

▪ **Basic Research**
Intern Nurses' Attitudes about Using Six Thinking Hats Strategy and its Relation to Their Clinical Competencies

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Abstract

Background: Six thinking hats is one of the most crucial strategies for fostering creativity and enhancing the clinical competencies of intern nurses. **Aim:** The study aimed to assess intern nurses' attitudes about using six thinking hats strategy and its relation to their clinical competencies. **Research Design:** Descriptive correlational research design was utilized. **Setting:** The study was conducted in all departments where intern nurses trained at Benha University Hospitals. **Sample:** Convenient sample of intern nurses (470) at the academic year 2023/2024 who trained at above mentioned study setting. **Tools of data collection:** Two tools were used; (I): Six Thinking Hats Strategy Attitudes Questionnaire, (II): Clinical Competence Scale. **Results:** The findings of this study showed that (66.2%) of studied intern nurses had positive attitude level regarding using six thinking hats strategy and (57.7%) of studied intern nurses reported that clinical competency level was competent. **Conclusion:** There was a highly statistically significant positive correlation between total intern nurses' attitudes about six thinking hats strategy and total clinical competencies scores. **Recommendations:** Supporting intern nurses by increasing participation in training courses and workshops to improve their clinical competencies by using six thinking hats strategy. Urging faculty of nursing prepared guidebook include one models of how to use the six thinking hats strategy for the development of creative thinking skills and clinical competencies.

Keywords: Clinical competencies, Intern nurses' attitudes, Six thinking hats strategy.

Introduction

The internship year is the last clinical year where intern nursing students practice patient care in a medical environment. By giving intern nurses the opportunity to administer direct patient care while being supervised by a preceptor, the internship year seeks to increase their clinical competency. The information, abilities, and attitudes that intern nurses demonstrate during their practical rotation make up their clinical competence (**Hashem, 2021**). Nursing Students' reactions to using the six thinking hats reflect the attitudes of the intern nurses, and the views and emotions that intern nurses typically have on a particular issue, particularly when they manifest themselves in behavior (**Albloushi et al., 2023**).

The six thinking hats strategy is one of the most crucial techniques for enhancing and cultivating creative thinking which gives intern nurses the tools to plan ahead and think creatively while also creating possibilities for problem-solving. Moreover, the six thinking hats technique instructs intern nurses on how to think and then compels them to think differently. For example, switching to the "green hat" method of thinking activates the intern nurses' minds and allows them to view things from many angles (**Al-Sababha, 2023**).

Edward de Bono six thinking hats techniques were identified; participants wore the hats in turn to show different ways to think; each hat's color corresponded to a different purpose; for example, the white hat represents analytical and objective thinking, emphasizing facts and viability. Red hat refers to subjective sentiments, opinion, perception, and emotional thinking. Blue hats, on the other hand, focus on organized thought, high-level situational overviews, or the big picture, and observe things from a distance (**Phuntsho & Wangdi, 2020**).

Yellow hat is the optimistic point of view that helps to perceive all the advantages and values of the decision and gives the best-case scenario and expects the best result. Black hat is concerned with critical, speculative, and uncertain thinking (**Gupta & Bodhankar, 2023**). Finally, green hat is concerned with original, associative thinking, fresh concepts and brainstorming ideas without regard to viability (**Morsy & Darweesh, 2021**).

The six thinking hats strategy is intended to assist intern nurses in adopting a wide range of perspectives in order to view the situation from multiple angles. It also equips them with the necessary time and effort to be exceptional and successful in scientific settings and transforms negative and inflexible attitudes into creative positions (**Al-Karimin, 2017**).

Additionally, by matching the colors of each thinking hat to the type and quality of thinking it represents, intern nurses can employ just one pattern of thinking at a time using the six thinking hats. The six thinking hats method is also useful for gathering data objectively, correctly analyzing it, coming up with fresh concepts and solutions, seeing possibilities, and selecting the best options (**Elsayed & Abbas, 2021**). It fosters cooperative thinking in all intern nurses, which enhances teamwork, interpersonal communication, lessens arguments and conflicts, and creates a fun and creative environment for competition. Moreover, foster critical thinking in all of its manifestations and give aspiring nurses constructive strategies for handling the variety of circumstances they encounter on a daily basis (**Mohamed & Ahmed, 2016**).

For intern nurses pursuing a nursing career, which requires a wealth of skills, knowledge, ethical behaviors, and competences, an internship year is an essential first step. To have competent, professional intern nurses who can give patients nursing care and practice in an efficient and professional manner, all of these should be united. For this reason, confirming professional, ethical, high-quality, and safe nursing care requires a clear distinction in clinical

competence (**Notarnicola et al., 2023**). In order to improve their future competency, nursing students, especially those undergoing internships, must gain more clinical experience during their training. During their training, they are required to practice more than just task-related clinical skills in order to deliver high-quality nursing care (**Thabet et al., 2020**).

