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# Interventions that promote retention of experienced registered nurses in health care settings: a systematic review

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| Correspondence  Greta G. Cummings  Faculty of Nursing  University of Alberta  Edmonton Clinic Health Academy  11405-87 Avenue  Edmonton  AB, Canada T6G 1C9  E-mail: gretac@ualberta.ca | LARTEY S., CUMMINGS G. & PROFETTO-MCGRATH J. (2013) Journal of Nursing Management  Interventions that promote retention of experienced registered nurses in health care settings: a systematic review  Aim The aim of this review was to report the effectiveness of strategies for retaining experienced Registered Nurses.  Background Nursing researchers have noted that the projected nursing shortage, if not rectified, is expected to affect healthcare cost, job satisfaction and quality patient care. Retaining experienced nurses would help to mitigate the shortage, facilitate the transfer of knowledge and provision of quality care to patients. Evaluation A systematic review of studies on interventions that promote the retention of experienced Registered Nurses in health care settings. Key issues Twelve studies were included in the final analysis. Most studies reported improved retention as a result of the intervention. Team work and individually targeted strategies including mentoring, leadership interest and indepth orientation increased job satisfaction and produced higher retention results. Conclusions Few published studies have examined interventions that promote the retention of experienced Registered Nurses in healthcare. Retention was highest when multiple interventions were used. Further research is needed to inform nurse leaders of ways to retain nurses and to maintain quality care in health care settings.  Implications for nursing management and leadership Programmes targeting the retention of experienced nurses need to be considered when implementing measures to decrease the nursing shortage and its effects on quality care. |

Keywords: experienced nurses, nurses, retention, systematic review, turnover Accepted for publication: 27 March 2013

## Introduction

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A projected nursing shortage in the next 10–20 years has been well documented in the global nursing literature (Cohen et al. 2009, Duffield et al. 2010, Gambino 2010). Cottingham et al. (2011) describe the nursing shortage as critical due to its potential effect on health services in many countries if the problem is not addressed. The nursing shortage is no different here in Canada. The Canadian Nurses Association (CNA) in 2009 projected a nursing shortage of nearly 11 000 fulltime nurses in 2007 and 60 000 in 2022 (Canadian Nurses Association 2009). The CNA as well as government organisations are working on finding ways to address the shortage and its effect on the Canadian healthcare system. The CNA proposed the following strategies – increase Registered Nurses (RN) productivity, decrease absenteeism, increase RN entry-to-practice enrolment, improve retention of RNs currently practising, reduce attrition among the profession and reduce international inmigration of RNs – as possible solutions to this problem (Canadian Nurses Association 2009). Many of these strategies are supported by evidence presented by researchers in the global nursing literature (Erenstein & McCaffrey 2007, Duffield et al. 2010, Gambino 2010). Healthcare and government organisations could implement these strategies to reduce the nursing shortage in Canada and help to decrease its effect on patient care.

The task of increasing the retention of RNs, both in the workplace and in the profession, has been argued as necessary to address the nursing shortage. Furthermore, decreasing nurse turnover could also decrease healthcare costs, increase staff satisfaction and maintain safer patient care. Studies have indicated that nurse turnover has been associated with high organisational cost and a lower quality of care (Kleinman 2004, Jones 2008). Erenstein and McCaffrey (2007) indicated that high turnover is associated with high stress among nurses in the workplace. Ferguson and Sobeco (2004) reported the need for organisations to work towards retaining experienced nurses in the workforce, at least on a part-time basis, in addition to previously discussed strategies. These strategies if employed in the workplace could save organisations considerable money that is currently used in orientating and training newly hired staff who replace nurses who either move to other areas in nursing or leave the profession altogether (Jones 2008, Cohen et al. 2009, Gambino 2010).

Additionally, hospitals depend on nursing knowledge to provide excellent quality care to its patients. High nursing turnover results in a loss of experience and knowledge for nursing units that could take time to regain (Force 2005). Hirschkorn et al. (2010) noted that the economic impact to the system of losing the knowledge and wisdom base of experienced nurses to early retirement and exit from healthcare is high. They continue to suggest that healthcare facilities throughout the world find ways to retain experienced and highly skilled nurses in order to provide high quality care to patients and their families. A recent review concentrated on effective retention strategies for health workers in rural settings, focusing on studies relevant to Australia (Buykx et al. 2010). The aim of this systematic review is to report the effectiveness of strategies for retaining experienced RNs.

Method

## Inclusion criteria

Definition of terms

The following terms were defined to guide the selection of studies to be included in this review. Experienced Nurse was defined as a Registered Nurse with a formal university/college education (or equivalent) and more than one year of practice in a particular area or/and a RN with additional training/certification in a specific nursing practice area (e.g. intensive care unit). Health Care Setting was defined as an organisation or programme that provides health services to individuals or groups of individuals. A Programme/Organisational intervention is an organisational/programme practice implemented with the intention of increasing the retention of experienced RNs (e.g. leadership training/development, pay incentive, staff development programmes). Each programme needed to define the retention period and how it was measured for their particular study.

Criteria for inclusion

Studies included in this review had to be quantitative research studies (correlation, quasi-experiment, survey), define ‘retention’, measure retention pre and post intervention, and include experienced RNs as subjects. Articles detailing strategies to promote the retention of newly graduated nurses will not be included because a recent publication has addressed this issue (Salt et al. 2008). Included studies have to examine the retention of RNs in health care settings, involve an intervention and measure its effect on retention, and preferably use a control group.

