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Original Article
Redefining Clinical Education: A Scoping Review Of Nursing Faculty Practice Models For Enhanced Clinical Competency

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Abstract:
Objective: To identify, appraise, and synthesize evidence of faculty practice models that promote clinical competency in nursing education.
Methods: A scoping review methodology was used for this review, for which an extensive literature search was carried out comprehensively in April 2023. The PICO framework was used to develop the research question. The literature was systematically searched from Medline (EBSCO Host), PubMed, CINHAL, Google Scholar, and Pak Medinet from 1979 to 2023 using various keywords and Boolean operators. The inclusion criteria were developed, and only those research studies that focused on the faculty practice model in nursing education were eligible for inclusion. Thematic content analysis was performed to identify the faculty practice models that promote clinical competency in nursing education with key features of the model and its benefits and limitations.
Results: The initial search retrieved 61,107 studies, out of which 173 met the inclusion criteria for which full-text articles were accessed and reviewed; ultimately, 37 studies were selected for scoping review based on the inclusion and exclusion criteria. In total, eight (8) basic models were identified, i.e., unification, collaboration or joint appointment, integration or nursing center, entrepreneurial or linkage, private practice, moonlighting, nurse-faculty group practice and dyad model.
Conclusion: The implementation of faculty practice models in nursing presents a number of challenges that must be addressed to improve patient care. A lack of resources, conflicts with physicians, and concerns about losing one's identity as a faculty member are just a few of the issues that must be addressed.

Keywords: Nursing Education, Faculty Practice, Clinical Competency, Faculty Practice Models, Clinical Education

Background:
"Theory without practice is sterile and practice without theory is blind". McCaughtery (1991) The history of nursing reveals that the nursing education model shifted from apprenticeship to university-based degrees and diplomas. This was done with the goal of improving educational quality and recognizing nursing as a discipline with academic and practice dimensions, which is why nursing is a practice-based discipline[1,2,3]. The primary goals of nursing education are that nurses must be prepared to meet diverse patients' needs, must be academically and clinically competent, must function as leaders, and must advance science that benefits patients and the capacity of health professionals to deliver safe, quality patient care[4]. Clinical education is at the heart of professional education in nursing, which is evident in the current curriculum of the bachelor of science in nursing (BSN) program where approximately 57% of the curriculum time of nursing education is dedicated to it. However, the theoretical and clinical domains require close integration to achieve the goals of nursing education[5,6]. Faculty members responsible for clinical education are expected to have both, theoretical knowledge and clinical training in order to bridge the gap between academic preparation and nursing practice of the students. In addition, they also require an understanding of the changing health-care environment, needs of the students and the population[7]. Approximately 5 decades ago, it was recognized that the shift from clinical settings of faculty members is affecting their clinical credibility, competence, currency and efficacy as nurse educators; therefore, academic nurses have been researching ways to maintain clinical competence and credibility through faculty practice[2,3].

The entry level in academia is lecturer or clinical instructor for which Bachelor of Science in Nursing (BSN) with 3 years of post internship experience is the requirement. Once a faculty member is appointed, then his/her primary role becomes an

educator with most of the time utilized in classroom teaching focusing on theoretical aspects, subsequently the role of practitioner becomes secondary. The reason being that the concept of faculty practice is almost nonexistent in many developing countries, which is essential for clinical education competency, resulting in a faculty academic-practice gap[9]. The faculty progression is structured into assistant, associate, and full professor, each with its own set of qualifications and criteria as set by relevant national regulatory bodies. There is no requirement of formal training in nursing education for newly hired faculty members, which is why they feel inadequately prepared for the role of educator[8]. Faculty practice is recognized as an important component of nursing education by the American Association of Colleges of Nursing and includes the provision of direct care, consultation, education, research, and management services by faculty who maintain their license and continue to practice in their area of expertise[8]. In the literature, several definitions of faculty practice exist, and there is no consensus on one definition; however, in general, it can be defined as a formal agreement between a nursing school and a clinical facility/enterprise/entity to integrate teaching, research practice and service to achieve excellence[3,9]. There are numerous advantages of faculty practice in nursing education, including maintaining clinical competence, serving as role models for students, advancing scholarship and research, and bridging the gap between academia and clinical practice[6,9]. Nursing faculty members who participate in faculty practice can stay current on new research, technologies, and treatments, ensuring that their teaching is current and relevant[10]. Faculty practice can also help them model professionalism, ethical behavior, and a commitment to patient care, all of which contribute to the development of a culture of excellence in nursing education[11]. By engaging in clinical practice, nursing faculty members can identify areas of need and develop research questions relevant to the profession, which can lead to new insights and discoveries that benefit patients and the overall healthcare system[12]. Faculty practice can also provide financial benefits. Faculty practice addresses the issues of improving the relationship between nursing services and nursing education as well as achieving academic discipline status[2]. It benefits nursing students, nursing faculty, and the nursing service-education relationship. In contrast, many challenges have been reported in the literature pertinent to faculty practice, such as a lack of scope of practice, a lack of mentors, role strain that leads to burnout, time management, reimbursement, balancing family and professional roles, academic workloads, lack of organizational and administrative support, and recognition of clinical competence in university promotion and tenure processes[2,3,6,13,14]. More empirical data are needed to support faculty practice and faculty practice models because clinical teaching is not considered to be a part of faculty practice[13,15].

