

## **Influences of Turnover, Retention, and Job Embeddedness in Nursing Workforce**

### **Literature**

Susan Louisa Adams, PhD(c), FNP-BC <sup>1</sup>

<sup>1</sup> PhD Student, East Tennessee State University, Associate Professor of Nursing, King University, [adamss@etsu.edu](mailto:adamss@etsu.edu)

### **Abstract**

Examining literature related to nursing turnover, retention and job embeddedness has implications applicable to employer and patients. Turnover is expensive and can lead to adverse patient outcomes and few studies focus on rural nurses. Keywords of nurse, rural, turnover, retention, and job embeddedness entered into three search engines produced 39 references from 1995-2015. Predominance of convenience samples, lack of discussion of reliability and validity information, and lack of theoretical or conceptual frameworks accompanied by lack of studies focused on rural nursing highlight the gaps in knowledge regarding what keeps nurses in their jobs.

**Keywords:** Nurse, Rural, Turnover, Retention, Job embeddedness

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### **Literature**

Understanding the characteristics of nurses who stay in the workplace aids employers as well as patients. Examining the concepts of turnover, retention, and job embeddedness provides a comprehensive view into factors influencing this phenomenon. For practical purposes, the

term “turnover” implies voluntary turnover. The cost of turnover of one nurse can be up to twice the cost of a year’s wages (Stroth, 2010). Turnover is associated with adverse patient outcomes linked to increased nurse workload. One study found that surgical death rates rose seven percent per added patient to a nurse’s workload (Stroth, 2010). The most recent nursing statistics note a 17.2% turnover rate per year compared to a 13.5% rate per year four years earlier according to a study performed by Nursing Solutions, Incorporated (NSI) (2015). Retention refers to those nurses who do not quit their jobs. The NSI (2015) report also noted that many of the participating institutions in their study population did not have comprehensive retention strategies despite noting that such a strategy is important to prevent turnover (NSI, 2015). Projected nursing shortages also highlight the need to retain practicing nurses in place (Dotson, Dave, Cazier & McLeod, 2013). Job embeddedness (JE) refers to those who stay in place as well. This concept consists of six components covering “on-the – job: and “off - the – job” factors associated with maintaining current employment (Holtom & O’Neill, 2004). JE arose from a need to “build a better mousetrap” when attempting to explain determinants of turnover and retention beyond previously used tools and theories (Reitz & Anderson, 2011).

Keeping nurses working in rural areas is especially difficult for several reasons (Stroth, 2010). The rural nurse is unique in that generalist skills are paramount and the nurses may feel overwhelmed at the breadth of responsibilities expected in practice (Molinari & Monserud, 2008). These nurses also have the added stressor of “professional isolation” as well as having a higher profile status as they care for friends and neighbors (Dotson, Dave, Cazier, McLeod, 2013). This feeling may lead to turnover. Understanding how to retain the rural nurse has implications for health care organizations, communities, and patients (Holtom & O’Neill, 2004).

Nurses are the most abundant rural health care professional and the least well studied concerning the choice of rural practice (Daniels, VanLeit, Skipper, Sanders, & Rhyne, 2007). Studies examining the rural nurse are few and sample sizes are usually small and therefore lack generalizability (Molinari & Monserud, 2008). The aim of this review is to examine the theoretical and empirical evidence in the existing literature regarding influences associated with nursing retention, turnover, and job embeddedness (JE), especially in rural nurses.

### **Method**

Gathering references for this review was challenging due to lack of studies involving rural nurses. PubMed Central, Cumulative Index to Nursing and Allied Health Literature (CINAHL), and Google Scholar provided a variety of findings. PubMed Central represents multiple health care professions, CINAHL primary focuses on nursing literature, and Google Scholar is an all-purpose search engine that may include literature missed by the other two options. The following search terms were included: Nurse, rural, turnover, retention, and job embeddedness in the title or abstract. Empirical articles, theoretical articles, intervention reports, and theses/dissertations from 1995 to the present were included. Exclusion criteria consisted of articles focused on nursing leadership style on retention and turnover rather than individual nurse characteristics associated with search terms, not about nurses in the United States, and not related to search terms after further review. Items not specifically about rural nurses were included if the other search terms were present in the title or abstract in order to provide contextual depth to the review. Two hundred seventy seven selections comprise the initial search engine findings. After reading these findings a manual search of journal tables of contents, review articles, and reference lists that included search terms yielded another twelve items. After again scanning the

search results, one hundred eight items warranted further evaluation. By eliminating duplicates, items deemed not primarily related to the identified search terms, and unavailable articles, 39 items met final review inclusion criteria.

