The Different Meanings of Flexible Shift work Scheduling: An Integrative Literature Review

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Abstract

Aim: *The aim of this rview study is to identify a clear meaning for "flexible shift work scheduling" for registered nurses from the different perspectives of nurses, policy-makers and health organizations.*

Background: *There is a significant need for today's nursing workforce to have more flexible shift work schedules due to demographic and social changes that have increased the demands on their time. For nurses, a flexible shift work schedule will help them to get the balance they need to reduce work-family conflict and for healthcare organizations it would be a successful tool that would improve nurse retention and recruitment. This paper approaches the study of the term "flexible shift work schedule" for nurses by identifying the meaning of the flexible shift work schedule for nurses based on the various perspectives of nurses, policy-makers and health organizations.*

Methods: *an integrative literature review was completed via a systematic search in the CINHAL and MEDLINE electronic databases. The literature was divided into research and non-research studies, and then it were categorized into three categories; (1) studies investigating the perspective nurses, (2) studies investigating perspective of policy-makers, and (3) studies investigating the perspective of health organizations.*

Results: *there are different interpretations of the meaning of the flexible shift work schedule for nurses as well as different goals within the three groups; nurses, policy-makers and health organizations. Furthermore, each group has a different interpretation of the meaning of the flexible shift work schedule based on level of experience and authority; however, within each group the meaning remained almost the same and goals seemed to be consistent. This review suggests that the difficulty in achieving a desirable schedule that fits the needs of each party might be because the groups do not have a common meaning for the term "flexible schedule" as they do not have shared goals to implement it. In addition, the review found that the voice of registered nurses is missing in the nursing research that discusses flexible shift work scheduling issues for nurses and this is another reason that is delaying implementation of flexible schedules that suit all parties.*

Conclusion: *This paper assists in finding a clear meaning for the flexible shift work schedule for nurses by using different approaches to study the perspectives of the three parties involved in the scheduling process and decision including policy-makers, healthcare organization and nurses.*

Introduction

Introduce the Problem

The critical nursing shortage and the dynamic nature of nursing work are forcing healthcare managers to run their organizations in a more flexible way [1]. Despite technological, managerial and professional changes in the nursing workforce that have led to a perceived increase in nursing productivity, globally there is still a huge gap between nurse supply and demand which is also being accentuated by a gradual increase in the average age of available registered nurses [2]. According to Gordon et al., in 2020 the registered nurse workforce will be 20% below projected global requirements.

Explore Importance of the Problem

The most challenging task for healthcare organizations is to provide high quality care at as low a cost as possible, while considering staff preferences and needs in and from the scheduling process". The challenges are also exacerbated by the current need for more flexible shift work schedules to improve nurses' work-life balance and to minimize work-life conflict. Many nurses struggle to manage the stressful situation created by the constant conflict between work demands and social responsibilities and this conflict has led many nurses who see their first priority as the care of their families leave the profession early [3]. For example, an American survey of acute care registered nurses working in Florida reported in 2005, that 38% of respondents indicated an intention to leave the profession early (prior to retirement age) due to work stress and unmanageable

shift work schedules [4]. In Australia, The Queensland Government Ministerial Task Force Report on Nursing Recruitment and Retention (1999:53) reported an annual 20.2% turnover of permanent nurses in Queensland with approximately 9% of the respondents indicating that this was related to inflexible shift work schedules. In Victoria, approximately 2000 nurses leave the profession each year due to work load and inflexible working conditions [5]. The organizational management of the healthcare system must therefore now consider and adjust to the demographic changes within the nursing workforce and the socio-cultural changes that have affected nurses' work style preferences and potentially altering the ability and possibly the desire of nurses to cope with, or indeed tolerate, traditional work conditions [6]. Consequently, flexible scheduling for nurses has become a significant human resource issue in healthcare organizations. The growing interest in flexible shift work scheduling in nursing has also been stimulated by a long period of difficulty in nurse recruitment and retention, often known as the global nursing shortage. A desirable, or at least tolerable, shift work schedule is very much linked with nurse retention, and managerial interest in flexible schedules is often seen as a successful strategy to retain nurses within the profession and to encourage the return of expert nurses who have already left the workforce [5]. For instance, the American Workforce Report of 2010 states that 25% of the American nursing workforce is looking for work with more flexible working hours that will fit their needs rather than work that provides greater financial income [7]. Interestingly though, the term "flexible scheduling" appears to have many different meanings addressing the varying interests of those involved in participating in or managing the health care workforce. This review, therefore, aims to clarify what the term "flexible shift work scheduling" means when it is used in relation to the organization of nursing work.

There is more than one factor driving this study; first, in order to address the critical situation of the nursing shortage, more innovation and creativity is needed in scheduling for today's nursing workforce to respond to the critical shortage situation. The global nursing shortage is currently about 120,000 and this number is expected to rise to 808,000 in 2020 [8]. The shortage of nurses has a significant negative impact on the quality of health service. Second, the ageing of the nursing workforce is an indicator that there is significant need for more understanding of the term "flexibility" in nurse's schedules. For example, according to the UK Nursing and Midwifery Council, in the UK, more than 100,000 registered nurses out of 366,000 are aged 55 years and older and approximately 80,000 registered nurses are aged 50 to 55 [9]. Some research has shown that older nurses need more flexibility due to different sleep patterns and strategies for coping with rotating shift work schedules. Inability to cope is related to fatigue which is mainly related to unavoidable normal physiological changes combined with the ageing process [7].

Third, the increase in the number of female workers in the nursing workforce has increased the need for more flexible shift schedules that help female nurses' to negotiate a work life balance. Globally, female nurses represent the largest proportion of the nursing workforce with a percentage of 70% [10]. The issue of work-life balance is becoming more important in today's society which means nurses need to manage the difficulties related to the nature of their work such as time management and a stressful work environment [9]. These changes have made the nursing workforce different from two decades ago because there are more demands on nurses' time thus making time management a hard task for nurses [10]. All of these

crucial factors have increased the need to understand the meaning of flexible shift work scheduling for nurses in order to improve nurses' lives and increase their work productivity. Numerous nursing studies have focused on the different forms of flexible schedules for nurses and different strategies to deal with the issue. This review differs from these studies in that it seeks to understand the meaning of "flexible scheduling", arguing that understanding the meaning is important in order to resolve the current flexible scheduling debate.