Therefore, it is critical to explore the different models of faculty practice for enhancing/imparting clinical competency in nursing education. However, there is no current literature that explores faculty practice models in nursing education.The purpose of this scoping review was to identify and critically analyze the existing models of education, and the practice of 'faculty practice' for enhancing/imparting clinical competency in nursing education. Model types, key features, benefits, and limitations are discussed along with emerging developments. The intent is to increase the understanding of faculty practice models and ultimately to contribute to the identification of contextually relevant faculty practice models.The PICO framework was used to develop the research question i.e. Population - Nursing Faculty, Intervention - Faculty Practice, Comparison - Different Faculty Practice Models and Outcome - Clinical Competency. This main question for the review was: what are the existing faculty practice models implemented in nursing education to enhance clinical competency? The objective of this review was to identify, appraise, and synthesize evidence of faculty practice models that promote clinical competency in nursing education.

Methods:

A comprehensive literature search was carried out in April 2023. Arksey and O'Malley's framework, which consists of five steps and was used for this scoping review. The steps included: i) defining the research issue; ii) locating pertinent studies; iii) choosing the study; iv) charting the data; and v) compiling, summarizing, and disclosing the findings. It was an iterative process in which each step was taken repeatedly for comprehensive coverage of the literature. Preferred Reporting Items for Systematic Reviews and Meta-Analyses extension for scoping reviews (PRISMA-Scr) guidelines for the literature search and subsequent data screening process were followed[16].

Search Strategy

To identify model types and extract model benefits, drawbacks, and challenges in implementation, an iterative process of literature analysis was performed. Search terms were developed focusing on the research question and pilot tested for refinement. Multiple combinations of subject headings were used as a final search term using MeSH terms, Boolean operators, and keywords to capture the studies of interest. Initially, the search was carried out from 2013 to 2023; however, the search was not comprehensive; therefore, the age bracket was removed, and as the first statement related to faculty practice was published in 1979, the following databases were searched from 1979 to 2023: Medline (EBSCO Host), PubMed, CINHAL, Google Scholar, and Pak Medinet.

The keywords used for literature search included, 'faculty practice', 'model', 'framework',
'nursing', 'nursing education', 'clinical competence', 'unification model', 'collaboration model', 'joint appointment model', 'entrepreneurial model', 'linkage model', 'integration model', 'nursing center model', 'moonlighting', private practice', 'nursefaculty group practice', and 'dyad model'. To enhance the sensitivity of the search, reference lists of highly cited studies were also searched systematically. The inclusion criteria were developed to include all faculty practice models of nursing education that may have appeared in these searches. Rigor was maintained throughout the search process to ensure comprehensive coverage of the literature.

Data Screening, Charting and Synthesis

The literature was searched to identify different types of faculty practice models and information about their design, implementation, and evaluation. The inclusion criteria were developed, and only those research studies eligible for inclusion focused on the faculty practice model in nursing education. All original research, short communication, systematic reviews, commentaries, editorials, theoretical discussions, and dissertations that were published in peer-reviewed journals and whose content was focused on faculty practice models in nursing education were included for review, and there was no publication age limit placed for the included studies. Articles published in a language other than English, not related to the faculty practice model, only abstract accessible and opinion papers, conference papers, and book/book chapters were excluded. To achieve the study objective, special attention was given to studies performed specifically on faculty practice models that focus on clinical competency. Most research studies evaluated specific models while a few compared the models. The terminology used in faculty practice varied greatly. Many articles talked about the academic-practice partnership model; however, only those articles that were focused on increasing the clinical competency of faculty members for clinical teaching were included. Articles focused on scholarly activities and serving population needs by faculty practice were excluded. The first author performed data extraction in which the database search was carried out and screened independently the title and abstracts of all publications for eligibility for inclusion. These were cross-checked by the second and third author for confirmation of the extracted results. To determine any discrepancy in the selection of articles based on the inclusion and exclusion criteria, both reviewers met during each stage of the screening process, i.e., at the beginning, middle and end. In case of any disagreement between reviewers regarding the suitability of the study for inclusion, the matter was discussed with the supervisor for the final decision. Full-text articles were obtained for all potentially eligible studies, which were then reviewed for inclusion. Reasons for excluding any studies were recorded.

A data extraction sheet was designed in Microsoft Excel to collect the relevant data from each study, including country, year, faculty practice model type, key features, benefits, and limitations. The data charting facilitated the identification of the demographic pattern of the data set and facilitated data synthesis. The first author objectively reviewed all the included studies and selected articles for the final scoping review.For data synthesis, thematic content analysis was performed to identify the faculty practice models that promote clinical competency in nursing education with key features of the model and its benefits and limitations. The first author conducted the thematic analysis, and the second and third authors validated the findings.

Results:

The initial search retrieved 61,107 studies, out of which 173 met the inclusion criteria; 20,646 were excluded during the title and abstract screening because these studies did not meet the inclusion criteria, and 52 duplicate records were also removed. The searches were repeated two weeks after the initial search to ensure up-to-date coverage of the available literature. A total of 31 additional results were retrieved and resulted in 4 additional studies for inclusion. Full-text articles were accessed and reviewed in 173 studies, out of which 37 studies were ultimately selected for scoping review based on the inclusion and exclusion criteria (See Fig 01. PRISMA diagram and Table 01: List of studies included for review).