## Search strategy

Six electronic databases – CINAHL, PsychInfo, EMBASE, Medline, Cochrane library, SCOPUS – were searched for this study. The key terms used were: retention, retain\*, turnover, employee, staff and personnel in combination with nurs\*. All key terms were used simultaneously for each database. The search was not limited by language or publication date. The assistance of a health sciences librarian was sought for the electronic database search. Website searches were also performed using above keywords for relevant organisations – Canadian Nursing Association (www.cna-aiic.ca), Canadian Health Services Research Foundation (www. chsrf.ca/home.aspx) and the Canadian Nursing Leadership Study group (www.publish.uwo.ca/~hkl/national\_ leadership\_study/reading.htm). A Google Scholar search was completed using all key terms for additional articles

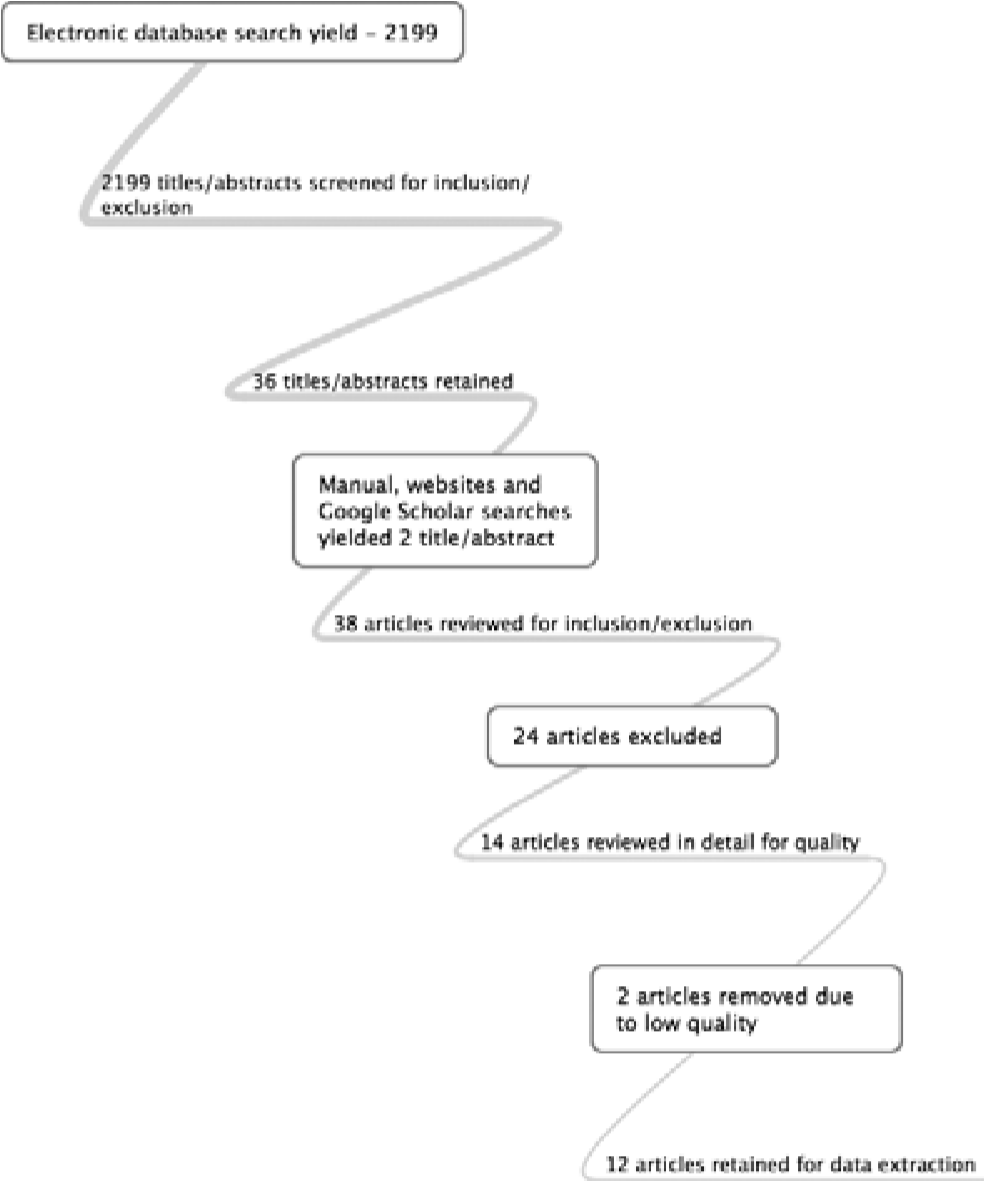


Figure 1

Study retrieval process.

(Figure 1). The references of included articles were also reviewed for additional related studies published by the authors. No additional articles were obtained as a result of this manual search.

## Screening

The titles and abstracts of the articles were reviewed and assessed for articles describing interventions that measured retention among registered nurses in a health care setting. Articles were grouped into Included (YES) and Excluded (NO) piles. All the titles and abstracts of YES articles were reviewed again for confirmation of meeting the inclusion criteria. All the YES articles were printed and screened using the inclusion criteria. These articles were then grouped into YES, NO and UNSURE piles. A second reviewer confirmed the initial article selection using inclusion criteria. All articles in the YES pile were assessed using an adapted version of a published screening tool (Figure 2) to confirm their suitability for the review (Estabrooks et al. 2003).

## Quality assessment

Only two of the YES articles reported using a control/ comparison group in their study, so all articles were assessed for validity and quality using an adapted version of the quality assessment tool published by Estabrooks et al. in 2003,. The tool (Figure 3) was used to guide assessment of the design, sampling techniques, measurements and statistical analysis presented in each article. The four criteria (design, sample, measurement and statistical analysis) in the assessment tool comprised 13 items that could possibly yield 14 points. Twelve of the items were scored as zero (not met) or one (met). The item related to the measurement of the dependent variable, in this case retention/turnover, was scored as zero (not measured), one (reported) and two (defined and reported). Studies were then grouped into three categories based on overall scores: low (0–4), medium (5–9) and high (10–14). Only studies rated as medium or high were included for data extraction and analysis in this systematic review.