The capacity to incorporate knowledge, skills, attitudes, and values into a clinical setting is known as clinical competency. In clinical settings, nurse management, nursing education, and crisis situations, it is crucial (**Najafi et al., 2022**). It can also be defined as the ability to do a nursing task and provide the desired outcomes in a clinical setting. Clinical competency is essential for assisting student nurses in reaching their objectives and improving their sense of fulfillment and involvement in clinical settings (**Albloushi et al., 2023**). There are different categories of nursing competencies include such as helping role, managing situations, diagnostic function, and work role, ensuring quality, therapeutic intervention and teaching/coaching (**Numminen et al., 2013**).

Clinical competency takes into account the intern nurses' foundational education, training, knowledge, and abilities that they have mastered over their academic and professional year. Additionally, clinical competency help to manage knowledge to make professional decisions, acquire necessary psychomotor skills, and build interpersonal relationships. Nursing practice is also expected to contribute to the ultimate goal of patient safety and assist intern nurses in making clinical decisions that are fundamental to the provision of complete patient care (**Tabriz et al., 2017**).

Significance of the study:

The six thinking hats strategy is a proven method for streamlining thought processes and boosting their efficacy. It also gives intern nurses complete option to switch up their approach when dealing with a given scenario, keeping them clear of complexities and confusion. These hats highlight the idea that thinking is a methodical, controlled process that enables intern nurses to think both consciously and unconsciously by gathering and analyzing data. The six thinking hats approach was developed to teach intern nurses how to adapt quickly to changing circumstances, look for alternatives, and enhance their thought processes. These skills can then be applied to increase their performance and clinical competencies (**Phuntsho & Wangdi, 2020**). So, this study will be conducted to assess intern nurses' attitudes about using six thinking hats strategy and its relation to their clinical competencies.

Aim of the study:

The study aimed to assess intern nurses' attitudes about using six thinking hats strategy and its relation to their clinical competencies.

Research questions:

1. What are levels of intern nurses' attitudes about using six thinking hats strategy?
2. What are levels of intern nurses' clinical competencies?
3. Is there a relation between intern nurses' attitudes about using six thinking hats strategy and their clinical competencies?

Subjects and Method

Research design: A descriptive correlational research design was utilized to carry out this study.

Study setting:

The study was conducted (4) main training areas at Benha University Hospital (Qalyubia Governorate, Egypt). Which each training area under supervision of nursing administration department; each training area took (3) months. *First area named;* Medical Surgical Nursing Areas; including (Intensive Care Unit, Emergency Intensive Care Unit, Intermediate Intensive Care Unit and Operation Unit). *Second area named;* obstetric and gynaecological nursing areas; including (Oncology Intensive Care Unit, Birthing Booth). *Third area named;* Paediatric nursing areas; including (Neonate Intensive Care Unit, Premature Care Unit) and *Fourth area named;* Selective Training Areas. The capacity of Benha University Hospital (880) beds, it provide free and economic services for patients.

Subjects:

Convenient sample consisting of the available intern nurses (470) at the academic year 2023/2024 from Benha University, who working at the above mentioned setting at the time of study and accepted to participate in the study.

Tools of data collection:

Data was collected through two main tools as the following:

Tool (I): Six Thinking Hats Strategy Attitudes Questionnaire:

It was adapted from **Karadag, Saritas & Erginer (2009)** and modified by researchers to assess the intern' nurses' attitudes levels about using the six hats thinking strategy. It included 20 items consisted of two parts: Part I; Socio demographic data of intern' nurses included; age, gender, marital status, graduation grade, residence, have you ever worked while studying, had taken training courses about six hats strategy and training areas. Part II; consisted of 20 items to assess intern' nurses' attitudes about using the six hats thinking strategy.

Scoring system:

Intern nurses` responses were assessed using a three-point Likert scale ranging from "1" disagree to "3" agree. Scores were calculated and converted into percent total scores from 20 to 60 points, scores that reveal the level of intern' nurses attitudes about using the six hats thinking strategy was classified as the following: "Positive" if the percent $\geq 75\%$ was equal (45 to 60) "Negative" if the percent $< 75\%$ was equal (20 to 44) **Karadag et al., (2009)**.

Tool (II): Clinical Competence Scale:

Self-reported scale was developed by **Meretoja, Isoaho & Leino-Kilpi (2004)** to assess intern nurses' clinical competency levels. The clinical competency scale is composed of 73 items distributed across seven categories: 'Helping role' (7 items), 'teaching coaching' (16 items), 'diagnostic functions' (seven items), 'managing situations' (8 items), 'therapeutic interventions' (10 items), 'ensuring quality' (6 items) and 'work role' (19 items).

