# Examination of Resiliency in a Rural Magnet Hospital

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## Article

### Abstract

The nursing profession in the United States faces multiple challenges in maintaining an adequate supply of nurses to meet consumer demands. One crucial factor associated with why nurses leave the profession is resiliency. This study aimed to examine nurses' current state of resilience, mental health, and physical health at a rural community, three-time Magnet Designated acute care hospital. Resilience was assessed using the Connor-Davidson Resilience Scale (CD-RISC). Self-perceived health status was assessed using the PROMIS Global Health short form v1.1. Results revealed that nurses (N=79) reported above-national-average resiliency and physical health but below-national-average mental health. Further research is needed to understand better the relationships between resiliency, physical health, mental health, the impact of the COVID-19 Pandemic, and long-term Magnet designation on these variables.

**Key Words:** Magnet, mental health, nurses, Registered Nurses, resilience, nursing, retention, physical health, resiliency, turnover

The nursing profession in the United States faces multiple challenges to maintain an adequate supply of nurses to meet consumer demands. These challenges stem from several factors, including an aging population, an aging workforce, limited enrollments in nursing programs due to a shortage of nursing school faculty, and increased numbers of nurses exiting the profession due to high-stress levels and staffing shortages (American Association of Colleges of Nursing (AACN), 2020). The U.S. Bureau of Labor Statistics (2021) projects that the Registered Nursing Profession will see a 7% growth from 2019 to 2029, with an additional supply of 175,900 RNs needed each year to meet demands. Further, the US. Department of Health and Human Services (2017) projected that approximately 800,000 additional nurses will be required to support growing demand by 2030. These statistics alone are concerning. However, when considered together with other statistics, including a trended increase in national annual rates of bedside RN turnover from 14.6% in 2016 to 15.9% in 2019 (Nursing Solutions, INC., 2020), it becomes abundantly clear that we must examine the reasons nurses exit the profession and develop effective retention methods.

> The nursing profession in the United States faces multiple challenges to maintain an adequate supply of nurses to meet consumer demands.

One crucial factor associated with why nurses leave the profession is resiliency. Resiliency, as a global concept, can be defined as the ability to respond to stressful situations and challenges in a way that results in effective functioning and the protection of physical and mental health (Dossett et al, 2021). As a nursing-specific concept, resilience can be defined as a dynamic process that develops over time and allows nurses to perform nursing duties despite adversity (Ang et al, 2019). Connor and Davidson (2019) suggested that resiliency is essential when considering the development of interventions to improve resiliency in groups of individuals at risk for maladaptive coping strategies and psychological distress due to exposure to

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stressful work environments. Nursing is an inherently stressful occupation. Stress in nursing has been linked to multiple negative impacts, including burnout (Khamisa, Peltzer, Ilic, & Oldenburg, 2017; Kim, Park, & Seo, 2019), poor job performance (Kim et al., 2019), and turnover intention (Lee & Kim, 2019). One study reported that out of a sample of 895 nurses, 58% experienced high levels of job stress due to staff issues (Khamisa et al., 2017). The development of resiliency in nurses is a key component in mitigating job stress (Chesak et al., 2019), burnout (Arrogante & Aparicio-Zaldivar, 2017; Brown, Whichello, & Price, 2018), and reducing turnover intention (Lee & Kim, 2019). Finally, the topic of resilience has

further-reaching effects than those reported on turnover intention and has also been linked to both mental health (Kemper, Xiaokui, & Khayat, 2015; Kermott et al, 2019; Sherin et al., 2019; Winblad, Changaris, & Stein, 2018; Zhang, Bai, & Li, 2020) and physical health (Matzka et al., 2016; Osofosky et al., 2018; Sheerin et al., 2019; Silverman et al, 2015).

This study aimed to examine the current state of resilience, mental health, and physical health of nurses at a rural community Magnet Designated acute care hospital. The overall aim was to identify specific opportunities to intervene and address areas of resilience that may impact nurses' overall health and potentially contribute to their leaving the workforce.