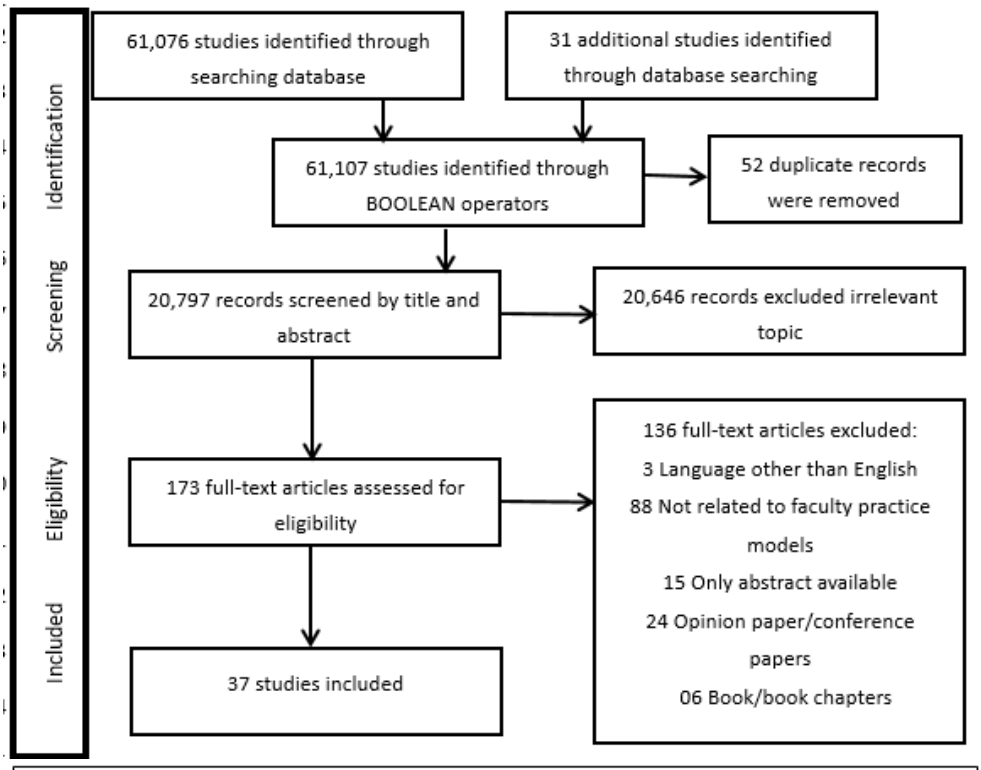

Figure 01. PRISMA diagram

In total, eight (8) basic models were identified, i.e., unification, collaboration or joint appointment, integration or nursing center, entrepreneurial or linkage, private practice, moonlighting, nurse-faculty group practice and dyad model. Few studies have focused on describing the model, and many have discussed and described their own model implementation in detail. Most of the literature was descriptive in nature. In some cases, models were combined to meet the needs of a particular organization. One scoping review was also found about academic service-learning nursing partnerships in the Americas[17]. Among 37 publications, one study focused on five of the eight models that we had identified[9]. This study was done in 2004 and served as a cornerstone for our exploration into faculty practice models. However, recognizing the temporal gap, we felt that it was essential to carry out a scoping study to list all faculty practice models that have been in use up to this point. This approach allowed us to comprehensively synthesize and incorporate the latest insights into our study. The key features, benefits and limitations of each model are discussed in table 02.

Model 01: Unification Model

Eleven studies focused on description of the unification model[2,3,9,13,15,18-23]. In the unification model, the clinical agency and nursing school share a central administrative backbone, and faculty members serve as clinicians as well as educators. The director of nursing services is also the dean of the nursing school[2,3,9,13,22]. The unification model is typically implemented in an academic health science center, where the hospital is affiliated with the university, and it necessitates that the health care center and the school of nursing share a common philosophy and mission[18,20]. The model was created to integrate nursing education and practice, with the goal of ensuring that ultimate responsibility for nursing practice, education, and research is held by a single administration. Dorthy Smith led the early 1960s unification movement in nursing education and service. In 1961, the plan was tested at Case Western Reserve University's School of Nursing and was later adopted. Rochester began a unification model in 1972, with the same administration, governing board, and budget, and joint appointments for education and service were made. Clinical directors oversaw both education and practice[21-23].

The Unification Faculty Practice Model allows academic institutions to maintain their faculty members' professional skills while also benefiting the clinical site. The benefits to the academic institution include the preservation of the institution's credibility through the participation of faculty members in service roles[9]. Meanwhile, the clinical site gains from enhanced patient care and education, staff development, better clinic management, and the application of academic knowledge to improve services. Furthermore, the Unification Faculty Practice Model improves the quality of care and student role modeling by keeping faculty members current and increasing their credibility. This model also encourages collaboration between nursing education and nursing services, providing opportunities for faculty members to conduct research and influence patient care quality while also positively influencing student learning[2,15]. Notwithstanding the advantages, there can be obstacles in using this model. The Faculty Practice Model encounters difficulties because of conflicting demands between service, teaching, and/or research because the major customer in the clinical context (the client) differs from the primary consumer at the academic institution (the student)[9]. Furthermore, a heavy workload can lead to burnout and resentment due to unrealistic time and energy demands[18,23]. The equitable distribution of faculty within educational and service settings, as well as the division of responsibilities, is required[2]. However, a shortage of nurses willing to take on the triple responsibility is a barrier to implementing this model. Finally, the unification model is viewed as a return to the diploma school model, in which the director of nursing services also serves as the director of the nursing school[22].

