Heliyon 5 (2019) e02503

Contents lists available at ScienceDirect

Heliyon

journal homepage: www.heliyon.com

Strategies for bridging the theory-practice gap from the perspective of nursing experts

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ARTICLE INFO

Keywords:
Health profession
Nursing
Theory-practice gap
Perspective
Nursing education
Clinical education
Tehran
Iran

ABSTRACT

The gap between education and the clinical practice has always been challenge for educational experts in the field. This article aims to explore the perspective of Iranian nursing experts about strategies used for coordinating education and clinical performance in nursing. This qualitative study was conducted by using a conventional content analysis approach; individual interviews were conducted at the participants' work place; while focus group discussions took place at the Nursing and Midwifery Faculty of Iran University of Medical Sciences. Participants in this study included nursing instructors, educational supervisors and nursing managers with a clinical background and teaching experience of at least five years. In addition, a graduate nursing student and a nursing PhD candidate were also interviewed to ensure data saturation. Purposive sampling was conducted between April 2016–October 2017 among scholars and nursing professional experts who were highly experienced in this field. The two focus groups, obtained the views of nursing managers and educational supervisors working in educational hospitals. Analysis involved open stepwise coding with an emphasis on continuous comparison of data, and reference to written notes of the interviews. The analysis process was carried out in three main phases of preparation, organization, and reporting. The results of this study were classified in three main categories: developing context base curriculum, interactive collaboration among nurses and faculties, the Design and Implementation of a Standard Clinical Guideline. It seems that strong intention and active participation of all beneficiaries are needed to bridge the gap between theory and practice. Creating an appropriate context for nurses and nursing trainers for mutual learning along with the use of pragmatic language in the form of clinical guidelines can help decrease this gap.

1. Introduction

The concept of a theory-practice gap is not new. However, despite many attempts by nurse faculty and clinicians to address the theory-practice gap it remains a key issue in both nursing education and practice, with the complex nature of the theory-operation gap not fully understood. This ensures that the meaning of the theory –practice gap as a general term is often unclear and has multiple interpretations (Scully, 2011).

Watkins, quoting Chapman, (2017) explains the theory and clinical gap as; he difference between idealised practice and common practice, the difference between taught general principles and the difficulty in interpreting them for application to a specific situation, the gap between taught abstract nursing theory and its use in practice, the gap between scientific knowledge and theory used as common practice, the gap between our individual mental representations of nursing and the published theories of nursing.

Consequently the theory-practice gap is a consistent nursing problem experienced by experienced and newly qualified nurses and students (Greenway et al. 2019), best summarized as the gap between the theories practitioners claim underlie their practice, and the implicit theories embedded within their practice, of which they may not be aware.

Matthew and Tucker (2018) emphasize when clinical practice does not usethe best scientific evidence the result can be non-standard care of the patient.

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https://doi.org/10.1016/j.heliyon.2019.e02503
Received 24 November 2018; Received in revised form 25 April 2019; Accepted 17 September 2019

In Iran in recent years, the public and the government have criticized nurses because of poor quality of patient care, and the divergence between nursing theory and clinical practice has also been recognized by some Iranian nursing researchers (Cheraghi et al., 2010).

Incompatibility of theoretical education with the performance of nurses in the clinical setting can lead to the inappropriate use of scientific resources coupled with adherence to conventional traditional methods in the clinic. This prevents the development of theoretical sciences in nursing and can lead to a decline in the quality of nursing services, indeed the distance between theory and practice has been identified as one of the reasons for ineffective nursing practice and job attrition (Khodaei et al., 2016).

This link between knowledge and practice is vital for supporting clinical decision-making and development of the nursing profession (Regaa et al., 2017). Nurses should be aware of both what they are practicing and the reasons why they are doing that task (Rolfe, 2013). The key point in nurse education is answering the question of how to motivate students to learn and then use their knowledge in clinical practice in an optimal and desirable way (Falk et al., 2016).

