Original article

# Workplace innovation management of nurse managers in University Hospitals: A phenomenological study

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**Background:** University Hospitals in Thailand still have no responsible unit related to Workplace Innovation Management (WPIM) and First-Line Nurse Managers (FLNMs) are the key person of the organization, but today there is still a lack of knowledge on individual innovation and creativity in the workplace, especially in nursing organizations with the future practice of nursing in a technologically advanced future and keep up with modern society and digital technology transformation era.

**Objectives:** To describe the definition and components of Workplace Innovation Management from First-Line Nurse Managers' experiences in University Hospitals.

**Methods:** Data were collected by in-depth interviews of FLNMs. Colaizzi's method was used to analyze the data.

**Results:** The finding revealed that the WIPM definitions perceived by FLNMs are process which stimulates systematic innovation related to the administration management and human resources in the organization in terms of information and communications technology, knowledge management process, job assignment, and workplace environment. Building up the strengths of each team member to reach their highest potential is a key aspect of effective management by allowing everyone to create new ideas to gain competitive advantage in order to achieve company goals. WPIM is divided into 6 main categories: 1) Workplace innovation planning; 2) Workplace innovation management for organizational development; 3) Workplace innovation for human resources management; 4) Workplace innovation in administration management; 5) Workplace innovation follow-up control; and, 6) Creating innovators. Informants are FLNMs total of 10 female gender, average age 51.10 years (range 43 - 58 years old), work experience in the management experience is 6.8 years. All informants hold a Master's Degree and 90.0% having WPIM experience and 70.0% is a Workplace Innovation Committee.

**Conclusion:** Finding from this study highlighted the need for comprehensive approach in WPIM especially, developing nurse innovator. In order to encourage WPIM effectively, the administrators should support and develop the effective strategies that promote WPIM of FLNMs.

**Keywords:** Workplace innovation management, nurse managers, University Hospitals.

Nowadays, the leaders of health organizations are developing a new concept of workplace management in health organizations with creative ideas to add organizational value.[1] They aim to demonstrate and introduce a solid innovation framework [2] in order to improve workplace environment concerning a good balance of the amount of work and quality of life [3],

especially within the University Hospitals (UH) which emphasizes the development of health care through research and up-to-date academic knowledge. The research by Hinno S, *et al*. [4] found that welcoming and approachable work environments and Workplace Innovation Management (WPIM) increase First-Line Nurse Managers (FLNMs) retention and improve the quality of care resulting in an increase in nurse satisfaction. However, almost all UH in Thailand have similar barriers to provide patient services namely, insufficient facilities, confined environments [5], long queue lines[6], huge numbers of patients which lead to dissatisfaction of service recipients.[7] In addition, some UH still have no responsible units related to WPI and some FLNMs do not know how to create

WPIM, while some UH have no mentoring and supporting system management for research and innovation. Moreover, there is still a lack of knowledge on individual innovation and creativity in the workplace, especially in nursing organizations with the future practice of nursing in a technologically advanced future and keep up with modern society and digital technology transformation era.

FLNMs in the UH play an essential role to drive the policy of "Innovation-Driven Organization" with a focus on human, system, knowledge development and service-design innovation in order to truly meet the needs and expectations of the patients to the highest standards of quality with the patient safety being the first priority[8], causing the UH to achieve with international standards by providing effective medical excellence, qualified team members[9], and adaptability to rapid technological change.[10]

WPIM aims to increase the efficiency and work quality of the organization. It unveils the importance of quality of work life that could enhance the organization's productivity.[3] Therefore, FLNMs can push for a change in the service system to improve the structure of all elements so as to comply with the company policy and to meet the needs of patients and team members in the organization.[11] However, from the previous research in Thailand, it has not yet been revealed. Hence, a qualitative research becomes a way to explain in-dept the essence of WPIM without prediction and fact-based intelligence.[12] Phenomenological research objectives to describe the definition and components of WPIM from FLNMs' experiences in University Hospitals. The findings of this research will be drawn attention to the meaning, concepts, and components of WPIM to further expand the quantitative research. In addition, the creative and generative ideas from the research findings together with WPIM components could help to develop workplace innovation in the nursing organization in the future.

