

Does Self-scheduling Increase Nurses' Job Satisfaction? An Integrative Literature Review

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Abstract

Background: Flexible work schedules give nurses the freedom and control to manage demands of work and life, while allowing the organisation to meet their staffing needs.

Aim: To explore nurses' perceptions of their job satisfaction and its relationship to self-scheduling.

Significant to Nursing Practice and Leadership: Nurses and nurse leaders have the potential to change the way scheduling of their work shifts takes place. Understanding the complex context in which self-scheduling occurs requires research and collaboration to ensure that nurses' job satisfaction is maintained while meeting organisational obligations. One strategy to accomplish this is through the introduction and support of a self-scheduling system that has potential to balance the individual needs of nurses as well as the organisation.

Methods: An integrative review of published peer-reviewed research and personal narratives that examine nurses self-scheduling and job satisfaction is the method of this inquiry. Quality appraisals were completed on all included articles.

Results: A total of nine articles, including personal narratives, satisfied the inclusion criteria. Current evidence suggests that self-scheduling is one of a number of factors that influence job satisfaction. However, implementation of self-scheduling programs is not without its challenges.

Conclusion: The findings of this integrative literature review indicate that self-scheduling programs underpin more flexible work schedules for nurses and may result in benefits for both nurses and the organisation.

Keywords: nursing, self-scheduling, jobs satisfaction, advanced practice nurse

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Introduction

Flexible work scheduling involves giving nurses the freedom to organise their work around their non-work commitments, increasing autonomy and control by allowing for self-scheduling within a minimum set of requirements. Successful implementation of self-scheduling requires the involvement of the nurses and the support of the organisation, and has the potential to improve job satisfaction, morale, professionalism, and work-life balance for nurses, as well as showing organisational financial benefits (Hung, 2002; Russell, Hawkins, & Arnold, 2012).

Background

There is a clear difference in scheduling nurses' work: how schedules are determined, the degree of ownership by the employee, and the flexibility that nurses have to change their schedules. However, how self-scheduling impacts job satisfaction is unclear. In Canada, mixed rotations of day/night eight or 12-hour shift schedules are common practice, with nearly four in 10 nurses working these kinds of rotations (Shields & Wilkins, 2006). In the USA, a unique genre of scheduling nurses' shifts, self-scheduling, became very popular in the 1980s. This system enables nurses' to book their preference for day or night shifts and to plan short-term vacations one to two months in advance (Ruggiero & Pezzino, 2006). According to Beutell (2010) and Ruggiero and Pezzino (2006), nurses who self-scheduled were more satisfied, enjoyed better work-life balance, became more empowered, and nursing shortages decreased in a hospital in which this system was implemented. This suggests that self-scheduling has the potential to shift the traditional set-scheduling process towards a more flexible format, one that benefits nurses and the organisations within which they work.

Flexible Work Schedules

Employers' designs of nurses' work schedules are guided by a multitude of criteria imposed by the organization itself, unions, and accreditation policies. However, recognising employee needs and personal obligations when facilitating schedule development can lead to improved loyalty and long-term employees (Cortese, Colombo, & Ghislieri, 2010). Of interest, in 2005, Statistics Canada conducted a survey revealing that only 36% of Canadian nurses reported flexibility in their worked days, with only 30% reporting flexibility in work hours (Statistics Canada, 2005). This represents a very small percentage of the total Canadian nursing population that enjoys the benefits of flexibility in their work schedule.

Job Satisfaction

Job satisfaction has been defined as the degree to which individuals like or dislike their jobs, a variation in attitude, and as "one of the constructs that has often been used to describe nursing personnel's working conditions" (Cortese, Colombo, & Ghislieri, 2010, p. 37). Job dissatisfaction results when the nurses' assumptions and expectations of the job or organisation are not met (Best & Thurston, 2004).

Significance of Project to Nursing Practice and Leadership

Advance practice nurses (APNs) have the clinical expertise, education, organisational understanding, and leadership skills to influence decision-making and empower others (MacDonald, Schreiber, & Davis, 2005). The leadership and collaborative competencies inherent within this role enable the APN to ensure quality improvement, respect, and advocacy for the needs of the nurses, while maintaining awareness of organisational obligations (Canadian Nurses Association, 2008). APNs have the sway to empower nurses by increasing their sense of control

over their work-life, which may lead to a decrease in the demands the work environment places on them (Karasek, 1979). One way to increase control and satisfaction is to introduce self-scheduling (Kellogg & Walczak, 2007; Russell, Hawkins, & Arnold, 2012). Leadership has the ability to change the way schedules are determined, allow for greater decision-making, control, and empowerment of nurses, accommodate modern day responsibilities of life and family, and enable a more satisfied, productive workforce (Best & Thurston, 2004; Cooper, 1996; Ruggiero & Pezzino, 2006).

Ensuring nurse's job satisfaction should be a top priority for health care organisations, APNs, and nurses. The Canadian Federation of Nurses Unions (2009, 2013) estimated that nurses' absenteeism costs the health industry \$734.3 million in 2012, nurses having a 55% higher rate of absenteeism than all other occupations and, in 2008, 19% of absenteeism was due to family or personal responsibilities (as opposed to illness or disability). A statistic closer to home indicates that between April 2012 and March 2013 in BC Interior Health Authority, almost 21 million dollars was spent on nurses' sick time and overtime (Interior Health Financial Summary, personal e-mail communication, received September 12, 2013). Fischer and Souse-Poza (2009) studied the relationship between job satisfaction and the health of workers; the results show that not only do workers with improved job satisfaction "feel healthier and are more satisfied with their health", health deterioration is prevented when improvements to job satisfaction are made (p. 1). While nursing schedules have been grounded in tradition, understanding the impact of these schedules and its relationships to nurses' job satisfaction has important implications for nurses' health and organisational productivity (Best & Thurston, 2004; Beutell, 2010; Ruggiero & Pezzino, 2006, Cooper, 1996).

Theoretical Framework

I view self-scheduling as an element of the physical, social, and cultural environments in which nurses work. Many nursing theorists have discussed the environment as a phenomenon that generates imbalance, stress, energy patterns, and requires adaptation (King, 1992; Neuman, 1996; Rogers, 1992). In her research of the nature of theoretical thinking in nursing, Kim (2010) explores the role of nurses within the changing environment. The concept of environment is not only regarded as a metaparadigm of nursing, but Kim defines it as “the entity that exists external to a person...and contains many distinct elements” (Fawcett, 1984; Kim, 2010, p. 220). The nature of the nursing environment determines or constrains the nurses’ functioning and development, and has been associated with human health conditions (Karasek, 1979; Kim, 2010; Thorne et al., 1998). Thorne et al. (1998) encourage critical review of the environment to reveal the determinants of health, life influences, limitations, and participation. Self-scheduling can change the environment that nurses work in; it has been shown to improve staff morale, increase the staff’s sense of control, decreases staff turnover, and create a more positive work environment (Kellogg & Walczak, 2007; Melo, Barbosa, & Souza, 2011; Russell, Hawkins, & Arnold, 2012; Teahan, 1998). Self-scheduling incorporates the conditions of work and life, challenges the status quo, and as I propose, has the potential to improve job satisfaction.