## **Results**

When examining literature for a review, multiple criteria should be included. Cronin, Ryan, and Coughlan (2008) outline topics to include when summarizing selections and this list guided the critique portion of this review. References fall into three sections for comparison – turnover, retention, and job embeddedness. Conceptual definitions, instruments, and method, sample characteristics, use of theoretical frameworks, and outcomes are discussed for each section.

### **Turnover**

Ten selections related to turnover are included in this review. Six research studies and four reviews of literature revealed themes related to nursing turnover. No nursing turnover theoretical references appeared in the search results.

#### **Definitions of turnover and rural.**

Turnover describes those who left jobs during the study period (ranging from 6 months up to three years) (Barenholdt & Mark, 2009; Hodgin, Chandra, & Weaver, 2010). Turnover can also mean past job change (Hunt, 2009; LeVasseur, Wang, Mathews, & Boland, 2009) and intent to leave (Hauck, Quinn-Griffin, & Fitzpatrick, 2011). Rural refers to communities with less than 50,000 people (Barenholdt & Mark, 2009) and non-metropolitan areas (Brewer, Kovner, Greene, Tukov-Shuser, & Djukic, 2012). Only two studies included the same definitions of turnover and

neither had the same definition of rural (Cooper, 1998; Hayes, et al., 2012). This lack of consistency limits comparability of findings.

### **Method and instruments.**

Of the ten turnover empirical references, four employed a cross-sectional quantitative design (Barenholdt & Mark, 2009; Hauck, et al., 2011; Hodgkin et al., 2010; Shader, Broome, Broome, West, & Nash, 2001). Another reference featured a prospective longitudinal panel design (Brewer, et al., 2012). One employed mixed methods (LeVasseur, et al., 2009) and four were literature reviews (Gilmartin, 2013; Hayes, et al., 2012; Hunt, 2009; Wagner, 2007). It is not surprising most studies were cross-sectional in nature as this design saves time and money. However, longitudinal studies provide information regarding changes over time and can better inform employers regarding factors associated with turnover (Grove, Burns, & Gray, 2012).

Careful selection or creation of research instruments is critical for accurate data collection and reporting study instrument validity information lends confidence to findings (Polit & Beck, 2012). Four of the six research studies reported reliability and validity data regarding the selected research instruments (Barenholdt & Mark, 2009; Brewer, et al., 2012; Hauck, et al., 2011; Shader, et al., 2001). Two studies included a previously developed tool associated with turnover “The Anticipated Turnover Scale” (Hauck, et al., 2011; Shader, et al., 2001) among other measurement tools. The other studies used original tools. The lack of consistency in tools used in the nursing turnover literature inhibits comparisons of findings.

### **Turnover literature sample characteristics.**

Most studies in the turnover literature focused solely on nurses. However, Hodgkin et al. (2010) included licensed practical nurses in their study. Barenholdt & Mark (2009) compared

rural and urban hospitals as the focus of study. Convenience samples dominate the review references regarding nursing turnover. This type of plan has inherent sampling bias risks and results must be viewed in this light (Polit & Beck, 2012). Only two studies reported randomization of participants (Barenholdt & Mark, 2009; Brewer, et al. 2012). Sample sizes were quite large (over 1000 nurses) in two studies (Brewer et al., 2012; LeVasseur et al, 2009). Four other studies had smaller numbers (97 - 253) (Barenholdt & Mark, 2009; Hauck, et al. 2011; Hodgins et al, 2010; Shader et al., 2001). Random sampling improves the representativeness of the study population (Polit & Beck, 2012).