The following research questions were posed in this study:

1. What degree of resiliency exists in the registered nurse workforce in the Magnet Designated hospital participating in the study?

2. What is the perceived mental and physical health status of registered nurses working in the hospital?

## Methods

Institutional Review Board approval was obtained before proceeding with the study. A convenience sample of 279 Registered Nurses employed by a single Magnet-designated hospital was invited to participate in an online survey. Each nurse received a URL to a Qualtrics survey that also included information concerning the purpose of the study, risks, and benefits, and that participation was voluntary. Participants were asked to complete the entire survey at one time.

Participants completed a demographic questionnaire that included age, race, gender, level of education, and specific questions about their work environment, such as shift worked and location/unit currently working. Resilience was assessed using the Connor-Davidson Resilience Scale (CD-RISC). The authors of the scale provided permission for use. The CD-RISC includes 25 items, each with 5-point Likert-type response options ranging from 0=not true at all to 4=true nearly all the time. The degree of resilience was reflected by the sum score of the 25 items, with higher scores reflecting greater resilience. This instrument has been used in multiple settings and with various populations. In a methodological review of resilience measurement scales (Windle, Bennett, & Noyes, 2011), the CD-RISC was one of three scales that received the best psychometric ratings. Internal consistency estimated using Cronbach's **α** was .89. Details on its reliability and validity have been documented in previous studies (Connor & Davidson, 2003; Mealer et al., 2016).

Self-perceived health status was assessed using the PROMIS Global Health short form v1.1 (PROMIS v1.1). The PROMIS v1.1 is a 10-item publicly available instrument that measures both Global Physical Health and Global Mental Health components. The estimated results were calculated using a standardized and published scoring and rating system. The Global Physical Health and Global Mental Health scores are generated by summing responses to two groups of corresponding items. Higher scores represent a better health status in the Global Physical or Mental Health domain. The scale has internal consistency reliability coefficients of .81 and .86 for Global Physical Health and Global Mental Health measurements, respectively. Research evidence for instrumental validity has also been well-documented (Cella et al., 2010; DeWalt, Rothrock, Yount, & Stone, 2007; Liu et al., 2010; Riley et al., 2010; Rothrock et al., 2010).

## Results

Data were analyzed using descriptive summary statistics. All data were analyzed using SPSS v 24. Results were compared to the US general population mean scores for resiliency and physical and mental health.

The demographic data and characteristics of nursing experience are reported in Table 1. The majority of respondents were female, with 100% being non-Hispanic white.

### Table 1. Demographic Data

|  | n | % |
|---|---|---|
| Age Group |  |  |
| <= 25 years old | 6 | 7.89 |
| 26-35 years old | 18` | 23.68 |
| 36-45 years old | 19 | 25 |

| | | |
|---|---|---|
| 46-55 years old | 13 | 17.11 |
| Older than 55 | 20 | 26.32 |
| Gender | | |
| Female | 75 | 94.94 |
| Male | 5 | 5.06 |
| Race/Ethnicity | | |
| Non-Hispanic White | 79 | 100 |
| Other or Multiple Race | 0 | 0 |

Table 2 reports the highest educational degree. It is important to note that this facility's majority of registered nurses are prepared at the BSN level or higher.

## Table 2. Highest Degree

| | n | % |
|---|---|---|
| Highest Nursing Degree | | |
| RN Diploma | 0 | 0 |
| ADN | 7 | 8.86 |
| BSN | 57 | 72.15 |
| MSN or Higher | 14 | 17.72 |
| Doctorate | 1 | 1.27 |

The hours worked per week, amount of overtime, and shift work are reported in Table 3. It is important to consider these in relation to physical health, mental health, and resiliency.