Describe Relevant Scholarship

The nursing workforce represents the largest and most costly proportion of the healthcare workforce. Developing a convenient operation plan that includes some flexibility is therefore crucial to ensure effective and efficient use of the available resources of the nursing workforce. Traditionally, working in a standard shift work schedule has been the norm for registered nurses in healthcare organizations to maintain continuity of patient care around the clock [12]. Standard shifts for nurses are defined as shifts that operate with different rotations - either clockwise or counter-clockwise, are varied in starting and finishing timed, shifts include night shifts and day shifts, and the length of the shift can vary from 8 to 12 hours [12]. In some studies, shift work is used as a synonym for irregular, odd, flexible, variable, unusual and non-standard working hours [5]. However, the shift work system can be made manageable by making shift work schedules flexible in a way that meets the needs of the staff and the organization. The nursing literature shows that nurses have strong preferences for when and where they work and many of them claim that their preferences should be considered to achieve the level of flexibility needed [5]. According to the nursing literature, lack of flexibility in nurses' schedules results in increased absenteeism, low morale, poor job satisfaction, and a high turnover and burnout rate. For these reasons, providing flexible scheduling for registered nurses has become a necessity.

In general, hospitals typically employ nurses to work either 8 or 12 hour shifts using the flowing standard protocol - three 8-hour shifts: day shift (usually 7:00 am to 3:00 pm), evening shift (usually 3:00 pm to 11:00 pm) and night shift (usually 11:00 pm to 7:00 am), and two types of 12-hour shifts - either AM shift (usually 7:00 am to 7:00 pm) or PM shift (usually 7:00 pm to 7: am). However, the growing number of nurses who need flexible schedules to balance their professional demands and family responsibilities makes adherence to this protocol challenging [5]. 'Family-friendly policies' have therefore emerged as a response to the dynamic change in the composition, and hence the needs, of the nursing workforce. These policies have been designed to improve the quality of employees' work life by minimizing work-life conflict in order to increase morale level which in turn will also increase workers' productivity and professional commitment [10]. Family-friendly policies are classified into three categories - policies providing more time for parenting, policies facilitating use of supplemental childcare, and policies providing counseling and education services for workers [10]. There are some who expand these categories to include care of the elderly. Policies that deal with time flexibility have been the most successful ones [10]. Flexible scheduling has emerged as a form of flexible time policy and it is the most preferred one for nurses as it minimizes their work-life conflict Quijada [10].

Much of the literature on flexible scheduling for nurses focuses on scheduling strategies to suit the needs and aims of the organization as well as those of the staff, for example, strategies such as self-

scheduling, flextime and reducing working hours, or measure the relationship between flexible schedule and nurses' commitments and job satisfaction [12]. According to the literature, a "flexible schedule" is unachievable for many reasons) [13]. Firstly, implementing flexible schedules for nurses is controlled by many factors, such as the demands of the organization, nurses' availability, the rules concerning priorities, the different requests of individual nurses, and the skill mix needed to ensure that quality care is being given over the shift [5]. Secondly, the nature of the long shift patterns that are common in inpatient areas, for example, is seen as a barrier to the implementation of flexible scheduling. Thirdly, the scheduler needs to consider many things in the scheduling process - patient acuity, safe staffing levels, the labor laws, and payroll expenses [14]. In addition, nursing studies reveal that the scheduling process is influenced by other uncontrollable variables that are related to the economic status of the organization and the level of technology that can be used in the scheduling process in the form of special computer programs to provide more flexible shift work schedules for nurses [14].

This review focuses on finding a clear meaning for flexible scheduling for registered nurses rather than discussing flexible scheduling strategies or studying the impact of flexible scheduling on nurses' satisfaction. For example, much research has shown that providing registered nurses with flexible shift work schedules is an empowering factor as it increases their satisfaction level and this, in turn, influences loyalty and morale level which also increases the chances that nurses will remain in the profession [11]. Furthermore, different strategies for providing flexible schedules for nurses and some computerized programs to enhance flexibility in the scheduling process have been studied in some nursing research [8]. However, there is still a lack of literature that seeks to specifically investigate or discuss the meaning of flexible scheduling for nurses. This review addresses this gap in the literature.

State Hypotheses and Their Correspondence to Research Design
An initial overview of the literature related to shift work indexed within the CINAHL and MEDLINE databases to establish the meaning of the "flexible shift work scheduling" revealed that there were three main parties involved in shift scheduling decisions and the associated processes - registered nurses, healthcare organizations and policy-makers [1]. Hence, three main perspectives can be identified in relation to flexible scheduling - the perspective of nurses, the perspective of policy-makers, and the perspective of healthcare organizations. In addition, scheduling is an integrative process that needs full involvement and commitment from the three groups - nurses, policy-makers and healthcare organizations - so responsibility should also be shared between them in order to achieve a suitable schedule that fits the needs of each group [15]. It is important, therefore, to analyze the meaning of shift work scheduling through these three perspectives identifying any commonalities and differences in these perspectives that add to the complexity of the scheduling process.