#### **Effect size.**

Performing a power analysis and calculating effect size aids in determining appropriate study sample size (Polit & Beck, 2012). One large study reported a small effect size (Brewer, et al., 2012). A medium effect size was reported in one smaller study (Hauck, et al., 2011). The other three studies did not report effect sizes (Barenholdt & Mark, 2009; Hodgins et al., 2010; Shader, et al., 2001). Performing a power analysis and reporting effect size helps reduce type II errors (Polit & Beck, 2012). Effect size reporting also assists in comparing studies (Sullivan & Feinn, 2012). The lack of effect size reporting limits the ability to compare findings in the turnover literature.

#### **Turnover use of theoretical frameworks.**

Including a theoretical or conceptual framework in nursing research has double benefits. The theory frames the study and the findings test the theory (Polit & Beck, 2012). Three of the six studies mention a theoretical or conceptual framework but none was the same. The literature review by Gilmartin (2013) focused solely on various theories associated with turnover. Hayes,

et al., (2012) and Wagner (2007) include sections on theory but Hunt (2009) did not. A more detailed description of the various theories presented will follow in the “Theory” section.

### **Turnover literature outcomes.**

Research outcomes in the turnover literature reflected a theme in organizational commitment and other work related factors such as workload and work stress (Brewer, et al., 2012; Hauck, et al., 2011; Shader, et al., 2001). Barenholdt and Mark (2009) compared rural and urban hospitals but did not find a significant difference in job satisfaction and turnover rates related to location. Rather, work environment and nursing unit characteristics such as number of beds, support services, and safety climate were factors associated with turnover. Brewer, et al. (2012), included rural and urban nurses in their study and found intent to stay was influenced by job satisfaction and organizational commitment. Comparing rural versus urban nurse turnover was not a study aim. LeVasseur, et al. (2009) and Hodgin, et al., (2010) noted organizational and personal factors associated with turnover. Two literature reviews also reported organizational issues were major influences on turnover (Wagner, 2007; Hunt, 2009). Hayes et al., (2012) reported nursing turnover had multiple ties to on the job and off the job factors. The overall common theme of organizational issues influencing turnover provides clues for employers although personal issues appeared in two references. Organizational issues can be addressed by changes in leadership, workloads, and support services, for example, and potentially lower turnover rates.

### **Retention**

Of the three concepts comprising this review, retention provided the most references totaling 19 titles along with the most discussion of rural nurse retention. Two literature reviews,

two reports of interventions, one theoretical article, and 14 research studies are included in this section.

### **Definitions of retention and rural.**

Definitions of retention in the literature selections include variations of “not quitting” your job and “intent to stay” (Atencio, Cohen, & Gorenberg, 2003; Blake, Leach, Robbins, Pike, & Needleman, 2013; Buffington, Zwink, Fink, DeVine, & Sanders, 2012; Cordeniz, 2002; Codier, Kamikawa, Kooker, & Shoultz, 2009; Ellenbecker, Porell, Samia, Byleckie, & Milburn, 2008; Hayhurst, Saylor, & Stuenkel, 2005; Hinson & Spatz, 2011; Karlin, Schneider, & Pepper, 2002; Katz, O'Neal, Strickland, & Doutrich, 2010; Kippenbrock, Stacy, & Gilbert-Palmer, 2004; McEllistrem-Evenson, 2010; Salt, Cummings, & Profetto-McGrath, 2008). The opposite phrase of “intent to leave” your job was also used to determine those plan to stay in their jobs (Cheng, Kelly, Carlson, & Witt, 2014; Daniels, et al., 2007; Dotson, et al., 2013; Dotson, Cazier, Dave, Spaulding, 2014; Murray, Havener, Davis, Jastremski, & Twichell, 2011; Wieck, Dols, & Landrum, 2010). Although phrased differently, these definitions essentially elicit the same information – did the nurse stay in place or leave? Kippenbrock, et al. (2004) and Daniels, et al. (2007) defined “rural” as towns with populations less than 50,000.