Scoring system

Intern nurses` responses were rated by using a five-point Likert scale, ranging from "1" never to "5" always. Scores were calculated and converted into percent that ranged from 73 to 365 points, scores that reveal the level of clinical competencies was classified as the following: the was measured as; "Competent" if the percent ≥ 75 was equal (274 to 365). "Incompetent" if the percent $< 75\%$ was equal (73 to 273) Meretoja et al., (2004).

Methods

The study was executed according to the following steps:

Approval

After explaining aim of the study to the director of Benha University Hospitals, the General Director and Nursing Director of Benha University Hospitals provided official permission.

Preparatory phase

The preparatory phase lasted two months, from the beginning of October 2023 to the end of November 2023, and included the following activities: Using journals, magazines, periodicals, textbooks, the internet, and theoretical understanding of the various elements of the study's area, as well as reviewing national and international relevant information to adopt and modify tools of data collection.

Pilot study

A pilot study was conducted in December 2023 to assess the applicability, feasibility and clarity of the included tools, as well as to estimate the time required to complete the study tools. It was done on 10% of the total number of research participants (47 intern nurses). There were no changes made; intern nurses who participated in the pilot study were included in the study's main subjects.

Fieldwork

The actual fieldwork took place across three months, from the beginning of January 2024 to the end of March 2024. The researchers gathered data by meeting with intern nurses on the shift and explaining the study's aim. Intern nurses were questioned during morning and afternoon working hours and according to their availability for three days per week; the daily number of intern nurses interviewed daily ranged from 18 to 22. The questionnaires took from 20 to 30 minutes to answer. Completed forms were gathered on time and double-checked for accuracy to avoid missing data.

Validity and reliability

A panel of specialists comprised of five experts from Nursing Administration Department at Faculty of Nursing Benha University (5 assistant professors) reviewed and tested the content validity of the data collecting tools, and adjustments were made based on their feedback.

The Cronbach's Alpha test was also used to assess the tools' reliability in terms of internal consistency and homogeneity. The internal consistency of the Six Thinking Hats Strategy Attitudes Questionnaire was 0.897, and Clinical Competency Scale was 0.923.

Ethical consideration

Prior to the conduction of the study, ethical approval was obtained from the Scientific Research Ethics Committee at Faculty of Nursing Benha University Ethical code (REC-NA-P3). All participants interviewed to explain the study's aim and methods, and they had the option to withdraw at any moment during the study. Furthermore, all data was coded to preserve the subjects' confidentiality and anonymity. Taking a page from a questionnaire implied verbal agreement to participate.

Statistical design

The data was organized, tabulated, and statistically analyzed using the Statistical Program for Social Science (SPSS) version 25 for Windows on an IBM compatible computer. In this research, descriptive statistics were used (e.g. frequency, percentages, mean and standard deviation). As a test of significance, Pearson correlation coefficient (r) was used to examine the nature of the link between the research variables. A significant level value was considered when p -value <0.05 and a highly significant level value was considered when p -value <0.001 , while p -value >0.05 indicates non- significant results.

Results

Table (1) Shows that less than three quarters (72.3%) of studied intern nurses were aged +23 years old with a mean age was 23.71 ± 2.66 . And more than three-quarters (77.6%) of them were females. And the majority (87.9 %) of them were unmarried. As regard graduation grade, three fifth (60.2%) of them were excellent grade and less than slightly three fifth (56.6%) of them were from rural area. As far as their worked while studying, training courses about six thinking hats strategy were had 65.7% & 53.0% of them were worked while studying & had taken training courses respectively.

Table (2) Shows that mean and standard deviation of total six thinking hats strategy attitudes and total clinical competence dimensions as reported by intern nurses. total six thinking hats strategy attitudes was 47.28 ± 6.24 that represents %78.8 of total scores.

Table (3) Shows that mean and standard deviation of total clinical competence dimensions as reported by intern nurses. Total clinical competencies dimensions was 271.81 ± 24.05 that represents 74.5% of total scores. The highest domain was helping role and the lowest domain was teaching-coaching.

Table (4): Demonstrates that there was a highly statistically significant positive correlation between total intern nurses' attitudes about six thinking hats strategy and total clinical competencies scores (p -value= 0.000**).

Table (1): Frequency distribution of intern nurses regarding their Socio demographic data (n=470).