Model 02: Collaboration or Joint-Appointment Model

For collaboration or joint appointment models, 16 studies were identified, out of which 12 were focused on model description[2,3,9,13,15,16,18,21,23-26] and 4 discussed their own model implementation, i.e., the lecturer/practitioner model that was used in the UK[27], two separate employment models used in Australia[27], clinical as part of academic appointments in the USA[27], academic-practice partnerships in the USA[28], the Calgary model in Canada[19], and joint nurse scientists in the USA[29]. The collaboration or joint appointment model was defined by Davis and Tomney in 1982 as "one agreed to by two or more institutions and carries out a defined responsibility in each."[21] This faculty practice model entails joint appointments for nursing educators and clinicians in both academic and clinical settings at a cost shared by the two institutions[2,3,9,15,16]. This collaborative model, also known as the joint appointment model, necessitates time and effort to complete two jobs that require different skills[18]. In this approach, the health-care agency and school have separate administrations, but their staff members cooperate in their work. This is the most common type of faculty practice model, and is used at many universities around the world, including Case Western Reserve University in the United States and McMaster University in Canada[19]. Overall, faculty practice entails an interdependent relationship between academia and service organizations with the goal of promoting highquality nursing education and patient care[24]. There are two types: cost-shared and noncost-shared[25,27].

Service agencies benefit from the collaboration or joint appointment faculty practice model in a variety of ways, including staff educational opportunities, cost savings, new perspectives on clinic administration and management, and the research application to improve practice[9,23,26]. Furthermore, the model encourages collaboration between nursing education and service, giving faculty the opportunity to conduct research, influence patient care quality, and improve student learning[2,28]. According to joint appointees, the position is fulfilling for both staff and students, and the continuity of nursing services enhances patient care3,29. The faculty practice model, in which faculty members have joint appointments at both academic and service institutions, saves money but may leave faculty members with less time for academic responsibilities such as teaching[9,26]. The equitable distribution of faculty responsibilities across both settings is critical to avoiding burnout and

resentment caused by unrealistic time and energy demands[2,23]. Because of the time and energy requirements, the joint appointment model has been viewed negatively[18].

Model 03: Entrepreneurial or Linkage Model

For entrepreneurial or linkage models, 15 studies were identified, of which 4 were focused on model description[9,13,15,30] and 11 talked about their own model implementation, i.e., the Houston Linkage Model in the USA[31], Nurse-led Clinic in the USA[32,33], Academic/Service partnership framework using a logic model developed by MacPhee[34], Academic-Service partnership in the Philippines[35], faculty practice model in the USA[36,37], Faculty Practice Partnership in the USA[38], Academicpractice partnership in the USA[39], Voluntary faculty practice in the UK[40], and Juvenile justice in the USA[41]. The entrepreneurial or linkage model of faculty practice entails a contract between a nursing school and an organization in which the school provides services to the agency for a fee[9,13,15]. The clinicians, administrators, and researchers remain university employees and are not paid directly by the agency[15]. The revenue generated is available to the nursing school and is used to hire backup faculty to cover absences[30]. A university salary, a salary supplement for faculty practice, and benefits are provided to the faculty member[31]. As part of their faculty responsibilities, the faculty members design their own practice and may also negotiate the use of their practice site as a research and teaching site[13,32]. The success of this approach depends on the creation of a Faculty Practice Council that consists of all faculty members taking part in faculty practice arrangements and administrative representatives of both organizations[12]. This model is mutually beneficial to nursing service and education, as well as cost-effective, because the university provides much-needed clinical, research, and leadership expertise to health-care institutes at a low cost[34,35,36].

Academic institutions can benefit from this model in many ways, such as better patient care, increased faculty clinical competence, and the upkeep of a curriculum that represents the current clinical situation[9]. It also opens collaborative quality improvement initiatives and clinical research opportunities without exposing the organization to financial risk. Community organizations and their clients benefit from expert clinical services, access to evidence-based practices and technology, and research opportunities. The model assists faculty members in maintaining current clinical skills and ensuring that the curriculum is relevant, which benefits students who have role models and facilitates faculty members' contributions to policy decisions and practice recommendations[31]. Furthermore, the model benefits nursing services by providing highly knowledgeable nurses' skills at a lower cost and contributing to faculty clinical competency, ensuring that new graduates can function clinically with less orientation time. This model offers both objective and subjective benefits, such as increased salary and credibility[30].

Instead of collecting fees from uninsured or underinsured patients, this fee-for-service model for faculty practice relies on grants and fundraising for financial support[40,39]. If the funds raised are insufficient to cover the costs at the end of the contract period, the university may discontinue the faculty practice[9,40]. This model, however, may restrict the university's involvement in decision-making, potentially impeding the development of the faculty practice's mission and philosophy. There are also issues with scheduling conflicts, expertise requirements, and promotion and tenure criteria for clinical practice[31,37,41].