The figure below shows the relationship between the three parties involved in the scheduling process. The triangle clearly shows the role that each party plays in the scheduling process that makes each party's perspective of scheduling central to a review of this nature. Each group represents one angle in the triangle and the arrows that surround the figure show the direction of the relationship between the three groups. Policy-makers use the flexible schedule

as a tool to improve nursing retention and to reduce cost related to the nursing shortage. Policy-makers are the link between nurses and healthcare organizations. They are responsible for policies and work regulations that improve work quality and productivity while also improving employees' work lives [16]. Therefore, they support nurses in their search for improvement of their work life and at the same time they must consider the need for healthcare organizations to ensure the maintenance of work quality. Policy-makers encourage healthcare organizations to provide nurses with more flexible schedules to attract them to remain in the profession to reduce recruitment and retention problems. At the same time, they support nurses, particularly in their quest for more flexible working hours that ensure that they can achieve a balance between their professional lives and in their private lives. Healthcare organizations have the authority to implement different strategies to provide flexibility to satisfy nurses and to provide them with the schedules they need in order to improve work productivity and to reduce the costs related to the nursing shortage [17]. On the other hand, nurses seem to play a passive role as they are influenced by the other two parties. The position of nurses in this process means they can react to policy-makers' recommendations that support more flexibility in shift work schedules yet they also rely on healthcare organizations to implement these policies and provide the maximum flexibility they can [18]. Nurses always ask for a schedule that fits their needs while healthcare organization apply a scheduling system that fits its budget and meets patient needs. As a result, achieving a balance between the needs of nurses and healthcare organizations becomes a continual fight. A review of the nursing literature, for example, reveals that the conflict between nurses and nursing managers seems to be related to where and when nurses want to work and what managers can offer them to get maximum productivity and quality level for the organization [1]. The analysis in this review highlights the reasons for the conflict and the author attempts to find the reason for the challenge of achieving a desirable schedule for each party.
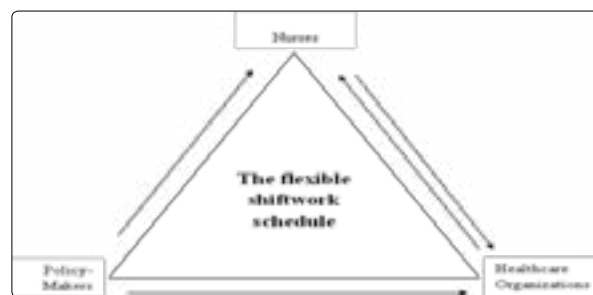
This integrative literature review will thus address the question, "what does the term "flexible shift work schedule" mean in relation to organizing the work of registered nurses from the perspectives of registered nurses, policy-makers and healthcare organizations?" Linking common perspectives and goals facilitates not only identification of a common goal but also the necessary involvement and responsibility of each party in creating flexible shift work schedules that fit the needs of each party.

Method
An integrative literature review method was used to conduct the study. This method was appropriate because the search could be broadened to include both experimental and non-experimental studies. The search process was done in a systematic way for two reasons - the scarcity of relevant literature that addressed the topic, and to validate the method of getting data. The search aimed to

find literature that was relevant to the topic of the study in order to answer the main question of the study. The main computerized databases that were used were the Cumulative Literature Index of Nursing and Allied Health Literature (CINAHL) and MEDLINE as they are considered to be the most extensive databases in the nursing discipline. A limited search of these databases was undertaken at the beginning to help identify the range and type of studies potentially available for synthesis. The search was limited to English language sources without a date limit in order to get a large number of available studies relevant to the topic.

Identify Subsections

The main keywords that were used in the CINAHL and MEDLINE databases were all relevant to the core concept. The initial keywords used were flexible scheduling, organizational policies, nursing staff, nurse and shift work. The following words were then used in different ways in the same databases to expand the search to find more useful articles - nurse*, schedule*, flex* and roster*. The second step involved at this stage was searching the electronic databases with several combinations of the keywords with "and" and "or" to find the most relevant studies in these databases. Since the main topic of the study is not a specific nursing issue and part of it is considered to be management-related, searching other databases helped provide more accurate answers to the study question. Therefore, the search was expanded to include another database- Sociological Abstracts - which also includes work management journals that have articles relevant to the study question. Using some work management publications was useful for getting more valuable informative literature that facilitated the integration of information. Furthermore, reviewing the articles in the initial search revealed that using the term "flexible schedule" with "nurse" was not very helpful in finding useful articles; instead, a good way to find relevant articles was to combine terms in different ways and to search with *.

Searching in this way initially found a large number of articles including research studies and non-research papers, so special criteria was chosen to limit the number of papers found; therefore, a number of inclusion and exclusion criteria were used to narrow the search in order to get the most relevant literature. Non-research papers refer to editorials, evaluative research papers and opinion reports.

Inclusion criteria
1. Research and non-research papers published in peer reviewed journals
2. Literature discussing different aspects of flexibility in regard to shift work schedules such as flextime, part-time issues and self-scheduling practices were included
3. In the English language

Exclusion criteria
1. Literature addressing forms of flexibility other than flexible shift work schedules such as job sharing or teamwork
2. Non nursing literature discussing the concept of flexible scheduling

Table 1 and 2 below provides a detailed breakdown of the initial search outcomes before an appraisal of the studies is provide.

Table 1: Search strategy

CINAHL	MEDLINE	The sociological abstracts
Flexible scheduling =821	Nursing staff=14854	Flexible schedule*=95
Shift work=112		
Organizational policies=9335	Work schedule tolerance=4057	
Nurse=121240		
Nurse*=264605	Roster*=35	Flexible schedule=1 Roster*=38 Schedule*=69
Schedule*=16512		
Roster*=351		
Flex*=17971		

Table 2: Combining words with and & or resulted in the following

CINAHL database:	MIDLINE database:	The sociological abstracts
Shift work and flexible scheduling and nurse=3	Work schedule tolerance and nursing staff= 94	Flexible schedule* and nurse*= 1
Flexible scheduling and organizational policies=25	Schedule* or roster* or schedule* and nurse* and flex*=41	Nurse* and flex*= 2
Flex* and roster* and nurse*=17		Flex* and schedule=6 Nurse* and schedule*=4
Flex* and schedule* and nurse*= 74		
Roster* and flex*=28		
Nurse and flexible scheduling=94		

Sampling Procedures

The initial search of the databases resulted in a total number of 619 articles. Following the initial search, all articles were screened according to titles. This process reduced the number of CINAHL and MEDLINE papers to 114 and Sociological Abstracts to 96 papers. Next, articles were screened according to abstracts. The number of CINAHL and MEDLINE papers was narrowed to 99 papers and the number of Sociological Abstracts was narrowed to 72 papers. After the search was completed, duplicated studies were removed. There were 22 papers duplicated studies. The total number remaining at this stage was 171 papers which were categorized into two groups - full research studies and non-research papers. There were 46 non-research papers and 15 full research papers in total at the end of the search process. The full articles were then reviewed which narrowed the outcome to 9 full research studies and 17 non research papers. The search was stopped at this stage and the selected literature was synthesized and appraised. Selected articles were classified according to themes to facilitate comparison between them. Codes were allocated to the articles based on their relevance. It then became easier to classify the studies into three groups – policy makers, organizations and nurses.