Karasek’s (1979) control-demand model theorizes that increased control over the work environment buffers the impact of the demands associated with a job, and can help to increase the job satisfaction experienced by the employee. Karasek proposes that “psychological strain results from the joint effects of the demands of a work situation and the range of decision-making freedom available to the worker facing those demands” (p.287). The model suggests that in a job like nursing where there is high demand and low decision-making latitude, the resultant

effect is job strain, stress, a reduction in problem solving, and decrease job satisfaction (Karasek, 1979; Johnson, Chisholm, & Weatherman, 2008). I have chosen to apply Karasek's model, as opposed to any other, as I believe that the high demand environment that Karasek refers to in this model is much like the nursing high reliability environment, and that often times in nursing we have little control over our schedules as discussed previously. Applying this to my review, I will explore nurses' experiences of self-scheduling and the amount of control that nurses' perceive they have over these schedules. There is the potential for self-scheduling to increased control over the work-environment, and thus decrease the demand and strain, which in turn has the potential to increased job satisfaction.

Purpose/Aim of Project

The purpose of this project is to explore nurses' perception of their job satisfaction and its relationship to self-scheduling.

Objectives of this project are to (1) present an overview of existing literature on the topic of nurses' job satisfaction and self-scheduling, (2) build knowledge regarding self-scheduling and nurses' job satisfaction, and (3) make recommendations that have potential to prompt further research and practice change.

Key Terms

For the purpose of this review, the following key concepts are defined as follows:

Evidence includes: (1) published peer-reviewed primary research literature (quantitative studies, qualitative studies, and program evaluations) about nurses' job satisfaction and self-scheduling (Froman, 2006; Poland, 2013) and (2) published non-peer reviewed personal narratives by individuals who have experienced and participated in self-scheduling (Baynham, 2003; Swidler,

2012). *Primary research*: includes research (quantitative and qualitative) conducted using original data; primary research provides specificity and aids in contextualization (Whalley, 2011). *Nurses* are defined as Registered Nurses (RNs) and Licensed Practice nurses (LPNs) who are involved in direct patient care. *Peer reviewed studies* are defined as studies that have been reviewed by experts in the field in an attempt to ensure that an exemplary standard of research is upheld. Peer review “acts as a filter” to ensure research is verified prior to publication and that the research is original and accurate (Poland, 2013, p.567). Thus, the peer review process improves the “quality of the scientific literature” (Froman, 2006, p. 253). *Program evaluations* are defined as those evaluations that assess self-scheduling programs within a healthcare setting and involve nurses as participants. *Personal narratives* are defined as non-peer reviewed personal stories about self-scheduling that have been told by nurses in healthcare settings. Personal narratives add to the richness of evidence by exploring the entanglement between cause and effect experienced by individuals, these add context and create meaning, and can “serve to construct and represent speaker perspectives and values” (Baynham, 2003, p.101; Swidler, 2012).

Research Methods

I have selected an integrative literature review method for this project. This method allows for retrieval and integration of existing information on this topic and provides direction for research on nurse’s job satisfaction and self-scheduling. Integrative literature reviews have the potential to “provide a more comprehensive understanding of a particular phenomenon or health care problem and can add to nursing science, inform research, and policy initiatives” (Whittemore & Knafl, 2005, p.552).

I conducted online literature searches using one electronic database and a search engine: The Cumulative Index to Nursing and Allied Health Literature (CINAHL) and Summon University of Victoria records. Additional searches were carried out with hand searches of retrieved articles' references lists. In CINAHL, key search words were used to identify relevant articles, these were "self-scheduling" and "nurses' job satisfaction and self-scheduling"; the search was limited to full text and academic journals; Summon searches used the key search work "self-scheduling"; the search was limited to articles published in peer-reviewed journals, with search terms "nurses" and "job satisfaction" added. In addition, personal narratives were included as evidence if they included discussion of nurses, self-scheduling, and job satisfaction. Included articles were not limited to geographic location or year of publication to maximise search results. I enlisted the help of a skilled librarian to aid in my literature search.

Articles that were included for review were required to be primary research, discuss nurse/nursing, self-scheduling, and job satisfaction, as well as be peer-reviewed if articles were research studies. The literature search as described above resulted in 56 retrieved articles. After duplicates were removed, 31 articles were yielded using CINAHL, of which three research articles and five personal narratives were included as valuable evidence to add to my project. 15 articles were yielded using Summon, none were included as the majority of articles had already been retrieved using CINAHL. Hand searches of reference lists of selected articles resulted in three additional articles, of which one was included (n=9). I developed a table (Appendix A) and a flow diagram (Figure 1) to track the retrieved articles and the inclusion/exclusion criteria. Next, I developed an integrative table/review matrix (Appendix B) to summarize the included articles, categorising the articles according to study design, the purpose of the study, which tool was used in critiquing the article, methods for selecting the article, and research findings. The tables,

appendices, and figure have been included to allow the opportunity for others to replicate or revise my literature review by tracking all the articles retrieved and the selection process.

