and performance exhibition, or what staff nurses do, are both included in the information exchange. Performance standards should always be the basis for constructive criticism, which can be used to address subpar work as well as commend strong work. Having a face-to-face discussion after gathering the data can offer help in solving performance problems (**Dana, 2019**).

Staff development is thought to be an effective way to influence an employee's conduct at work. Employee job satisfaction is increased. Conversely, it is imperative to comprehend any challenges about performance requirements and enhance performance in specific circumstances. If it is not based on well-defined criteria, it might not have an impact on performance in other circumstances or even have the opposite effect (**Islam & Rashad, 2019**).

Clear, comprehensible, relevant to the work tasks that employees attempt, and achievable are the requirements for performance criteria. Regular, insightful, and helpful feedback is taught to nurse managers. Additionally, to help staff overcome performance deficiencies that are discovered throughout the assessment process, employees should be given the proper

training and development opportunities. According to **O'Brien and O'Donnell (2019),** to improve patient satisfaction with staff performance, the assessment of individual employee performance must also concentrate on assessing the behavior and work performance of the employee rather than the personality traits of the employee.

Patient satisfaction is a gauge of the quality of care and provides information to clinicians about several medical topics, such as the efficacy and degree of empathy of the treatment (**Wikipedia, 2022**). Numerous things can seem to be at play when it comes to improving the patient experience. First of all, there are no internationally recognized definitions for patient experience or patient satisfaction, even though healthcare organizations have been discussing and emphasizing these concepts for a long time. Vendors of patient satisfaction surveys, for instance, employ contrasting terminology, which causes patients to understand things differently. The organization also lacks definitive studies that demonstrate the relationships between patient outcomes and satisfaction. Healthcare leaders naturally desire to understand the relationship, given the abundance of resources aimed at enhancing patient happiness (**Bickmore & Merkley, 2018**).

Patients are demanding better and higher standards of care and service, and they have increasing expectations of healthcare providers. Nowadays, a common outcome metric for assessing the caliber of healthcare provided is patient satisfaction. According to **Vuković (2022)**, contentment is an evaluation that is favorable regarding the healthcare that has been given about the objectives and expectations of the patient. However, a crucial factor that affects both productivity and the caliber of work produced is the job happiness of healthcare personnel. This intricate phenomenon is an attitude about one's work that affects one's career, health, relationships with coworkers, and motivation, among other things (**Sahlsten et al., 2020**).

Significance of the study:

According to the literature review conducted by the researcher, numerous international studies

have been published in professional articles and journals. These studies highlight the significance of applying a system in harmony with nurses' skills and abilities, and they also demonstrate how better patient care is achieved through the synchronization of nurses' competencies and patients' needs. The initial study, "From Theory to Practice Synergy," was conducted by **Curley (2018)**. The subsequent study, "Implementing synergy in a multi-hospital system," was examined by **Cox et al. (2019)**. The third study, "Examining the Nurses' performance quality and patient satisfaction in intensive care units," was conducted by **Curry (2018)**. The good contact between a nurse and patient requires time, as literature (**GhamariZare, et al., 2018**) and other research also highlight patient needs spending time as literature of (**Sahlsten et al., 2020**). So, the purpose of the study was to evaluate the effectiveness of synergies system implementation on staff nurses' competency, performance, and patient satisfaction.

Aim:

The study aimed to evaluate the effectiveness of synergies system implementation on staff nurses' competency, performance, and patient satisfaction.

Research hypotheses:

Synergies system implementation is expected to improve staff nurses' competency, performance, and patient satisfaction.

Subjects and method:

Design:

A quasi-experimental research design was used to achieve the aim of the current research

Setting:

The study was conducted in the Critical Care Unit at South Valley University Hospital.

Subject:

A convenience sample of Staff Nurses (N= 50) working in the previously selected setting and this study included 50 patients.

Data collection tools:

Tools: three tools were used for the data collected:

Tool (I) Synergies System Scale which consisted of two parts;

Part (I) Nurses' data such as age, gender, educational level, and years of experience.

Part (II) Nursing Competency Scale:

Nursing Competency Scale: (**AACN, 2023**) developed this instrument. Open-ended questions about nurses' knowledge are given by the researcher, who then translates the questions' components to the nurses. It has 38 items total that are broken down into eight categories: response to diversity (6 items), advocacy and moral agency (5 items), caring practice (5 items), clinical judgment (5 items), clinical inquiry (5 items), collaboration (3 items), learning facilitation (4 items), and systems thinking (5 items). Questions with a yes response received a score of one, and those with a no answer received a zero. The total scores of each nursing staff were categorized as unsatisfactory if the score was less than 80% and satisfactory if the score was 80% or more.