The literature search found a large number of articles that either did not focus on nurses but investigated the issue of flexible scheduling, or that focused on nurses but did not address the question of the study in any way, therefore they were excluded from the review.

The literature included in this review either discusses flexible scheduling by looking at different ways of arranging working hours or by discussing the benefits of having such an arrangement for both nurses and healthcare organizations. Furthermore, some of the literature included addresses different aspects of flexibility in regard to shift work schedules such as flextime, and part-time work, and using technology to set flexible shift work rosters for nurses in hospitals. Other studies measure satisfaction and commitment level associated with providing flexible schedules for nurses which implies some embedded meanings for flexible scheduling. The absence of literature that addresses the position of nurses made it difficult to find nurses' voice to include in this review to provide comprehensive analysis.

Description of the studies

In general, the identified studies did not specifically address the meaning of "flexible shift work scheduling" in relation to the organization of nursing work, therefore, it was decided to review the studies to determine the embedded meaning of "flexible shift work scheduling". Furthermore, while a considerable number of the identified studies reported the policy makers and healthcare organizations perspectives, the perspective of the nurses who work these shift schedules was not evident in the identified research studies (Table 3). What was available though in discussion papers and experiential reports (non-research papers) (Table 4) was the perspective of nurse managers which has been used her as an indication of the perspective of nurses in the absence of other literature.

Quality of identified studies

According to Whitte more and Knafl, there is no "gold standard" to use when assessing the quality of studies used in an integrative literature review because the concept of quality is complicated and not well defined [19]. It was necessary to use a systematic search strategy to identify this literature to locate the relevant studies. Whitte more and Knafl also recommend using a historical or antecedent search approach which includes authenticity, methodological quality, informational value, and representativeness of available primary sources which was appropriate for use in this study. Evaluating the source of information is a crucial step in determining the credibility of the sources of information used. In this review, this was determined through the selection of valid and well-authenticated electronic databases and by assessing the representativeness of each study included in this review to ensure its relevance to the aim of the review. The studies selected for this review are thus all from authentic sources and have been appraised as being of sufficient quality for inclusion here.

Results

A survey of relevant literature conducted as the first step in reviewing the literature for this thesis revealed that there are three different perspectives in regard to the meaning of the flexible scheduling for nurses. Consequently, as documented in Tables 3 and 4, the studies reviewed here were divided into the three following perspectives according to the view they represent - studies presenting the perspective of nurses, studies presenting the perspective of policy-makers and studies presenting the perspective of health organizations.

As the systematic search of the literature has shown, nurses have not been asked directly for their understanding of the meaning of flexible shift work. The nurses' perspectives presented here were not the focus of the research studies but rather embedded within the analysis of the selected studies. For this reason, non-research papers have been included in this review, particularly because all of these were written by nurses either as commentaries or case study reports of work experiences. Only one qualitative study is included in this review. Yet while nurses were part of this qualitative study, flexible scheduling was again not the main issue. Rather, the study aimed to explore the personal and professional commitment of mid-life nurses in the nursing workforce. However, the study includes some nurses' voice regarding flexible shift work scheduling within its findings.

The quantitative and mixed methods studies generally used a questionnaire to measure either nurses' preferences or incentives related to scheduling practices. Clearly, there is a lack of qualitative research that tackles the flexible schedule issue purely from the perspective of nurses.

A summary of the research papers, their methods, samples, and findings, is presented in Table 5. Table 6 summarizes the non-research papers and their major findings.

The perspective of healthcare organizations

According to Bard & Purnomo's study, the meaning of flexible scheduling is perceived similarly by some nurses and some healthcare managers as they believe that a flexible shift work schedule should consider nurses' preferences and be fair to the whole team. However, healthcare managers acknowledge that sometimes considering different nurses' preferences makes the scheduling process difficult and can still be unfair to some nurses thus creating an inflexible workplace. In this study, managers argued that the scheduling process must ensure sufficient coverage by nurses at all times. Hence, sometimes it can be impossible to provide the desired days off for each nurse. This study presents the point of view of organization managers because the survey was designed in a special way that aimed to evaluate the advantages and disadvantages of a new scheduling system in order to improve the efficiency of the organization. The study did not focus on nurses' preferences regarding the flexibility they want in their schedules.

Similarly, Gray's 1993 descriptive longitudinal study examined the changes in nurses' preferences over time regarding shift work schedules in order to introduce a new computerized system to schedule nurses based on their preferences. The research proved that stability in nurses' preferences is important in order to demonstrate a successful flexible scheduling system that provides nurses with the shift schedules they desire as it was found that nurses have a unique preference for a work schedule based on their different personal needs. The results revealed that setting up a special scheduling program based on nurses' preferences does not guarantee that nurses will be given their preferred schedule every time and this was because of changes in their preferences. Only 3 out of the 20 nurses included in this study had inconsistent preferences for their work schedule, and individual preferences appeared to be stable for three to six months. However, giving nurses fewer non-preferred shifts can improve their level of satisfaction with their schedules. This study is useful because it proves that nurses' preferences are an important element that should be considered in the scheduling process whether or not these preferences are fixed.

The perspective of policy-makers

In reviewing the studies that present the point of view of policy-makers, it became clear that all of the research was done to introduce special recommendations for healthcare organizations about family-friendly policies either by studying the impact of inflexible schedule on nurses' burnout and turnover or by showing to healthcare organizations the benefits they would experience from implementing flexible scheduling as a successful nurse retention and recruitment strategy.