Socio demographic data		Intern nurses (470)	
		No	%
Age	< 23years	130	27.7
	+23 years	340	72.3
	Mean ± SD	(23.71±2.66)	
Gender	Male	105	22.4
	Female	365	77.6
Marital status	Unmarried	413	87.9
	Married	57	12.1
Graduation grade	Excellent	283	60.2
	Very good	100	21.3
	Good	51	10.9
	fair	36	7.6
Residence	Urban	204	43.4
	Rural	266	56.6
Have you ever worked while studying?	Yes	309	65.7
	No	161	34.3
Had taken training courses about six thinking hats strategy?	Yes	249	53.0
	No	221	47.0

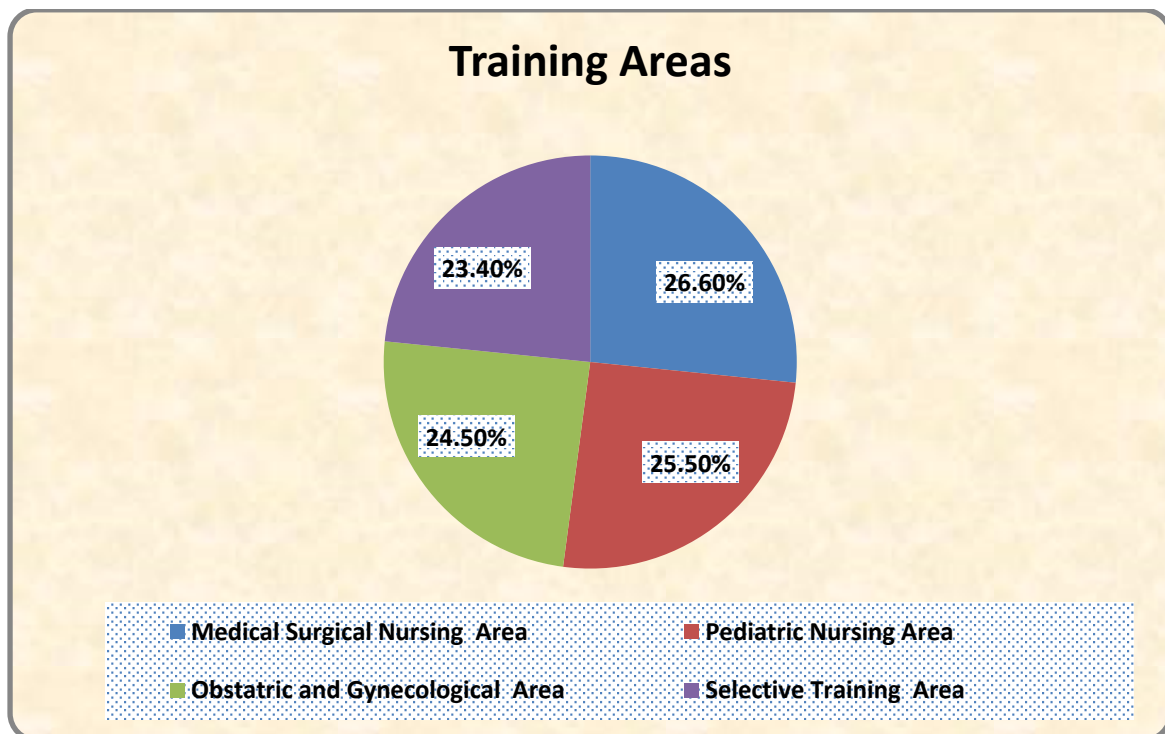
Figure (1): Percentage distribution of intern nurses according to their training areas

Figure 1: Clarifies that the highest percent (26.6%) of intern nurses were trained at medical surgical nursing area. While the lowest percent (23.4) % of them were trained at selective training area.

Table (2): Mean and standard deviation of total six thinking hats strategy attitudes as reported by intern nurses

Variables	Max score	Mean \pm SD	Mean %*
Total attitudes about using six thinking hats strategy	60	47.28 \pm 6.24	78.8%

* Percentages are calculated relative to maximum score.

Table (3): Mean and standard deviation of total clinical competencies dimensions as reported by intern nurses

Variables	Max score	Mean \pm SD	Mean %*
Helping role	35	30.43 \pm 3.48	86.9%
Teaching-coaching	80	51.28 \pm 5.47	65.4%
Diagnostic functions	75	52.75 \pm 3.41	70.3%
Managing situations	40	29.14 \pm 1.82	72.85%
Therapeutic interventions	50	38.42 \pm 2.79	76.8%
Ensuring quality	30	22.48 \pm 3.42	74.9%
Work role	95	76.45 \pm 5.48	80.5%
Total clinical competencies	365	271.81\pm24.05	74.5%

Table (4): Correlation between total six thinking hats strategy nurse interns' attitudes and clinical competencies

Variables	Total six thinking hats strategy intern nurses' attitudes	
	<i>R</i>	<i>P</i>
Total clinical competencies	0.897	0.000**

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

Figure (2): Levels of studied intern nurses regarding total attitudes about using six thinking hats strategy