## Materials and methods

Ethical approval was obtained from the Institutional Review Board of Christian University of Thailand (Approval no. N04/2019) and Central Research Ethics Committee of Thailand (Approval no. CREC020/2020). Before the interviews, the purpose of the study and the right to withdraw at any time without any penalty were explained to the participants. *Confidentiality* and *anonymity* were also described to *protect* the privacy of the participants while collecting, analyzing, and reporting data. After that each participant was provided written informed consent.

## Study design

A qualitative phenomenological approach was used in this study so as to fully describe WPIM where the data obtained from the informant's experience. The researcher conducted in-depth interviews with informants having some experience in WPIM. The data collection was performed in hospitals and was analyzed using the Colaizzi's method. In phenomenology, the researcher imparted the experience of the informant without prejudice to truly understand the meaning and experience of informant on WPIM.

## Characteristics of the informants

Ten key informants of this study were FLNMs taking responsibility as Head Nurses in UHs who experienced in WPIM. They work in different 6 UHs in the North, South, Northeast and Central regions of Thailand. The informants have been selected by Snowball Sampling Technique. The inclusion criteria were "being FLNMs experienced in Nursing Administration with 1 or more years[13] and willing to share their experiences".[14]

## Data collection

The semi-structured interview guide was conducted by the researcher and then was validated by 3 experts working in the area related to the research study. The first expert was a head nurse who had experience related to innovation research and development. The second one was the researcher who was an expert in qualitative research instrument development and the last one was an Assistant Professor who was an expert in qualitative research. The development of the interview guidelines evolved from the workplace innovation concept of Dhondt S, et al.[15] The guide consisted of two parts with 16 questions in total for data collection. The first part focused on demographic data of the participants such as ages, education levels, positions, years of the position, experience in receiving training in WPIM, experience in providing counselling related to WPIM, and experience in being the WPIM committee. The second part consisted of WPIM and its components. In qualitative study, the researcher is considered as a

key aspect of the study in terms of collecting data by using other tools to gain adequate information and further become saturated. The researcher uses data triangulation method to validate results by comparing the results from different informants of the same phenomenon. In addition, reviews triangulation was conducted by the nursing lecturer who was an expert in qualitative research to validate the correctness of the transcription (confirmability). Besides, the information obtained from the informants was returned to the informants for checking its accuracy (Member checking). In this study, the saturated information occurred after interviewing 10 informants with details of the interview process as follows: 1 interview with 1 informant, 5 interviews with 8 informants, and 6 interviews with 1 informant. The average times of each interviewing is 1 hour and 20 minutes with data collecting between 14 November 2019 to 1 August 2020, totaling 260 days. Examples of the questions used is What does "innovation management" mean? in your understanding.

### Statistical analysis

Because this study describes the definition and components of WPIM from FLNMs' experiences in University Hospitals, Collaizzi's method was applied to analyze the data.[16] There were seven steps in Colaizzi's method of data analysis as follows: 1) The data were transcribed word by word then the researcher read and reread the transcribed data several times, focusing on the context of the data and participant responses; 2) Significant statements that pertain to the phenomenon were extracted; 3) The meaning from significant statements were formulated; 4) The formulated meanings were aggregated into themes, and similar themes were grouped and categorized into the categories; 5) The obtained results were integrated into an exhaustive description of the phenomenon under study; 6) An exhaustive description was subsequently generated; and, 7) The findings of the study were validated through the nursing lecturer and each participants.

### Results
### Characteristic of the informants

Informants included 10 females.  The mean age of FLNMs was 51.10 years (range 43 - 58 years old). The mean of management experience was 6.8 years. All informants hold a Master's Degree. Ninety percent of them had WPIM experience and 70.0% of them was a Workplace Innovation Committee that was appointed from the Nursing Organization of each hospital, responsible for overseeing tasks related to nursing innovation of the Nursing Department.

