

RURAL NURSES: LIFESTYLE PREFERENCES AND EDUCATION PERCEPTIONS

Deanna L Molanari, PhD, RN, CNE¹

Ashvin Jaiswal, BA²

Tamara Hollinger-Forrest³

¹ Professor, School of Nursing, Idaho State University, molidean@isu.edu

² Graduate Student, College of Pharmacy, Idaho State University, jaisashv@pharmacy.isu.edu

³ Assistant Coordinator Northwest Rural Nurse Residency, Idaho State University, holltama@isu.edu

Keywords: Rural Nurse, Recruitment, Retention, Administration, Education

ABSTRACT

Background: The recruitment and retention of rural nurses is often complex, costly and difficult. Administrators report new graduates are often unprepared for the role and little is known about their perceptions of lifestyle and education preparedness. There is also insufficient information about why nurses choose rural generalist roles.

Purpose: The study investigated relationships among lifestyle preferences, perceptions of educational preparedness for the rural generalist role, and the intent to move.

Methods: Participants in a rural nurse residency answered online survey questions requiring both qualitative and quantitative responses. The study employed a descriptive, correlation design.

Results: The sample (n = 106) consisted of both novice and expert rural nurses from 22 states. “Proximity” was given as the main reason for choosing the rural generalist role. Most participants rated their education as ineffective. A significant 11% intended to move. One hundred percent of those with intent to move worked fewer than 12 months. Preference for the rural lifestyle and a particular community influenced the choice for the first employment position rather than a desire for the rural generalist role. Perceptions of preparedness influenced the intent to move.

Conclusion: Findings suggest community-based strategies highlighting recreation, climate, cultural opportunities, and relationships can improve nurse recruitment and retention. Academic and professional development education are proposed for rural nurse preparedness.

INTRODUCTION

Despite the fact that a global economic recession eased the nurse shortage, the need for nurses continues to grow (Hendren, 2009; Holloway, Baker, & Lumby, 2009; Kenny, 2009). Rural administrators find hiring new employees challenging and costly. Recruiting rural nurses takes longer and the turnover rate is higher than for urban centers (Cramer, Nienaber, Helget, & Agrawal, 2006; Rosseter & American Association of Colleges of Nursing, 2010). The literature states work environments are linked to job satisfaction which is then linked to nurse turnover, but little is said about the retention role of communities (Baernholdt & Mark, 2009). Understanding nurse perceptions is the first step to developing successful recruitment and retention strategies (Baker, 2009; Molinari & Monserud, 2009; Wieck, Dols, & Landrum, 2010); therefore, understanding why nurses choose rural practice is vital to managing the rural shortage (Hu, Chen, Chiu, Shen, & Chang, 2010; Nooney, Unruh, & Yore, 2010). The purpose of this study is to examine rural nurse lifestyle and career preferences, educational preparation perceptions and the intent to move.

The study is based on the rural nursing theory framework (Lee & Winters, 2004). The theory posits rural practice is different from urban practice due to a number of issues including: Environmental, patient health definitions, and health provider use patterns. Theoretical principles discuss differences in the roles and skills between rural and urban nurses (Baernholdt & Mark,

2009). In order to discover more about how rural nurses practice, the following research questions were asked: Why do nurses choose to work in rural settings and how prepared are graduates for the rural generalist role? A correlational, cross sectional design was used.

BACKGROUND

The economic recession eliminated many positions in all major industries but the demand for health care personnel continued to rise (U.S Bureau of Labor Statistics, 2009). Rural regions experienced a more complex and long term nurse shortage (Bushy & Leipert, 2005; Cramer, et al., 2006). Therefore, administrators seek to understand the personal, community, and education factors that influence recruitment and retention.