## Data extraction

The following data elements were extracted from each of the included studies: author name, publication year, country where study was conducted, language, journal name, research aim and questions, study settings and subjects, type of intervention, theoretical framework/ model, measurement instruments, reliabilty, validity, analysis, timeframe and outcomes/findings. Further data were extracted on each of the study interventions to capture the following: duration, provider, intensity, recipients, fidelity (efforts to ensure implementation consistency across individuals and sites), contents/elements (Cummings et al. 2011).

Results

## Search results

The electronic database search yielded a total of 2199 abstracts and titles. Thirty-six articles were printed and reviewed in detail to identify whether these studies met the inclusion criteria. Two additional research articles were printed and reviewed as a result of the website and Google Scholar searches. Fourteen studies were included in the quality assessment process. A total of 12 quantitative studies were retained for analysis after the quality assessment process (Table 1). Two studies were excluded due to low quality.

## Characteristics of included studies

All included studies were reported in English. The majority of included studies were completed in North America – nine in the United States of America and one

Figure 2

|  |  |  |
| --- | --- | --- |
| **Interventions that promote retention of experienced registered nurses in health care settings: a systematic review**  Screening tool for inclusion/exclusion | | |
| Study: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ First Author: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  Publication Information: Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Journal: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | |
| **Instructions for completion:**   1. Circle Y or N for each criterion 2. Record inclusion decision: article must satisfy all three criteria Record if additional references are to be retrieved | | |
| **Inclusion/exclusion criteria:**  1. Does the study sample consist of experienced Registered Nurses?  Characteristics: Specify:   * RNs with more than 1year experience \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * RNs with specialized experience (e.g. ICU) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   2. Does the study: Specify   * Include an intervention \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * Define retention \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * Measure retention pre & post intervention \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ * Take place in a health care setting \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   3. Is the relationship between retention and an intervention evaluated?   1. Is there evidence of direction?   Text only: \_\_\_\_\_\_\_YES \_\_\_\_\_\_NO   1. Is there a P-value 2. Is there a statistic identified?   Which one(s)? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_   1. Is there an indication of magnitude? | YES  YES  YES  YES  YES  YES  YES | NO  NO  NO  NO  NO  NO  NO |
| **4. Final decision: include in study: Comments:** | YES | NO |

Screening tool (adopted from Estabrooks et al. 2003).

in Canada. There was one study each from Sweden and Italy. All studies were conducted in healthcare settings. Ten of the studies were done in a hospital, one in a nursing home and one in a healthcare district. Most of the studies were non-experimental. Four of the studies used a pre and post design to collect data and two had comparison groups. The studies were conducted between 1989 and 2009 with the majority published after 2005. Three studies were published between 1989 and 1997. No studies published between 1997 and 2005 met the inclusion criteria for this review. A total of 123 475 study subjects participated in the 12 included studies. Nine studies had registered nurses (two included nurse managers) as the sole subjects and three studies had nurses as part of the study sample. The reported years of nursing experience for the study sample ranged from over 2 years to more than

20 years. The majority of the studies reported average nursing experience greater than 4 years. Four studies included a framework or model for guidance (Table

S1).

## Quality review summary

All included studies were rated as medium or high in the quality assessment. Four studies were prospective in nature, one was retrospective and seven were correlational. Seven studies reported using either a covariate or multivariate analysis including multiple logistic regression, multivariate regression and multiple linear regression. All the correlational studies tested for relationships between variables when applicable. The majority of the studies included subjects from more than one site. Seven studies had greater than a 60% response rate. Six studies reported protecting subject anonymity. Only four studies used a framework/model and six studies not only reported retention/turnover but defined it and indicated how it was measured. The most common weaknesses identified during the quality review were lack of random sampling and attention to outliers during data analysis (Table 2).

## Retention

Retention was used interchangeably with turnover in most of the studies reviewed. None of the studies reported using a validated tool to measure retention. In the majority of studies, retention/turnover was measured as the percentage of nurses who left their position voluntarily (or not) or who transferred to another unit. They derived the percentage by dividing the number who left by the total number of nurses employed on the

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| |  |  |  | | --- | --- | --- | | **Interventions that promote retention of experienced registered nurses in health care settings: a systematic review**  Quality Assessment and Validity Tool for Correlational Studies | | | | Study: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ First Author: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Publication Information: Date: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Journal: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | | | | **Design:**   1. Was the study prospective? 2. Was probability sampling used? | **NO**  0  0 | **YES**  1  1 | | **Sample:**   1. Was sample size justified? 2. Was sample drawn from more than one site? 3. Was anonymity protected? 4. Response rate greater than 60%? | 0  0  0  0 | 1  1  1  1 | | **Measurement:**  **Determinants (IV) [assess for IVs correlated with DVs only]**   1. Was the determinant measured reliable? 2. Was the determinant measured using a valid instrument?   **Influence on the measure of RETENTION/TURNOVER(DV)**   1. Was the dependent variable measured using a valid instrument? 2. If a scale was used for measuring the dependent variable, was   internal consistency ≥ 70%?   1. Was a theoretical framework/model used for guidance? | 0  0  0  0  0 | 1  1  1  2  1 | | **Statistical Analysis:**   1. If multiple determinants were studied, are correlations analyzed? 2. Were outliers managed? | 0  0 | 1  1 | | **Overall Study Validity Rating (circle one)**  (key: 0-4 = LO; 5-9 = MED; 10-14 = HI) | **TOTAL:**  **\_\_\_\_\_\_\_\_**  **LO MED HI** | |   Figure 3  Quality assessment tool (adapted from Estabrooks et al. 2003).  Table 1  Literature search strategy   |  |  |  | | --- | --- | --- | | Database  (No time limit) | Search terms | Number  of articles | | CINAHL | (staff or personnel or employee) and (retention or retain\* or turnover) and nurs\* | 287 | | MEDLINE | (staff or personnel or employee) and (retention or retain\* or turnover) and nurs\* | 994 | | EMBASE | (staff or personnel or employee) and (retention or retain\* or turnover) and nurs\* | 1157 | | PsychINFO | (staff or personnel or employee) and (retention or retain\* or turnover) and nurs\* | 1905 | | Cochrane Library | (staff\* or personnel) and (retention or retain\* or turnover) and nurs\* | 13 | | PROQUEST | (staff or personnel or employee) and (retention or retain\* or turnover) and nurs\* | 362 | | Total titles and abstracts reviewed (duplicates removed) | | 2199 | | Manual, Website and Google Search | | 2 | | Studies retained after both review (YES articles) | | 14 | | FINAL study selection (after quality assessment) | | 12 | |