Nursing researchers state that the theory practice gap not only reduces the credibility of the nursing profession and nurses' motivation, but can even lead to a decrease in the quality of patient care (Ajani and Moez, 2011).

Many strategies such as; internship, residencies mentorship, and preceptorship programs, have been applied to bridging this gap in many countries (Hossein and Osuji, 2017; Wall et al., 2014; Valizadeh et al., 2016; Harris, 2014). Although in some cases, these programs have been to some extent successful the subject is still one of the basic issues in nurse education which needs further research (Factor et al, 2017). The gap between education and practice can cause serious consequences. In particular novice nurses are reported to suffer from emotional responses which can affect their ability to practice appropriately (Massey et al., 2017).

Therefore it is necessary to bridge the gap between knowledge and practice by training nurses who can use this knowledge in practice to work efficiently and effectively to meet the ever changing health needs. There are few studies which focus on bridging the gap between knowledge and practice from the perspective of both nursing experts in education and clinical setting. This study is an attempt to explore the perspective of Iranian nursing experts from both areas about their strategies for coordinating education and clinical performance in nursing to help bridge this gap.

2. Methodology

This qualitative study was conducted using semi-structured individual interviews and focus groups with conventional content analysis of the data.

This approach was chosen because the nature of the phenomenon of the theory and practice gap is too complex that cannot be identified by using quantitative research of its various dimensions. In naturalistic paradigm and qualitative methods the reality is observed on the basis of the context, and multiple realities and structures of a phenomenon, which are not often easily observable, are used for precise study of the fields. Knowing about other people's experiences and perspectives about a phenomenon can provide us with a deep insight and awareness about that phenomenon (Elo et al., 2008).

The theory practice gap is a multidimensional concept. Studies have confirmed that individual, group, and organizational interactions are involved in creating or completing it. On the other hand, the researchers believe that content analysis is a valuable method in organizational research and helps the researcher to gain a stakeholders perception of the organizational behavior, exploring of new strategies and policies based on this approach (Duriau et al., 2007).

2.1. Participants

Purposive sampling was conducted April 2016–October 2017 among scholars and nursing professional experts who were highly experienced in education or clinical setting and in theory practice gap. To collect data, five well-known nursing faculty members teaching at universities in Tehran were selected based on inclusion criteria. The inclusion criteria for faculties were and a minimum qualification of a PhD degree, at least five years of cooperation as an educator in the university. We started with a faculty member who has significant experience in teaching and some publish in the theory practice gap. After analyzing the first interview, we went to the second person, and individual interviews continued until data saturation.

Inclusion criteria for participation in focus groups were clinicians with a minimum of a bachelor's degree in nursing, at least five years clinical working experience and acting as an educational supervisor or a nursing manager.

2.2. Research setting

Individual interviews were conducted at the participants' work place; while for focus group discussions the Nursing and Midwifery Faculty were chosen. Due to high workload, it was not possible to interview the participants in the hospitals during the work time, and there was no suitable place to conduct a group interview after office hours, therefore, the participants were officially invited by the faculty; and the meetings were held at the faculty in two sessions.

2.3. Data collection

Data gathered through individual interviews and focus groups. At the first, semi-structured interviews were used, Interviews usually began with a general question about the quality of clinical training and were then continued by asking "Could you explain about theory practice gap?" "How the theory-practice gap could be lessened? In progress, questions such as more exploratory questions were asked in individual interviews such as "Can you describe this with a real example" and "Is it possible to clarify this a bit more?" Interviews were done according to. Streubert and Carpenter (2011) and continued until no new data were identified (data saturation). Individual interviews with Instructors lasted between 60 to 90 min, and due to the limitation of time each person was interviewed only once. Moreover, throughout two focus groups, the views of 14 nursing managers and educational supervisors working in educational hospitals were obtained. The location and date for the focus groups were notified one month before the data collection through an official letter. Triangulation in data generation leads to convergence of the central characteristics of the phenomenon across focus groups and individual interviews, which enhanced trustworthiness of findings (Lambert and Loiselle, 2008). The approximate time of these sessions were 120 and 150 min.