The literature discusses both individual and community reasons for the shortage but little is said about lifestyle preferences of preceptors of educational preparation for rural practice. *Economic factors* suggest lower salaries, fewer leadership opportunities, and family employment issues contribute to the issue (Molinari & Monserud, 2008). *Personal nurse factors* such as ageing, generation, and family life reasons were found to be important in several urban samples (Wieck, et al. 2010; Palumbo, McIntosh, Rambur, & Naurd, 2009; Lea & Cruickshank, 2007; Skillman, Palazzo, Keepnews, & Hart, 2006; MacPhee & Scott, 2002). Rural *community factors* such as school quality, fewer spouse employment opportunities, and the lack of educational access influence nurse recruitment (Cleary, McBride, McClure, & Reinhard, 2009; Kenny, 2009; Mason, 2004). Little is mentioned about why nurses choose a rural generalist specialty role over urban medical/surgical roles.

Education is often used as an intervention to increase nurse confidence and competence (Park & Jones, 2010; Molinari & Monserud, 2008). The reasoning suggests nurses who know how to perform are less likely to feel stressed or to make errors. Several studies explore new graduate skills needed for practice but little was found about the perceptions of academic educational effectiveness.

Rural Nursing Practice

Rural research samples are needed because nursing differs from urban settings in definition, duties, facility size, population health, economic conditions, and available technologies (Kulig et al., 2009; Bushy & Leipert, 2005). Rural nursing is described as a generalist practice with specialty knowledge in crisis assessment and management (Crooks, 2004; Drury, Francis, & Dulhunty, 2005; Rosenthal, 2005). Small rural hospitals support fewer than 25 acute care beds and provide rehabilitation services, long term care, and clinics (Rural Assistance Center, 2009). The rural nurse generalist role requires a specific skill set due to the need to provide care for all disciplines, acuity levels, and age groups during one shift (Molinari & Monserud, 2009).

Rural nursing theory also suggests residents prefer independent decision making which impacts self-care practices; experience high rates of no health insurance, and delay use of health care providers. The result is that rural nurses manage more crises than urban peers (Bushy & Leipert, 2005). The lack of insurance results in less preventative care followed by higher rates of chronic disease with co morbidities. Rural communities also support larger proportions of elderly and youth using Medicaid funding (Molinari & Monserud, 2008). Studies indicate new rural nurses experience high anxiety levels and burnout within the first 18 months of professional practice (Duchscher, 2008).

Summary

Researchers propose several retention strategies but there is no definitive marketing approach for hiring successful rural nurses. The lack of information about why nurses choose rural practice hampers recruitment strategy development. More understanding of the effectiveness of basic education for the rural generalist role is needed as well.

METHODS

One hundred and six new enrollees in the Northwest Rural Nurse Residency (NWRNR) completed an author created personal information online survey. The data contains both open and close-ended question responses. Questions pertained to demographics, the importance of community characteristics, perceptions of lifestyle and educational preparation.

The questionnaire was based on literature findings, reviewed by experts, piloted and placed online after approval for human subjects by the institutional review board. The cross-sectional, mixed method design gathered both qualitative and quantitative responses. Participants were applicants to an online nurse residency program. The responses of new nurses employed for less than one year and expert nurse employed in rural facilities were compared for similarities and differences.

Data Analysis

Data were investigated according to question type. Open-ended questions were explored for concepts, categories and themes then tallied for frequency. Answers to quantitative items were placed in Statistical Package for Social Sciences version 17 (SPSS®) for descriptive analysis of ordinal data. Tests conducted considered the ordinal nature of the data. Analyses included: factor analysis, mean rank comparisons, Spearman rank order correlation coefficient, Kruskal-Wallis one-way of analysis of variance-by-ranks and Wilcoxon rank sum test (McDonald, 2009). A null hypothesis of no differences among groups was assumed. Significance levels were set at 0.05. Significant Spearman correlation relationships are categorized as weak ($r=.100-.399$), moderate ($r=.400-.599$) or strong ($r=.600$ and above).

Qualitative data were descriptively described using thematic analysis. Responses were placed in a word document, coded, sorted and sifted according to emerging constructs. Concepts and categories were formed from commonalities. Themes were constructed from generalizing of categories (Maura, 2002).