The studies by Macphee's , Spetz and Trinkoff all aimed to introduce recommendations for healthcare leaders to persuade them to implement more flexible schedules for nurses by showing the benefits of implementing these kind of practices and showing the negative impact of inflexible schedules on nurses' health and work productivity [20-22]. A flexible schedule was defined by policy-makers in Macphee's study as one that enables nurses to select their hours and location of work to suit their lifestyle needs and professional aspirations (2000, p. 2). This is similar to the perspective of nurses; however, policy-makers always link improvement in employees' lifestyle with improvement of work productivity. Furthermore, the study found that providing a flexible schedule empowers nurses in both formal and informal ways. Results showed that nurses working with flexible schedules have better socialization networks in their workplaces than nurses working with traditional schedules. However, the participants in this study were all part-time nurses which imply that the study was limited to one form of flexibility. Macphee's study also recommended that further research needs to be done to study the meaning of flexible scheduling from the perspective of nurses as the author found that there was a lack of knowledge in this area.

Similarly, the study by Spetz introduced some recommendations for healthcare leaders about using benefits in order to improve nurse recruitment and retention strategies [21]. The study found that accommodating the preferences of nurses is important when implementing flexible scheduling. One of the study's recommendations to employers was that they should develop new scheduling strategies to satisfy the preferences of nurses in order to attract more nurses to the profession and to keep nurses who are currently working. In addition, the author acknowledged that some healthcare leaders are critically supportive of flexible scheduling as they have seen many older nurses who more flexibility in their schedules need remain in the profession.

The quantitative study by Trinkoff described the nature and prevalence of extended work schedules across nursing settings that go against the Institute of Medicine guidelines in the United States [22]. The study found that lack of control over shifts may lead to nurse abuse and extended working hours as 17% of study' participants worked mandatory overtime. The researcher argued that working mandatory overtime reduces nurses' control over scheduling and affects their social life and commitments outside the profession. In addition, reducing control over scheduling results in job stress and physical fatigue and ultimately significant nursing errors may be made. Trinkoff raised industry-wide concern about the effect of working extended hours, including fatigue and health risks to nurses as well as the quality of patient care [22].

Other research that discusses the perspective of policy-makers found a strong relationship between inflexible working schedules and the number of nurses who had left the profession because of work-family conflict [18]. The qualitative part of Langan's study found that 30% of nurses left because of bad working conditions including inflexible shift work schedules as some nurses mentioned that raising a family and lack of time to engage in family activities were the main reasons for them leaving the profession as there was a mismatch with long and inflexible shift schedules. In addition, 30% of respondents stated that adopting family-friendly policies would be the strongest incentive for them to remain in the profession. In addition, the findings revealed that when the mean age of respondents increased, fewer hours per week were worked which indicates that the ageing process should be considered as a strong reason to give nurses more flexible shift work schedules in order to improve nurse retention. The study found that absence of flexible scheduling was the primary cause of many nurses leaving the profession. In this study, policy-makers aimed to find more effective incentives to retain nurses in the profession.

The perspective of nurses

Reviewing studies that present the perspective of nurses revealed that the meaning of flexible scheduling is mainly based on three main themes - the perception of the existence of and accessibility to a flexible schedule, perceived control over working hours and related professional commitments, and the needs of the flexible schedule system.

Perception of the existence of and accessibility to a flexible schedule In Harris et al.'s study, some senior nurses who had been working as registered nurses for less than 6 years believed that flexible scheduling is restricted to some departments while others thought it does not even exist [9]. Bard and Pornomo's study (2003) revealed that some senior nurses believe that flexibility in nursing schedules should come as an entitlement with the job and should not be a negotiated issue. On the other hand, nursing managers believe that flexible scheduling exists but it is not equally accessible to everybody as it depends on each individual case. Other senior nurses perceive that flexible scheduling relates only to nurses with family responsibilities. The flexible schedule is defined by nursing managers as one that must meet the needs of both the organization and the service and provide for the needs of the whole team. This study was selected because it reflects the position and the varying views of different nurses in regard to flexible scheduling.

Perceived control over working hours and professional commitment

Brooks' study (2001) found there is a relationship between influence over work scheduling and nurses' professional commitment. He found that 33.4% of nurses who have control over their working hours were less likely to leave the profession compared to 21.4% who intended to leave related to the absence of control over their shifts. Brooks did not explain the concept of controlling shift work to the respondents before they answered the questionnaire. This is significant because it allowed nurses to express their own point of view regarding controlling shifts. The respondents came from different backgrounds, so they answered the questionnaire based on their individual experiences with the many different forms of flexibility that exist in terms of controlling working hours. This illustrates the weak relationship found between control over shift work schedules and level of commitment. However, the study was useful for articulating the relationship between commitment and control over working hours as this is considered to be one form of flexibility in nurses' shift schedules.

The need for a flexible schedule system

In Dickerson's study, nurses perceived a flexible schedule to be more important than rewards and benefits as they were given the chance to discuss the most current concerns they had regarding working conditions [23]. This is because at certain points of their work life, some nurses priorities family responsibilities over professional duties. Similarly, Spetz's study, found that when it comes to nurse retention, nurses perceive that improvement in the work environment, including flexible work schedules, is more important than other benefits, such as salary and pension. In addition, nurses defined a flexible schedule as one that allows nurses to meet family and personal demands and gives them more control over time off which allows them to plan ahead [21].