\*Signifies any word beginning with would be including in the search.

unit (Weisman et al. 1993, Song et al. 1997, DiMeglio et al. 2005, Castle & Engberg 2006, Carraher & Buckley 2008, Meraviglia et al. 2008). Mohr et al. (2008) reported resignation data using the Veterans Health Administration (VHA) Human Resources Turnover Rate database. Resignation rates were measured as the number of employees who actively resigned (includes counts for employees who were transferred to another institution including other VHA hospitals) divided by the average onboard employee count used during the

Table 2

Summary of quality assessment of 12 included papers for interventions that promote retention of experienced registered nurses in health care settings

No. of studies

|  |  |  |
| --- | --- | --- |
| Criteria | Yes | No |
| Design  Prospective studies | 4 | 8 |
| Used probability sampling | 3 | 9 |
| Sample  Justified sample size | 12 | 0 |
| Sample drawn from more than one site | 10 | 2 |
| Anonymity protected | 6 | 6 |
| Response rate >60%? | 8 | 4 |
| Measurement  Reliable measure of independent variable | 12 | 0 |
| Used a valid instrument for measurement of independent variable | 12 | 0 |
| Used a valid instrument for measurement of dependent variable? | 8 | 4 |
| Internal consistency for Retention/turnover ≥70%\* | 12 | 0 |
| Theoretical framework or model used for guidance | 4 | 8 |
| Statistical analysis  Correlations analyzed when multiple effects studied | 10 | 2 |
| Outliers managed and addressed in study | 0 | 12 |

\*Two possible points for this item.

fiscal year. However, another study measured retention as the total number of years in nursing, in current job, anticipated in current job and total anticipated career length (Codier et al. 2009). This study looked at retention in the nursing profession as opposed to a particular healthcare setting.

## Effectiveness of study interventions

Fifty eight percent of the studies reported an improvement in retention as a direct result of the intervention studied. Five broad categories of interventions were observed in this review – nursing practice models, teamwork approach, leadership practice, organisational and individual strategies. Three studies described interventions that sought to determine the effect of nursing practice models that are used widely by magnet hospitals in North America (Weisman et al. 1993, Song et al. 1997, Meraviglia et al. 2008). Among the three studies, one study observed no significant difference in turnover among the study setting when compared with a traditional intensive care unit (Song et al. 1997). The other two studies noted an improvement in retention. Weisman et al. (1993) reported that retention was significantly greater (80%) in the study units than the comparison group (68%) among all staff, however, for the study respondents there was no significant difference in retention – 83% vs. 73% for the comparison group. Meraviglia et al. (2008) found a decrease in turnover from 15.04 to 12.32%.

Two studies examined team oriented interventions in the workplace and their effect on turnover among nurses (DiMeglio et al. 2005, Mohr et al. 2008). Both studies reported a decrease in turnover as a result of interventions implemented – about 1.25 fewer nurse resignations in a 1 year period with every 1 standard deviation unit increase in teamwork (Mohr et al. 2008) and a turnover decrease from 9 to 6% (DiMeglio et al. 2005).

There were two studies on management training and behaviours that promote retention of staff (Gagnon et al. 2006, Sellgren et al. 2007). They reported the least direct positive effect on retention. Sellgren et al. (2007) found that leadership behaviour was directly correlated with actual staff turnover although the effect was mediated by job satisfaction, and Gagnon et al. (2006) reported an overall turnover rate change from 11.8% (2 years before) to 14% (1 year before) to 17.9% (workshop year) to 15.4%

(1 year after).

Two other studies focused on how organisational characteristics affect turnover (Boss et al. 1989, Castle & Engberg 2006). Lower staffing levels, lower quality of care, for-profit ownership and higher hospital bed size were associated with higher staff turnover (Castle & Engberg 2006) and a turnover decrease from 31.3% pre project to 17.8 and 20.6% were reported during the 2 subsequent years after the intervention was implemented (Boss et al. 1989).

The last category of interventions examined strategies targeted toward individual nurses and their relation in promoting higher retention among nurses (Camerino et al. 2008, Carraher & Buckley 2008, Codier et al. 2009). One study realized that nurses with higher emotional intelligence were high performers, had longer careers and exhibited greater job retention (Codier et al. 2009). In the Camerino et al. (2008) study, high turnover was related to reported lower work abilities (using the work ability index – ‘a measure of the degree of fit of the worker with his/ her job’, p.1646) in nurses older than 45 years; however, among nurses younger than 45 years, work ability was not a predictor of exit from the profession (younger nurses in their study were likely to seek additional education and to change their place of work when their work ability was low in a particular area of nursing). The last study reported that turnover was significantly related to ease of benefit replacement, however, attitude towards benefits was not a significant predictor of absenteeism and weakly predicted turnover (Carraher & Buckley 2008). The interventions ranged from 6 months to 4 years in length with the majority of studies indicating a 1 year timeframe.