RESULTS

An analysis of the sample was performed before perceptions and preferences were inspected. A Chronbach alpha analysis of internal reliability of the educational preparation ($\alpha=.93$) and lifestyle ($\alpha=.86$) subscales was performed. Results are reported in five sections: Sample, intent to move, rural life perceptions, factor analysis, and educational preparation. Both qualitative and quantitative analyses are reported.

Sample

Females comprised 95% of the 106 respondents. Participants reported employment experience of one-half month to over 36 years. The mean experience was 27 months with 69% employed less than one year. Since the majority of subjects worked fewer than 12 months, comparisons with those employed longer than a year were conducted. Perceptions of educational preparation and reasons for choosing the rural generalist role were similar for all levels of experience.

Forty-five percent of participants reported salaries ranging from \$31,000-\$45,000. Thirty-five percent of nurses were over age 40 with 41% under the age 30. Those reporting a racial or ethnic category were 91% Caucasian, 5% were Hispanic, 2% were Native American and 3% reported other. Most participants obtained an associate degree (53%) before practice. Sixty-seven percent of the sample described a rural birthplace. Sixty-eight percent of participants were married, 26% were single, and 7% were divorced. Fifty-one percent reported children at home.

Intent to Move

One prediction of turnover is the intention to move within two years. Eleven percent of the sample reported an intent to move ($z = -10.247$, $p < 0.000$). An analysis of the perceptions of those with the intent to move was conducted to seek factors contributing to turnover. A Mann-Whitney U test indicates those with more experience were less likely to intend to move ($Z = -2.06$, $p = 0.04$). One hundred percent of those with the intent to move worked fewer than 12 months. Younger participants (age 20-25) were more likely to move than older nurses, Mann-Whitney U ($z = -1.964$, $p = .05$). Participants without children were also more likely to move, Mann-Whitney U ($z = -2.153$, $p = .031$). Participants who considered the rural lifestyle as unimportant or somewhat important were more likely to move than those who rated the lifestyle as important, ($z = -2.145$, $p > .032$; $z = -2.581$, $p = .01$).

Spearman correlations indicate participants with the intention to move were weakly associated with educational level, ($r = 0.192$, $p = .05$). Participants with baccalaureate degrees were more likely to move than those with associate degrees, ($R = 0.264$, $p = .06$). Feeling prepared in crisis management was negatively associated with the intent to move ($r = -0.208$, $p = .03$).

Rural Lifestyle Perceptions

Why nurses choose rural lifestyles was addressed with both qualitative and quantitative data and a comparison of the results for new graduates and those employed longer than one year were completed. No significant lifestyle subscale group differences for nurses employed fewer or more than twelve months were found so the data is reported as a whole. The qualitative data consisted of two open-ended questions about how and when nurses were introduced to the rural generalist role.

A qualitative analysis asking why individuals choose a rural generalist role produced two themes: Proximity and strategic decision making. Forty-two responses indicate “proximity” or the closeness of the agency was the motivation for seeking a rural generalist career. Participants applied for a job at the closest hospital. People chose to live in rural communities due to birthplace, relocation with a spouse, and relocation for other reasons. Examples of responses include: “There is nothing closer for 100 miles,” and “I was born and grew up in a rural community.”

Few responses indicated that the rural generalist practice was a “strategic decision”. Examples of a career move or a lifestyle choice include the following: “I ...decided to work in a rural area to accumulate some general nursing experience,” and “I wanted to work in a small rural setting because you know the people that you are caring for.”

The main focus of respondents’ decision making was the choice of a community rather than a choice among facilities or employment positions. Reasons given for choosing the community provided both specific and general explanations. “We moved to be by my husband’s family” is a specific example for choosing a community. General exemplars pertain to a rural lifestyle such as, “I love rural communities.”

Nurses were influenced by both people and experiences when choosing a rural nursing career. The types of individuals influencing decisions include: Friend, nurse supervisor, hospital director, boss, mother, and preceptor. “I was talked into it.” “My mom was a nurse”. Experiences reported as influencing a career choice were either due to exposure to a health care career or a personal health experience. People mentioned as influential in the career choice include: A paramedic, Red Cross volunteers, certified nurse assistant, and a pharmacist assistant. Personal experiences were often family based. “After helping my mom recover from a surgical procedure...” and “after my second son was born...” Individuals did not mention preferences for a specific nursing role. Their answers were “caring” focused, “I love caring for people I know.”