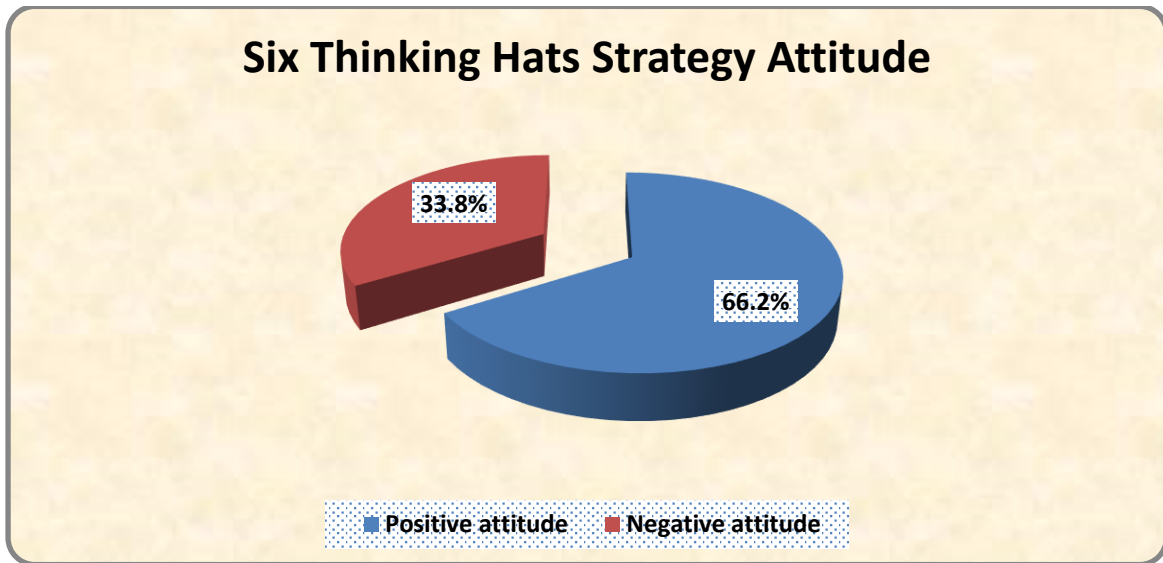


Figure 2: Illustrates that about two thirds (66.2%) of studied intern nurses had positive attitude regarding using six thinking hats strategy. While, more than third (33.8%) of them had negative attitude regarding using six thinking hats strategy.

Figure (3): Levels of total clinical competencies as reported by intern nurses

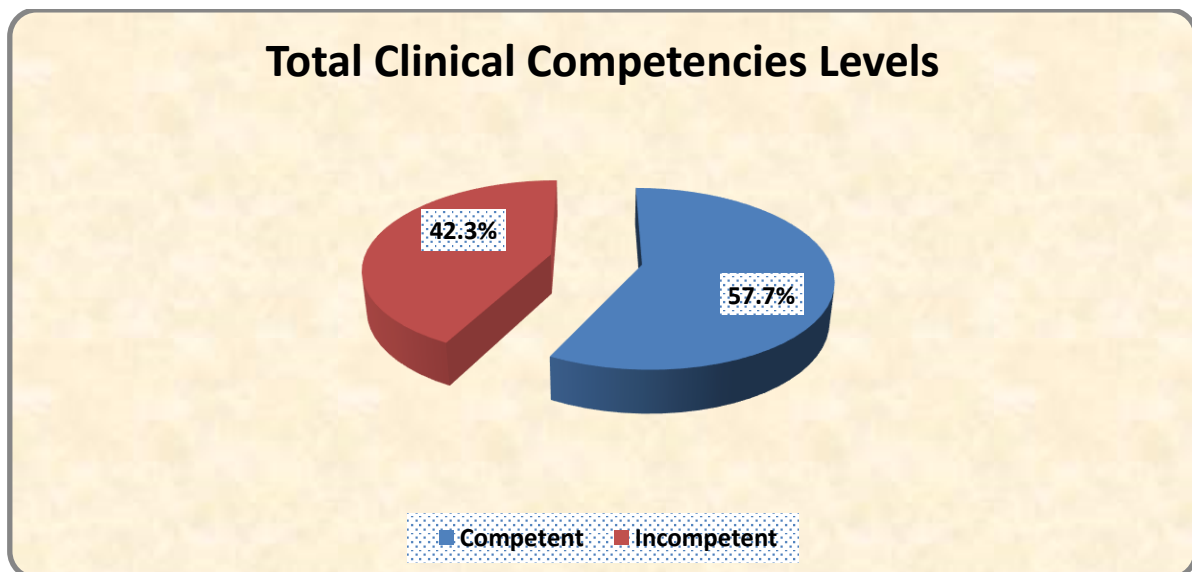


Figure 3: Demonstrates that less than three fifths (57.7%) of studied intern nurses reported that clinical competency level was competent. and about two fifth (42.3%) of them reported that clinical competency level was incompetent.