Tool (II) Patients' demographic data such as age, sex, and level of education.

Tool (III) Patients' Satisfaction Assessment tool:

The investigator created this instrument by examining pertinent literature (**Ahmed, 2014**). According to the synergies system, it assessed patients' satisfaction with nursing care competency. It has 23 items total, divided into three categories: expectations and needs (8 items), nurses' communication (10 items), and nurses' skills and competencies (10 items divided into three points for before, four points during, and three points after procedures are completed). Participants' answers were tallied using a 5-point Likert scale: very satisfied (point 5) = (4) = moderate satisfaction (3) = mild (2) = low (1).

Fieldwork:

Data collection was extended five months from the middle of July 2023 to the end of December 2023. Through group discussions,

the researchers explained the study's purpose to the nurses. Under the researchers' supervision, each nurse was given the chance to finish the questionnaire. It took about 30 to 35 minutes to finish the questionnaire form.

Content validity:

After the tools were translated into Arabic; a panel of experts (5 professors) from the academic nursing staff, at the Nursing Administration and Critical and Emergency Nursing Departments performed face and content validity to assess their clarity, relevance, comprehensiveness, and applicability. According to their opinions, no needed adjustments were made.

Tools reliability

Test consistency of the study was assessed using Cronbach's Alpha Coefficient test. The result was α = 0.898.

Pilot study:

It was carried out before starting the actual data collection to confirm the clarity, understanding, and applicability of the tools. Additionally, to estimate the required time to complete the questionnaire sheet. The pilot study was carried out on 5 nurses (10% of the study sample). The 5 nurses who participated in the pilot study were included in the study sample.

Administrative and ethical considerations:

The study was approved by the Ethics Committee and the dean of the Faculty of Nursing, at Sohag University. Verbal and written explanations of the nature and aim of the study have been explained to nurses included in the study. The researchers informed the participants that their participation was voluntary; they could refuse without any rationale, and they weren't forced to write their names with emphasis on the confidentiality of information as it would be used for research purposes only

The procedure of data collection:

The researchers met with each nurse for 25 to 30 minutes, during which they explained the purpose of the study and requested their oral consent to participate. The program was implemented over two weeks, with a total of 16 hours spread over four days, divided into eight sessions for each group, two sessions per day (beginning at 9 a.m., when participants were expected to be there and ending at 1 p.m. when they were asked to leave). As a result, all sessions were run by the participants' working hours. In the first session, the researcher provided an overview of the study's purpose, objectives, contents, and schedule. At the start of each session, the goals of the sessions were discussed.

Every day, there was feedback regarding the previous session, and each session concluded with a synopsis of the one that had just concluded. During the program's execution, the researcher employed a variety of instructional tactics, including brainstorming, small group discussions, think-pair-share, fishbowl exercises, PowerPoint presentations, flip charts, posters, illustrations, and video presentations. A comparison of the program's implementation before and after was made. Following the training session, all participants received their handouts.

Statistical Design:

Data entry was done using the SPSS v25 computer software package. Statistical software was used to confirm the collected data before automated data entry and analysis for social sciences (SPSS) v.g 20 programs. Data were presented using descriptive statistics in the form of frequencies and percentages for qualitative variables and means, and standard deviations for quantitative variables. Quantitative variables were compared using the chi-square test, paired t-test, Pearson correlation matrix, and (ANOVA test) were used, and statistical significance was considered at P-value ≤ 0.05.

Results:

Table (1): Portrays that, the mean age of staff nurses was **29.33 ±6.36**, 80% of them were females, 70% were with less than ten years of experience, and 70 of them had diploma degrees.

Table (2) illustrates that half (50%) of the studied patients were more than 55 years old,

(68%) of them were male, and (50%) were illiterate.

Table (3); shows that the knowledge score among the studied nurses post-synergies system implementation had improved compared to pre-synergies system implementation, with statistically significant differences between pre and post-synergies system implementation regarding all items of synergies system (at <0.001).

Figure (1) demonstrates that 14% of the staff nurses had a satisfactory level of total knowledge of pre-synergies system implementation. Compared to post synergies system implementation, this total knowledge level improved and became satisfactory among 88% of the staff nurses.