Model 04: Integration Model or Nursing Center Model

For integration or nursing center models, 13 studies were identified, of which 9 were focused on model description[2,3,9,13,15,18,19,26,32] and 4 talked about their own model implementation, i.e., College of Nursing FPM in the USA[10], Nurse-led Clinic in the USA[42], Nurse-managed Wellness Center in the USA[43], and Communities of Practice (CoPs) in the USA[14]. The integration model is a type of faculty practice model in which the nursing school develops its own health care service[3,9,13,16]. Faculty and graduate students are responsible for providing direct patient care in a clinical setting in this model[2]. Nursing centers are an important part of the nursing faculty because they provide students with clinical experiences as well as opportunities for faculty members to develop independent nursing practice and design nursing research projects[18]. Integrated model nursing centers are self-sustaining, and clients pay directly for nursing services,[10] hence they generate revenue, provide high-quality care to the community, and raise faculty members' visibility by providing learning opportunities for students and clinical practice for faculty[26]. The integrated model differs from the traditional model in that faculty members are not involved in direct patient care[15]. The integrated model has been successfully implemented at several universities in the United States, including Pennsylvania State University and the University of Wisconsin-Milwaukee, where the emphasis of care is on health promotion[19].

This approach allows the school or department a high degree of control over the practice in addition to the benefits mentioned in the entrepreneurial or linkage mode[19]. It generates income for higher education and offers patients high-quality care, both of which are becoming increasingly vital[2,14,42,43]. Although this approach could generate money, its main drawback is the possibility of financial losses. Due to their reliance on patient fees, which frequently fell short of covering the expenses of faculty practice, only a tiny number of academic nursing institutions were able to generate income[9]. This was primarily caused by the fact that many patients lacked insurance or had inadequate insurance, making it difficult for them to pay for treatment. The availability of practice environments and administrative support in both institutions and health-care organizations is also necessary for this approach to be successful[2].

Model 05: Moonlighting

For the moonlighting model, 7 studies were identified that were focused on the description of the model[2,3,15,18,24,26,21]. The moonlighting faculty practice model refers to when faculty members practice nursing on their own time, typically on nights,

weekends, vacations, or summers, outside of their specified work responsibilities[21]. Moonlighting instructors may work at a hospital or in the community, and they are paid directly for their services without the involvement of any students[2]. This model's main objective is not research and scholarship, nor is it officially contracted by or via the school of nursing[3]. The moonlighting faculty practice model in nursing has several benefits, including higher pay and opportunities for faculty to maintain their clinical expertise and knowledge. Additionally, this strategy enables faculty to collaborate with neighborhood organizations and attract prospective students to the nursing program[18,24]. It can also increase the reputation of the nursing program by highlighting the faculty's dedication to offering top-notch patient care[15,26]. Additionally, working a second job can expose teachers to a variety of patient groups and clinical settings, which can enhance their instruction and mentoring of students.However, this model has limitations because it requires the faculty member to work a second job and does not include any administrative support or control[18]. One of the main limitations of the nursing moonlighting faculty practice model is that it is not directly integrated into the nursing education program and may not align with the school's goals and objectives[24]. It may also result in an overburdened faculty member who is less available for teaching and mentoring students[26]. Furthermore, because moonlighting involves independent practice outside of the nursing school, there may be less accountability and oversight regarding patient care, which may jeopardize the quality-of-care provided[2]. Finally, because moonlighting is frequently motivated by financial incentives, there is a risk of conflicts of interest that could jeopardize academic integrity and ethical practice[21].

Model 06: Private Practice Model

For the private practice model, 7 studies were identified that were focused on the description of the model[2,3,9,15,18,19,24].
Faculty members in the private practice model negotiate a direct patient care role with a healthcare agency and receive direct reimbursement for their services[3]. This is distinct from "moonlighting" outside of designated work responsibilities and is an essential component of the faculty member's role within the academic institution[9]. During school hours, faculty may provide care in either an inpatient or outpatient facility and may or may not have students assigned to them. The health-care agency reimburses the nursing school for the services of the faculty member[2]. Like joint appointments, the private practice model provides administrative support[18]. This model enables faculty to select their area of expertise and negotiate their role accordingly. While there are advantages to this model, such as faculty autonomy and flexibility, there are also drawbacks, such as scheduling conflicts and promotion and tenure criteria for clinical practice. This strategy has been practiced at the University of Tennessee College of Nursing in the United States[19].This model may address several advantages for client care, clinical research, and practice advances as well as nursing student education. Faculty members can serve as positive role models for students in this model because they provide direct patient care and can share their expertise in real-world healthcare settings[2]. Furthermore, it can help to advance clinical research and practice innovations, which are goals of the entrepreneurial or linkage model[9]. Furthermore, the private practice model generates revenue for the nursing school, which can be used to fund education, research, and other initiatives.

There are also limitations to the private practice faculty practice model in nursing education. Due to profit-sharing and productivity expectations, it can be difficult to meet teaching, practice, service, and research expectations[9]. The division of responsibility between patients and students, as well as the incentives for faculty who engage in this practice, can also pose challenges[24]. Furthermore, the heavy workload can be a hindrance[18]. Another limitation is that, while described as faculty practice models, the "moonlighting" and "private practice" models involve providing services outside of designated work responsibilities and are intended to supplement income[15].