### 1. Definition of workplace innovation management

According to Becattini N, *et al.* the understanding about the WPIM, the administrator with less than 5 years management experiences will have access to the workplace innovation management more than the one with more than 5 years experiences.[17] Therefore, the researcher divided the informants into 2 groups: 1) FLNMs with work experience duration less than 5 years (Group 1); and, 2) FLNMs with work experience duration more than 5 years (Group 2). The study found that both groups had different opinions on the definition of WPIM. Group 1 emphasizes the meaning of WPIM as a management and work process while Group 2 refers to a systematic process and productivity which can be illustrated from the following qualitative data:

"In my opinion, I look at it as the process of creating new things or new methods including systematic management in the ever-changing situation to create a competitive advantage with other hospitals. It includes Information Technology and Communication, the knowledge management process, work design, workplace, and work environment. The most important thing is we have to draw out the potential of our team member so that they can be creative in making innovation and it must be planned from the beginning to the end of the process and then evaluate the performance" (Group 1).

"I think, it's the ability to plan the work process systematically to achieve the goal. It is a management for each team members to have creative learning. Everyone is able to share new ideas, and create different work process. We need to motivate ourselves at all time to build the learning and developing which lead to Workplace Innovation" (Group 1).

"For me, it's a systematic work process that involves step-by-step management, starting from planning, assigning, assisting, and recruiting sufficient and appropriate team members for each task with supervision and follow up" (Group 2).

"In my opinion, it means innovative thinking process, new idea, or new processes that we bring to make work easier and more comfortable. It must be managed in a systematic process and productivity, starting from planning till the end such as recruiting the right team member to work to achieve specified goal" (Group 2).

### 2. Components of workplace innovation management

The researcher transcribed the interview line by line and then read the review data in order to understand the overview of the innovative workplace innovation components. After that, the issues were extracted and named to be the Open Coding related to the meaning that reflected the component. Subsequently, the researcher provided the Axial coding and sent it to an expert to examine and analyze if there is any unclear information to plan for the next interview. The researcher reviewed the meaning obtained from the informant. When the definition is obtained, the researcher categorized to create a conclusion according to the research objectives that were called a Theme. In this study, 32 significant statements were extracted from the interview data, which were then categorized into 22 themes. Finally, 6 categories were formed by merging similar themes (Table 1). All of the key findings from this study were synthesized and showed in Figure 1.

**Table 1.** Categories and Themes of workplace innovation management.

| Categories | Theme | Significant statements |
|---|---|---|
| 1. Workplace innovation planning | 1. Establishing a clear policy, vision and working strategy | • "In order to plan, management team needs to set the goals with a clear vision and policy on people matters. How to increase the capability of the team members such as training, time management, environment management, supporting both funding sources and giving freedom of thought as well as sequence of the operating processes from the start to the end." (G2) |
| | 2. Establishing a clear work unit and human resource of WPIM | • "Organizational planning including the departments and persons responsible for WPIM should be clearly defined with clear and specific goals and objectives and various operating methods to achieve the goals." (G2) |
| | 3. Methods and processes of workplace environment and knowledge, and human resource management | • "For me, I think it starts from setting up future goals and clearly stating innovation activities, providing people with an understanding of WPI, and training and developing people to be able to work as planned. Let everyone participate in the work in order to meet the objectives of the company." (G2) |
| | 4. Implementation | • "I think, it must start from planning and setting up the goal. We will create new innovations under a safe, modern and practical environment. Administrators should analyze the opportunities, strengths, and weaknesses of the organization and provide tangible benefits to patients in the workplace." (G1) |
| | 5. Evaluation | • "Planning and being well prepared in each task. The objective and purpose must be set properly. The guidelines need to be planned from the beginning with the evaluation at the end and must manage people, knowledge and environment in the workplace as planned." (G1) |
| | 6. Team work to create workplace innovation | • "The guidelines must be set for future use with the cooperation of the team. Being involved, they can create new innovations in the workplace such as people who don't wash their hands, how do we manage them? They will be a thinker and make them feel that they are important and be a part of the quality improvement in the organization." (G2) |