Discussion:

Six thinking hats is practical thinking tool that acts as a role-playing model. It is as a team-based problem solving and brain storming technique that can be used to explore problems and solutions and uncover ideas and options that overlooked by a homogeneously thinking group. On the same line, it separates the components of thinking in order to do them

properly as there is no one brain ideal for all types of thinking. Also, it provides a framework to help intern nurses think clearly, thoroughly and directs thinking attention in one direction at a time (**Job et al., 2015**)

Moreover, it facilitates productive, critical thinking, collaboration, communication, creativity, enhances clinical competencies and enables each intern nurse unique point of view to be considered and assign each member of the team a different, one-dimensional “Thinking Hat” for the duration of the problem solving and enhance clinical competencies (**Gupta & Bodhankar, 2023**).

The current study aimed to assess intern nurses' attitudes about using six thinking hats strategy and its relation to their clinical competencies.

Regarding to the personal data of studied intern nurses, the findings of the present study showed that less than three quarters of studied intern nurses were aged +23 years old. And more than three-quarters of them were females. And the majority of them were unmarried. As regard graduation level three fifths of intern nurses were had excellent level and less than slightly three fifth of them were from rural areas. As far as their worked while studying more than two thirds of them were worked while studying. In relation to training courses about six hats model more than half of them had taken training courses respectively. Finally, the highest percent of intern nurses were trained at medical surgical nursing area. While, the lowest percent of them were trained at selective training area.

Regarding to levels of studied intern nurses' attitudes about using six thinking hats strategy, the findings of the present study illustrated that more than two thirds of studied intern nurses had positive attitude regarding using six thinking hats strategy. From the researchers point of view this may be due to more than half of intern nurses received training courses about using six thinking hats strategy facilitated intern nurses to empathize with the patient; sharing different ideas and opinions; considering the patient holistically; generating creative ideas; looking at an event from positive and negative aspects; and developing their system of thinking and their clinical competencies.

In addition to, retaining the six thinking hats strategy stimulates competition among intern nurses effectively contributing to their motivation, raising their level of ambition and their continuing desire to accomplish other activities; which has had a significant impact on their increased acquisition of creative thinking skills and lead to enhance clinical competencies.

This result was in agreement with **Mostafa et al., (2020)** who conducted study about «The effectiveness of using the six-hats teaching method on improving thinking skills among critical care nursing students» they found that the vast majority of the nurses intern were satisfied about the using of six hats model. In addition to they reported that the majority of nurses intern agree that the six hats model made them consider the negative and positive aspects of the disease and think about the various aspects of a subject, also the model helped them produce creative ideas, provided them for sharing of different ideas and thoughts, improved their thinking systems. and increased their interest and motivation and competencies in training area.

In the same line, **Mahamod, et al., (2019)** who conducted study about «Knowledge differences, attitudes and practices using six thinking hats by gender and specialization in the Malay language primary school teachers»; **Isnon & Badusah (2017)** who conducted study about «The Competence of Malay language teachers in applying high level thinking skills in

teaching and learning» who indicated that the intern nurses attitude toward six hats model was at the high level. In addition to, **Ercan & Bilen, (2014)** who conducted study about « Effect of web assisted education supported by six thinking hats on students' academic achievement in science and technology classes» who reported that web-assisted education materials prepared with the use of the six thinking hats technique increased intern nurses' attitudes.

The finding of the present study was parallel with **Afriani & Atiqa, (2019)** who conducted study about « Application of six thinking hats method in improving students' thematic learning outcome in elementary school. In Proceedings of the 1st International Conference of Science and Technology in Elementary Education» who reported that there was a significant increase in the application of the six thinking hats method to respondent' attitude. The results of this study were supported by the findings of **Isa (2015)** who conducted study about « the knowledge, skills of the implementation and attitude of primary school Islamic teachers towards the comfort of learning styles. Master Thesis of Education» who stated that participants had positive attitudes towards six thinking hats method.

The result of the present study was in agreement with **Job et al., (2015)** who conducted study about « A Study to compare the perspective towards six thinking hats and traditional teaching technique among baccalaureate nursing students at selected college of nursing, kozhencherry» who reported that the majority of the samples preferred six hat teaching strategy more than traditional teaching technique as the majority of the samples verbalized that six thinking hats technique as an excellent teaching method this method is good.

The results was agreed with **Ismail (2021)** who conducted study about « The Effect of Utilizing the Six Thinking Hats Strategy on Developing the English Language Speaking Skill and Attitudes towards it among Online EFL General Diploma Students » who Mentioned that six thinking hats strategy proved to achieve significant development on the positive nurses intern' attitudes towards learning.

The findings of the present study demonstrated that more than half of studied intern nurses reported that clinical competency level was competent, and about two fifth of them reported that clinical competency level was incompetent. From the researchers point of view intern nursing students seemed to have great trust in their levels of competence at the time of training at hospitals. This result may be due intern nurses who positive attitude about using of six hats strategy it lead to the quality of clinical training courses their received about six hats strategy may be increase intern nurses' performance in the clinical area. And also, intern nurses had perceived their level of competence to high competency that can be related to their self-efficacy to use their skills. In addition to the orientation program that held for their courage nurse interns to feel safe and enable them to demonstrate competence

The findings of the present study was in the same line with **Mohamed & Mohamed (2021)** who conducted study about « Perceiving Psychological Empowerment and Its Relationship to Clinical Competence and Professional Values among Nursing Intern Students » who reported that more than half of nursing intern students had high level of total clinical competence.