The intensity of the interventions varied across applicable studies. Measurement of intensity was not possible for most studies because they were correlational in nature and measured relationships rather than the effects of the intervention. For prospective or retrospective studies, the interventions were integrated as part of the culture of the settings and therefore were ongoing. Three studies reported on programmes that implemented the intervention during a period of time: one intervention had a minimum of three, 1 hour sessions (DiMeglio et al. 2005), one had ten workshops that were 4 hours each (Gagnon et al. 2006), and one study involved an organisational development intervention that involved management training, counselling and coaching over a period of time (Boss et al. 1989). Most study interventions were provided to staff by the researchers. Two interventions were programmes implemented by the setting management team. One was completed by the district nursing association and two were facilitated by external consultants. None of the included studies reported on the fidelity of the intervention, therefore data are not shown in Table 3 (Table 4).

### Discussion

This systematic review synthesized evidence-based interventions reported in the nursing literature that promote the retention of experienced registered nurses in health care settings. While many studies in the literature have focused on the retention of new graduate nurses and strategies that increase job satisfaction, little research has been published on interventions that increase the retention of experienced nurses. This review, in line with findings from another review, found little evidence of the effectiveness of any specific intervention targeting the retention of this group (Buykx et al. 2010). Given that retention is influenced by many factors such as flexible scheduling, money, health benefits, mentorship opportunities, organisational focus on retention, management practices and recognition, work environment and retirement plans, the results of this review do not point to one particular intervention that could be implemented to influence experienced nurse retention (Force 2005, Alspach 2007, Hirschkorn et al. 2010). One result evident from this study review is that healthcare settings need a combination of interventions to help increase the retention of their experienced nursing staff.

### Implications for practice

The nursing shortage is a major issue facing healthcare organisations due to its effect on cost and the quality of care (Force 2005). In Canada, healthcare and nursing organisations have recognized the seriousness of the nursing shortage and called for measures to help resolve it. The Canadian Nurses Association (2009) proposed strategies to help with the shortage including the retention of current practising nurses. Experienced nurses form a major proportion of the current practising nursing population; therefore initiating strategies that influence the retention of experienced nurses are crucial to a resolution of the problem (Moseley et al. 2008). This systematic review reveals that a limited number of quality quantitative studies exist that have examined interventions that could be adopted by healthcare settings to help retain highly trained and experienced nurses in the workforce.

Experienced nurses need to be more assertive at expressing their needs and communicating with health care leaders to help identify strategies that could help keep them working longer. They have much to contribute to research at the unit level to identify programmes that facilitate a better work environment and foster their retention. Nurses at the frontline must be involved and help to increase evidence-based knowledge as this is critical in tackling the nursing shortage and improving their work environment. This review shows that professional practice models promoting nurses’ autonomy, increased accountability and shared governance (magnet hospital features) resulted in either maintained or increased retention (Force 2005). A programme with similar features – increased autonomy, reward and recognition – reported promising initial results such as increased job satisfaction, increased morale, cost savings and greater acceptance of change (Bauer et al. 1993). In this review, interventions that were team oriented as well as individually targeted strategies produced higher retention results. As indicated by Cowden et al. (2011), nurse leaders who foster better work environments and take the time to know and meet the individual needs of their staff are likely to foster greater intentions to stay, which could lead to retention among staff. Therefore interventions bearing these features should be included in any measures implemented in healthcare and organisational levels to help decrease the nursing shortage and its effect on patient care.

Characteristicsofstudyinterventions

Author(year)SpecificinterventionDurationProviderIntensityRecipientsContents/Elements

Song

etal.

(1997)

Nurse-managed

specialcareunit

(

SCU)professional

practicemodel

case

management

minimum

technology

shared

governance

4

yearsThehospitalunitOngoingpractice

onunit

NursesFeaturesofSCUbasedonsociotechnicalperspective

SCUenvironmenthadminimumtechnology,acasemanagement

practicemodel,andasharedgovernancemanagementmodelto

fosterautonomyandself-regulation

Thecasemanagementmodelfostersoutcome-orientedpractice

Sharedgovernancemanagementenablesnurseauthority,

accountability,controlandautonomy

Mohr

etal.

(2008)

Teamworkculture–

individual,

workgroup,and

organisationlevels

1

yearResearchersNotreportedPhysiciansand

nurses

Teamworkcultureassessment–surveywithfive-pointscalee.g.of

question‘Managersinmyfacilityarewarmandcaring’

Meraviglia

etal.

(2008)

Nurse-friendly

project

criteria

12

(

MagnetHospital

Criteria)

6

–9monthsTexasNurses

Association

OngoingNursesinhealth

caresetting

Nurse–FriendlyHospitalCriteria

Controlofnursingpractice

Safetyoftheworkenvironment

Systemsexisttoaddresspatientcareconcerns

Nurseorientation

Chiefnursingofficer

Professionaldevelopment

Competitivewages

Nurserecognition

Balancedlifestyle

Zerotolerancepolicyfornurseabuse

Middlemanagementaccountability

Qualityinitiatives

DiMeglio

etal.