Findings of non-research papers (nurses' perspective)

The non-research papers included in this review provided an overview of what a flexible schedule is from the perspectives of nurses. Reviewing these non-research papers revealed that the majority of nurses perceive flexibility in shift work schedules gives them more control over their working shifts either by considering their preferences to days off or by making the schedules more consistent to enable them to manage their work demands and their social responsibilities without experiencing stress [24]. Some non-research papers also offered definitions of flexible scheduling from the perspective of nurses. For example, Sullivan defines a flexible schedule as one that enables nurses with a family or outside commitments to remain in nursing while Wortley defines it as one that makes shifts more social and gives nurses control over working hours [25,26]. In contrast, Smith and Mathias describe a flexible schedule as a more predictable one [16,27]. Hardman and Adams, Bond, Marquis, and Husto suggest that a flexible schedule is one that takes into account nurses' preferences and social considerations, while Hebda and Meche (2004) goes beyond this to include transportation, volunteering and education needs and they claim that flexible scheduling would ensure the best balance of management and nursing workforce needs [28-30]. As an expert nurse, Brazil considers that flexibility in nurses' schedules ensures an appropriate skill mix while providing a level of control over working hours. Some, like Reader, believe that there is more than one form of flexibility in regard to nurses' shift work schedules, so a variety of working time patterns that enhance working arrangements is essential to provide the desired schedule for nurses [31,32]. Tully supports the idea of giving nurses autonomy and control in scheduling decisions, not only to meet social and professional needs but also to promote professionalism [33]. Similarly, Barton, Chandra and Barton, Smith, Totterdell, Spelten and Folkard name self-scheduling practice as the ideal form of flexible scheduling for nurses because it gives them more control over working shifts and days off [34,35]. As senior nurse managers, Bonner, Beaumont and Smith argue that flexible scheduling is more complicated as it should balance staff needs, patient needs and organizational needs and allow organizations to stay on budget [36].

Discussion

A review of the literature on the meaning of flexible scheduling for nurses reveals that nurses, healthcare organizations and policy-makers have different interpretations of the meaning of flexible shift work scheduling. Even in the absence of qualitative studies that address flexible scheduling from the perspective of nurses, it is still clear that each party has its own goals for implementing flexible schedules. In general, both nurses and healthcare managers have a common need to obtain more flexibility in shift work schedules in order to improve working conditions and to reduce the problems associated with an inflexible scheduling system, including work-life conflict and the high rate of nurses' turnover and absenteeism. However, while healthcare managers define a 'perfect' schedule in terms of its ability to meet the needs of the organization, that is, maximizing output; nurses define it in terms of its ability to facilitate a more manageable work/life interaction that is, minimizing conflict. In the absence of shared understandings, interpretations and definitions of flexible scheduling among the three parties, achieving a shift work schedule that meets the needs of each group therefore becomes more difficult. Findings also show that there are differences in the interpretation and meaning of flexible shift work schedules within each group based on level of experience and authority level. However, goals appeared more consistent within each group despite the differences in the way they define a flexible schedule.

Flexible schedules for registered nurses

There are similarities in the meanings nurses ascribe to flexible shift work scheduling in spite of their different circumstances such as their qualifications and level of authority. There is still general consensus that flexibility is about creating different forms of working arrangements to achieve one common goal which is minimizing work-life conflict. According to a report on the flexible workforce in the Local Feature Magazine, nurses want their career to fits their lifestyle: they need flexible schedules to balance their family responsibilities and work demands [37]. Furthermore, nurses must participate in a wide variety of educational activities either to improve their professional skills for career advancement or to equip themselves with the skills necessary to provide the increasingly complex care that they are required to give patients [38]. Sometimes, while working full-time fuels the need for more flexibility in shift work schedules, when it is possible for nurses to change shifts flexibly by switching shifts with others, this helps them to achieve their goals without being stressed or forcing managers to struggle with staffing discrepancies [30]. However, for this to happen, nurse managers must become more flexible to approve such arrangements. Nurses agree that flexible scheduling should be done in a more creative way to provide more control over shift patterns and working hours to prevent the work-life conflict associated with non-standard shifts while still providing 24 hour service [26].

For nurses, then, a flexible schedule is about breaking the fixed, standard routine patterns and giving them control over their working hours regardless of which form is applied. Self-rostering is considered the most successful form of flexibility in regard to nurses' shift work schedules. According to Burton et al., self-rostering practice is defined as "the practice when nurses are involved in drawing up and consulted regarding their preferred shift hours before the eventual roster is drawn up and posted" [24]. Many nurses say that such a practice gives nurses control over shift times, including starting and finishing times, which is an important source of the autonomy that nurses need to control their work environment. Self-scheduling practice is acknowledged because it enhances nurses' managerial skills and promotes professionalism through developing negotiation and communication skills which increases job satisfaction level among nurses [33]. This potentially improves retention and recruitment strategies. In her research, Yearwood found that implementing "flex time" (a policy that allows nurses to select their starting and finishing times) was well supported by many nurses as it provided them with control over the starting and finishing times

of their shifts and enabled them to effectively accommodate their personal commitments with their working hours without the need to shift to other working patterns [39]. It can also be argued that applying such a policy not only meets the different preferences of nurses to satisfy their needs, it also encourages different shift length patterns and mixes different nursing qualifications to get the balance that nurses need [40].

Some nurses reported the availability of different patterns of flexibility in scheduling; however, they claim that managers restrict this availability in order to balance the need to provide services for patients and to enable an adequate skill mix that should be maintained [41]. Arranging shift hours or patterns, however, is not the only way to provide flexibility - the freedom to select the location of work is important too because it allows nurses to suit their life-style needs and professional aspirations [42].

Predictability is also an important factor in the meanings attached to flexibility in shift work schedules. As identified by Venango, "nurses, like everyone else, need to be able to plan ahead and to be guaranteed that the personal time required can be assured". With clearer, steadier rosters, shift schedules become more manageable as they allow nurses to manage their off duty time efficiently rather than having to take unscheduled days off to meet or manage their life commitments. As Lu et al. reports, this approach appeals to nurses who believe that as schedules become more predictable, equal and potentially fair for everybody, a form of control over shift rosters will be established that will help to address the work-life conflict currently associated with shift schedules [42]. The control these nurses need is the ability to plan ahead rather than control of their starting and finishing times or changing the length of working shifts. As nurses experience of shift work and scheduling increases they become more realistic and objective in their perceptions and expectations of flexibility in shift schedules.