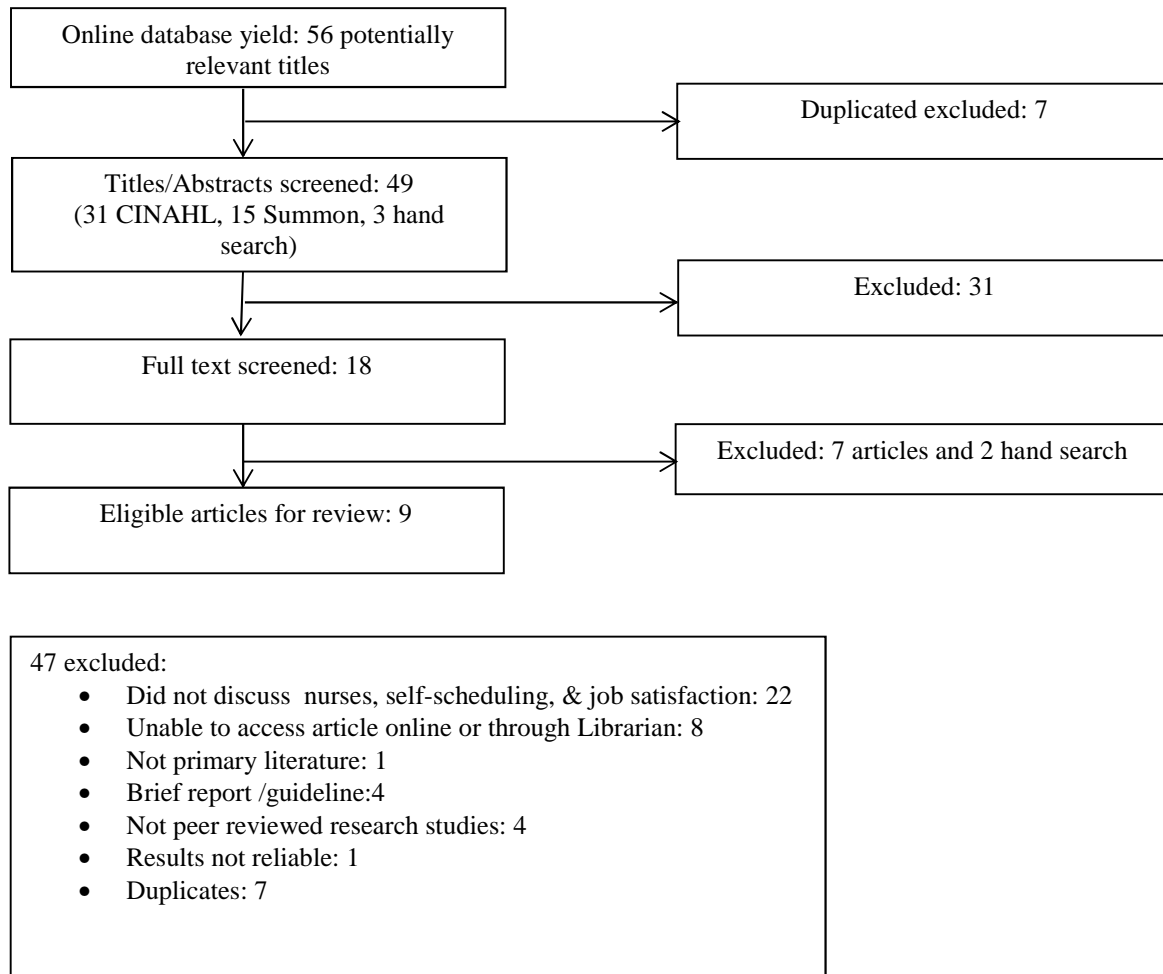


Figure 1. Selection of articles for review

In summary (Table 1), I retrieved nine published journal articles relating to nurses' self-scheduling and job satisfaction during this literature search. Four were peer-reviewed studies, and five were personal narratives from RNs who had experience with self-scheduling. The articles publication dates ranged in age between 1993 and 2012. There was one publication in 1993, one in 1998, one in 2003, one in 2006, one in 2007, three in 2008, and finally, one in 2012. Seven of the studies and personal narratives originated from the U.S.A, and two studies were

conducted in Denmark. All articles involved nurses as participants in self-scheduling, with seven articles referring to acute care as the setting and two articles referred to community care settings for self-scheduling. All articles included nurses as participants, job satisfaction, and self-scheduling.

Table 1: Summary of Retrieved Articles

Author(s)	Publication data	Methodology	Geographical location	Contextual setting	Participant(s)
Bailyn, Collins, and Song	2007	Mixed method	U.S.A	Acute care: ICU and step down	70 Registered Nurses (RNs)
Nabe-Nielsen, Garde, Aust, and Diderichsen	2012	Quantitative	Denmark	Elder care centres and elder home care	5% RNs, 52% social health care helpers, and 43% other direct care healthcare workers.
Pryce, Albertsen, and Nielsen	2006	Quantitative	Denmark	Psychiatric ward	60% RNs and 40% healthcare workers.
Teahan	1998	Program evaluation	U.S.A.	Neonatal ICU	RNs
Niemchak, Canipe, and Frazier	2008	Personal narrative	NC, U.S.A.	Medical ICU	RNs
Bluett	2008	Personal narrative	NY, U.S.A.	Addiction treatment centre	RN supervisor
Robb et al.	2003	Personal narrative	NY, U.S.A.	Dept. of nursing, Mayo Clinic	RNs
Downton	2008	Personal narrative	IN, U.S.A	Hematology & Oncology unit	RN
Griesmer	1993	Personal narrative	MA, U.S.A	ICU	RN

In order to verify the quality of the retrieved research articles, I assessed each article using a quality appraisal tool. I reviewed one mixed method study design article using the Critical Appraisal Skills Program (2013) qualitative research checklist and Kline & Singh's (2013) critiquing guidelines for quantitative research, two quantitative research articles using Kline & Singh's (2013) critiquing guidelines for quantitative research, one program evaluation

article with a critical eye and the knowledge gained from Patton (2008), and summarized five personal narratives.

By incorporating and summarising past narrative representations and empirical literature, while forming comparisons and identifying themes, I hope to provide a comprehensive understanding of the phenomena under review, advance knowledge, and illuminate nursing quality and practice improvement initiatives.

Findings

In this section, I will portray a brief description and analysis of findings for each of the four articles and five personal narratives that I determined to best fit the integrative literature review. The analysis of discourse surrounding the topics of self-scheduling and job satisfaction in nurses explored the entwined relationship between the two, the unique difficulties with implementing self-scheduling programs, and the effects that nurses experienced when using self-scheduling.

Research Articles

Bailyn, Collins, and Song (2007) describe the process and difficulties associated with self-scheduling on a 31 bed nursing unit, involving 70 unionized nurses (n=70). The self-scheduling initiative was evaluated by providing staff with a questionnaire at four different times during the year to assess their satisfaction with the program. The Likert-style survey assessed (1) participants' sense of control, (2) whether their schedule enhanced work-life balance, (3) the perception of increased flexibility, and (4) whether self-scheduling allowed them to provide good patient care. The program was terminated after the year by the department manager due to various issues and limitations regarding miscommunications of program guidelines, lack of

compliance with program rules, a disregard for unit staffing needs by nurses, a false sense of entitlement to certain shifts, and a perception of increased work load for the nurse manager (Bailyn, Collins & Song, 2007).

Nabe-Nielsen, Garde, Aust, and Diderichsen's (2012) study, the "New working hours in the eldercare sector", explores the effect of increasing work-time flexibility in healthcare workers working in eldercare settings, on their perceived flexibility, variability, regularity, and predictability. This quasi-experimental research study involved eight workplaces in three Danish municipalities. Questionnaires were completed by 296 self-selected participants at baseline and 274 at one year follow up. In addition, the authors collected qualitative data via focus group interviews from 32 participants to add to the richness of the study and assess unintended effects that may have not been identified in the questionnaires. Data were analysed using SPSS regression to determine relationships between variables and infer causal relationships (the authors do not state, but I am assuming there was normal distribution and linearity). GENMOD (generalised linear model) was used to determine the outcome based on a predictor variable, i.e. to determine if the intervention resulted in the outcome (Bruce, Pope, & Stanistreet, 2008; Kline & Singh, 2013).

Pryce, Albertsen, and Nielsen (2006) conducted an experimental study of a flexible work schedule implemented in a Danish psychiatric hospital in order to improve worker health, increase employee influence, work-life balance, and job satisfaction. This study is based on the assumption that an open-rota system allows employees more control over their work-rest schedule by letting them sign up for shifts that they prefer on an open rota, thereafter small modifications are made to ensure both employee and unit needs are met. This intervention of open-rota scheduling was adopted by eight nursing teams; 86 intervention participants and

compared to 91 participants in the control group. Participants were randomly assigned to groups, and the intervention lasted for 20 months as part of a hospital-wide project funded by the Danish Ministry of Employment project to enhance work and well-being. A questionnaire survey pre- and post-intervention sought to collect data on (1) work scheduling indices, (2) work-life balance indices and, (3) health and well-being indices. MANOVA univariate analysis was utilised to assess the variation in individual variables pre-post and control-experimental groups (Pryce, Albertsen, & Nielsen, 2006).