### **Retention method and instruments.**

Quantitative studies also predominate the nursing retention literature. Few longitudinal studies are present in the retention references. Atencio, et al. (2003) collected data over two years from an urban west coast hospital. Ellenbecker, et al., (2008) collected initial data and repeated the survey one year later. Hayhurst, et al., (2005) collected retention data from a northern California hospital three times over an eighteen-month period. The remaining eleven

studies collected data in a cross sectional fashion. The downfall of cross sectional design is that this “snapshot” in time does not reflect trends over time (Polit & Beck, 2012).

Instrumentation used to determine retention is as varied as the reasons nurses stay in place. Unless otherwise specified, validity information regarding the tools was provided. Atencio, et al., (2003) and Hayhurst, et al., (2005) used “The Moos Work Environment Scale” to evaluate occupational influences of retention such as work pressure, autonomy, and task orientation. The “Practice Environment Scale of the Nursing Work Index Revised” assesses aspects of a nurses’ involvement in the organization, staffing, leadership, and nurse-physician collegiality. This scale was used along with another established instrument called the “ICU Nurse-Physician Communication Questionnaire to determine retention of pediatric intensive care nurses (Blake, et al., 2013). Buffington, et al., (2012) chose to use along with the “Revised Casey-Fink Nurse Retention Survey” along with qualitative methods in their nursing retention study. This instrument investigates “work environment, support, and encouragement”. Cheng, et al., (2014) selected Price and Muller’s “Causal Model” to study advanced practice nurse retention. A study to determine if a link exists between emotional intelligence and nurse retention conducted by Codier, et al., (2009) used the established “Mayer Salvey-Caruso Emotional Intelligent Test” instrument. Using previously validated instruments adds to the body of knowledge regarding the subject matter as one can compare study results when the same tool is used. However, only two studies used the same tool in this instance.

Four references included original tools. Daniels, et al. (2007) study had a rural focus and did not include validity data regarding their questionnaire. Dotson, et al. (2013) developed a tool to study rural nurse retention. Dotson, et al., (2014) reported a Cronbach alpha greater than .7

for their tool created to form a “Retention Model”. Ellenbecker, et al. (2008) created the “Home Healthcare Nurse Job Satisfaction Scale” which assesses on the job and off the job influences on retention and reported an adequate reliability score. Providing reliability information adds rigor to nursing research (Polit & Beck, 2012).

### **Retention sample characteristics.**

Urban locations predominate the retention literature. Seven references discussed urban hospital nurse retention (Atencio, et al., 2003; Blake, et al., 2013; Buffington, et al., 2012; Hayhurst, et al., 2005; Hinson & Spatz, 2011; Salt, et al., 2008; Wieck, et al., 2010). Five references addressed rural nurse retention in various settings. Daniels, et al. (2007) included nurses along with several types of rural health care providers in New Mexico. Kippenbrock, et al. (2004), featured nurse practitioners in rural Arkansas in the study. Katz, et al. (2010) discussed Native American nurses working in their home communities. Dotson, et al. (2013) and Dotson, et al., (2014) compared rural and urban nurse retention in the southeastern United States using the same data set. Ellenbecker, et al. (2008) and Karlin, et al. (2002) recruited nurses from four states but did not specify rural or urban locale. Daniels, et al. (2007) noted the lack of literature regarding rural nurse retention and unfortunately this situation has not improved in the past eight years.

### **Sampling pattern.**

Convenience sampling methods commonly appear in the retention references (Atencio, et al., 2003; Blake, et al., 2013; Buffington, et al., 2012; Cheng, et al., 2014; Codier, et al., 2009; Dotson, et al., 2013; Dotson, et al., 2014; Hayhurst, et al., 2005; Karlin, et al., 2002; Kippenbrock et al., 2004; Wieck, et al., 2010). Katz, et al., (2010) chose purposive sampling to

conduct a qualitative retention study of Native American nurses working with the Indian Health Service (n = 9). One study employed a stratified random sampling method (Daniels, et al., 2007). Ellenbecker, et al. (2008) used random sampling to select nursing homes to invite participants in their study of 1912 home health nurses in New England. All but one study recruited sample sizes over 100. Karlin, et al., (2002) recruited 36 geriatric nurse practitioners participants in ambulatory settings in Colorado and Massachusetts for their nursing retention study. The studies regarding turnover by far had the largest sample sizes. Large sample sizes sound impressive, but as most of these studies used convenience samples, the findings may still not be representative of the desired population (Polit & Beck, 2012).