Quantitative answers provided more preference data. Participants rated the importance of 15 lifestyle variables using a scale of 1-5, where 1 means not important and 5 means important. A rural lifestyle (4), a reasonable cost of living (4), close to family (3.9), opportunities for social relationships (3.9), and employment for spouse (3.9) rated the highest means. The fifteen rural lifestyle variables were moderately associated with demographic variables: Marital status, age, and educational level. The variable called “rural lifestyle” was associated with elected leadership ($R= 0.499$, $p<0.001$), leadership opportunities ($R= 0.456$, $p <0.001$), social relationship opportunities ($R=0.223$, $p0.021$), topography ($R=0.211$, $p 0.03$), quality of schools ($R= 0.209$, $p 0.032$), and cost of living ($R=0.195$, $p 0.045$).

Factor Analysis

In order to simplify data and to identify the nation of lifestyle variables, a factor analysis was performed (Fitzpatrick & Kazer, 2011). The analysis included: Principle component analysis, component rotation using varimax with Kaiser normalization and a Chronbach alpha. Four simple patterns were identified and merged into new variables called: “outdoors”, “living location”, “community leadership”, and “family needs” (Table 1).

Table 1
Summary of Factor Analysis Variables

Outdoors ($\alpha=.84$)	Living Location ($\alpha=.79$)	Community Leadership ($\alpha=.84$)	Family Needs ($\alpha=.84$)
Topography	Cost of Living	Elected Leadership	Quality of Schools
Climate	Proximity to Family	Opportunities for Leadership	Employment for Spouse
Recreational Activities	Opportunities for Professional Relationships	Opportunities to Volunteer	
Cultural Activities	Opportunities for Social Relationships		

Each variable was then compared with the various demographics and the intent to move. The importance of rural lifestyle was kept as a separate variable and compared with others. Perceptions of the outdoors were rated as more important to those with baccalaureate degrees or higher degrees ($R= 0.227$, $p 0.014$) and associated with family needs ($H = 4.739$, $df 1$, $p .03$). The living location was rated more important as age increased ($R = 0.273$, $p .005$). Family needs were significantly related with marital status ($H=16.241$, $df 2$, $p <.001$) and having children at home ($R= -0.377$, $p <.001$).

Educational Preparation Perceptions

Nurses rated perceptions of preparation for the rural nurse generalist role by addressing the effectiveness of basic education programs. Participants used a scale of one to five where one represented totally unprepared and five equaled prepared for the generalist role. Nurses addressed 16 nursing educational topics. Findings suggest participants felt neither prepared nor unprepared to practice in the following areas: The means for each of the following are placed in order of least to most prepared (Table 2).

Table 2

Educational Preparation Ratings for Rural Generalist Role

Parameter	Mean	Parameter	Mean
Trauma	3.05	Communication Technology	3.45
Neurology	3.11	Psychiatrics	3.51
Pediatrics	3.12	Cardiology	3.59
Crisis Management	3.27	Respiratory	3.59
Human Resource Management (HRM)	3.32	Leadership	3.72
Nursing Obstetrics	3.34	Pharmacology	3.83
Assessment	3.41	Critical Thinking (RCT)	3.98
Technology	3.45	Geriatrics	4.01

Nurses who did not feel prepared in crisis management reported an intention to move ($R=0.208$, $p 0.03$). Job experience was associated with obstetrics ($R= -0.235$, $p 0.015$), crisis assessment ($R= 0.203$, $p 0.04$), and communication technologies ($R= -0.261$, $p 0.007$) using Spearman's correction. Participants who reported feeling supported in the new job position also stated feeling prepared in the following: Human resource management ($R= -0.238$, $p 0.014$) and cardiac care ($R= -0.202$, $p 0.04$).