2.4. Data analysis

Data analysis was occurring concurrently with further interviews and that emerging analysis was used to inform the next interviews/focus groups Content analysis has known as a flexible methodology that has been widely used in social sciences (White and Marsh, 2006). In this approach, open coding steps were performed stepwise with an emphasis on continuous comparison of data, asking more detailed questions, and reminder writing beside the interviews. The analysis process was carried out in three main phases of preparation, organization, and reporting. During data collection from the interviews, they were transcribed by the researcher (first author). For each transcription, the researcher repeatedly listened to the recorded file and wrote down all the sentences. This made the researcher well aware of the interviews. Then, the semantic

analytic units were prepared and these were then categorized when no further data was gathered from additional interviews and whatever achieved was similar to that of previous interviews, the research team would be sure of data saturation.

Then the organization step including open coding, category creation, and abstraction was performed. Open coding refers to word by word, line by line, and paragraph by paragraph reading of the data and dedicating codes without considering any specific limitations. After this step, the categories were classified under a more general title. In the abstraction step, according to the research objectives a general descriptive analysis of the categories and groups which were created in the analysis stage was performed. Finally, the analyses were displayed in a conceptual network based on the research objectives.

To validate the data in this study, prolonged engagement in the area and spending enough time to communicate and collect data helped build trust and understanding with the participants and allowed in-depth data collection, so that data collection and interviews lasted for nearly one year. In addition, sampling was performed with maximum variability based on age, sex, work experience, position and so on. Moreover, in this study the researcher provided the readers with the conditions to use the findings in other contexts by presenting a deep, analytic, and rich description of background, the participants' characteristics along with describing the study context, and a clear description of barriers and limitations. To ensure that the analysis reflects the experiences of the participants accurately, data collection and analysis stages were controlled by participants' revisions using member checking; and according to the participant's suggestions necessary changes were made to interpret the data; these measures helped the credibility of the study. To provide dependability and conformability, some part of the raw data, including interviews and analysis products, meaning the primary codes and categories, were assessed by experts. All stages of the research, especially the data analysis steps, were recorded completely and in details, allowing other researchers interested in this research area, easily access the interviews, coding, and other stages of the research according to the available literature and documentation.

The participants and the main researcher have the same Persian native language. For translation Persian to English, the correspondent author had cooperated with a professional translator involve explaining to the translator the intended meaning and its context in the Persian language they done in a side-by-side procedure.

2.5. Ethical considerations

The study was approved by Iran university of Medical sciences ethics committee Participation in this study was voluntary, informed consent was obtained from all participants, and all interviews were audio recorded with the participants' permission.

3. Results

The results of this study were classified into three main categories: developing and expanding context based curriculum, interactive collaboration among nurses and faculties, the design and implementation of standard clinical guidelines.

3.1. Developing and expanding context based curriculum

Nursing text books are mainly written in developed countries such as America and Canada although used to teach in developing countries. However there are few similarities between these types of facilities, including the available equipment and human resources in the development and developing world. Participants in this study believed the first and most important strategy for bridging the gap between theory and practice is "Developing and Expanding Context Base Curriculum" in developing countries. This theme was sub divided into 3 further categories including; "creating culture-based theories", "adjusting and re-forming curriculum content", and "introducing clinical theories".

3.1.1. Creating culture-based content

All participants believed that current content needed further refinement and improvement. Due to; facilities, shortages, threats, and the religious orientation of communities, university faculty participants in this study considered formulation of culturally specific theoretical content was essential. Although the review and application of theoretical content formulated in other countries was useful, faculty participants supported the need for every community to have its own specific caring models and theories, as well as curriculum content.

3.1.2. Adjusting and re-forming curriculum content

According to nursing faculty participants, some of the available theories also require rebuilding and modification as the majority of them are developed on the basis of qualitative studies and naturalistic perspectives. However the interactions and needs of people change based on their demands, desires, and conditions over time. Additionally, the nursing discipline has also evolved and needs to prepare to develop stronger theories and models. The participants in this study suggested that some approaches such as relevant theory-based studies and action research approaches could be appropriate to support developments in this field.