Figure (2): Reveals that almost all nurses (94%) had unsatisfactory performance levels regarding the Synergy system in pre-synergies system implementation, but post-implementation 86% of them improved to have satisfactory performance levels.

Table (4): Shows that, there was a positive correlation between performance and knowledge regarding synergies system items with statistical significance differences between them at P ≤ 0.001*. however, no correlation was identified with the pre-synergies system implementation.

Figure (3): reveals that 30% of the studied patients were very satisfied with all variables as regards needs of nurses' communication, nurse skills, and competencies pre-synergies system implementation. Which improved to 70% among them post nurses' communication, nurse skills, and competencies.

Table (1).Personal data of studied nurses (n=50)

Personal and job characteristics	No	%
Age in a year:		
< 30	30	60.0
30 - < 40	13	**26.0**
≥ 40	7	14.0
Mean ± SD	**29.33 ±6.36**	
Gender:		
Male	10	20.0
Female	80	**80.0**
Experience (in years):		
< 10	35	**70.0**
≥ 10	15	30.0
Educational Qualification:		
Nursing diploma	15	30.0
Technical diploma in nursing	35	70.0

Table (2): Demographic data of the studied patients (n= 50)

| Demographic data	No.	%
Age:		
< 50 years	14	28.0
50 - 55 years	11	22.0
> 55 years	25	50.0
Mean ± SD	51.44 ± 8.23	
Sex:		
Male	34	68.0
Female	16	32.0
Educational level:		
Illiterate	25	50.0
Primary	12	24.0
Secondary	5	10.0
University	8	16.0

Independent samples t-test   Chi-square test

Table (3): Comparison between knowledge score regarding synergies system among the Studied nurses Pre- and Post- implementation (n= 50)

Items	Pre (No/%)	Post (No/%)	X^2	P-value
Advocacy and moral agency	10 (20)	37 (74)	19.44	0.0001**
Caringpractice	7(14)	34(68)	17.33	0.0001**
Clinical judgment	12(24)	45 (90)	16.56	0.0001**
Clinical inquiry	17 (34)	38 (76)	19.77	0.0001**
Collaboration	8(16)	33(66)	17.88	0.0001**
Facilitation of learning	13 (26)	42 (84)	16.99	0.0001**
Response to Diversity	17 (34)	39 (78)	19.23	0.0001**
Systemsthinking	9(18)	35(70)	17.79	0.0001**

(**) highly statistical significance at $p < 0.001$
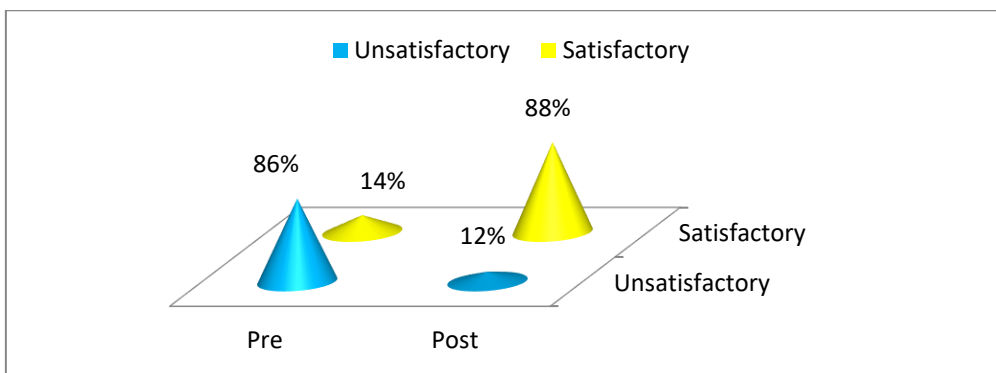
Figure (1): Total staff nurses' **Knowledge Level regarding** synergies system **pre and post-** synergies system implementation **(n= 50)**
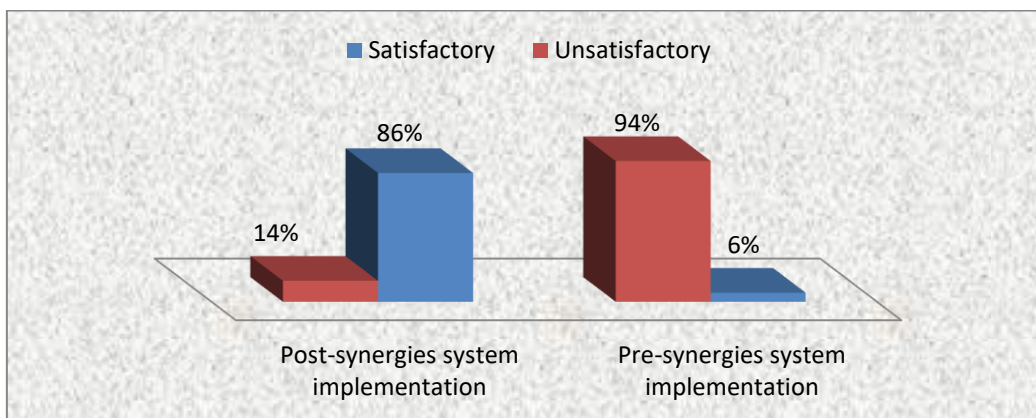