#### **Effect size.**

Only one reference listed effect size. Blake, et al., (2013) achieved a small effect size in their study of pediatric critical care nurses. As stated earlier, failure to report or calculate an effect size limits comparability among studies (Polit & Beck, 2012).

#### **Retention literature use of theoretical frameworks.**

As was the case with instrumentation, a variety of theoretical and conceptual frameworks appear in the retention literature (Atencio, et al., 2003; Blake, et al., 2013; Cheng, et al., 2014; Codier, et al., 2009; Dotson, et al., 2014; Ellenbecker, et al., 2008; Katz, et al., 2010). None were the same. Eight out of fourteen research studies in this review lacked reference to any theory. The use of theoretical or conceptual frameworks aid in linking findings to previous research, thereby improving quality of the literature (Polit & Beck, 2012). However, as no two studies used the same theory, the ability to link findings is limited. Discussion of retention related theories follows in the “Theory” section.

### **Retention literature outcomes.**

Workplace issues such as autonomy, pressure, task orientation, leadership, feeling valued, salary, intent to leave, job satisfaction, and interventions to improve retention influenced staying on the job regardless of setting (Atencio, et al., 2003; Blake, et al., 2013; Buffington, et al., 2012; Daniels, et al., 2007; Dotson, et al., 2013; Hinson & Spatz, 2011; Murray, et al., 2011). Non-work related factors such as family size, emotional intelligence, generational differences, “values match”, and altruism also influenced retention (Cheng, et al., 2014; Codier, et al., 2009; Cordeniz, 2002; Dotson, et al., 2013; Wieck, et al., 2010). Previous work or educational experience in rural areas influenced retention of nurses in this setting along with loan forgiveness and other financial incentives improved rural retention rates (Daniels, et al., 2007; Kippenbrock, et al., 2004; McEllistrem-Evenson, 2010).

Reviews of literature addressing nurse retention revealed several suggestions to keep nurses (both rural and urban) in place. McEllistrem-Evenson (2010) echoed Daniels, et al. (2007) by suggesting targeting students with rural backgrounds to work in rural areas and improve financial compensation for working in these areas. Salt, et al. (2008) reported that preceptor programs were effective in retaining new graduate nurses. These findings inform those concerned with nursing workforce retention issues and note the multifactorial influences upon nurse retention in any area.

### **Job Embeddedness**

The search for job embeddedness literature matching inclusion criteria produced a few more references than turnover, but less than retention. Six research studies, two literature reviews, and three theoretical articles provide insight on this concept.

### **Job embeddedness definitions.**

Job embeddedness rose from the business literature around 2001 (Reitz & Anderson, 2011). Organizational and community “fit”, “links”, and “sacrifice” wind together to embed a person in place (Mitchell, Holtom, Lee, Sablinski, & Erez, 2001). Fit refers to how well the person is at ease in their surroundings, links refer to connections with coworkers and neighbors, and sacrifice refers to how hard it would be to change jobs or move (Reitz & Anderson, 2011). Gibbs (2015) and Jiang, Liu, McKay, Lee and Mitchell (2012) and Mitchell, Holtom, Lee, Sablinski, & Erez (2001) compared job embeddedness to “stuckness”. Halfer (2011) and Holtom and O’Neill (2004) use the term to describe those who did not leave their jobs during a specific amount of time. “Intent to stay” also is used to define job embeddedness (Reitz, 2014a).

Suggestions to amend the original Job Embeddedness tool to represent specific populations or occupations appear in the literature. For example, Reitz and Kim (2013) suggested changes to better study rural versus urban nursing JE. By changing the tool, the contextual components of job embeddedness changes although the overall conceptual definition remains the same. This limits generalizability of the findings despite the use of the term “job embeddedness”. “Rural” was defined using the Rural Urban Commuting Area (RUCA) method by the two studies specifically contrasting rural and urban populations (Reitz, 2014a; Reitz and Anderson, 2011).