(2005)

Ateam-building

approach

1

yearLifespanhuman

resources

department

employee–an

RNtrainedin

group

facilitation

Medium-

Minimumthree

1-

hourteam

session

Nursingstaff

andmanager

Session1–fivemainactivities(introduction,flipchartactivity,

discussionusingcharacteristicsofhigh-performingteams,

discussionofsurveyresults,anddiscussiononhowsession

went)

Session2–activities(discussionofSession1notes,‘styles’

exerciseanddiscussionofresults,andissuesidentifiedand

capturedforsession3)

Session3–activities(recappingandfeedbackonprevious

sessions,opendiscussionofissues,andactionplan

development)

Boss

etal.

(1989)

Organisational

development(OD)

Confrontation

team-building

meetings

Structural

interventions

3

yearsODconsultantHighEmployeesand

management

Confrontationteam-buildingmeetings–3-dayconfrontationteam-

buildingmeetingb/ndirectorandsevencoordinatorstoresolve

theirproblemsanddevelopplansforworkingtogether

Structuralinterventions–combiningunitsandreassigningsome

departments

Rolenegotiations–in-depthrolenegotiationbetweendirectorand

eachcoordinator

(

Continued

)

Author(year)SpecificinterventionDurationProviderIntensityRecipientsContents/Elements

Rolenegotiations

Management

training

Trainingchange

agents

Thirdparty

facilitation

Process

consultation

Sociotechnical

interventions

Methodsof

increasing

accountability

Coachingand

counselling

Administrative

updatemeetings

Managementtraining–trainingandeducation(timemanagement,

organisationalchange,communication,conflictmanagement,

processanalysisandhowtoruneffectivemeetings)

Trainingchangeagents–graduateclassinODandconsultation

skillsforalladministrativecouncilmembersanddepartment

heads

Thirdpartyfacilitation–conflictresolutionusingaskilledthird

party

Processconsultation–employeetraining

Sociotechnicalinterventions–technologicalchangeswithin

departments(equipment,computersystems–financialand

medical)

Methodsofincreasingaccountability–budgetaryandfinancial

proceduresandbiweeklypersonalmanagementinterviews

Coachingandcounselling–consultantdidone-to-onecounselling

andcoachingformanagersanddirector

Administrativeupdatemeetings–CEOinformal,quarterly

meetingswithemployees(announcements,answerquestions,

listentotheirconcerns)

Sellgren

etal.

(2007)

Leadership

behaviourwiththe

dimensionof

change

Leadership

behaviour

Workclimate

Jobsatisfaction

November

2003

ResearchersN/ANursemanagers

andtheir

subordinates

Assessment:

Leadershipbehaviour–LeadershipProfiles(Change/

development,production/task/structure,Employee/relations)

Workclimate–variables(challenge,freedom,ideasupport,trust,

dynamism,playfulness,debates,conflicts,risktaking,andidea

time)

Jobsatisfaction–variables(competence,emotion,autonomy,

initiativeandrelations

Weisman

etal.

(1993)

Unit-levelSelf-

management

Model–

Professional

PracticeModel

(

)

PPM

12

monthsHospitalOngoing

practiceon

unit

Nursesand

managers

PPMModelattributes:

hournursemanagementofunit(self-managementbya

24

nursingcommittee)

Salaryratherthanhourlyincome

Gainsharing

Primarynursingmodel

Unit-basedschedulingcommittee

Peer-reviewcommittee

Qualityassurancecommittee

Codier

etal.

(2009)

Emotional

Intelligence(EI)

measuredbythe

MSCEIT

instrument

Not

reported

ResearchersN/ANursingstaffEIabilitymeasures:

Theabilitytoaccuratelyidentifyemotionsinselfandothers

Theabilitytouseemotionstofacilitatereasoning

Theabilitytounderstandemotionsinselfandothers

Theabilitytomanageemotionsinselfandinemotional

interactionswithothers

Camerino

etal.

(2008)

N/AResearchersN/ANursesThinkingofquittingindicators:

Individualfactors(gender,occupationalposition,locationofbirth,

Continued

)

(

Author(year)SpecificinterventionDurationProviderIntensityRecipientsContents/Elements

Perceivedwork

abilityrelated

toage

typeofhealthcareinstitution)

Externalfactors(perceivedavailabilityofnursingpostsinthe

dameregionofemployment)

Well-beingindicators:

Workability

Jobsatisfaction

Organisationalcommitment

Emotionalexhaustion

Thinkingofchange

Carraherand

Buckley

(2008)

Employeeattitude

towardsbenefits

andbehavioural

intentions

:

yearsResearchersN/ANursesAttitudetowardsbenefitsindicators

3

Levelsofsatisfactionwithbenefits

Easeofreplacementofbenefits

Importanceofbenefitstoanindividual

Perceivedcostofone’sbenefitpackage

Castleand

Engberg

(2006)

Organisational

characteristics

1

yearResearchersN/ANursinghome

staffand

administrators

Organisationalcharacteristics:

Staffinglevels

Topmanagementturnover

Residentcase-mix

Quality

Medicaloccupancy

Ownership

Chainmembership

Bedsize

Gagnon

etal.