Teahan (1998) explored the implementation and evaluation of a self-scheduling program for nurses in a Neonatal Intensive Care Unit in a U.S. hospital as a result of a problematic scheduling system that had resulted in increased absenteeism, vacancies, staff dissatisfaction, increased patient safety risk due the use of agency staff, and increased cost to the organisation. The author chose this busy tertiary care referral centre to assess the self-scheduling process and theory that evolved from it. The self-scheduling approach involved four phases, (1) assessment, (2) planning, (3) implementation, and (4) evaluation. Each phase included various components of current state, desired outcomes, and implementation strategy. A trial period was included in the program, a systematic, participatory approach adopted, and shared ownership and responsibility encouraged. This self-scheduling program challenged the current organisational and management system, thus highlighting the need to refocus priorities to staff needs and empowerment, and progressive approaches to problem solving (Teahan 1998).

During the year that self-scheduling was in effect in Bailyn, Collins and Song's (2007) study, the authors report that shift changes decreased, absenteeism stayed on average the same (with a peak around holiday seasons), nurses' moral increased, as did their sense of control, flexibility, and work-life balance. However, compliance with the rules of the program proved

difficult. Pryce, Albertsen, and Nielsen (2006) found that nurses in the flexible scheduling group reported greater job satisfaction, were less likely to swap shifts when using the open-rota system, and had improved work-life balance, social support, and morale when compared to the control groups. The findings of this study by Pryce, Albertsen, and Nielsen (2006) suggest that “open-rota systems are, to some extent, an effective intervention to enhance job satisfaction” (p. 286). In addition, the findings support that the quality of work and life was improved with little investment from personnel or financial resources. Similarly, participants in Nabe-Nielsen et al.’s study (2012) reported increased flexibility (although limited due to employees’ contractual obligations to work specific shifts), decreased variability (in terms of how often employees were called to work at short notice), and a decrease in regularity and predictability of work schedules (due to schedules not being as repetitive). When Teahan (1998) evaluated the self-scheduling program, she found that there was a requirement of an intrinsic need to change the status quo, and that without this shared desire by all stakeholders, there is diminished motivation to change. Supportive findings of this program evaluation included an increased sense of control by staff, improved morale, positive work climate, less confrontational staff, improved problem solving, effective communication, decreased staff turnover, staff empowerment, and less cost to the hospital. Unsupportive findings in Teahan’s (1998) program evaluation included feelings of favouritism by staff, increased scrutiny of the schedule, frustration, increased need for objectivity and fairness, and increased demand on time and staff resources. Nabe-Nielsen et al. (2011) suggest that there is a fine balance between adequate planning in self-scheduling and allowing enough time for short-term flexibility to accommodate changes. There is a need to “keep or increase the regularity of the work-schedule while increasing the flexibility” (Nabe-Nielsen et al., 2102, p. 448). The intervention needs to “match local needs” as well as workplace staffing

needs (Nabe-Nielsen et al., 2012, p.441). In addition, the involvement of committed and supportive leadership in implementing and sustaining self-scheduling is crucial. Likewise, Teahan (1998) cautions that in order to ensure self-scheduling program success, management support, staff participation, and structured implementation is vital. The results of Teahan's (1998) program evaluation suggested that the program was a success; not only did it "serve as a solution to staffing problems, but it also assisted with team building and morale boosting" (p.366). In contrast, the qualitative data collected by Nabe-Nielsen et al. (2012) revealed that those participants who used computerized self-scheduling had difficulty planning their non-work activities, difficulty remembering their work schedule, and experienced that the continuity of care and regular team work was disrupted (Nabe-Nielsen et al., 2012).

A limitation of Bailyn, Collins, and Song's (2007) research is the lack of mention of the study type; one could assume that the authors conducted a mixed method research study; however, this is not explicitly mentioned. This poses questions of criterion-related validity; the questionable relationship between the participant's actual behaviour and that recorded in the questionnaire. Similarly, there were limitations in Nabe-Nielsen et al's. (2012) study that included threats to internal validity, external validity, and potential biases (Nabe-Nielsen et al., 2012, p. 448). Of note to this project is that only 5.2% of the participants were classed as "nurses", and all were in elder-care centres, the average age was 44.3, men were excluded, and job type did not result in normal distribution (Nabe-Nielsen et al, 2012). Limitations of Pryce, Albertsen, and Nielsen's (2006) study include voluntary participation by units; this non-probability convenience sample can introduce bias and threats to internal validity. There is no discussion by these authors regarding divergent validity; the tools that were used to measure different constructs are in fact similar.

Personal Narratives

Bluett (2008), Downton (2008), and Griesmer (1993) discuss their experiences with nurses self-scheduling while working as RNs in the U.S.A. Bluett (2008) reflects that successfully implemented self-scheduling programs for nurses has been shown to benefit staff retention, increased staff morale, sense of control, and improve the work environment. While the benefits of self-scheduling in increasing nurse's morale, creating a sense of control for staff, and helping to balance work-life commitments were reflected in Downton's (2008) narrative. Griesmer (1993) observed that nurses expressed pleasure with the new self-scheduling program, enjoyed more control over their job, and were more committed to the unit.

Bluett (2008) cautions that for successful implementation of self-scheduling, shared ownership of the idea is essential in addition to sufficient staff education. Griesmer's (1993) perception was that there were challenges with self-scheduling arising when some staff constantly put their needs ahead of others. Most importantly, Bluett (2008) states that leadership needs to understand their role in the self-scheduling process: overseeing the project, supporting and encouraging change, motivating staff, and facilitating the process instead of controlling it. Downton (2008) reflects feeling supported and respected by her progressive leadership team, combining this with the benefits of self-scheduling, it enabled her to provide better care and remain committed to her job. The nursing leadership on the unit Griesmer (1993) was working on hoped that by introducing self-scheduling, there would be an increase in staff morale, retention, and autonomy, and encouraged the staff to adopt the same vision. Allowing the nurses to have control of and assume responsibility for self-scheduling, allows staff to feel "a sense of empowerment and promotes job satisfaction" (Bluett, 2008, p.15).

Downton (2008) states that in her experience, self-schedules are well organised, are adapted to meet the needs of both the staff and the nursing department, are fair, and iterative in that the shift coordinator changes the program based on feedback and annual surveys. Bluett (2008) cautions that there are inherent frustrations with self-scheduling; trying to balance the needs of the employees and the organisation. The author urges others to evaluate self-scheduling programs for both positive and negative impacts (Bluett, 2008).

Niemchak, Canipe, and Frazier (2008) and Robb et al. (2003) designed and implemented self-scheduling programs in their respective units in the U.S.A. with the goal of developing a healthier working environment (Niemchak, Canipe, & Frazier, 2008) and increasing nurses' control over their work schedule (Robb et al., 2003). Niemchak, Canipe, and Frazier (2008) tell of what they experienced as essential to the success of the program: planning, collaboration, forming a committee, and developing guidelines for self-scheduling. They report that after a year of implementing the program, the majority of the staff seemed satisfied with their schedule compared with the previous method of scheduling, nurses reflected improved job satisfaction, and staff turnover was reduced by five percent from the previous year (Niemchak, Canipe, & Frazier, 2008). Robb et al. (2003) revised guidelines, added policy statements, developed resource tools, and identified areas that required further development. They report that in their experience what contributed to a successful self-scheduling program involves staff participation, training, technology, frequent meetings with leadership and staff, expert consultation, and shared governance (Robb et al., 2003).