### **Job embeddedness literature method and instruments.**

The job embeddedness tool is a quantitative instrument; therefore, all the research studies were of this design. Three studies were cross sectional (Gibbs, 2015; Reitz, 2014a; Reitz & Anderson, 2011). Two were longitudinal (Halfer, 2011; Holtom & O’Neill, 2004). As stated earlier, longitudinal studies provide clues to change over time (Polit & Beck, 2012).

The original Job Embeddedness tool was used in each of the six studies reviewed (Gibbs, 2015; Halfer, 2011; Holtom and O’Neill, 2004; Reitz, 2014a; Reitz & Anderson, 2011; Reitz & Kim, 2013). This tool has 40 items divided into six categories three each for organizational and community factors (i.e. fit, links, sacrifice) that potentially influence retention. Holtom and O’Neill 2004 report an overall tool alpha reliability of .87. Additional tools such as “The Nurse Job Satisfaction” and the “Intent to Stay” instruments rounded out the dissertation research by Gibbs (2015). These were included as job satisfaction and intent to stay were study aims in addition to determining the total Job Embeddedness Score. Halfer (2011) included a career development questionnaire to examine retention influences in new graduate nurses. Tools to evaluate organizational commitment, job alternatives, job search behavior, and intent to leave provided context for Holtom and O’Neill’s 2004 study of hospital employees. The additional context led to the finding that the Job Embeddedness tool better predicted retention than the other instruments (Holtom & O’Neill, 2004). All references included validity information for selected instruments.

### **Job embeddedness literature sample characteristics.**

Four studies focused on JE had sample populations comprised only of registered nurses. Halfer (2011) studied 191 new graduate nurses in an urban, inpatient setting. Eighty two nurses from across the nation working in long term care comprised the sample for Reitz (2014a). Reitz & Anderson (2011) and Reitz & Kim (2013) used the same data set of 400 urban and 400 rural nurses from Illinois. Gibbs (2015) studied 101 registered nurses and 24 health care assistants working in a north Texas hospital. Holtom and O’Neill (2004) surveyed 232 Midwestern hospital employees and specifically mentioned nurses in the findings.

### **Sampling pattern.**

In contrast to the turnover and retention references in this review, random sampling predominates in the JE literature. Four studies randomized the sample population (Holtom & O'Neill, 2004; Reitz, 2014a; Reitz and Anderson, 2011; Reitz and Kim, 2013). Only two studies employed convenience samples - Gibbs (2015) and Halfer (2011). The use of random sampling reduces risk of bias related to sample selection (Polit & Beck, 2012).

### **Effect size.**

Effect size appears in three references. Gibbs (2015) calculated 170 participants would achieve a moderate effect size but the actual study only had 125 participants. Reitz (2014a) needed 138 participants for a small effect size but had only 82 participants in the final study. Reitz and Anderson (2011) required 200 participants for a medium effect size and achieved this goal. The same population was used for secondary data analysis in a later study (Reitz and Kim, 2013). Reporting effect size gives the reader clues to the strength of the relationship of variables (Polit & Beck, 2012).

### **Job embeddedness literature use of theoretical frameworks.**

The JE literature understandably draws heavily on the Job Embeddedness theory first proposed by Mitchell, et al., in 2001. Other theoretical references used in the JE studies include self-efficacy theory, locus of control (Gibbs, 2015), voluntary turnover (Holtom & O'Neill, 2004) and The Unfolding Model of Turnover (Stroth, 2010). These theories will be discussed further in the theory section of the review.