Model 07: A Nurse-Faculty Group Practice

For the nurse-faculty group practice model, 1 study was identified that focused on the description of the model[21].
The nurse-faculty group practice model is a method in which a group of faculty members collaborate to provide direct care to clients. This model has several advantages over traditional models of faculty practice; for example, it makes better use of resources by allowing multiple faculty members to share responsibilities and provide care to clients and leads to improved collaboration and communication among faculty members, thereby improving overall care quality[21]. This model offers an excellent opportunity for clinical education because students can observe and participate in the care provided by the faculty team. This allows students to connect their classroom learning with practical experience, providing them with valuable real-world knowledge.

In addition, this model offers benefits to nursing faculty members, such as the capacity to maintain clinical skills, take pleasure in the freedom and excitement of practicing nursing, and function as a role model for students[21]. Working together, faculty members can accomplish their responsibilities in teaching, research, and service while simultaneously providing patients with high-quality treatment. It may improve patient outcomes and encourage collaboration among nursing faculty members.

The nurse-faculty group practice approach has certain drawbacks even though it offers exceptional chances for clinical instruction and permits faculty members to maintain their clinical skills. It can be challenging to strike a balance between the demands of teaching, research, and practice while also ensuring that all obligations are successfully met. Furthermore, putting the plan into practice might require a substantial investment in resources such as buildings, machinery, and personnel[21]. Additionally, there can be difficulties in scheduling both practice and instruction, as well as a dearth of third-party compensation. The nurse-faculty group practice model is still a crucial component of nursing education and practice, despite these challenges.

Model 08: Dyad Model

For the dyad model, 4 studies were identified, of which 2 were focused on model description[13,15] and 2 discussed their own model implementation, i.e., a faculty clinical practice model based on Paskiewicz's framework in Australia[11] and a faculty practice mentoring program in the USA[33]. The Dyad faculty practice model links faculty with clinical nurse experts to work together on projects in practice, research, and education[15]. The faculty members' opportunity to work with clinical professionals, increase their knowledge and abilities, and enhance the standard of patient care are only a few benefits of this paradigm. To give students a significant real-world experience, the Dyad model also encourages a greater integration of education and practice with faculty members working as clinical partners[13]. The Dyad faculty practice model has been shown to be effective in nursing education. Better patient care, more positive faculty–student interactions, and greater job satisfaction are the results[44]. Adjunct academic appointments follow this model, allowing faculty members to annually negotiate their availability and degree of dedication[11]. Clinical nurse specialists and academic faculty can work together to change the practice environment, and clinical faculty can change the academic environment. By collaborating in this way, everyone benefits from a stronger and more efficient health care and educational system[13,15]. Overall, the Dyad faculty practice model gives faculty members a great chance to increase their responsibilities, enhance their competencies and have a beneficial impact on the health-care system.

However, the Dyad faculty practice approach does have certain limitations. Ensuring that faculty can successfully manage their teaching, research, and practice commitments is one challenge[11]. Another problem is the significant investment in facilities, equipment, and staff that is needed to support this model[44]. Moreover, schedule conflicts between teaching and practice may occur, and it is possible that third parties will not pay for joint projects that faculty members and clinical nurse specialists complete[13,15].

Discussion:

Each faculty practice model has unique benefits and limitations, and the selection of a model is dependent on the academic institutions policies, resources available at the clinical training sites, and educational program mission and objectives. Careful planning, sufficient funding, and open communication between the academic institution and the clinical training site are required for the implementation of these approaches. Faculty members must also be open to change and flexible enough to take on new duties[45]. For faculty practice to be successful, collaboration and clinical competency recognition are also crucial[32]. Future studies should concentrate on how well these models can enhance nursing education, patient care, and research.

In our study, 37 studies were examined that were focused on faculty practice models for clinical competency in nursing education. Several benefits have been reported regarding implementing faculty practice in nursing education. One of the most important benefits is that faculty members are updated about recent advancements in the industry. Faculty members who remain active in clinical practice ensure that their instructions are up-to-date and maintain their own clinical competence, which benefits students' and better prepares them for the challenges of contemporary nursing practice[41,46]. In addition, by engaging in faculty practice, faculty members serve as role models for their students in terms of professionalism, ethics, and dedication to patient care[45]. Furthermore, nursing faculty can use their clinical expertise to pinpoint gaps in the literature and create careerrelevant research topics[29]. They can contribute to the development of nursing knowledge and enhance patient outcomes by doing research and sharing their findings. In short, faculty practice becomes an essential part of nursing education and aids in bridging the gap between academic and clinical practice and equips students for the difficulties they will encounter during their nursing careers[28,38,44].

Implementing faculty practice and making it an intrinsic component of the academic position requires strategic planning. The challenges that must be resolved include lack of resources, conflicts with physicians, and concerns about losing one's identity as a faculty member, fostering collaboration between academic institutions and clinical settings, workload changes, such as time allocation for consultation and faculty practice, organizational and administrative assistance, acknowledgment of clinical competence for promotion and tenure, as well as evidence of scholarly outcomes from the combination of teaching, practice, and research 2,3,18,21,24,-26,46. Future research should assess the efficacy of these models, and the effect of changes in workload and administrative support to integrate faculty practice into the role of the nurse academic.