(2006)

ActionLearning

Programme

10

yearsResearchersHigh–

3

workshopsof

hourseach

4

Nurses

managers

Projecthadthreephases:diagnosticphase(pre-test),an

interventionphase(actionlearning),andanevaluationphase

)

(

post-test

Programmeelements:

Discussionofdiagnosticreportsbasedonstaffsurveyandfocus

groupanalysis

Aprogrammeof10actionlearningworkshopsof4hourseach

Regularindividualcoaching

ActionLearningWorkshop

Wave1approachprinciples–explorationofassumptions,

creativityinwaysofworkingontheprojectanddeveloping

competencies,opennesstocomplexity,developmentof

dialecticalthinking,andattentionandpresencegiventoself,

others,andthecontext.Wave1framework–‘domainsin

questioning’(I,we,it,andthesystem)

Wave2&3approach–The

theory-of-actionapproachto

reflectivepractice

(

Argyris&Schon)(The‘frames

⇒

actions

⇒

consequences’cycle)

Table 4

Summary of study outcomes: interventions that promote retention

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Category | Type of intervention | Author  (year) | Findings | Additional outcomes |
| Nursing  Practice  Models | Nurse-managed special care unit (SCU) professional practice model | Song et al.  (1997) | No significant difference in turnover – 24% for both groups  8% of SCU and 10% of ICU nurses transferred to other units | RNs preferred the SCU practice model  SCU RNs reported greater job satisfaction  Absenteeism was significantly lower in the SCU than in the ICUs |
|  | Unit-level Selfmanagement Model –  Professional  Practice Model  (PPM) | Weisman et al. (1993) | All nurses at units; retention among PPM nurses is significantly greater (80%) than  the comparison group (68%)  Respondents; retention among PPM nurses not significantly greater (83%) than the comparison group (73%) | PPM nurses score significantly greater than comparison nurses on work satisfaction  Higher pay and work satisfaction increase the odds of retention  Longer hours worked reduces the odds of retention  PPM’s impact on retention may be indirect through work satisfaction |
|  | Nurse-friendly project | Meraviglia et al. (2008) | Nurse retention improved. Turnover decreased from 15.04% (year 1) to  12.32% (year 3) | Vacancy rate increased slightly: 7.42% (year 1) to 7.47% (year 3)  Hospitals participating in the NF project seem to provide a positive work environment with more nursing care hours per patient day and fewer vacancies in nursing staff  Quality of care improved at participating hospitals as measured by the nurse-sensitive QIs |
| Team work approach | Teamwork culture | Mohr et al.  (2008) | The average hospital-level resignation rate was 5.25% for RNs compared with all VHA employees at 2.9% - RN  retention at 94.75%  RNs – teamwork culture was significantly correlated with hospital-level resignation rates (r = 0.21, P = 0.02)  Teamwork culture was significantly and negatively associated with resignation rates for nurses - about 1.25 fewer nurse resignations in a 12 month period with every 1 SD unit increase in teamwork | The average hospital-level resignation rate was 6.44% for physicians compared with all VHA employees at 2.9% |
|  | A team-building approach | DiMeglio et al. (2005) | Turnover rate decreased from 9 to 6% in the post intervention – 27% decrease | Group cohesion, group dynamics and functioning as well as nurse satisfaction statistically improved |
| Leadership practice oriented | Action Learning Programme for  nurse managers | Gagnon et al. (2006) | Compared with 2 years before, turnover rates increased during the intervention year for waves 1 (14.2–21.6%) and 3 (9.4–22.5%) but decreased for wave 2  (11.2–10.8%);  For the year following the intervention, turnover decreased in wave 1 to 13.7% and increased in wave 2 to 17.0%  Overall, turnover rates changed from 11.8% (2 years before) to 14.0% (1 year before) to 17.9% (workshop year) to  15.4% (1 year after) | About 50% of nurses intending to leave were younger, better educated, and lessexperienced  Main sources of dissatisfaction are linked to organisational issues  Nurses internally motivated have higher global job satisfaction, stronger affective commitment, and better perception of the nurse managers’ leadership than nurses who were externally motivated  Little short-term impact on intent to stay or to leave |
|  | Leadership behaviour with the dimension of change | Sellgren et al. (2007) | The effect of leadership behaviour on staff turnover is mediated by job satisfaction  The direct correlation between leadership behaviour and actual staff turnover was weak, even when controlling for the influence of job satisfaction and work climate | Strong correlations between leadership behaviour, job satisfaction and work climate and a strong intercorrelation between work climate and job satisfaction  Staff turnover had a strong direct correlation with job satisfaction |
| Organisation oriented | Organisational characteristics | Castle and  Engberg  (2006) | Average turnover rates were 56.4, 39.7 and 35.8% for CNAs, LPNs and RNs, respectively | Higher top management turnover is associated with higher RN turnover |

Table 4

(Continued)

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Category | Type of intervention | Author  (year) | Findings | Additional outcomes |
|  |  |  | Lower staffing levels, lower quality, forprofit ownership, and higher bed size are associated with higher turnover |  |
|  | Organisational Development (OD) (quality of work life programme) | Boss et al.  (1989) | Turnover among hospital nurses pre project was 31.3%. During the project’s two subsequent years, it decreased to 17.8% and 20.6%. Turnover rate for comparison group increased from 22.6 to 26.3% and  25.6% during project years | Data from intervention group indicated statistically significant improvement during the period between measures, while comparison group data remain unchanged |
| Individual oriented | Employee attitude towards benefits and behavioural intentions | Carraher and Buckley  (2008) | The ease of replacement of benefits was significantly related to turnover  Behavioural intent to search was a significant predictor of both turnover and performance.  Those who are absent more are more likely to leave; those with lower performance are more likely to leave  Attitudes towards benefits are not significant predictors of absenteeism or performance and weak predictors of turnover  Behavioural intention to quit was not a significant predictor of turnover, absenteeism, or performance | Those with higher performance are less likely to be absent  Behavioural intent to be absent was found to be a significant predictor of  absenteeism  Worth of benefits was significantly related to absenteeism |
|  | Emotional  Intelligence (EI) measured by the MSCEIT  instrument | Codier et al. (2009) | Higher EI scores equated to higher performance, longer careers, and greater job retention | EI scores strongly correlated positively with both performance level and retention variables  Actual reported years in current job correlated significantly with experiencing EI |
|  | Perceived work ability related to age | Camerino et al. (2008) | Among nurses <45 years, work ability is a significant predictor of different types of thinking of quitting, but not of actual exit  from the workplace  Among nurses >45 years, only actual exit was predicted by lower work ability scores, along with the perception of a larger availability of free nursing posts in the region | Lower perceived work ability was associated with a higher desire to undertake further education and/or change workplace or profession for nurses  <45 years |