As faculty participant 1 explained: "we teach in classroom how to use AED[1] but the students cannot see any AED in the real world. We emphasis the nurse-patient ratio is 1:1 in PICU[2] and family centered care in so important…but they see vice versa in the clinical setting. I think we must adjust content and simultaneously we must try to improve our clinical environments."

3.1.3. Introducing clinical theories

The faculty participants believed that creating directly applicable clinical theories can be an effective approach to their use. They emphasized this as a measure for reducing theoretical abstraction, making theories more understandable to clinical staff and students, evaluating their efficiency, and developing their dimensions.

Participant 1 with 20-years work experience in teaching theory and philosophy of nursing suggests: "Trying to create practical and simple theories can help develop nursing discipline." They then added: "Current theories should be the base to introduce appropriate tools, so that all nurses can use them and evaluate their efficiency at all levels. When we implement specific clinical theory in practice patients will receive care not only on the clinical experience, intuition or ritual, but also on the basis of valid scientific evidence."

According to Participant 8: "Take into consideration that nurses working in the maternity and intensive care units are now familiar with theories such as attachment, since some tools have been made which are specifically developed for knowing, understanding and using this theory and by the same token, the theory dimensions have been realizable for us."

Some participant had different viewpoints: "Theories have an abstract nature (even if they are tailor-made for the clinical setting) and their direct application is complex, and we are at the beginning. If we can implement the explicit nursing knowledge in practice, we will be very happy to turn the theory language into a common language, a very complex task." (P4).

3.2. Interactive collaboration among nurses and faculties

This theme includes three sub categories: "Empowerment of faculties and nurses in theories and practice", "changing the educational system", and "changing the research system".

[1] Automated external defibrillator.
[2] Pediatric Intensive CareUnit.

3.2.1. Empowerment of faculties and nurses in theories and practice

The participants (clinicians and faculties) believed that bridging the gap between theory and practice cannot be accomplished by only changing and considering the structure of theoretical content and instead also requires the inclusion of other fundamental measures such as; cultivating positive attitudes through holding discussion sessions and joint workshops for university professors and clinical nursing directors, familiarizing and empowering all nurses, but especially nurse trainers, and nursing directors, and re-orienting nursing studies and education.

One of the participants (an educational supervisor) said, "… everyone thinks that clinical nurses' knowledge is low compared to academic trainers who are considered knowledgeable, but I witnessed that in regard to infection control, clinical governance, report writing, etc. our (clinical) nurses' information and knowledge were much more than the faculties and sometimes the educators taught things which were outdated; Or in a specialized ward, such as dialysis, CCU and ICU, the majority of instructors were not able to work with [medical] devices. I assume that in this regard, educational and clinical nurses should collaborate with each other in faculties. What's wrong if clinical nurses get involved in the continuous education workshops as well?" (P.7).

Another faculty participant who confirmed:" The last time I have been in the clinical setting was 8 years ago. Since then, the equipment has changed. New drugs come in with new business names that I do not know, although I'm teaching the latest textbook, but these should be experienced in the clinical setting." (P.5).

3.2.2. Changing the educational system

Faculty participants frequently explained that theoretical nursing science courses had limited application to the students' clinical practice, leading to the ongoing existence of a gap between theory and practice. Faculty participants emphasized the need to discuss aspects of practical experience in class during theoretical instruction as a key strategy designed at bridging this gap.

A faculty participant (P.3) …stated,: "We have a variety of educational models designed for close proximity to education and clinics, for example 'I think context-based learning is good, although it cannot always be applied".

However some teachers and clinical nursing managers expressed negative views about teachers engaging in clinical teaching But their reasons for opposing were different.