The new lifestyle variables (after factor analysis) were then compared with various educational preparation variables. Outdoors was related with feeling prepared in cardiac care ($R=0.193$, $p 0.05$). The living location was associated with critical thinking ($R=0.227$, $p 0.02$) and cardiac care preparation ($R=0.208$, $p 0.033$) and with human resource management ($R=0.263$, $p 0.006$). Leadership was associated with critical thinking ($R=0.198$, $p 0.041$) and cardiac care ($R=0.297$, $p 0.02$).

DISCUSSION

The findings of the small convenience sample of novice and expert rural nurses, provides information about nurse perceptions and preferences when choosing a rural generalist position. The sample was drawn from a variety of rural communities and facilities in 22 United States. Participants were enrolled in a yearlong residency program either as preceptors or as residents. Findings indicate a need for further study with larger samples and a greater diversity a professional development program. Respondents were younger in this sample than in previously conducted studies, but the educational levels were similar (Park & Jones, 2010; Molinari & Monserud, 2009).

Intent to Move

The intent to move was not common among responders but significant. Those with fewer than 12 months experience, no preference for a rural lifestyle and an urban birthplace were more likely to intend to move. Their reasons for moving according to the data included significant relationships with the lack of educational preparedness and no preference for the rural lifestyle. The importance of educational preparation in crisis assessment and cardiac education were highlighted. Further study is suggested. For instance, stress and burnout concepts were not compared with educational preparation or rural lifestyle preferences. Future studies about new employee's intent to move may suggest why baccalaureate nurses are more inclined to move than associate degree nurses.

Lifestyle Preferences

Employment was related to age and lifestyle preferences. Questions arise regarding rural employment, marital status and age. How available are potential rural spouses for young nurses? How is the choice of a rural generalist career impacted by spousal employment? Does gender influence the generalist role choice?

Rural nursing theory supports the findings that lifestyle variables are important when choosing an employer (Winters & Lee, 2010; Lee & Winters, 2004; Weinert, Cudney, & Hill, 2008). The theory posits emotional ties to the land, along with strong familial and social networks. People with preferences for the rural lifestyle reported fewer intentions to move; therefore, understanding potential employees' backgrounds and preferences may impact retention.

Nurses did not mention the title "rural generalist role" as a career goal in open-ended questions. Reasons for the lack of terminology are unknown. Several questions arise. Is the term widespread as a descriptor of rural nurse practice? How much exposure to rural nursing do students receive? Is there a lack of understanding of rural nursing as a specialty? Do differences in rural and urban definitions of "generalist" prevent common usage of the term? Do rural nurses lack interest in specific role labels like critical care or obstetrics nurse? Findings indicate more information is needed about the use and meaning "generalist" before progression towards a national rural generalist certification can proceed.

Convenience and life experience influenced the choice of a rural generalist role. The finding that early health care exposure and health care professionals' advice impacted career decisions is similar to other studies (Kanto, 2004). Few rural nurses discussed career goals suggesting nurses base decisions on accessibility rather than strategic planning. The proximity approach for career choice appears different from processes nurses employ in many urban settings. New graduates in urban settings speak of employment in terms of "becoming" a pediatric or trauma nurse (Minnesota Department of Health, 2007). Urban novices expect the new role to take time and experience to accomplish. Graduates seek out facilities that offer the position and residencies to aid in the transition-to-practice. In this sample, rural nurses spoke of "caring" rather than becoming a certain type of nurse. Do rural nurses seeking to become specialist perceive skill development differently than those who focus on "caring"? According to Skillman and associates, an increasing number of rural nurses choose to work in urban sites where specialty employment is more available than in rural settings. Are rural nurses who choose to work locally different from those who choose to travel?

Commuting nurses reduce the rural applicant pool (Skillman, et al., 2006). A rural/urban comparative study of new graduates' job searching strategies is needed. The Washington study

reported salary as important to nurses who commuted to cities for higher wages. In this study, lifestyle variables were important to participants but salary was not. What is the impact of practice preferences and monetary rewards on the decision of where to work? Are there other differences between nurses working in urban and rural settings? How do rural generalists plan for advancement to administrative or specialty roles like cardiac care or oncology? Do rural generalists define advancement differently than urban peers? For instance, if few administrative leadership opportunities prevent vertical advancement, do nurses advance laterally by increasing knowledge? How are experts identified and appreciated in rural facilities?