### Implication for leadership

Nursing leaders are critical to finding evidence-based solutions for the nursing shortage currently facing many countries. This review adds to the knowledge on what interventions nurse leaders could adopt to influence this problem. The review included two studies aimed at leadership oriented interventions. Both reported higher retention by implementing an organisation-wide development programme to help increase staff retention (Boss et al. 1989, Castle & Engberg 2006). Nurse leaders could promote organisational programmes such as higher staffing levels and a higher quality of care to aid in the retention of experienced nurses in healthcare settings. Another study reported increased retention when features of teamwork were incorporated at all levels within the organisation (Mohr et al. 2008). Implementing interventions at organisational levels to impact retention might be as important as unit specific programmes. Armstrong-Stassen (2005) discovered that improved benefits, flexible work schedule, incentives for continuing employment, providing retirement with callback arrangements, increased financial compensation and redesigning work processes to minimize negative impact on nurses were important human resource practices that might influence experienced nurses’ decision to remain in the workforce. Management support and training as part of organisational interventions reported in this review influenced retention in a positive way (Gagnon et al. 2006). Kleinman (2004) stated that in order for organisations to promote retention, they need to support managers’ efforts to be visible and accessible to staff, and to use transformational leadership styles in the workplace. This suggests that a revision of organisational policies and practices as well as support for leadership training in a certain style of management may influence staff nurse retention.

Nurse leaders (executives as well as operational) working in healthcare settings could also influence the nursing shortage by promoting and supporting interventions such as unit level nursing practice models, teamwork culture and individually targeted strategies such as social networking and mentoring. They could support initiatives that emphasize retaining nurses closer to retirement such as mentoring younger nurses, working part-time hours and offering leadership opportunities to enable the transfer of knowledge and experience to newer nurses at the unit level (Meraviglia et al. 2008, Hirschkorn et al. 2010). Finally, nurse managers and leaders could partner with researchers to develop and study promising interventions that could promote the retention of experienced nurses in the workplace.

### Implications for research

Considerable nursing research literature exists that offers strategies to a facilitate higher intent to stay, increased job satisfaction and better work environment; however, few well designed studies are available on the effectiveness of interventions that help to retain experienced staff nurses in healthcare settings (Alspach 2007, Allen et al. 2010, Duffield et al. 2010, Maxson-Cooper 2011). Most of the available literature on retention points to, or supports, strategies that have not been well studied. This lack of evidencebased programmes/approaches makes it difficult for healthcare leaders confidently to tackle this problem. As indicated earlier in the study quality review, most of the related published studies lacked quality research features. Only four of the included studies used a framework to guide their study and none reported on fidelity. Frameworks could be important to research studies examining the effectiveness of interventions because of their ability to aid in both the development and interpretation of factors contributing to an intervention’s effect (Brathwaite 2003). Among the retained studies, only two used a control group. There is a need for researchers to partner with nurse leaders from all levels of an organisation to identify promising programmes and interventions available in the workplace and to study its effect on retaining experienced nurses. Well-designed studies with control groups and large sample sizes are needed to verify much of the speculation in the literature on what works best to retain experienced nurses, given that much of the well-designed research to date has focused on retaining new graduate nurses (Persaud 2008, Cottingham et al. 2011, Kooker & Kamikawa 2011). Future research in this area should report fidelity in addition to other characteristics such as intensity and the duration of intervention.

### Study limitations

This study has limitations worth mentioning. Although a few of the studies defined retention in a similar way, retention was defined and measured in a variety of ways. This variability limits the generalization of the results. Second, the study might have a report bias, given that non published studies were not included and published studies tend to over report positive findings. Since the majority of the studies included were done in North America, the results may lack consideration of the cultural influence. In addition, only quantitative studies were included in this review because we were focused on intervention studies. We also found it challenging to draw out information about nurses with less than 1-year experience from some of the studies included in this review. Therefore, these studies were included to avoid loss of data relevant to experienced nurse samples. However, the average nurse experience for the review was 4 years. Finally, there were few non-English studies published that met the study criteria even though the study search was not limited by language. A study written in Korean was reviewed by a Korean reviewer and then excluded because it measured turnover intent, not turnover/retention.

### Conclusion

The nursing shortage facing many countries, Canada included, is demanding that leaders implement measures to help decrease turnover and increase the retention of registered nurses in healthcare settings. This systematic review examines interventions reported in the nursing literature targeting retention of experienced nurses. The findings provide some strategies – practice models, teamwork, leadership, organisational and individual – that could be implemented to increase retention in the workplace. We encourage frontline nurses to participate in similar programmes implemented in the workplace to help increase retention. Nurse leaders could also support and participate in both unit and organisational level interventions that promote the retention of experienced nurses in healthcare settings.

The findings indicate that few well designed studies in the literature report on interventions for retaining experienced nurses in healthcare settings. This makes it difficult for policy makers, healthcare leaders and managers to take actions that influence retention of experienced nurses. In future, researchers should partner with healthcare and nursing organisations in order to design studies, preferably with control groups, to test the effectiveness of programmes and interventions in the workplace for retaining experienced nurses. The outcome of these future studies, if well designed, could contribute to managing and decreasing the effects of the nursing shortage on quality patient care.

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### Ethical approval

No ethical approval was required for this study as it did not include human subjects.

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### Supporting information

Additional Supporting Information may be found in the online version of this article:

Table S1. Characteristics of included studies.