Figure (2): Total staff nurses' performance **level regarding** synergies system **pre and post-** implementation **(n= 50)**

   Table (4): Correlation between performance and knowledge regarding synergies system items of the studied staff nurses pre and post-implementation.

Items	Total knowledge			
	Pre-implementation		Post-implementation	
	r	p	r	P
Total performance	.079	.698	.787	.000**

(**) Correlation is highly significant at p<0.001
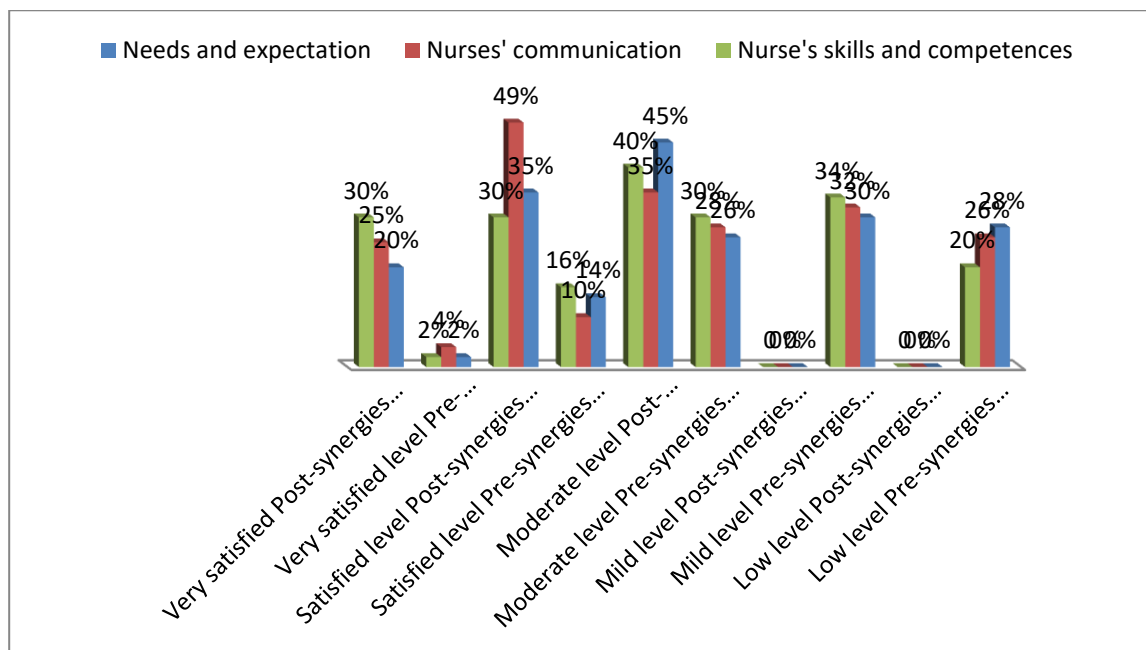
Figure (3): Patients' satisfaction level distribution regarding their needs and expectation, nurses' communication, nurse's skills, and competencies pre and post-synergies system implementation

Discussion

As a professional care model, the Synergy Model expresses a framework that determines the relationship between the nurse and the patient, other nurses, and the rest of the care team. Furthermore, this model provides nurses with a common language for defining and relating to patients' needs (**Kaplow & Reed, 2022**). This model is an excellent framework for organizing the patient's care performance within the healthcare system (**Kerfoot et al., 2020**). When examining the model as a basis for nursing care, three aspects of the outcomes can be taken into consideration the patient, the nurse, and the health care system. Three aspects of the outcomes can be taken into consideration when examining the model as a basis for nursing care. These aspects of the outcomes are patient satisfaction, complications rate, failure in resuscitation, and costs (**Kaplow & Reed, 2022**).