Education Perceptions

Preparation for practice is often discussed in the literature. In this sample, perceptions of preparedness were measured by the rating of academic education courses. Results were similar for both experienced and novice nurses. A lack of preparedness was common to all surveyed. Perceptions of preparedness are not as reliable as objective competency measurement according to MacLeod and associates (2008) so a different measurement approach is suggested for future studies. Employee's lack of preparation perceptions suggests the need for performance-based assessments upon hiring. The lack of preparation also indicates a need for staff development. Benner and associates' and the Institute of Medicine call for transition-to-practice programs (Benner, Sutphen, Leonard, Day, & Shulman, 2009; Mueller et al., 2006). The National Council of State Boards suggests using a state regulation strategy to ensure all nurses receive professional development following graduation.

CONCLUSION AND IMPLICATIONS

Hiring and retaining rural nurses is complicated. Many questions are posed and a few trends are noted. The rural applicant pool is small and likely to be drawn from local residents who prefer a rural lifestyle. To further complicate the retaining nurses, the study suggests an intent to move is more likely to occur in new employees with less than one year's experience and who feel unprepared in crisis assessment and management or cardiac care. Individuals reporting an intent to move felt stronger about their lack of preparation than respondents with no such intention. Findings suggest academic education programs need to increase the amount of students' rural exposure and the number of opportunities to practice crisis assessment and management. Obstetrical experiences may be infrequent in rural facilities and increase the need for periodic education about at risk births. The need for specialty knowledge in crisis assessment and management and the lower ratings of preparation in these areas is concerning (Crooks, 2004; Drury, Francis, & Dulhunty, 2005; Rosenthal, 2005). Although staff development is costly and difficult, results indicate education cannot be ignored in order to ensure patient safety. Feeling unprepared is also related to stress, burnout and turnover and contributes to the high turnover rate of new graduates in rural settings (Baernholdt & Mark, 2009; Jones & Gates, 2007; Kowalski & Cross, 2010).

Findings suggest interviewing and hiring nurses requires addressing applicant background and lifestyle preferences. Interviewers may consider questions about birthplace, nearby family and friends, or spousal employment. Results also suggest interviewers can increase the probability of retention by providing local information during the initial interview. New employees want to know about community characteristics and resources such as recreation, and professional relationship opportunities. New residents also want social relationships suggesting mentoring may speed the acclimatization process. A suggest new administrative task is the socialization of new employees into the community. Since lifestyle factors influenced job

choices, involving community leaders in the hiring process might generate rapid inclusion feelings.

Data indicate developing a community network approach to hiring might increase employee success. At present, rural nurse employment practices differ from the recruitment strategies of other health care providers (Kulig, et al., 2009). Including community leaders in the hiring process as do other professions could address local opportunities for: Recreation, spousal employment, leadership, and social relationships which were mentioned as important to this sample. Involving community leaders in recruitment might increase nurse retention and shorten turnover time (Baernholdt & Mark, 2009; Jones & Gates, 2007; Rosseter & American Association of Colleges of Nursing, 2010).

Administrators want more information from both researchers and applicants. Researchers will find many workforce questions to ask about the rural generalist role, preparation for the role, and career management over a lifetime. Understanding how nurses plan their careers is important for facility management as well as for recruitment and retention. Questions about the impact of “convenience” decisions on practice quality and safety outcomes are vital to rural health. The literature does not elaborate on how “convenience” motivations relate to the number of hours worked per week, communication systems, and patient errors. Solving the rural nursing shortage begins with more information about why nurses choose the generalist role and the educational preparation needed to be successful.

ACKNOWLEDGEMENT

The study was supported in part by a Health and Human Resource Services grant D11HP1127, Rural Nurse Residency.