**Table 1.** (Con) Categories and Themes of workplace innovation management.

| Categories | Theme | Significant statements |
|---|---|---|
| 2. Workplace Innovation Management for Organizational Development | 1. Job design and systematization to create innovation to develop working environment | • "When it comes to work design, whether it is a matter of manpower, budget, equipment that are required, a comprehensive plan is a must." (G1)<br>• "In order to organize the project of various events, we will have manning management. We have to encourage creativity amount the team members to create innovation and define duties and responsibilities for the nurses and assistants." (G1) |
| | 2. Job grouping and innovation assignments | • "Set up a group of people responsible for innovation, set positions, assign each task to the right position as well as organizing a system of work by creating innovation to develop the entire working environment." (G2)<br>• "In my opinion, good managing is a when we assign a job to each nurse to avoid overlap and each person has a clear responsibility." (G2)<br>• "It may be created as a project to drive innovation development in the workplace, including effectively defining the duties to enable the team to work in an innovative development approach." (G2)<br>• "Assign responsibilities and identify who is best suited for each task or project. (G2) |
| 3. Workplace Innovation for Human Resources Management | 1. Estimating Manpower Requirements | • "Providing enough people to work and choosing people suited to the job are the most important aspects because if they love what they do, they will perform perfectly." (G1) |
| | 2. Support and promotion of human resource development | • "Apart from recruiting enough people in the team, time allocation is also important." (G1) |
| | 3. Personnel recruitment | • "Putting the right person to the right job increase efficiency in the workplace innovation by assigning them 70:20:10, which is, 70% to work in the organization, 20% to think of the improvement and problem solving, another 10% to think or do of what they are interested as we have planned. Moreover, we have to choose the people to suit the job so that they can fully develop themselves and achieve a good result." (G2) |
| | 4. Personnel selection and support to development | •"Assigning the team members can be divided to the person who is responsible for WPIM and the person who contributes and supports creating the WPI. The one who is responsible for WPIM must have qualifications, full of knowledge and skills for the position of responsibility. The person who contributes to innovation in the workplace, training is provided to have knowledge and skills that are essential to innovation and creating the inspiration." (G2)<br>• "Carefully selecting and recruiting people to be on the team, and providing the training and development to work according to the plan. In addition, supporting and developing innovative ideas within the workplace with independent thinking and appropriate individual abilities. Educate the team about work changes because innovation in the workplace is constantly changing." (G2) |

**Table 1.** (Con) Categories and Themes of workplace innovation management.

| Categories | Theme | Significant statements |
|---|---|---|
| 4. Workplace Innovation in Administration Management | 1. Command, suggestion and Supervision | • "Administrators must balance multiple tasks simultaneously and delegate when appropriate. The organization contributes in terms of supporting time for team. An automatic queue system was used to classify patients according to their treatment in order to reduce the delay in waiting for long queues. New workplace design can reduce the congestion of services." (G2)<br>• "Assigning the work in accordance with their own duties and responsibilities in order to achieve the goal effectively. Supervise and follow up staff performance according to the plan continuously and steadily. Support from supervisors and teams." (G2) |
| | 2. Team and chief supports and organizational motivation) | • "The 4 fundamental factors are people, budget, equipment and management needs to be supported. In particular, creating an atmosphere of participation in work that encourages the team to think and make decisions." (G2) |
| | 3. Leadership<br>4. Communication | • "As a leader, proper assignment and motivating the team to work together and to achieve the goals are important. Sometimes, the leader is just a consultant. A suggestion like this can create an innovation in the workplace. The leader is the one who supervises and exchanges ideas with the team and also must listen to their opinions." (G2) |
| 5. Workplace Innovation Follow-up control | 1. Risk control, monitoring and activities control | • "Performance controls are supervising. It is to make sure that the work has been done as planned and as scheduled. Is there some part to improve? In the wards, there is some risk. Environmental design in the workplace is essential and will help to control the risk for patients and team." (G1)<br>• "Controlling the evaluation of the work and following-up to see whether it is completed in accordance with the plan we have laid out from the beginning." (G1)<br>• "Control, follow up and monitor the results so that we will be able to understand in order to produce the results needed to achieve Workplace Innovation Management (WPIM)." (G2) |
| | 2. Evaluation | • "Operational controls play a key role in managing Workplace Innovation to meet the objectives of the organization. Therefore, it is necessary to plan for the periodic monitoring and evaluation. If there is a problem that cannot be solved, the administrator can assist and give some advice in order to achieve innovation as planned." (G2) |
| | 3. Indicator | • "Performance monitoring must have indicators to measure and evaluate that the work can be able to perform as planned." (G1) |