### **Job embeddedness literature outcomes.**

Job embeddedness (JE) studies often report the total JE score as well as the scores of the individual factors of link, fit, and sacrifice as these vary among age groups, locations, and job title, for example. A high total JE score implies a low intent to leave current employment (Holtom & O'Neill, 2004). Total JE score was associated with intent to stay in all but one study however determining the total JE score was not a study aim (Halfer, 2011). Organizational fit was reported twice as significant for nurses (Gibbs, 2015; Halfer, 2011). This is consistent with the turnover and retention literature regarding nurses. Stroth (2010) noted turnover rates in organizations dedicated to JE had half the turnover rate of those who were not. Organizational links, community fit, and community sacrifice were also important to nurses more than healthcare assistants (Gibbs, 2015). Age appears to influence which of the six job embeddedness dimensions is significant in the study samples. Community embeddedness was found to be associated with retention in one study including an older population of nurses (Holtom & O'Neill, 2004). Younger nurse turnover was associated with lack of organizational fit (Halfer, 2011). The job embeddedness literature points to the overall total JE score to be associated with lower levels of intent to leave even if different versions of the tool are used (Reitz & Anderson, 2011; Reitz, Anderson, & Hill, 2010; Reitz & Kim, 2013). Individual characteristics appear stronger in some populations and less in others but the total score remains predictive. This provides employers with a broad picture of embeddedness and specific information to use while attempting to individualize retention interventions.

### **Theoretical influences of turnover, retention, and job embeddedness.**

Theoretical underpinnings of studies examining nursing retention, turnover, and job embeddedness build on one another. The use of theory in research adds depth and insight to findings (Gilmartin, 2013). Nurses stay in jobs they are dissatisfied with and leave jobs they enjoy. In order to explain this anomaly, Lewin's Field Theory suggests that individuals are surrounded by a "perceptual life space" and are connected to the world by web strands (as cited in Mitchell, et al, 2001). Surviving "shocks" in one's personal and professional life influence turnover and are discussed in the "Unfolding Model" of turnover (as cited in Mitchell, et al, 2001). Additional turnover theoretical influences in nursing literature include Price and Mueller's "Causal Turnover Model", Hinshaw and Atwood's "Anticipated Turnover Model", Parasuraman's "Integrated Turnover Model", and Borda and Norma's "Absence and Turnover Model" (Gilmartin, 2013). Gilmartin (2013) provides an overview of these models along with others previously mentioned. She highlights the "Unfolding Turnover Model" and the "Job Embeddedness Model" as guides to shape further research for nursing as these address the needs of the profession more adequately than other models.

Multiple theoretical frameworks appear in the retention literature and often incorporate "job satisfaction". The "Organizational and Personal Factors and Outcomes" conceptual framework by Shaefer and Moos incorporates multiple organizational and personal influences on workers in order to understand the influence on these factors on quality of care and patient outcomes was used to study nurse retention (as cited in Atencio, et al., 2003). Dotson, et al. (2014) developed an original "Retention Model" that includes job satisfaction, job stress, value congruence, and financial factors. The "Theoretical Model of Home Healthcare Nurse Job

Retention” suggests nurse characteristics, job satisfaction, and market characteristics influence intent to stay and improve retention (Ellenbecker, et. al., 2008).

Job embeddedness theory was designed to fill gaps left by previous turnover and retention theories. Six “dimensions” influence retention and are divided in to community and organizational themes regarding “fit, links, and sacrifice”. Fit describes how well the person perceives belonging to the organization or community. Links describes relationships the person has at work and in the community. Sacrifice reflects the stress involved with leaving the organization or community (Mitchell, et al, 2001). Gibbs (2015) combined self-efficacy theory with Job Embeddedness theory and locus of control in a dissertation. Having an internal locus of control and believing one is capable of doing their job well leads to confidence that they belong in the job they have and this is proposed to raise the level of job embeddedness in nurses (Gibbs, 2015).

Understanding Rural Health theory strengthens studies regarding rural nurses (Lee & McDonagh, 2013). Work relationships and work independence were cited as factors influencing job satisfaction in rural nurses according to a literature review on international rural nurse job satisfaction (Manahan & Lavoie, 2008). Hiring “outside” leadership to lead rural health care entities can conflict with the patient preference of working with “insiders” noted in rural nurse theory. Growing nurse leaders from the inside could appeal to the independent nature of rural residents and nurses (Lee & McDonagh, 2013). Rural theory was not cited in the rural nurse references selected for this review.