According to multiple surveys, Iran does not want its performance quality status. Ghamari Zare and colleagues' study, which looked into how well nurses performed and how satisfied patients were in the critical care unit, revealed that while nurses' therapeutic performance was better than other domains, their communicative and educational performance was weaker than other performances. However, in terms of overall performance, our results showed that 28% of nurses had weak performance, 64% had moderate performance, and only 8% had good performance (**Ghamari et al., 2018).**

The Synergies System is used in different settings and for many purposes, including patient care, staff development, and developing a nursing productivity measure (**Khalifehzadeh et al., 2022**). The results of the current study showed that most patients were between the ages of 55 and 60 and that most of them were male. These findings are corroborated by a study by **Melek (2019**), which discovered that the majority of MI occurs in people over 55 and becomes more common with increasing age. The American Association of Care Staff Nurses (AACN) synergy for patient care has grown to be widely accepted as an available system for professional nursing in the twenty-first century (**Kaplow, et al, 2019).** Synergies System lies in simplicity: It identifies the patient as the center focus, describing the patient's needs and the skills required of the nurse to best meet those needs (**Hardin, 2019).**

According to the results of the current study, the majority of staff nurses were females, the mean age of staff nurses was **29.33 ±6.36**, and less than three-quarters had a diploma in nursing education. This finding is consistent with **Mohamed's (2020)** finding that the majority of staff nurses under study hold a diploma in nursing.

The results of the current study revealed that the knowledge score among the studied nurses post-synergies system implementation had improved compared to pre-synergies system implementation, with statistically significant differences between pre and post-synergies system implementation regarding all items of the synergies system. From the researcher's point of view, it reflected the positive effects of synergies system implementation in improving staff nurses' knowledge

These findings are consistent with a study by **Rivet (2022)**, which noted that to ensure patient safety and rights, staff comfort and competence, and long working hours, frequent education on rarely used protocols is necessary. This is consistent with research conducted by Hardin and **Kaplow (2022),** which demonstrated that the work of nurses using the Organizational Synergies System framework leads to the ability to capitalize on the individual strengths of staff nurses required by the patient. Also, This is in line with the findings of a study conducted in 2022 by Kaplow, which showed that the Organizational Synergies System, when supported by organizational standards, defines the impact that professional nursing can have on outcomes other than patient outcomes. Professional nursing plays an important role in the health care system. This is consistent with research conducted by Hardin and **Kaplow (2022)**, which found that the clinical starts with the anatomy, physiology, and assessment related to a specific body system and then moves on to monitoring and intervention for patients in the coronary care unit.

This finding is consistent with a study by **Leske (2019)**, which found that early relationship-building between the nurse, family, and health team system will promote communication throughout the patient's critical illness. This finding contrasts with that of a previous study (**Gamal, 2019**), which found that nurses with baccalaureate degrees in nursing science had the highest knowledge scores. Conversely, research **(Hassan & Aboulazm, 2019)** indicates that staff nurses with baccalaureate degrees in nursing had the greatest knowledge ratings. This result was consistent with (**Ali, 2020**), who reported that staff nurses at the technical institute scored far higher on infection control tests than nurses with baccalaureate degrees or nursing diplomas.

The results of the current study revealed that less than one-fifth of the staff nurses had a satisfactory level of total knowledge of pre-synergies system implementation. Compared to post synergies system implementation, this total knowledge level improved and became satisfactory among the majority of the staff nurses. From the researcher's point of view, it confirmed the effectiveness of synergies system implementation. This is consistent with (**Mohamed, 2019**), who discovered that before the training program, participants lacked inadequate knowledge. According to this line (**Michael et al., 2019**). This is corroborated by (**Emam, et al., 2019 & American Association of Critical Nursing, 2019**), who mentioned that lengthy work hours and a lack of reward systems are two aspects that contribute to staff nurses' lack of expertise. However, **Rivet (2019)** noted that to guarantee staff competency and comfort as well as patient safety, it is crucial to regularly deliver education on rarely used techniques.

The results of the current study revealed that almost all nurses had unsatisfactory performance levels regarding the Synergy system in pre-synergies system implementation**,** but post-implementation the majority of them improved to have satisfactory performance levels. From the researcher's point of view, it confirmed the success of synergies system implementation, which leads to improving knowledge and is associated with improving performance.