Discussion

In my review, I provide an overview of evidence, and the quality of it, that speaks to self-scheduling and how self-scheduling influence nurses' job satisfaction. I reviewed the literature with a focus on patterns, regularities, contrasts, paradoxes, and irregularities relating to my review topic. I will now discuss the dominant themes that emerged in more detail.

Self-scheduling Results in Increased Morale

The reviewed literature reveals a repeated pattern that nurses that utilise self-scheduling programs show higher levels of morale. Downton (2008) experienced a sense of shared ownership and decision-making that increased her motivation and morale while using self-scheduling. Similarly, Niemchak, Canipe, and Frazier (2008) found increased participant morale one year after designing and implementing self-scheduling. Nurses expressed a sense of morale boosting due to managers willingness to accept sudden changes that required schedule adjustments, in a study by Bailyn, Collins, and Song (2007). Although met with initial resistance, Pryce, Albertsen, and Nielsen (2006) report that their study findings reflect improved worker influence, social support, and staff morale while using a flexible scheduling system. Staff team building and morale increased when implementing self-scheduling, according to Teahan (1998); staff were also less confrontational, and a more pleasant and positive work environment was noted.

Froman (2009) emphasizes the important role of positive psychology in assisting with coping and resilience in the workplace. Individuals with increased morale are better equipped to rebound from adversity or personal impediments. Furthermore, literature links positive attitudes

and high levels of morale to personal motivation, job satisfaction, and increased productivity and innovation (Froman, 2009; Sergeant & Laws-Chapman, 2012).

Self-scheduling Increases Control

A dominant theme emerged that nurses utilising self-scheduling programs expressed an increased sense of control and power over decision-making. Nurses interviewed by Bailyn, Collins, and Song (2007) stated that they enjoyed more freedom and control over their time, personal lives, and delivered better patient care while participating in self-scheduling. Bluett (2008) and Griesmer (1993) suggest that in their experience, nurses felt more empowered, had a refreshed sense of control over their work and life, and improved job satisfaction while using self-scheduling. Staff participation in self-scheduling design, development, and modification added to a sense of control (Robb et al., 2003), while Teahan (1998) reported that the intrinsic need to change the status quo resulted in a nurse-driven scheduling process that increased nurses' control over the planning, process, and outcomes of self-scheduling.

Including nurses in the development of flexible scheduling programs affords them more control over their work environment, has the potential to influence outcomes, and results in shared decision-making power. Lack of control has been linked to decreased teamwork and lack of autonomy (Kellogg & Walczak, 2007; Russell, Hawkins, & Arnold, 2012). High levels of work stress and little control over the work environment can also result in an imbalance that has poor outcomes for the nurse, the organisation, and can negatively impact patient care delivery (Karasek, 2004).

Self-scheduling Decreases Staff Turnover and Absenteeism

The data and narratives reviewed presented evidence that self-scheduling decreased staff turnover and absenteeism. Bluett (2008), Downton (2008), and Griesmer (1993) discuss how staff retention and commitment improved due to self-scheduling programs. In the study conducted by Nabe-Nielsen et al. (2012), self-scheduling caused major changes in how worked hours were planned, this increase in flexibility resulted in less occurrences of nurses being called to work at short notice. Niemchak, Canipe, and Frazier (2008) report that in their experience, after a year of self-scheduling, staff turnover was reduced from the previous year. Similarly, Teahan (1998) reported that there was a decrease in sick calls following self-scheduling implementation; this system of scheduling was used as a solution to staffing difficulties.

With increased rates of burnout, challenges with recruitment and retention, and increased complexity of patient care – nurses are finding it difficult to maintain their health and remain committed to a work environment that does not allow for change (Simmons, 2012). Utilising self-scheduling allows staff to manipulate their schedules to match their individual needs while decreasing nurse turnover (Hayes et al., 2006). This has the potential to decrease the 19% of absenteeism that is due to family or live commitments (The Canadian Federation of Nurses Unions, 2009), decrease organisational cost associated with loss of worked hours and replacement of labour costs, while improving nurses' health by decreasing stress related to lack of decision-making and control (Hayes et al., 2006; Karasek, 2004).

Self-scheduling Increases Flexibility

Those individuals participating in self-scheduling reflected that they perceived an increase in the flexibility associated with scheduling. Nearly all the nurses surveyed by Bailyn,

Collins, and Song (2007) stated that self-scheduling delivered improved flexibility in worked hours. Similarly, Nabe-Nielsen et al. (2012) reported that participants in their study reported increased flexibility in which shifts they would accept or reject in their work schedules and self-scheduling led to a sense of individualized work hours.

There is concern that only 36% of Canadian nurses report flexibility in their worked days (Statistics Canada, 2005). Flexible work schedules have the potential to meet the staffing needs of the organisation while fulfilling the individual needs of the workers. With inflexibility resulting in increased stress, job dissatisfaction, and decreased productivity, the benefits of a more flexible schedule is evident for nurses, patients, and the organisation (Kellogg & Walczak, 2007; Russell, Hawkins, & Arnold, 2012; Simmons, 2012).

Self-scheduling Improves Work-life Balance

Balancing work, life, and other commitments is often a challenge for shift workers. The reviewed literature revealed that self-scheduling enhanced nurses' work-life balance. Nurses expressed pleasure with being able to schedule their work around their non-work needs without difficulty (Bailyn, Collins, & Song, 2007). The quality of nurses' work and life was improved by self-scheduling in a study conducted by Pryce, Albertsen, and Nielsen (2006) and nurses expressed a better balance between work and family commitments using self-scheduling (Downton, 2008).

Complex decision-making occurs when nurses select their workdays (Kellogg & Walczak, 2007). Nurses take family responsibilities, study commitments, social obligations, and other work and non-work considerations into account when planning scheduling. To balance the responsibilities of home, work, and self, organisations need to give control back to the nurse

(Simmons, 2012). Moving away from a rigid rotating fixed schedule and allowing for individualization and preference in scheduling allows for greater job satisfaction and flexibility (Russell, Hawkins, & Arnold, 2012).

Other Considerations

Several contrasts and irregularities were also present in the literature. Bailyn, Collins, and Song's (2007) study revealed that self-scheduling had no effect on nurses' absenteeism. Literature varied with regard to the effect of self-scheduling on managers' use of time. Some studies found that self-scheduling released the managers from scheduling tasks thus enabling additional time for other duties and activities (Pryce, Albertsen, & Nielsen, 2006; Teahan, 1998). However, one study noted that self-scheduling increased the amount of time spent by managers on scheduling (Bailyn, Collins, & Song, 2007). This led to nurse managers' feelings of frustration, nurses' resistance to change, nurses' undue scrutiny of the schedule, nurses' hesitation to participating, and the end of some pilot self-scheduling programs (Bluett, 2008; Pryce, Albertsen, & Nielsen, 2006; Teahan, 1998). Some studies showed that commitment to employment and loyalty increased with self-scheduling, this resulted in decreased staff turnover and less shift trades (Downton, 2008; Niemchak, Canipe, & Frazier, 2008; Pryce, Albertsen, & Nielsen, 2006; Teahan, 1998).