## **Discussion**

Theoretical and empirical evidence regarding influences associated with nursing retention, turnover, and job embeddedness (JE), especially in rural nurses are not exhaustively present in nursing literature. Although several titles exist for each topic, lack of consistency in study aims, design, instrumentation, and use of theory cloud the ability to compare results among the findings. Few references address the rural nurse. However, similar themes emerge from the present state of the science and inform employers of issues influencing intent to stay or go. A table summarizing these findings can be found in Table 1. The outcomes of all three concepts (turnover, retention, JE) are reported in terms of job embeddedness dimensions to note themes across the literature.

Table 1

*Characteristics of Turnover, Retention, and Job Embeddedness Literature*

<b>Characteristic</b>	<b>Turnover n = 10</b>	<b>Retention n = 19</b>	<b>Job Embeddedness n = 10</b>
Rural samples	0	3	0
Rural / Urban mix sample	3	2	2
Urban only sample	3	7	1
Unspecified sample location	0	2	3
Effect size calculated	2	1	4
Reliability discussed*	4	10	6
Cross sectional design	4	11	3
Longitudinal design	1	3	2
Empirical (primary)**	6	14	6
Empirical (secondary)***	3	2	2
Theoretical***	1	3	3
Fit	9	19	4
Links	7	10	3
Sacrifice	6	9	1

*Note.* \*reliability (i.e. Cronbach alpha score) discussed in primary empirical studies; \*\*Primary = research study; \*\*\*Secondary = review of literature (Cronin, et al., 2008). Theoretical sources include reports of interventions.

Multiple influences ranging from unit level, organizational level, community level, and personal level affect whether a nurse remains in place or moves on to another organization or

profession. Employers are urged to understand these factors in order to attract and keep adequate staffing. Of the six job embeddedness “dimensions”, organizational fit was consistently most noted across the three concepts as associated with staying in place. Organizational fit can be expressed as job satisfaction, commitment, or workload. Links followed second, and sacrifice was third. Links can come in the form of support services or relationships with leaders. Sacrifice in the form of financial compensation, altruism, and family ties can affect one’s desire to stay with an organization.

### **Conclusion**

Several gaps appear in the literature regarding the concepts of turnover, retention, and job embeddedness, especially within the rural nursing workforce. Nursing turnover literature exhibits a lack of a consistent definition of “turnover”, use of multiple measurement tools, and small sample sizes. A lack of longitudinal studies was noted as problematic (Hayes, et al., 2012). Longitudinal studies are preferred as events influencing turnover occur over time (Gilmartin, 2013). Only six studies were longitudinal. The literature associated with nursing retention also suffers from lack of a consistent definition of “retention”, use of multiple tools used to assess this phenomenon, lack of effect size reporting, and inconsistent use of theory. The job embeddedness literature had common themes associated with the theory of job embeddedness, but several versions of the tool were employed thereby reducing comparability among the studies. This lack of a consistent method of studying nursing workforce issues, especially in rural areas, points to a need for further research.

## **Future research**

Determining the best method to study what keeps nurses (especially rural nurses) on the job, and how to interpret and apply the findings guides future research for those interested in nursing workforce issues. Of the three concepts examined in this review, the job embeddedness tool addresses multiple factors associated with keeping nurses in place and has an adequate Cronbach alpha score. The job embeddedness theory also encompasses other theoretical frameworks regarding retention and turnover thereby functioning as a comprehensive model to interpret studies regarding job embeddedness. Gilmartin (2013) concluded that nursing research would benefit by using models from the business world. She states that nursing is “behind the times” when it comes to this type of management research and she specifically mentions “The Unfolding Turnover Model” by and the “Job Embeddedness Model” as preferred frameworks.

Combining rural theory to future research is also suggested as well as taking under advisement the use of re-configured versions of the original Job Embeddedness tool tailored to rural nurses as designed by Reitz & Kim (2013). The use of this information in rural nurses has been limited in the past. With little research to build upon, maximizing efficiency, and increasing rigor would be advised in order to gain maximum information from research efforts.

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