**Table 1.** (Con) Categories and Themes of workplace innovation management.

| Categories | Theme | Significant statements |
|---|---|---|
| 6. Creating Innovators | 1. Living with change | • "The environment around us is changing rapidly and all the time causing the organization to change as well. We must re-organize the work and train the team in new ways of working, bringing new technologies to reduce the impact arising from the changes and encouraging the team in the wards to adapt and accept and to work together creating new potential for change at the same time." (G1) <br> • "We have to challenge ourselves to think out of the box and to see new perspectives and give opportunities to bring those ideas into action, learning from work. In addition, rewarding ideas that create value for the organization is also essential, such as recognition, giving extra money or giving holidays." (G2) |
|  | 2. Thinking creatively | • "I mean, we should not stick to the same conceptual thinking or the same rules. The creativity can be from many aspects. We have to look at every situation in many dimensions, think about something new or things that no one had thought before which will be different from before." (G1) <br> • "It is an extension of the existing conceptual thinking into new forms of thinking, not being like "a frog in the coconut shell" to create something new. If we do not have creativity, there would be no progress. The creative idea can happen with the advice of the leaders to help, teach, give guidance so that they can visualize and have creative people as role models in the workplace. This can reduce congestion and make patients feel comfortable both mentally and physically." (G2) <br> • "Be creative in new things, new ideas, exchange ideas in the organization and bring those ideas to create innovation and present the innovations to the patient. It is important to have a system to support finding new ideas that can create new work processes that will generate ideas for innovation in the organization." (G2) |
|  | 3. Change management | • "The environment around us has changed rapidly and constantly. This causes changes within the organization in terms of new ways of work and training. Therefore, new technologies are used to reduce the impact of changes and encourage all staff in the ward to adapt and accept the changes along with creating new methods of working to accommodate the change which occur." (G1) |

**Note:** G1 = Group 1,
G2 = Group 2

**Figure 1.** Research finding data synthesis.

## Discussion

The results of the study showed that FLNMs have provided various definitions and components of innovation management. However, once it has been analyzed according to the duration of management experience, FLNMs can be divided into 2 groups, less than 5 years experience and more than 5 years experience which can be discussed as follows.

In terms of WPIM, it could be stated that the management with over five years of experience realize that WPIM is a working process such as planning, organizational management focusing on the results of quality management which is different from those who have less than 5 years management work experience with an opinion that WPIM is all about activities such as work process, workplace, and working environment design. Each different point of view has its own specific definition and it shows that the understanding of WPIM depends on the length of time in management experience because the administrators with a management period of less than 5 years' experience have more expertise in approaching WPIM than administrators with a management period of more than 5 years' experience.[17]

In terms of the components of WPIM, it can be divided into six categories which are workplace innovation planning, workplace innovation manage-

ment for organizational development, workplace innovation of human resources management, workplace innovation in administration management, workplace innovation follow-up control and creating innovators. The 2 groups of informants both viewed that planning is an essential component of WPIM. The leaders must set the goals, define the policies, and having a clear vision and mission of the organization. They must also specify the responsibilities of the team members related to the innovation in order to engage everyone in planning, working and creating innovation together in order to build the WPIM according to Dang's concept which is stated that organizational planning correlates with WPI.[18] Moreover, it is important to assign the right job to the right person according to their ability and aptitude. It does not matter whether it is small or large organization, effective management is needed in order to allow the organization to progress steadily and sustainably in a way consistent with the concept found by Carranza G, *et al.* that WPI focuses on assigning work responsibilities and making decisions about organizing work processes.[19] Organizational management is a new way to organize work responsibilities. It is the most common innovation.