## Table 3. Worked Hours Per Week, Overtime Hours, and Work Shift

| | n | % |
|---|---|---|
| Worked Hours Per Week | | |
| 0-24 | 9 | 11.39 |
| 25-36 | 25 | 31.65 |
| 37-40 | 43 | 54.43 |
| 40+ | 2 | 2.53 |
| PRN | 0 | 0 |
| Overtime Hours Worked Per Week | | |
| | | |

| | n | % |
|---|---|---|
| None | 32 | 44.44 |
| 0.5-4 | 25 | 34.72 |
| 4.5-8 | 9 | 12.5 |
| More than 8 | 6 | 8.33 |
| PRN, Salaried or Varied | 0 | 0 |
| Work Shift | | |
| Days | 64 | 81.01 |
| Evenings | 1 | 1.27 |
| Nights | 13 | 16.46 |
| Rotates between days, nights, or evenings | 1 | 1.27 |

Experience in the department, the activity involved in, the area of work, days missed in the last three months, and if one ever thinks of quitting a job are reported in Table 4. Notably, most participants have 10+ years in their department and identified direct patient care as the activity in which they spent the most time involved.

**Table 4. Experience in Department, Activity Involved In, Area of Work, Days Missed in Last 3 Months, Ever Thinks of Quitting Job**

| | n | % |
|---|---|---|
| Experience in Current Department | | |
| Up to 2 years | 18 | 23.08 |
| 2-5 years | 18 | 23.08 |
| 5-10 years | 14 | 17.95 |
| 10+ years | 28 | 35.9 |
| Most Time Involved in | | |
| Direct Patient/Population Care | 61 | 77.22 |
| Administration/Management | 15 | 18.99 |
| Education/Professional Development | 3 | 3.8 |
| Area of Work | | |
| Acute Care | 52 | 68.42 |
| Ambulatory/primary care | 21 | 27.63 |
| Education | 2 | 2.63 |
| Days missed work in past 3 months | | |

| | | |
|---|---|---|
| None | 58 | 73.42 |
| 1 day or shift | 11 | 13.92 |
| 2-3 days or shifts | 8 | 10.13 |
| More than 3 days or shifts | 2 | 2.54 |
| Ever Think of Quitting Job | | |
| Never | 33 | 41.77 |
| Sometimes | 39 | 49.37 |
| Usually | 6 | 7.59 |
| Always | 1 | 1.27 |

The U.S. general population's mean resiliency score is 80.9 (Connor & Davidson, 2019). 56% of the study population fell within the best quartile for resiliency scores. Physical health, mental health, and resiliency scores were higher than the US general population for reported physical health compared to the U.S. general population (50.06+-5.01). The US general population's mean score for physical health was 50. (Health Measures, 2017). However, the nurses in this study reported worse mental health, with the group mean score (50.5+- 7.89) underperforming the U.S. general population mean score of 50 (Health Measures, 2017). The raw physical and mental health scores were standardized to the general population using the t score.

## Discussion

The results of this study provided important revelations about the demographic characteristics, resiliency, and mental and physical health of nurses in one rural Magnet-designated institution. This study's findings may help inform organizational policies and practices aimed at improving the resiliency of nurses and retaining the nursing workforce (Conner & Davidson, 2003). Demographically, the population represented in this study is similar to the profile of nurses in the U.S. reported by the National Council of State Boards of Nursing (NCSBN) 2017 nursing workforce study (NCSBN, 2017) except regarding race/ethnic diversity. However, this accurately reflects the overall demographics of the population represented in the rural area where the organization is located.

The nurses in this study reported higher resiliency scores than the average population in the U.S. The higher-than-average mean resiliency scores are likely attributable to the organization's long-term Magnet Designated status (since 2006). Magnet Designation has been demonstrated, by research, to improve outcomes including quality and safety, work environment, and nurse satisfaction (Rodríguez-García et al, 2020). Schlack, Aiken, Chittams, Poghosyan, & McHugh (2021) suggested that building healthy work environments using the key components of the Magnet Model is an effective strategy for improving nurse outcomes, including preventing burnout. Finally, Hart, Brennen, and De Chesney (2014) suggested that the organizational factors associated with a Magnet work environment are critical to creating healthy work environments that support nurses' ability to develop personal and professional characteristics, increase resiliency, and allow them to cope with the inherent stresses of working in healthcare.