The literature revealed several limitations with the self-scheduling program. Limitations included managers not being willing to hand control over to the staff to manage scheduling, unsupportive leadership, lack of program structure and communication, too little training and education, prioritizing personal needs over unit needs, and a disregard for scheduling rules and guidelines (Bailyn, Collins, & Song, 2007; Bluett, 2008; Griesmer, 1993; Nabe-Nielsen et al.,

2012; Robb et al., 2003). I have identified that a certain amount of resistance to change is evident in the literature from both the nurses and the management team when implementing self-scheduling (Bailyn, Collins & Song, 2007; Bluett, 2008; Pryce, Albertsen, & Nielsen, 2006; Nabe-Nielsen et al., 2012; Teahan, 1998). The success of a self-scheduling program appears to be reliant on the formation of a staff-led steering committee, shared ownership and stakeholder participation, fairness, collaboration, structured implementation, and organisation. The literature reviewed suggests that self-scheduling programs need to account for contextual differences, manage resistance to change, adapt, and balance to meet both the personal needs of the program and the staffing needs of the organisation (Bluett, 2008; Downton, 2008; Nabe-Nielsen et al., 2012; Robb et al., 2003).

As discussed, all articles included themes of nurses and various degrees of improved job satisfaction when using self-scheduling. However, a causal relationship between self-scheduling and job satisfaction was not mentioned in isolation. As described, many variables were affected by self-scheduling and any of these may have indirectly resulted in the improved job satisfaction. Several authors have tried to isolate factors that affect nurses' job satisfaction, including work-family conflict (Utriainen & Kyngas, 2009), demographics (Shah, Al-Enezi, Chowdhury, & Al Otabi, 2004), salary (Utriainen & Kyngas, 2009), support (Shah, Al-Enezi, Chowdhury, & Al Otabi, 2004), education (Rambur, McIntosh, Val Palumbo, & Reinier, 2005), environment (Shah, Al-Enezi, Chowdhury, & Al Otabi, 2004), routine (Utriainen & Kyngas, 2009), and interpersonal relationships (Shah, Al-Enezi, Chowdhury, & Al Otabi, 2004; Utriainen & Kyngas, 2009). However, most agree it is a combination of these factors that results in a dissatisfied employee.

The majority of the reviewed literature appears to suggest that self-scheduling has benefits for both the nurses and the organisation. However, several points suggest the contrary. Some authors found there is no effect on the rates of absenteeism, that there was an increase in frustration, resistance, power dynamics, as well as time needed to manage self-schedules (Bluett, 2008; Pryce, Albertsen, & Nielsen, 2006; Teahan, 1998). In addition, other authors expressed that insufficient planning, support, cooperation, and provision of training resulted in a self-scheduling programs failure or termination (Bailyn, Collins, & Song, 2007; Griesmer, 1993; Nabe-Nielsen et al., 2012; Robb et al, 2003.). One could logically deduce that self-scheduling cannot be viewed in isolation from the context in which it is implemented; rather it should be viewed within the complex healthcare ecosystem that aims for a symbiotic relationship between individual and organisation. An APN has the potential to act as the glue that holds this complex web together in order to see self-scheduling and improved job satisfaction come to be a reality for many nurses. Understanding the factors that influence individuals and organisations when change, like self-scheduling, is implemented can provide insight into ways that APNs can better lead and ensure success of programs like this. I will focus on one such factor that is evident in the reviewed literature, that is, resistance to change. Resistance to change appears not only to be evident on an individual level but on an organisational level too. The next three sections will discuss the growth and effect that resistance to change has on the individual, the organisation, and ways in which APNs can equip themselves to adapt to this changing environment and effectively manage the stressors of self-scheduling implementation.

Individual

The reviewed literature appears to reflect that individual power dynamics and resistance to change plays a role in the success or failure of a self-scheduling program (Bailyn, Collins, &

Song, 2007; Bluett, 2008; Griesmer, 1993; Pryce, Albertsen, & Nielsen, 2006; Teahan, 1998). In my experience, individuals are usually open to the idea of increased flexibility in the workplace. However, implementation and supporting the necessary changes to make self-scheduling a reality are not as well accepted. Developing a self-scheduling program needs to happen within a bottom up approach that is utilisation focused and one that emphasizes the relevance to the end user (Patton, 2008). In my experience, the majority of individuals will try to maintain the status quo, even if it is not the most effective or flexible schedule program; change is often resisted. However, this resistance does not need to be viewed as negatively influencing self-scheduling; rather I would encourage resistance to be seen as a form of organisational growth.

LeTourneau (2004) discusses that implementing organisational change often results in a feeling of being “perceived as incompetent”, as “interfering with getting my work done”, or not having a clear reason for its implementation (LeTourneau, 2004, p. 286 - 287). By involving those affected by change in self-scheduling, being transparent in the intentions, and planning for these common responses, resistance can be minimized. LeTourneau goes further to suggest that three principles, or rules of engagement, should be set in motion: early involvement, fairness, and collaboration. Likewise, the reviewed literature appears to indicate that these factors had an effect of the self-scheduling program’s success or failure (Bailyn, Collins, & Song, 2007; Bluett, 2008; Downton, 2008; Pryce, Albertsen, & Nielsen, 2006; Robb et al., 2003; Teahan, 1998). By taking LeTourneau’s principles into account, fear of change, loss of control of the practice environment, staff alienation, anger, and resistance can be avoided (LeTourneau, 2004; Kelly & Weber 1995).

Organisation

In healthcare systems, many nuclear groups have a tendency to circumvent change to retain the status quo. Chreim, Williams, and Collier (2012) caution that although the influence of senior management in change is essential, these insular communities of health care professionals at the clinical level can limit implementation and hinder change that requires inter-sectoral collaboration.

A common misconception is that change that occurs with little or no resistance is a good change or one that has been managed well. Waddell and Sohal (1998) challenge this assumption and state that casting resistance to change in a negative light is unsubstantiated. These authors ensure that trying to overcome resistance and viewing it as the enemy of successful initiatives is not the best route to take. Rather, they encourage management to use the resistance to gain utility and avoid suppressing it. These authors have found that utilizing resistance has been largely ignored by current management of change models, and could in fact be the factor leading to success in change and organisations. These authors suggest using resistance for its useful role in change, and shift the worldview of what resistance means to organisational success. When resistance is managed carefully and seen as inherently good, it can enhance and potentiate change efforts and influence organisational stability. By gaining a rhythmic organisational pattern between stability and change, “avoiding the dysfunctionality of too much change while ensuring stability does not become stagnation”, organisations and their stakeholders can find new solutions, gain innovation, improve motivation, and uncover new possibilities (Waddell & Sohal, 1998, p. 545).

Perhaps the role of resistance needs to be redefined in organisational change management models and envisioned as an asset for growth rather than a resistance to progress. By using appropriate methods to anticipate and manage resistance when implementing self-scheduling, organisations and leaders have the ability to overcome obstacles, empower stakeholders to embrace changes, in addition to driving healthcare forward (Pieterse, Caniels, & Homan 2012; Waddell & Sohal 1998).