Writing over 20 years ago, Williams reported that some nurse managers believed that the most successful way to achieve a balance in shift work schedules was to consider the physical, psychological and social needs of qualified nurses. The argument is, therefore, that reducing working hours or eliminating unsociable working hours was not a healthcare managers' primary goal for implementing flexible rosters. More recently, Morison's findings agreed with this position as they indicated that nurse managers agreed that reducing working hours is not the only way to solve rostering problem and they believe that achieving a successful roster (defined as a desirable schedule for each party) needs time and a good level of communication between themselves as managers and the nurses involved [43].

In spite of the different perceptions of flexible schedules among nurses (depending on, for example. age, experience and non-work responsibilities), nurses generally agree that providing any pattern of flexibility in schedules empowers nurses by giving them control over their working time and allows them to balance work demands with social responsibilities [44]. Many also agree that flexibility in nursing schedules contributes to significant improvements in patient care. In summary, the view of nurses can perhaps be best presented as "everybody deserves a flexible schedule" as everybody is responsible for something and individuals have different interests which may not necessarily be family-related responsibilities [30].

Flexible schedules for health organizations

The meaning of flexible shift work scheduling seems to be similar for most healthcare organization managers because managing a healthcare system is always based on the rules and standards established to achieve pre-determined primary goals [15]. Health organizations often work to maintain a level of productivity and work quality based on the demands of the service. Health organizations are interested in implementing flexible schedules for nurses in various forms and managers attempt to help in the communication and implementation of this. Providing flexible schedules within health organizations means providing the right number of competent staff at the right time to maintain reasonable workloads while providing adequate, or at least the required amount of rest between shifts [45]. Most healthcare organization managers see a flexible shift work schedule as a multi-objective process that should consider the needs of the organization, patient's needs and nurses' needs within the available budget to provide the best level of care. They believe that flexible scheduling is about promoting equality in the work environment in order to develop a working team that is able to provide optimal efforts for the organization (Harris, Bennett, Davey, & Ross, 2010a), but at the same time, if nurses are given control over their rosters, care must be taken to ensure that the appropriate skill mix is available in each shift to maintain the quality of patient care [46].

However, perceptions about, as well as the implementation of, flexible schedules is influenced by management style and the availability of various working patterns for nurses [15]. For some managers, offering flexible shift work schedules for nurses reduces staff retention and recruitment problems as it reduces shift work stress and improves health. Researchers report that some health care organizations have been forced to implement flexible schedule policies by their Human Resources departments as a way of reducing staff turnover and recruitment problems, at a time when organizations are not prepared for these policies [15]. Because of this, applying a flexible schedule policy sometimes creates an inflexible work environment. For example, some nursing managers report that some older nurses are less familiar with the meaning of family friendly policies that support nurses working more non-standard hours than younger nurses and this makes them feel disadvantaged and creates a discriminative work environment [34].

Managers agree that flexible schedules need a responsible nursing team. Health organization managers are aware that different flexible scheduling strategies will not work unless there is a responsible team of nurses who respect each other and understand each other's needs, therefore they claim that flexible scheduling needs a responsible nursing team [46]. Health care managers in general, and nursing managers in particular, realize that matching a health organization's goals and requirements affects the level of flexibility provided as there are different organizational requirements (such as quality control, accreditation programs, technology implementation, patient safety and occupational safety) that need to be met at the same time. However, each healthcare organization is forced to provide some minimum level of nursing care based on different skill categories and achieving the desired schedule as well. Expert managers are aware that successful scheduling needs time and special consideration to be completed with a good level of communication with the nurses themselves. In addition, it needs to be based on a special plan that fits the priorities of the service and the budget.

Flexible schedules for policy-makers

The meaning of flexible scheduling for policy-makers reflects their understanding that they are concerned about the benefits of flexible schedules for both nurses and health organizations as they believe that excellent performance at work and at home should be equally valued. The meaning of a flexible schedule is considered to be providing an increased number of the various forms of modification and arrangement of working time within the shift work system that should reflect the needs of both health organizations and nurses [44]. This type of policy emerged in the 1990s and became an important aspect of family-friendly policies to give nurses more choice over their working hours, moving away from the rigid shift work system. Since then, studies have shown that these type of policies have improved nurse retention and recruitment strategies [5]. Flexible scheduling has been discussed and supported by many policy-makers because it is one of the most successful methods that can be employed to create a flexible workplace.

Furthermore, allowing variations in which nurses set their own working hours is a useful strategy for recruiting nurses. From the perspective of policy-makers, a flexible schedule is supported in three important ways - identifying operational demands in order to increase flexibility of shift work schedules, presentation of available options with information on implications for nurses' health and social life, and facilitating training and group consultation [20].

Flexible schedule: A conflict of definitions?

From the preceding discussion, it is clear that the meaning of flexible scheduling differs among the three parties - nurses, policy-makers and healthcare organizations. This is illustrated in the triangle below, which expands on the triangle introduced earlier which explained the relationship between the three parties. The triangle here, however, explains the cause of conflict between the three parties that perhaps hinders the achievement of a desirable schedule that will satisfy each of the parties. Nurses are supposed to be engaged in the scheduling process and share the responsibility for scheduling which would provide them with the opportunity to minimize undesirable shifts and negotiate their days off to fit their needs. However, most of the time nurses are not given their preferred shift because the healthcare organization uses a fixed scheduling system that is usually designed to fit patients' needs and work demands as the first priority and allows for limited flexibility in nurses' schedules, or as much as is perceived by managers to be possible without stretching the organization's budget [47]. Furthermore, it is also evident that (nurse) managers can become the "gate-keepers" in the provision of flexibility for nurses. This is because oftentimes it depends on individual cases and the provision of flexibility is not necessarily related to clear policies [9].