The findings of the present study was Similar to **Ubas-Sumagasyay & Oducado, (2020)** who conducted study about « Perceived Competence and Transition Experience of New Graduate Filipino Nurses » who stated that intern nurses had a high level of self-reported

competency. Also, this result was in the same line with **Faraji et al., (2019)** who conducted study about « Evaluation of the clinical competency level among nurses working in Kermanshah University of Medical Sciences affiliated hospitals» who reported that nearly more than half of intern nurses had a good clinical competency level.

In the same line, **Albagawi et al., (2019)** who conducted study about « Self- efficacy and clinical competence of fourth-year nursing students: A self-reported study» who found that the nursing students had a high level of clinical competence. In addition, this result was matched with **Adib Hajbaghery & Eshraghi Arani, (2018)** who conducted study about « Assessing nurses' clinical competence from their own viewpoint and the viewpoint of head nurses: A descriptive study» who concluded that about two-thirds of intern nurses had good clinical competence level.

The results disagreed with **Getie, et al., (2021)** who conducted study about « Clinical practice competencies and associated factors among graduating nursing students attending at universities in Northern Ethiopia: institution-based cross-sectional study» who reported that more than one quarter of graduated nursing students were competent and nearly to three quarters were incompetent. On the other hand this result was contradicted with **Soroush et al., (2016)** who conducted study about « The relationship between nurses' clinical competence and burnout in neonatal intensive care units » who found intern nurses were moderate clinical competent.

On the other hand, the results of the present study contrary to the study by **Biftu et al., (2016)** who conducted study about « Perceived clinical competence among undergraduate nursing students in the University of Gondar and Bahir Dar University, Northwest Ethiopia: A cross-sectional institution based study» who as they reported that more than half of the graduated nursing students perceive themselves as incompetent.

The findings of the present study showed that the highest domain was helping role followed by work role, then therapeutic interventions, then ensuring quality, then diagnostic functions and finally the lowest domain was teaching–coaching.

From the researchers' point of view; these findings could be attributed to the fact that intern nurses are mentored throughout their training period with highly qualified trainers who prepare the trainees to efficiently provide comprehensive nursing care to their patients. Preceptors act as professional role models and are therefore responsible for displaying a positive attitude toward the nursing profession and the patients while providing acceptable levels of conduct. They also facilitate the smooth transition of nurse interns into the field of clinical nursing practice by informing and helping them to understand social, psychological, religious, and cultural aspects related to nursing. Also, from the researchers' point of view, the high level of clinical competency of internship students is a result of activating training orientation programs at the beginning of the internship period for students to prepare the new nurses for their specific units to facilitate their transition from university to the practical environment.

The findings of the present study was in accordance with **Alnajjar et al., (2019)** who conducted study about « Assessing the effectiveness of two internship clinical training programs: Impact on the perception of competency enhancement and student satisfaction» who they found in their study that most interns perceived themselves to be most competent in the subscale of work role and most interns used the clinical competencies related to a working

role more frequently than any other subscales of competence. In addition **Jiménez et al., (2016)** who conducted study about « Values in nursing students and professionals: An exploratory comparative study» who reported that regarding the seven factors of the nursing competencies the highest mean score present was related to ‘work role, managing situations, and therapeutic interventions’

The findings of the present study was supported by **Faraz, (2016)** who conducted study about « Novice nurse practitioner workforce transition into primary care: A literature review » who mentioned that there is wide range of clinical competence related to helping role domain. On the other hand this result was inconsistent with **Namadi- Vosoughi et al., (2014)** who conducted study about «Assessing nursing graduates clinical competency from the viewpoints of graduates and head nurses » who they reported that the early graduated nurses were the least scored domain was the competence in management and leadership. Also, **Meretoja, et al., (2004)** who conducted study about « Nurse competence scale: Development and psychometric testing » who reported that the lowest score was related to the use of quality assurance. In addition, **Kalantary et al., (2016)** who conducted study about « Determination of nurses’ clinical competence in critical care ward in Golestan hospital» who reported that the component of “quality assurance” was at the lowest level among nurses. In addition to this finding was in disagreement with **Abd El-Hamed & Ebrahim, (2021)** who conducted study about « Perceiving psychological empowerment and its relationship to clinical competence and professional values among nursing intern students » who as they reported that the highest domain was work role followed by teaching–coaching., then therapeutic interventions, then managing situations then diagnostic functions then helping role, then diagnostic functions and finally the lowest domain was then ensuring quality.