The Role of the APN

Leadership and senior management have a duty and organisational obligation to facilitate change and optimise performance by 'keeping the machine well-oiled and functioning'. However, it is my opinion that this philosophy of seeing the individual organisational parts in isolation does not always result in better performance and productivity. Rather, Plsek and Wilson (2001) suggest treating organisations like a complex adaptive system. Encouraging collaboration and creative thinking with those directly affected by self-scheduling by using a strategy of minimum specifications. To use this strategy to reduce resistance to change, all stakeholders need to collaborate and engage in dialogue which may result in decreased anxiety, enhanced boundary setting, directional discussion, and a minimum set of specifications for moving forward with an initiative like self-scheduling (Plsek & Wilson, 2001).

To avoid conflicting ideals between the APN, the nurses, and the organisation, Smollan (2011) suggests planning and assessing the potential disturbance on various stakeholders and understanding that there will be those that stand to lose something. The benefit of participating in honest communication, identify parties that may undermine the change, and handling resistance with care, should not be underestimated (Smollan, 2011). Similarly, through studying those

unsuccessful self-scheduling initiatives by assessing what went wrong, why there was resistance, and seeking answers to questions arising, there is a potential to change existing practices that averted the desired outcome. The APN's knowledge and skills in program evaluation is critical in performing utilisation-focused evaluations to determine limitations in current scheduling practices toward building organisational capacity, and initiating effective policy development (Patton, 2008). The APN can begin this process by performing a needs assessment, assessing the goals that the individual nurses desire to achieve, "and examine how these needs and goals best fit the needs of the" organisation "and the nursing profession" (Skalla & Caron, 2008, p.30). In addition, by prioritising self-scheduling's benefits to job satisfaction, a clear mission and vision of the organization can be developed to achieve group unity and empower all stakeholders to embrace positive change (Beutell, 2010; Ruggiero & Pezzino, 2006; Teahan, 1998).

Kelly and Weber (1995) researched what factors influence participation in healthcare positing that in order for organizations to overcome resistance to change, staff need to own the need for change, management and staff must collaborate, and processes needed to be modified to reflect the values co-created by stakeholders. These efforts were proven to support positive employee engagement and enable productive organisational outcomes (Kelly & Weber, 1995). Thereby I propose that leadership practice can be adapted to enhance the success of self-scheduling. By using an integrative collaborative approach, the APN can illuminate the commitment to a common goal of fostering job satisfaction.

It is my belief that it is an APNs job is to know their employees, not just on a professional level, but on a deeper personal level, in order to understand the stressors, strain, and work-life influences that a staff member may be experiencing. In doing so, the APN will be more attuned to fluctuations in job satisfaction and resistance to change. Knowing the individuals needs and

matching those with the organisations obligations, the APNs can use the staff's dissatisfaction with a less flexible scheduling system as a motivator for change in the organisations structure.

In a high reliability, high stress environment like healthcare, the interaction between job demands and decision authority is complex. Karasek (1979) studied that a combination of a lack of control over one's job and high job demands is associated with mental strain. He developed a model, the job strain model, which recommends redesigning the current job model to decrease the effects of mental strain on employees. According to Karasek, when jobs include a component of high strain and low decision authority, like nursing, the result is unresolved strain that can lead to job dissatisfaction. APNs have the potential to support an environment that moves towards participatory stress prevention by giving the nurses more control over their work schedule in an attempt to improve job satisfaction.

In conclusion, nursing leaders have the responsibility to identify a new philosophy of management that empowers the staff and shares control by practicing collaboratively, while integrating evidence into practice and recognising the importance of theory in management (Canadian Nurses Association, 2008; Teahan, 1998). Only then, can self-scheduling programs truly be seen as a success, and improvement in job satisfaction of nurses an outcome.

Limitations

Although an effort was made to include all the literature relating to nursing job satisfaction and self-scheduling, admittedly there are limitations due to human factors and technology. Inherent limitations with "inconsistent search terminology and indexing problems" are associated with computerized databases; to mitigate this, I conducted extensive article hand searching through reference lists (Whittemore & Knafl, 2005, p. 548). Publication bias is a

realistic limitation in integrative literature reviews – what is published may be skewed towards positive results, i.e. publication of research is dependent on results – this results in an “over-representation of significant or positive studies” and literature not being representative of all studies undertaken (The Cochrane Collaboration, 2002, n.p.). In addition, human factors influence the interpretation and analysis of discourse, although an attempt was made to maintain an unbiased approach, there is risk for subjectivity when reviewing literature. For the purpose of this integrative literature review, only articles that were available online, contained primary research, and were written in English were included; this excludes grey or unpublished literature, and literature of other languages. There was no exclusion due to geographic location of the study in an attempt to create a culturally unbiased lens through which to view this topic. There was an overall impression that, although there is much research available on the health benefits of job satisfaction, very little high quality recent literature was available linking self-scheduling to nurses’ job satisfaction.

Recommendations

Recommendations for practice changes include integration of research into practice by organisations, leadership, and individuals in order to realise the benefits that evidence-based practice has on self-scheduling and improvement of nurses’ job satisfaction. Leadership recommendations include an increased awareness of collaborative practice, utilisation of resistance as a catalyst for change, and empowerment of nurses to improve their job satisfaction. Recommendations for further research include identifying and evaluating existing self-scheduling programs, including economic evaluation, and carrying out rigorous research on the effect of self-scheduling on job satisfaction. I recommend further investigation into the specific

determinants or motivators of nurses' job satisfaction, the effect of job dissatisfaction on nurses' health, and the impact this has on the quality of patient care provision and safety.

Conclusion

The findings of this integrative literature review indicate that moving toward a more flexible work schedule for nurses has potential to result in benefits for both nurses and the organisation. Introducing self-scheduling using a bottom-up approach that engages diverse stakeholders has potential to create change that benefits all stakeholders while empowering nurses who work the schedule. Further, there may be considerable costs saving to the organisation. There is a necessity that the nurses, leaders, and the organisation understand the core concepts relating to job satisfaction, select ingenuities that support the needs of employees, and stipulate improvement initiatives that engage personal and organisational development.

With the current and predicted worsening nursing shortage in Canada and globally, staff retention and reduction of absenteeism by improving schedule flexibility through self-scheduling should not be overlooked. Nurse leaders are in a unique position to promote knowledge, balance the needs of the nurses and the organisation, while supporting and motivating positive change. The responsibility lies on the shift workers, healthcare professionals, the nursing leaders, and the hospital administration to be aware of the benefit of self-scheduling to improve job satisfaction.