In the past, in some healthcare organizations, nurses were found to be unfamiliar with their rights in relation to the availability of flexibility in their shift schedules, so many of them felt embarrassed to ask for shift-swapping and were concerned that a request could affect their professional evaluation [48]. Similarly, some midlife nurses were found to believe that a flexible schedule was only for nurses with families, so they felt that they did not have the right to ask for it. Commonly though, nurses remain in the position of having to negotiate with managers for the opportunity to control their working hours. Policy-makers seem to have a somewhat passive position here too, as they do not make policies to protect nurses' right for more flexible schedules but rather they suggest

the implementation of other policies that can only be achieved through increasing schedule flexibility. Nurses' scheduling is thus generally managed by healthcare organizations and policy-makers who try to create scheduling strategies that satisfy their nurses without directly consulting them. However, when some nurses get the opportunity to air their views, they say they are not satisfied with their schedules. Nurses have not been asked directly about the type of flexible schedule that would satisfy their needs and, on the basis of the literature located for this review, they have never been asked to declare their needs or give their perspective on what should be considered in the scheduling process. Therefore, as illustrated in (Figure 3), both healthcare organizations and policy-makers target nurses in different ways that appear to be intended to provide flexibility in scheduling but the perspectives of the nurses themselves are not clearly represented in regard to their desired schedules.
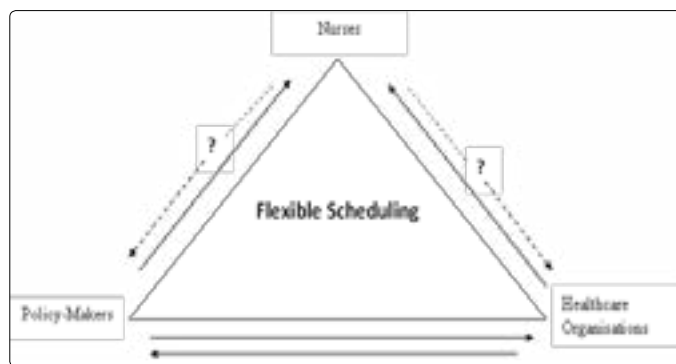

Figure 2: Perspectives on flexible scheduling (arrows indicate direction of communication)

It can be argued that the conflict between the three parties arises out of either the lack of a clear meaning or goal for flexible scheduling or they do not have a common understanding of the concept of flexible scheduling. This review of the available literature has revealed that, while there has been significant research exploring the strategies and goals of flexible scheduling from both health organizations' and policy-makers' perspectives, there is still a lack of literature that seeks to understand the meaning attached to this by both parties, but perhaps more importantly, there is a lack of literature that seeks to understand the meaning attached to the term by nurses themselves. Where nurses' voices are reported in research, it is usually a means of assessing or evaluating a specific scheduling system or to measure satisfaction level with the current scheduling system; that is, nurses' voice is a by-product of a health care organization's focus. While there is some evidence to suggest that nurses themselves have different perspectives of flexible shift work scheduling, they still have a common goal for implementing flexible schedules which is the need to balance their work duties and their life responsibilities. The need for a clear and realistic view of nurses' flexible shift work schedules is important because of its potential to assist in resolving the conflict between nurses and management regarding the desired schedules. Therefore, nurses are unsatisfied with their schedules and always argue that they should be given schedules that fit their needs. Interestingly, flexible scheduling policies and standards are always controlled by health organizations and policy-makers who prioritise their goals and satisfy nurses. Once these parties have come to an agreement that satisfies patients, staff and operational needs, an enhanced roster system will likely be implemented. The scheduling process should be consultative in a way that the three groups of stakeholders will be equally represented in the ongoing

planning, development, introduction and evaluation of a flexible roster system [49].

It can therefore be argued that nurse managers play the gate-keeper role in providing flexible schedules for nurses and oftentimes struggle to meet both the organization's needs and employees' needs. However, nurses strongly believe that managers are always more concerned with the priorities of the service and the budget than with the needs of the nurses [43]. Furthermore, nurses argue that the only way to solve the flexible schedule problem is to have positive and more responsible managers who will give nurses more authority and responsibility to work flexible hours rather than being primarily concerned with financial profits [50]. Some nurses argue that health organizations could alter their staffing numbers to accommodate variable census demands rather than forcing nurses to adjust their preferences to meet organizational demands.

Conclusion
Nurses have the right to have flexible shift work schedules and flexible scheduling is necessary to help them meet the demands of modern society as well. There is an economic impetus for creating, more flexibility in shift scheduling. For example, in the United States, studies have shown that every time nurse changes jobs as a result of inflexible working conditions, particularly inflexible scheduling, it costs 5000 Euros to find a replacement and just a 1% reduction in the number of nurses leaving the profession would save 15 million Euros each year [30]. Allowing nursing staff to have some control over their shift schedules has been shown to result in significant improvement in job satisfaction and retention [1]. A balanced schedule that fits nurses' work demands and familial responsibilities can only be achieved when there is strong, mutually beneficial communication between nurses and healthcare organizations [51]. Conflicting perceptions of the meaning of flexible scheduling between the two complicates an already complex endeavor. For this reason, studies that seek to understand the meaning of flexible shift work scheduling from different perspectives are important in informing this process.

This review has identified two main gaps in flexible scheduling. First, there is a lack of nursing research that focuses on the meaning of flexible scheduling. While the current writing in this area implies an assumed non-problematic understanding of flexible scheduling, the critical review here has exposed the different meanings attached to the term by the three key players in the planning and implementation of flexible schedules, that is, nurses, healthcare organizations and policy makers. The main contention of this review is that this diversity in meaning can be a significant source of miscommunication and conflict between the three parties and can impede effective implementation and achievement of desirable schedules that satisfy all parties. Second, the voice of nurses is undermined and underrepresented. In particular, there is a lack of qualitative work that explores nurses' own interpretations and perceptions of what flexible scheduling means for them. Such knowledge is critical to achieving flexibility in nurses' shift work schedules. It is highly recommended that the nursing profession establish guidelines for development and implementation of family-friendly policies. In addition, the voice of nurses should be heard and their views should be well presented in further nursing research to fully understand their needs [52-55].

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