In addition, apart from planning and organizational management, the informants defined additional components of WPIM that the organization must be

allocated and managed the task to suit the responsibility. Administrator should provide the time and training to create innovation. This is consistent with Dang's concept [18] which said that WPIM correlated with Human Resources management in the organization.

The results of the study found another 2 components obtained from the qualitative data:1) workplace innovation in administration management; and, 2) workplace innovation follow-up control. There is an interesting point in the interpretation that only Group 2 contributors see administrators as a component of WPIM congruent with the concept stated by Muenjohn M, et al. [20] who stated that strategic planning and environmental design are positively related to performance and has a large impact on WPI. The difference in opnion may be the reason that the staff (administrators) with a longer period of work experience have more of a macro perspective than less experienced staff. On the other hand, both groups of informants identified the same elements - workplace innovation follow-up control. The WPIM has to monitor the work performed in accordance with the plan. This result is consistent with the research of Oeij PR, et al. [21] which found that workplace innovation's structural orientation consists of organizational structure, designing work process related to the assigning of work, controlling (management) and operations and giving the team members the ability to control, follow up, and participate in structured decisions.

Both groups of informants identified that the innovator's attributes must include being creative, innovative thinking, enjoying challenges and having the ability to adapt to changes, related to the concept of Lu JG, et al.[22] which said that creativity is associated with innovation in the workplace which impacts the success of individual team members and organizations. In addition, creativity also plays an important role in the innovation process maintaining efficiency and change in the organization which encourages the drive toward creativity in the organization. [23] This finding is supported by the research of Steinerowska-Streb I, et al. [24] which defined that creating a working atmosphere and supporting team integration can stimulate creative ideas that lead to innovation and innovative ideas. Open innovation also stimulates creativity in each team member which benefits the internal environment of the organization [25] the findings coincided with the concept of Lo Presti V.[26] who

stated that positive thinking, adaptation to situations that have changed unexpectedly is an innovative strategy of organizational management in order to achieve the goal as specified by the organization. It can be seen that innovative design becomes one element that will drive the success of WPIM. Therefore, the administrator should develop policy and plan to encourage FLNMs and team to think as an innovator in order to create WPI in the UH in the future. However, some limitations from the study should be noted. This study explored the WPIM in the experience of FLNMs but the development of WPIM required multidisciplinary team involvement therefore further research could be conducted in other level of nursing administrators of the UH.

## Conclusion

The phenomenological study explored the experience of FLNMs. WPIM was defined  as a process that creates innovation related to the systematic administration management and human resources in the organization. WPIM was categorized into 6 components namely: 1) Workplace Innovation Planning; 2) WPIM for Organizational Development; 3) Workplace Innovation for Human Resources Management; 4) Workplace Innovation in Administration Management; 5) Workplace Innovation Follow-up Control; and, 6) Creating Innovators. Therefore, the administrators should support and develop the effective strategies related to these findings comprehensively especially, creating nurse innovator in order to promote WPIM of Nurse Managers. Accordingly, it can encourage workplace innovation in the nursing organization in the future.

The administrator should prepare FLNMs in the field of WPIM by creating the WPIM training program for FLNMs according to the UH context and supporting FLNMs and team for experience exchange between the national and international organization of excellence in WPIM. In addition, the workplace innovation management team could be created in order to operate and monitor the effective WPIM. Further research should be conducted in nursing administrators at other levels of the UH due to the different responsibilities to reflect the strategic management of innovation in the nursing organization. Moreover, the knowledge of Workplace Innovation components should be further developed to be the self-assessment tool in order to promote WI in the UH.

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