Conclusion

In conclusion, each one of the faculty practice models has its strengths and limitations. The implementation of faculty practice models in nursing presents several challenges that must be addressed to improve nursing education, which will ultimately lead to enhanced patient care. A formalized faculty practice plan developed in collaboration with stakeholders and guided by a systematic assessment of individual faculty members' attitudes and perceptions can assist in overcoming these challenges. Furthermore, institutions must assess the effectiveness of faculty practice, including its impact on patient care and student learning. Nursing can continue to evolve and improve patient care by addressing these challenges and implementing effective faculty practice models.

Recommendations

The following recommendations are made considering the study's findings.

1. For developing competent nurse practitioner, the nursing institutions should incorporate contextually relevant faculty practice model in nursing education and encourage clinical proficiency among nursing faculty
2. Faculty practice model should be selected considering available resources, organizational policies and faculty readiness.

3. It is important that the effectiveness of the model implemented be studied for student learning and improvement in patient care.

Limitations:
Literature search from Web of Science and Scopus was not carried out as at the time of the study, our institution did not have subscriptions to these databases. Hence we utilized the sources that were available to us.

List of abbreviations:

PNC	Pakistan Nursing Council
BSN	Bachelors of Science in Nursing
PICO	Patient/Population, Intervention, Comparison and Outcomes
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
MeSH	Medical Subjects Headings
EBSCO	Elton B. Stephens CO (company)
CINHAL	Cumulated Index to Nursing and Allied Health Literature
UK	United Kingdom
USA	United States of America
FPM	Faculty Practice Model
CoPs	Communities of Practice

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Table 01: List of studies included for review

Author	Title	Year	Journal
Millonig[2]	Faculty practice: A view of its development, current benefits, and barriers.	1986	Journal of Professional Nursing
Budden[3]	Nursing faculty practice: Benefits vs costs.	1994	Journal of Advanced Nursing
Saxe et al[9]	What is faculty practice?	2004	Nursing Outlook
Moss et al[10]	Leveraging a sucessful faculty practice model to recruit and retain early-career nurse faculty	2022	Nurse Educator
Fowler et al[11]	Is faculty practice valuable? The experience of Western Australian nursing and midwifery academics undertaking faculty clinical practice-A discussion paper	2017	Nurse Education in Practice
Gonzales ei al[12]	Academic nursing and faculty practice.	2023	Nurse educator
Upvall et al[13]	Defining the cultural milieu for implementing faculty practice in Pakistan.	2022	International Journal of Nursing Practice
Padilla BL & Evans-Krieder K[14]	The added value of clinical faculty in building effective academic–practice partnerships.	2022	Journal of American Association of Nurse Practitioners
Premji et al[15]	Faculty practice in a private teaching institution in a developing country: embracing the possibilities.	2011	Journal of Advanced Nursing
Markaki et al[17]	Academic service-learning nursing partnerships in the Americas: a scoping review.	2021	BMC Nursing
Rodgers[18]	Implementing faculty practice: A question of human and financial resources.	1986	Journal of Advanced Nursing
Collen et al[19]	The development of a practising nursing faculty.	1989	Journal of Advanced Nursing
Wakefield-Fisher[20]	The issue: Faculty practice.	1983	Journal of Nursing Education
Chickadonz GH[21]	Faculty practice.	1987	Annual review of nursing research
Nayer DD[22]	Unification	1980	AJN The American Journal of Nursing
Marriner A[23]	Unification of nursing education and service	1983	Nursing Administration Quarterly
Choudhry[24]	Faculty practice competencies: Nurse educators' perceptions	1992	Canadian Journal of NursingResearch Archive
Little & Milliken[25]	Practicing what we preach: Balancing teaching and clinical practice competencies	2007	International Journal of Nursing Education Scholarship
Emerson S[26]	Confronting the nursing faculty shortage: Identifying solutions to address the issue.	2015	Arkansas State University