**The nurses in this study reported higher resiliency scores than the average population in the U.S.**

In addition, nurses in this population reported higher levels of physical health than the U.S. general population. Little is currently known regarding the impact of resiliency specific to reported health outcomes of nurses. However, Osofsky et al. (2019) (P<0.05), Matzka et al. (2016) (ß = .20); Sherrin et al. (2019) (β = -0.16, p<.001); and Silverman et al. (2015) (r = .17) found associations between resilience levels and health outcomes in other populations. Silverman et al. (2015) suggested that the mechanism responsible for this phenomenon includes an improved ability to cope with challenges related to physical health concerns and a positive outlook on future health outcomes.

The final study endpoint examined was that of nurses' reported mental health. The results reported suggest that nurses in this study sample experienced poorer mental health (mean score 14.72) outcomes than the U.S. General Population (mean score 15). This finding is intriguing in light of the higher-than-average resiliency scores reported by this population, and the associations reported in the literature between the positive impact of resilience and mental health outcomes in nurses and other populations (Kemper et al., 2015; Kermott et al., 2019; Sheerin et al., 2019; Winblad et al., 2018; Zhang et al., 2019).

## Recommendations for Future Research

The current study was conducted before the COVID-19 pandemic. In light of this, repeating the study to examine resiliency, physical health, and mental health after the pandemic would be appropriate. There is a substantial likelihood that these scores may vary from the original study. Mental health scores in the present study were below the national average. It will be beneficial to examine these to determine if tailored interventions will be needed to address either. It will also be important to repeat this study with a larger population to thoroughly explore potential relationships among these variables. Finally, it may be beneficial to investigate possible relationships between Magnet Designation, resiliency, and physical and mental health of registered nurses.

## Conclusion

Results of this study revealed that nurses in one three-time designated Magnet, rural, acute care hospital reported above national average resiliency and mental health scores. However, self-reported mental health scores were slightly below the national average. This study has significant implications because it specifically examines resiliency in a rural three-time Magnet designated -hospital. The findings stemming from this study are beneficial to understanding how resilient the nurses in this organization are and that physical health does not necessarily equate to mental health. Further inquiry is needed to understand these differences for this organization to determine how to address gaps. In addition, it is essential to address the connection between mental health scores, retention of employees, and reasons employees choose to leave the organization. Finally, the impact of long-term Magnet Designation on these outcomes should be further explored, particularly as the results of this study may have implications for nurses overall.

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Mikel Hand, EdD, RN, OCN, NE-BC, NEA-BC is a Professor of Nursing at the University of Southern Indiana in Evansville, IN. and a Research Consultant for Schneck Medical Center in Seymour, Indiana. He has over thirty years of healthcare experience, with 19 involving research surrounding leadership and health systems. Resiliency has become a particular topic of interest for Dr. Hand as retention of nurses in the profession is strongly influenced by an individual's ability to remain resilient and to maintain a desire to stay in nursing.

### Rachel Stangland, MSN, RN, CNOR

Rachel Stangland, MSN, RN, CNOR, is an experienced nurse leader at Schneck Medical Center in Seymour, IN. Rachel has a Master of Science in Nursing Leadership and is a Certified Operating Room Nurse. She has over 10 years of healthcare experience in professional practice, education, leadership, and project management. Resiliency is a key topic of interest in clinical practice, particularly in light of the global COVID-19 pandemic. Rachel became interested in exploring resiliency as a key to improving staff morale, retention, and engagement.

### Tracy McKinney, BSN, RN, CHPN

Tracy McKinney, BSN, RN, CHPN is a staff nurse practicing at Schneck Medical Center in Hospice. Tracy has a Bachelor of Science degree in Nursing and is a Certified Hospice Registered Nurse. Tracy became interested in the topic of resilience in nursing to address burnout and turnover among hospice nurses.

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