REFERENCES

- Baernholdt, M., & Mark, B. A. (2009). The nurse work environment, job satisfaction and turnover rates in rural and urban nursing units. *Journal of Nursing Management*, 17(8), 994-1001. [[MEDLINE](#)]
- Baker, T. (2009). Small rural emergency departments are not simply cut-down large urban emergency departments, Editorial, *Australian Journal of Rural Health*, pp. 291-291. [[MEDLINE](#)]
- Benner, P. E., Sutphen, M., Leonard, V., Day, L., & Shulman, L. S. (2009). *Educating nurses: A call for radical transformation*. Somerset, NJ: Jossey-Bass John Wiley & Sons.
- Bushy, A., & Leipter, B. (2005). Factors that influence students in choosing rural nursing practice: a pilot study. *Journal of Rural and Remote Health*, 5(2), 387. [[MEDLINE](#)]
- Cleary, B. L., McBride, A. B., McClure, M. L., & Reinhard, S. C. (2009). Expanding the capacity of nursing education. *Health Aff*, 28(4), w634-645. [[MEDLINE](#)]
- Cramer, M., Nienaber, J., Helget, P., & Agrawal, S. (2006). Comparative analysis of urban and rural nursing workforce shortages in Nebraska hospitals. *Policy, Politics, & Nursing Practice*, 7(4), 248-260. [[MEDLINE](#)]
- Crooks, K. (2004). Is rural nursing a specialty? *Online Journal of Rural Nursing and Health Care*, 4(1), 3-4.
- Drury, V., Francis, K., & Dulhunty, G. (2005). The lived experience of rural mental health nurses. *Online Journal of Rural Nursing and Health Care*, 5(1), 19-27.
- Duchscher, J. B. (2008). A process of becoming: the stages of new nursing graduate professional role transition. *Journal of Continuing Education in Nursing*, 39(10), 441-450. [[MEDLINE](#)]

- Fitzpatrick J.J., & Kazer M. W. (2006). *Encyclopedia of nursing research*. New York: Springer Pub.
- Hendren, R. (2009). Focus returns to nurse retention in 2010. Retrieved from <http://www.healthleadersmedia.com/content/NRS-244148/Focus>Returns-to-Nurse-Retention-in-2010>
- Holloway, K., Baker, J., & Lumby, J. (2009). Specialist nursing framework for New Zealand: A missing link in workforce planning. *Policy, Politics, & Nursing Practice*, 10(4), 269-275. [[MEDLINE](#)]
- Hu, Y. C., Chen, J. C., Chiu, H. T., Shen, H. C., & Chang, W. Y. (2010). Nurses' perception of nursing workforce and its impact on the managerial outcomes in emergency departments. *Journal of Clinical Nursing*, 19(11-12), 1645-1653. [[MEDLINE](#)]
- Jones, C. B., & Gates, M. (2007). The costs and benefits of nurse turnover: A business case for nurse retention. *The Online Journal of Issues in Nursing*, 12(3).
- Kanto, W. P. Jr. (2004). Influencing career decisions in pediatrics. *The Journal of Pediatrics*, 144(6), 693-694. [[MEDLINE](#)]
- Kenny, A. (2009, Feb 2). Nursing shortages will cripple rural health care, *ABC News*. Retrieved from <http://www.abc.net.au/news/stories/2009/02/02/2479976.htm>
- Kowalski, S., & Cross, C. L. (2010). Preliminary outcomes of a local residency program for new graduate registered nurses. *Journal of Nursing Management*, 18(1), 96-104. [[MEDLINE](#)]
- Kulig, J. C., Stewart, N., Penz, K., Forbes, D., Morgan, D., & Emerson, P. (2009). Work setting, community attachment, and satisfaction among rural and remote nurses. *Public Health Nursing*, 26(5), 430-439. [[MEDLINE](#)]
- Lea, J., & Cruickshank, M. T. (2007). The experience of new graduate nurses in rural practice in New South Wales. *Rural and Remote Health*, 7(4), 814-814. [[MEDLINE](#)]
- Lee, H. J., & Winters, C. A. (2004). Testing rural nursing theory: Perceptions and needs of service providers. *Online Journal of Rural Nursing and Health Care*, 4(1), 51-63.
- Macleod, M. L. P., Misener, R. M., Banks, K., Morton, A. M., Vogt, C., & Bentham, D. (2008). "I'm a different kind of nurse": Advice from nurses in rural and remote Canada. *Nursing Leadership*, 21(3), 40-53. [[MEDLINE](#)]
- MacPhee, M., & Scott, J. (2002). The role of social support networks for rural hospital nurses: Supporting and sustaining the rural nursing work force. *Journal of Nursing Administration*, 32(5), 264-272. [[MEDLINE](#)]
- Mason, W. A. (2004). Oregon's economic crisis and the national nursing shortage: a transformational opportunity for rural areas. *Online Journal of Rural Nursing & Health Care*, 4(1), 18p.
- Maura, M. (2002). Evidence-based practice in action. *Journal of pediatric nursing*, 17(4), 313-320.
- McDonald, J. H. (2009). *Handbook of biological statistics* (2nd ed.). Baltimore, Maryland: Sparky House Publishing.
- Minnesota. (2007). *Retaining rural nurses: Midwestern summit on retaining and making the best use of the older more experienced rural nurse*. St. Paul, MN: Office of Rural Health and Primary Care, Minnesota Dept. of Health.
- Molinari, D. L., & Monserud, M. (2009). Rural nurse cultural self-efficacy and job satisfaction. *Journal of Transcultural Nursing*, 20(2), 211-218. [[MEDLINE](#)]
- Molinari, D. L., & Monserud, M. A. (2008). Rural nurse job satisfaction. *Rural and Remote Health*, 8 (Online), 1055. [[MEDLINE](#)]