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	Article	Source	Research Study	Study Type	Peer Review	Includes nurse/ nursing	Includes self-scheduling	Included job satisfaction	Data complete / article available / not primary source	Exclude	Include
33	Anonymous (2007)	S	✗	LS	✓	✓	✗	✓	✗	✗	
34	Strunk & Strunk (2012)	S	✓	QN	✓	✓	✗	✓	✓	✗	
35	Brunoro-Kadash & Kadash (2013)	S	✗	PE	✓	✓	✗	✗	✓	✗	
36	Utlely et al. (2011)	S	✗	LS	✓	✓	✗	✓	✗	✗	
37	Ma et al. (2009)	S	✓	QN	✓	✓	✗	✓	✓	✗	
38	Halfer & Graf (2006)	S	✓	QN	✓	✓	✗	✓	✓	✗	
39	Moseley, Jeffers & Paterson (2008)	S	✓	SR	✓	✓	✗	✓	✗	✗	
40	Manoilovich & Laschinger (2007)	S	✓	QN	✓	✓	✗	✓	✓	✗	
41	Brooks & Anderson (2004)	S	✓	QN	✓	✓	✓	✓	✗	✗	
42	Hayes et al. (2006)	S	✗	IR	✓	✓	✗	✓	✗	✗	
43	Duffield et al. (2011)	S	✓	QN	✓	✓	✗	✓	✗	✗	
44	Stordeur & D'Hoore (2007)	S	✓	QN	✓	✓	✗	✓	✗	✗	
45	Sorensen et al. (2009)	S	✓	QN	✓	✓	✗	✓	✓	✗	
46	Leurer, Donnelly & Domm (2007)	S	✓	QL	✓	✓	✗	✓	✗	✗	
47	Joyce et al. (2010)	H	✓	SR	✓	✓	✓	✗	✓	✗	
48	Pryce, Albertsen & Nielsen (2006)	H	✓	QN	✓	✓	✓	✓	✓		✓
49	Halpern (2005)	H	✓	QN	✓	✗	✓	✓	✓	✗	

QN = Quantitative
QL = Qualitative
IR = Integrative Review
PE = Program Evaluation
PN = Personal Narrative
RT = Report
LS = Literary Summary
SR = Systematic Review

49 Retrieved Articles

- CINAHL: 31 of which **3 included**
- Summon: 15 of which 0 included
- Hand search: 3 of which **1 included**
- Personal narratives include as evidence: **5 included**

Study of narrative must include nurses, self-scheduling, and job satisfaction; data and/or article must be complete and available.

C	CINAHL (“self-scheduling” and “job satisfaction and self-scheduling”; full text; academic journal)
S	UVic Summon (“self-scheduling”; full text; limit to articles from peer review publications; journal article; search terms: nurses and job satisfaction) – excluded articles already found in CINAHL
H	Hand search through reference lists
✓*	Personal narratives included to add personal experience to the literature

**Appendix B: Integrative Table/Review Matrix to Summarize Included Articles and
Personal Narratives.**

Author(s) and study title	Study design	Purpose	Database used to retrieve article	Quality appraisal tool used	Methods used to sort and select article	Study findings/ Abstract
<p>Bailyn, L., Collins, R., & Song, Y. (2007). Self-scheduling for hospital nurses: an attempt and its difficulties. <i>Journal Of Nursing Management</i>, 15(1), 72-77. doi:10.1111/j.1365-2934.2006.00633.x</p> <p>Peer review journal</p>	Mixed method	To describe a pilot project on self-scheduling (self-rostering) for hospital nurses and assess its potential values and difficulties in implementation.	CINAHL	Critical Appraisal Skills Program (2013) qualitative research checklist & Kline & Singh's (2013) critiquing guidelines for quantitative research	<p>Key word: self-scheduling; self - scheduling & nurses job satisfaction</p> <p>Limiter: full text online; academic journal</p>	<p>During the time of the pilot project nurses felt that they had better control of their time and were able to give better patient care. Also, change requests decreased, as did the time spent by the nurse manager and her sense of annoyance. But since the nurses did not adhere to the rules of the programme, despite repeated efforts by the nurse manager, the attempt floundered.</p>
<p>Nabe-Nielsen, K., Garde, A., Aust, B., & Diderichsen, F. (2012). Increasing work-time influence: consequences for flexibility, variability, regularity and predictability. <i>Ergonomics</i>, 55(4), 440-449. doi:10.1080/00140139.2011.646321</p> <p>Peer reviewed</p>	QN: Quasi-experimental	This quasi-experimental study investigated how an intervention aiming at increasing eldercare workers' influence on their working hours affected the flexibility, variability, regularity and predictability of the working hours.	CINAHL	Kline & Singh's (2013) critiquing guidelines for quantitative research	<p>Key word: self-scheduling; self - scheduling & nurses job satisfaction</p> <p>Limiter: full text online; academic journal</p>	<p>Employee work-time influence may buffer the adverse effects of shift work. However, our intervention study suggested that while increasing the individual flexibility, increasing work-time influence may also result in decreased regularity of the working hours and less continuity in the care of clients and co-operation with colleagues.</p> <p>Highlights the pros and cons of computerised self-scheduling. Can allude to decreased jobs satisfaction due to disruption in regular working team, patient continuity, and colleagues.</p>

Author(s) and study title	Study design	Purpose	Database used to retrieve article	Quality appraisal tool used	Methods used to sort and select article	Study findings/ Abstract
<p>Pryce, J., Albertsen, K., & Nielsen, K. (2006). Evaluation of an open-rota system in a Danish psychiatric hospital: a mechanism for improving job satisfaction and work-life balance. <i>Journal Of Nursing Management, 14</i>(4), 282-288. doi:10.1111/j.1365-2934.2006.00617.x – peer reviewed</p>	<p>QN experimental design & with QL analysis</p>	<p>To evaluate the impact of an open-rota scheduling system on the health, work-life balance and job satisfaction of nurses working in a psychiatric ward in Denmark.</p>	<p>Hand search</p>	<p>Kline & Singh's (2013) critiquing guidelines for quantitative research</p>	<p>Hand search references</p>	<p>Results: Nurses in the intervention group reported that they were more satisfied with their work hours, less likely to swap their shift when working within the open-rota system and reported significant increases in work–life balance, job satisfaction, social support and community spirit when compared with nurses in the control groups. Conclusions: The ownership and choice over work–rest schedules has benefits for nurses, and potentially the hospital.</p>

Author(s) and study title	Study design	Purpose	Database used to retrieve article	Quality appraisal tool used	Methods used to sort and select article	Study findings/ Abstract
<p>Teahan, B. (1998). Implementation of a self-scheduling system: A solution to more than just schedules. <i>Journal of Nursing Management</i>, 6(6), 361-368. doi:10.1046/j.1365-2834.1998.00096.x</p>	<p>Program Evaluation</p>	<p>The author of this article explores the implementation and evaluation of a self-scheduling program for nurses in a Neonatal Intensive Care Unit in a U.S. hospital as a result of a problematic scheduling system that had resulted in increased absenteeism, vacancies, staff dissatisfaction, increased patient safety risk due the use of agency staff, and increased cost to the organisation</p>	<p>CINAHL</p>	<p>Patton (2008) as guideline</p>	<p>Key word: self-scheduling; self - scheduling & nurses job satisfaction</p> <p>Limitier: full text online</p>	<p>Key findings included that there needs to be an intrinsic need to change the status quo, without this shared desire by all stakeholders, the motivation to change is diminished. Supportive findings of this program evaluation included an increased sense of control by staff, improved morale, positive work climate, less confrontational staff, improved problem solving, effective communication, decreased staff turnover, staff empowerment, less cost to the hospital, application for vacancies on the unit even though none existed, and time released for the manager. Unsupportive findings included feelings of favouritism by staff, increased scrutiny of the schedule, frustration, increased need for objectivity and fairness, and increased demand on time and staff resources. This self-scheduling program was later used as a model, findings used to inform duplicate program implementation in other settings, and inform systems improvement.</p>
<p>Personal Narratives Included as Evidence</p>						
<ul style="list-style-type: none"> • Niemchak, Canipe, & Frazier (2008) • Bluett (2008) • Robb et al.(2003) • Downton (2008) • Griesmer (1993) 						