Scanlon et al[27]	Building the next generation of advanced practice nurses through clinical education and faculty practice: three international perspectives.	2015	Clinical Scholars Review
Sebastian et al[28]	Leadership by collaboration: Nursing's bold new vision for academic-practice partnerships.	2018	Journal of Professional Nursing
Finnell DS & Castner J[29]	The Role of Nurse Scientist Across Academia and Practice. Nursing outlook. 2020 Nov 1;68(6):696-7.	2020	Nursing Outlook
McNiel & Mackey[30]	The consistency of change in the development of nursing faculty practice plans	1995	Journal of Professional Nursing
Starck et al[31]	Nursing faculty practice in the Houston linkage model: Administrative and faculty perspectives	1991	Nurse Educator
Aquadro et al[32]	Removal of nursing faculty practice barriers in academia: An evidence-based model	2014	Journal of Nursing Education
Gonzales et al[33]	A Faculty Practice Mentoring Program.	2023	Nurse Educator
Harper et al[34]	Partnership to improve quality care for veterans: the VA Nursing Academy.	2015	Journal of Professional Nursing
Tuppal et al[35]	Best practices in building academic-service partnerships in nursing: Views from the lens of nursing administrators, students, faculty and staff nurses	2017	International Journal of Nursing Education
Drayton-Brools et al[36]	Building clinical education training capacity in nurse practitioner programs.	2017	Journal of Professional Nursing
Pardo et al[37]	Cultivating and Refining Clinical Knowledge and Practice: Relating the Boyer Model to Doctor of Nursing Practice Scholarship	2016	Journal of Doctoral Nursing Practice
Beierwaltes et al[38]	A school-based health center partnership: Faculty practice, nursing student learning and wellness in youth, families and community	2023	Journal of Clinical Nursing
Wall & Medina[39]	Creating an academic-practice partnership in a primary care pediatric clinic	2022	Journal of Professional Nursing
Allen40	Faculty practice: a model to bridge the theory–practice divide.	2000	British Journal of Community Nursing
Clifton & Roberts[41]	Innovation in faculty practice: a college of nursing and juvenile justice collaboration.	2016	Journal of Professional Nursing
Clevenger et al[42]	Creating new models of care through academic-clinical partnership	2018	Nursing Administration Quarterly
Thompson et al[43]	Meeting baccalaureate public/community health nursing education competencies in nurse-managed wellness centers.	2013	Journal of Professional Nursing
Gonzales et al[44]	Optimization of faculty practice.	2020	Journal of Professional nursing

Model	Key features	Benefits	Limitations
Unification	◆ Clinical agency and nursing school have shared administration. ◆ Faculty members hold dual appointments as clinicians and educators. ◆ Nursing school dean is also the director of nursing services.	◆ Benefits both academic institutions and clinical sites ◆ Maintains professional skills ◆ Improves patient care/education ◆ Enhances credibility ◆ Promotes collaboration ◆ Fosters research with quality care impact	◆ Competing demands ◆ Workload strain ◆ Equitable distribution of faculty ◆ Shortage of nurses ◆ Resemblance to diploma school model.
Collaboration or Joint Appointment Model	◆ Joint appointments ◆ Cost-sharing model ◆ Collaboration between institutes for faculty practice implementation ◆ Two types: cost-shared and noncost-shared.	◆ Cost savings ◆ Promotes collaboration ◆ Improve learning and patient care ◆ Role is rewarding for both students and staff. ◆ Enhanced nursing service.	◆ Less time teaching. ◆ An equitable distribution of responsibilities needed to avoid burnout and resentment. ◆ Negative perception of joint appointment model.
Entrepreneurial or Linkage Model	◆ Agreement between school and organization. ◆ Clinicians, administrators, and researchers are university employees. ◆ Revenue generated is used to hire replacement faculty.	◆ Improved patient care ◆ Increased faculty clinical expertise ◆ Collaboration initiatives ◆ Access to evidence-based practices ◆ Cost effective skilled services	◆ Based on grants and Fundraiser ◆ Inadequate funding risks practice suspension. ◆ Limited university involvement. ◆ Scheduling conflicts ◆ Promotion and tenure criteria challenges.
Integration or Nursing Center Model	◆ Nursing school creates own health-care service, with faculty and students providing direct patient care. ◆ Self-sustaining model, clients pay directly for nursing services.	◆ Provides high degree of control to the school/department. ◆ Revenue-generating activity in higher education. ◆ Patients are given highquality care.	◆ Financial risk due to patient fees. ◆ Limited revenue generation for academic nursing centers. ◆ Practice settings and administrative support are crucial.
Moonlighting	◆ Faculty member practices nursing outside of work hours including nights, weekends, and vacations without student involvement.	◆ Increased faculty compensation ◆ Maintained clinical skills ◆ Community engagement ◆ Increase credibility ◆ Improved teaching and student mentoring	◆ Faculty working as second job ◆ No administrative Support ◆ Compromising integration ◆ Threat to academic integrity and ethical practice. ◆ Services provided outside of designated work responsibilities.
Private Practice Model	◆ Faculty negotiate direct patient care ◆ Receive direct payment for services ◆ Choose expertise area with or without student involvement	◆ Faculty autonomy and flexibility ◆ Benefit nursing student education, client care, clinical research, and practice innovations. ◆ Faculty serving as positive role models.	◆ Scheduling conflict and workload ◆ Promotion and tenure criteria ◆ Difficult to meet teaching, practice, service, and research expectations. ◆ Difficulties in allocating responsibility between patients and students ◆ Supplement income.

Nurse Faculty Group Practice	◆ Faculty team collaborates to provide care ◆ Bridging classroom learning with real-world experience through student observation and participation.	◆ Improves resource utilization ◆ Improves collaboration and communication ◆ Enhances overall care quality ◆ Maintaining clinical skills ◆ Serving as a mentor to students	◆ Balancing teaching, research, and practice ◆ Scheduling problems ◆ Lack of third-party reimbursement.
Dyad Model	◆ Faculty members and clinical nurse specialists are paired to collaborate on education, practice, and research projects.	◆ Greate integration of Education and practice ◆ Improved patient care ◆ Stronge faculty–student relationships ◆ Increased job satisfaction	◆ Juggling teaching, research, and clinical responsibilities. ◆ Resource intense ◆ Scheduling issues ◆ Lack of third-party reimbursement for joint projects.

Table 02: Key Features, Benefits and Limitations of each model