- Nooney, J. G., Unruh, L., & Yore, M. M. (2010). Should I stay or should I go? Career change and labor force separation among registered nurses in the U.S. *Social Science & Medicine*, 70(12), 1874-1881. [[MEDLINE](#)]
- Palumbo, M. V., McIntosh, B., Rambur, B., & Naud, S. (2009). Retaining an aging nurse workforce: perceptions of human resource practices. *Nursing Economic\$,* 27(4), 221. [[MEDLINE](#)]
- Park, M., & Jones, C. B. (2010). A retention strategy for newly graduated nurses: An integrative review of orientation programs. *Journal for Nurses in Staff Development*, 26(4), 142-149 [[MEDLINE](#)]
- Rosenthal, K. (2005). What rural nursing stories are you living? *Online Journal of Rural Nursing and Health Care*, 5(1), 37-47.
- Rosseter, R., & American Association of Colleges of Nursing. (2010). Nursing shortage: fact sheet. Retrieved from <http://www.aacn.nche.edu/Media/FactSheets/NursingShortage.htm>
- RUPRI Rural Care Delivery Expert Panel., & Rural Policy Research Institute (U.S.). (2006). *The Institute of Medicine rural health report: Next steps in legislation and programs*. Columbia, MO: Rural Policy Research Institute.
- Rural Assistance Center. (2009). CAH frequently asked questions. Retrieved from http://www.raconline.org/info_guides/hospitals/cahfaq.php
- Skillman, S. M., Palazzo, L., Keepnews, D., & Hart, L. G. (2006). Characteristics of registered nurses in rural versus urban areas: implications for strategies to alleviate nursing shortages in the United States. *The Journal of Rural Health*, 22(2), 151-157. doi: 10.1111/j.1748-0361.2006.00024.x [[MEDLINE](#)]
- U.S Bureau of Labor Statistics. (2009). *The employment situation-November 2009*. Retrieved from www.bls.gov .
- Weinert, C., Cudney, S., & Hill, W. (2008). Health knowledge acquisition by rural women with chronic health conditions: A tale of two web approaches. *Australian Journal of Rural Health*, 16(5), 302-307. [[MEDLINE](#)]
- Wieck, K. L., Dols, J., & Landrum, P. (2010). Retention priorities for the intergenerational nurse workforce. *Nursing Forum*, 45(1), 7-17. [[MEDLINE](#)]