The results of the current study revealed that there was a positive correlation between performance and knowledge regarding synergies system items with statistical

significance differences between them, however, no correlation was identified with the pre-synergies system implementation. From the researcher's point of view, it confirmed the good impact of synergies system implementation. in line with the findings of **Emam et al. (2019)**, who said that staff nurses' performance is enhanced by educational growth. It was in line with **Albert's (2018)** assertion that staff nurses would become more knowledgeable following their attendance at educational events. In agreement with (**Westfall, 2019),** who said that staff nurses employed in long-term care facilities can alter their behavior through the use of in-service education programs. These modifications may enhance long-term care facilities' staff nurses' capacity to oversee and encourage safe and effective medication therapy. Additionally, it was noted (**Fowler, 2019**) that staff nurses' knowledge gaps should be addressed through education, along with their acquisition of new therapy and trend knowledge.

In every context where staff nurses practice, education in health care—both patient education and nursing staff education—is a topic of great interest. A significant portion of a nurse's job is teaching. Research backs up the idea that patient education enhances compliance and, consequently, health and well-being held by staff nurses and other healthcare professionals. Increased compliance with treatment regimens due to improved client knowledge and cooperation with therapeutic regimens (**Carpenter & Bell, 2022).**

Enhancing quality and safety in healthcare requires education as a crucial link. Staff nurses play a key role in driving quality improvement since they are the main clinical care providers with a continuous bedside presence (**Dorham & Sherwood, 2018**). Clinical inquiry, as defined by **Hardin (2019)**, is the process by which a nurse observes, asks questions, smells, senses instinctively, listens, and integrates findings into oneself for the benefit of the patient.

The results of the current study revealed that less than one-third of the studied patients were very satisfied with all variables as regards needs nurses' communication, nurse's skills, and competencies pre synergies system implementation. Which improved to more than three-fifths among nurses' communication, nurse's skills, and competencies. From the researchers' point of view, it explained the role of synergies system implementation that improves staff nurses' knowledge and practice and is associated with improving patient satisfaction.

The majority of patients in Julayi and colleagues' study expressed more than half having moderate satisfaction with nursing care and less than two-fifths being highly satisfied (**Julayi et al., 2018**); **Nouhi et al., (2018)** reported the client's average satisfaction with nurses' educational performance as less than half which were at moderate level; in **Dehghan Nayeri et al., (2020)** study, more than three-quarters of patients expressed the satisfaction rate of nurses performance in their privacy at low and moderate level. Overall, patient satisfaction with care was more reported in the week and moderate level.

Nonetheless, **Rouhi et al.'s (2019)** research revealed that slightly less than 25% of patients reported moderate satisfaction and that over three-quarters of patients were satisfied with their care.

In **Yellen, (2021)** qualitative analysis, three judgments on the effectiveness of using the Synergy method were drawn. For patients, this meant changing how they behaved and performed, quitting smoking, having better tolerance, experiencing less pain and intermittent claudication, and having a higher quality of life. Conclusions for the system were lowering adverse events, lowering complications, lowering the death rate, and shortening hospital stays. For the nurse, the finding was building an effective therapeutic relationship with the patient. Applying this technique is essential to meeting the cultural demands of the patient, according to **Smith (2019)**.

Kuriakose (2018) discovered that the utilization of authorized characters in this system leads to better nursing care for patients and enhances the patient's prognosis through better communication between the nurse and the system, the patient's family, and the nurse herself. According to **Brewer et al. (2019)**, developing a rapport between the nurses and patients' personalities improves the quality of

the intervention's outcome. According to **Arashin (2020**), using the Synergy system as a Rapid Response Team (RRT) guide improves coordination and relationships, accelerates preventive treatments, and improves patient outcomes from those interventions.

Conclusion:

Based on the findings of the current study, it can be concluded that Synergies system implementation positively affects staff nurses' competency, performance, and patient satisfaction. The knowledge and performance of staff nurses regarding the Synergies system improved following its introduction. The knowledge of the synergy system and all performance categories correlated positively and statistically significantly.

Recommendation:

Based on the study findings, the following recommendations will be made: Develop educational programs for nursing staff who care for patients in all units at all hospitals; Repeat this research with a larger sample size and a different government hospital for generalization; Further research is advised to develop tools in nursing guidelines for patient care. Ongoing training about the synergies system for all nurses is recommended to be applied.

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