In addition to, the findings of the present study demonstrated that there was a highly statistically significant positive correlation between total six thinking hats strategy intern nurses' attitudes and total clinical competence scores. From the researchers point of view this would be attributed to the nature of this strategies as it is in lines with the recent trends in teaching to focus on student involvement in the educational process. It provides an opportunity for the student to express opinions, put forward ideas, defend them, and critique others'. In addition, it may be due to the characteristics of this strategy, as it allows students to get used to flexibility in thinking without restrictions, and shifts from one pattern to another, diversifies This thinking patterns between neutrality, emotional, positive, negative, creativity and inclusiveness.

his finding of the present study was supported by **Mahamod, et al., (2019)** who conducted study about « Perceiving Psychological Empowerment and Its Relationship to Clinical Competence and Professional Values among Nursing Intern Students» who as they found that the use of six thinking hats in the teaching and learning can increase the competence, interest and achievement of the student.

This finding of the present study was supported by **Hahn, (2022)** who conducted study about « Critical thinking or critical creativity: applying De Bono's six thinking hats to speech-language pathology education and practice» who as who found that there was associations between undergraduate and graduated nursing students’ lateral thinking styles (i.e., hat color) and their level of clinical experience.

In the same line **Azeez, (2016)** who conducted study about « Six Thinking Hats and social workers' innovative competence: An experimental study » who revealed that there exists positive and significant effect of six thinking hats on participants' innovative competence. The implication of the finding is that participants' innovative competence was significantly improved by six thinking hats training technique.

Conclusion:

Based on the findings of current study it can be concluded that more than two third of studied intern nurses had positive attitude regarding using six thinking hats strategy and less than three fifth of studied intern nurses reported that clinical competency level was competent. Also, there was a highly statistically significant positive correlation between total intern nurses' attitudes about six thinking hats strategy and total clinical competencies scores.

Recommendations:

- Supporting intern nurses by increasing participation in training courses and workshops to improve their clinical competencies by using six thinking hats strategy.
- Urging faculty of nursing prepared guidebook include one models of how to use the six thinking hats strategy for the development of creative thinking skills and clinical competencies.
- Developing six hats thinking strategy to improve the weaknesses points of intern nurses in the professional values adapted to cultural, social, and religious conditions prevailing in the faculties and hospitals.
- In the hospital, nurse managers need to pay more attention to nurse interns' to improve clinical competencies with concern professional value.
- Further studies about professional behavior challenge facing intern nurses.
- Further studies about exploring the gap between theory and practice in different cultures and contexts.

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الملخص العربي

إتجاهات مرضى الإمتياز عن إستخدام إستراتيجية قبعات التفكير الست وعلاقتها بكفاءاتهم العملية

المقدمة: تعتبر قبعات التفكير الست واحدة من أهم الاستراتيجيات لتعزيز الإبداع وتعزيز الكفاءات العملية لمرضى الإمتياز.

الهدف: هدفت الدراسة إلى تقييم إتجاهات مرضى الإمتياز عن إستخدام إستراتيجية قبعات التفكير الست وعلاقتها بكفاءاتهم العملية.

التصميم: تم استخدام تصميم الارتباطي الوصفي.
مكان الدراسة: أجريت الدراسة في جميع الأقسام التي يتدرب فيها مرضى الإمتياز بمستشفيات جامعة بنها. **العينة:** العينة المتاحة من مرضى الإمتياز المتدربين (470) في العام الدراسي 2024/2023م في مكان الدراسة المذكور أعلاه.
أدوات جمع البيانات: تم تجميع البيانات باستخدام أداتين وهم اولاً: استبيان إتجاهات إستراتيجية قبعات التفكير الست، ثانياً: مقياس الكفاءة العملية.

النتائج: أظهرت نتائج هذه الدراسة أن ما يقرب من ثلث مرضى الإمتياز (66.2%) لديهم مستوى اتجاه إيجابي تجاه استخدام إستراتيجية قبعات التفكير الست، و اكثر من نصف مرضى الإمتياز (57.7%) أفادو بأن مستوى الكفاءة العملية كان كفوياً.
الاستنتاج: كان هناك علاقة إيجابية ذات دلالة إحصائية عالية بين إتجاهات مرضى الإمتياز نحو إستراتيجية قبعات التفكير الست وأجمالي درجات الكفاءات العملية.

الخلاصة والتوصيات: دعم مرضى الإمتياز من خلال زيادة المشاركة في الدورات التدريبية وورش العمل لتحسين كفاءاتهم العملية باستخدام إستراتيجية قبعات التفكير الست. نحث كلية التمريض إعداد دليل يتضمن نموذجاً لكيفية استخدام إستراتيجية قبعات التفكير الست لتنمية مهارات التفكير الإبداعي والكفايات العملية.

الكلمات المفتاحية: الكفاءات العملية، إتجاهات مرضى الإمتياز، إستراتيجية قبعات التفكير الست.