Participant number 11 (nursing manager) believed: The ratio of the faculty to the student is low. Therefore, a faculty member is responsible for a large number of students and practically does not have effective teaching. On the other hand, we can not accept a large number of students in the department because student swarming impedes the implementation of quality care.

A faculty member believed the responsibilities of the faculties are erosive; Teaching the research activities, executive at the Faculty will not leave us an opportunity to take clinical nursing techniques. I think this section should be given to clinical nurses who have up-to-date knowledge.

3.2.2.1. Creating clinical board of education. A significant finding in this study was the deep gap in attitude and views of participating clinical nursing managers towards teachers and the facilitation of theory into clinical practice. This resulted in the suggestion that a way to bring theory closer to clinical practice was the establishment of a clinical board of education.

Participant 12 stated, "During my long wok experience in hospital, either when I was a ward nurse or the time I became an educational supervisor, I witnessed faculties and students acting like an outsider; as if they were just visitors. Many of the faculties are not familiar with clinical practice, they cannot even do venipuncture; they only gather the students and hold seminars. As a result, when it comes to clinical practice, these students cannot perform well in clinics. If the nursing staff became the members of faculty, there would be some changes. Because they are familiar with the wards and patients as well as clinical practice. This is because; they have to update their knowledge for job promotion. ."

Participant 13 said: "Once university authorities asked us to introduce nurses interested in teaching to help students in clinics as clinical educators as the preceptors, but no one volunteered, because their individual rights were not defined at all. On the other hand, our ward is so busy that no one is free to teach students and take care of patients at the same time."

3.2.3. Changing the research system

Many of the participants believed clinician and faculties that nursing research was rarely used and few nurses tend to study theories. Participants generallybelieved that conducting research on theories is difficult, time-consuming and in this regard, Participant 2 said, "There is no tendency among faculty members and students to study theories of prominent theorists or the models and theories introduced by nurses within our own country. When a student was recommended to work on a model introduced by someone else, she/he thought that it was for personal benefits and not for the nursing discipline."

According to Participant 7, "Executing this major evolution at all levels of nursing and taking care of patients is not possible without allocating budget and including senior nursing directors' ideas. Certainly, any movement and evolution in the healthcare system depends on changes in viewpoints of medical and healthcare policymakers."

3.3. To design and implement localized clinical guidelines

The results of the current study suggest that experts in nursing education and clinical directors should work together to try to design and implement clinical guidelines based on local situations, which will support the integration of nursing practice and theory. In this way procedures are specified and the educator and clinical staff would share the same expectations as the students. This can lead to students' empowerment in the clinical environment.

Participant 16 said: "A key point that brings theory closer to practice and promotes care quality is designing and implementing guidelines. This is the responsibility of faculties and nursing research centers to customize available guidelines from around the world, make them implementable and provide clinical nurses with a healthcare standard and model, while including these guidelines in the academic curriculum of nursing faculties. In this way a common language is created for communication between training entity and practice entity."

However this view was modified by Participant 17 who said: "Development of a clinical guideline, by itself, is not sufficient to promote this mutual language and application it also requires continuous monitoring and evaluation; which is of great importance for the achievement of these plans."

"…, we should check to what extent the healthcare standards are executed in the ward. In fact, healthcare checklists are the instruments used to measure how close education and practice in each ward is. It is observed that what is taught in the faculties is standard, but what happens in the clinic varies depending on conditions. The difference is sometimes so considerable that it even jeopardizes the client's health."

In this regard, Participant 14sstates: "It is essential to create a cooperation lever between nursing professors and clinical managers to provide appropriate conditions for training students and applying knowledge-based care culture in the hospital."

A view which is further supported by participant …: "Accrediting hospitals helps to design standard care and reduce the gap between theory and practice."

4. Discussion and conclusion

The most significant finding of this study was the need to develop and expand a context base curriculum. . This finding is supported by the work

of Farsi et al. (2010) who argues that Iran, as a religious country with a humanistic approach to care rooted in the Iranian cultural context, results in a conflict with the theoretical/biomedical approach prevelantin the current nursingcurriculum. Therefore, reform of nurse education curriculum to make it compatible with the context is an important developmental needs, which must also be coordinated with any newly emerged philosophical and theoretical caring perspectives.

Trimmer et al. (2013) showed context based learning can create a space to close the theory practice gap. According to the findings of our study, a common language should be fabricated between education and practice to bridge this gap. Additionally result from our study indicate that clinical guidelines are considered the best language to promote this sharing. Jerlock et al. (2003) have also referred to this issue, stating that clinical training in nursing has a vital role in the attachment of theoretical objectives, practice, and research in nursing. Introducing clinical guidelines as a means of education can support realistic students' expectations of the clinical environment.

Fotheringham et al. (2015) in a study entitled the connection between theory and practice in the initial nursing learning experience, points out that a nursing curriculum which clearly determines the association between the basic nature of nursing and practice, which is based on learning outcomes, can help the student learn simultaneously about the position of theories in relation to clinical practice.

In our current study, participants strongly acknowledged the need to revise the content of nursing curriculum, this links to the interdisciplinary approach which underpins the research conducted by Ketcherside et al. (2017). They reported a significant difference between the ability of nursing educators and nurses participating in their research, and concluded that although their findings are not generalizable, the interdisciplinary educational model which focuses on teamwork behaviors can be a positive translation of interdisciplinary theory into practice.

Findings from our current study indicate some differences among participants in howspecific clinical nursing theories can be used in practice. For example, some faculty based nursing instructors had negative attitudes towards the use of clinical models, althoughmany published studies have supported the use of theories as a solution to bridge this gap between theory and practice (Baxter, 2007). However this is also some evidence that attempts to implement evidence-based practices in clinical settings may not always be successful (Sales et al. 2006).

Flood and Robinia (2014) recommended that university instructors deliver clinical training in order to bridge the gap between theoretical and clinical training. An important finding of our study was the need for mutual and coordinated training of clinical nurses and facultyinstructors althoughthis is not in line with the currently held common beliefs amongstthe healthcare community in Iran. Recommendations from previous studies Iran based studies indicated (Cheraghi et al., 2010) a preference for the vertical and hierarchical transfer of information and knowledge from the faculty to hospitals; however, the results of the current study show that sometimes this relationship works inversely and university educators also need to be trained and empowered by clinical nurses. Educational development managers of faculties should take this into consideration when designing empowerment programs. Findings from this study also suggest that policymakers of continuous educational programs revise the process for completing these programs and issuing the certificate to ensure ongoing competency and currency with practice.

In the current study, both nursing managers and academic educators believed that the preceptors hip plan failed in bridging the gap between theory and practice which they believed was due to incomplete implementation of the plan; this was attributed to the lack of incentive system for participation as a result of which nurses were not willing to participate. Andrew and Ford (2013) suggest that the role and the position of clinical training facilitators is also worthwhile considering as a means of bridging the theory practice gap, however this is not always adequately supported (Andrew and Ford, 2013; Valizadeh et al., 2016). In our study Clinical nurses believed that if they had the benefits of a faculty, they would be more motivated to engage in instructional education than when they were the preceptor therefore they suggested **creating Clinical Board of Education.**

5. Conclusion

It seems that a strong intention to change linked to active participation of both faculty and clinical nurses are needed to bridge the gap between theory and practice. Findings from our study suggest that creating an appropriate context for nurses and nursing educators which supports mutual learning, along with the use a common shared pragmatic language in the form of clinical guidelines may help decrease this gap.

Declarations

Author contribution statement

Mahnaz Shoghi, Mahbobeh Sajadi, Fatemeh Oskuie, Afsaneh Dehnad, Leili Borimnejad: Conceived and designed the experiments; Performed the experiments; Analyzed and interpreted the data; Contributed reagents, materials, analysis tools or data; Wrote the paper.

Funding statement

This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Competing interest statement

The authors declare no conflict of interest.

Additional information

No additional information is available for this paper.

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