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## The Effect of Mentorship and Social Events on Job Embeddedness and Intent to Stay in Emergency Department Nurses

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**The Effect of Mentorship and Social Events on Job Embeddedness and Intent to Stay in  
Emergency Department Nurses**

Submitted in Partial Fulfillment of the Requirements for the Degree of Doctor of Nursing  
Practice at the University of Kentucky

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Louisville, Kentucky

2023

## Abstract

**Background and Purpose:** The COVID-19 pandemic has drastically impacted nurse retention. According to the Kentucky Nurses Association, 57% of surveyed Kentucky nurses are considering leaving their jobs. Best retention strategies are unclear. Job embeddedness (JE) and Intent to stay (ITS) are factors that influence retention. The purpose of this project is to increase JE and ITS at a level one emergency department (ED) by implementing evidence-based mentorship and social event interventions.

**Methods:** This study utilized a mixed-methods, one group pretest-posttest design. Mentorship pairs were matched by personality type using the Big Five Personality Test. Four mentorship discussion meetings and two social events were held over six weeks. Pre and post-test scores from the Global Job Embeddedness Scale and McCain's Intent to Stay Scale were analyzed using paired t-tests via SPSS software. Open response findings were analyzed by the primary investigator.

**Results:** Twenty-six ED nurses completed the pre-surveys and eighteen completed the post surveys. Participants were mostly female (92.4%), Caucasian (84.6%), under age 30 (56.5%), and had five years or less of nursing experience (69.3%). Increases in scores on the Global Job Embeddedness Scale ( $p= 0.19$ ) and McCain's Intent to Stay Scale ( $p= 0.92$ ) were non-significant. Participants suggested on-site social activities, increasing pay, increasing staff, and awarding accomplishments to improve retention.

**Conclusion:** Mentorship and social events may not be enough to overcome other workplace barriers that impact JE and ITS in the ED setting. Future research efforts are needed to assess the impact of the participant suggestions to improve retention.

## **Acknowledgement**

I would like to express my sincere gratitude to my DNP Advisory Committee members: Dr. Candice Falls (Advisor and Committee Chair), Dr. Sheila Melander, Dr. Patricia K. Howard, and Dr. Katherine Rogers (Mentor) for their encouragement, guidance, and support. I would like to acknowledge the University of Louisville Hospital Emergency Department Leadership Erin Riebel and Alyssa Parra who backed this project wholeheartedly and continuously rooted for me. Finally, I would like to thank the University of Louisville Emergency Department for making this project possible and helping me accomplish my dream of earning a Doctorate in Nursing Practice.

## **Dedication**

To my husband, Daniel:

You believed in me when I didn't believe in myself. I am in awe of your patience, selflessness,  
and unwavering love. I will always bet on us. I love you endlessly!

To my parents, Norman and Deborah Fallot:

Thank you for making it possible to pursue my dream. All that I am is because of you! I hope I  
make you as proud as you make me.

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## **Background and Significance**

### **Problem Statement**

Nurse retention is the most important topic in healthcare as turnover and nursing shortages have caused a crisis (American Nurses Association, 2021). Nurses are the primary providers of direct patient care (American Association of Colleges of Nursing, 2019), comprising 30% of hospital employment nationwide (United States Labor of Statistics, 2020). Nurses play a critical role in health promotion, disease prevention, and delivering primary, community and emergency care (World Health Organization, 2018). Accordingly, retaining nurses is imperative to preserve the integrity of healthcare, however best strategies are uncertain.

### **Context, Scope, and Consequences**

Nurse retention has been considerably impacted by the COVID-19 pandemic (Lavoie-Tremblay et al., 2021). This is reflected by a rise in the national nurse turnover rate to 27.1% as well as an increase in the vacancy rate to 17% (NSI National Health Care Retention and RN Staffing Report, 2022). National surveys report 52% of nurses are considering leaving their positions (American Organization for Nursing Leadership, 2022) and 36% are considering leaving the bedside (American Association of International Healthcare Recruitment, 2021). Similar patterns are mirrored locally. A Kentucky survey found 57% of surveyed nurses are considering leaving their jobs (Kentucky Nurses Association, 2021). The University of Louisville Hospital (ULH), a large Kentucky hospital that employs 917 nurses, turned over 32.7% of its nursing staff from July 2021 to January 2022. In the last five years, the average hospital has alarmingly turned over 100.5% of its workforce with cited reasons including personal reasons, pay, and workload/staffing ratios (KNA, 2021; NSI National Health Care Retention and RN Staffing Report, 2022). Specifically, emergency department (ED) nurses

experienced some of the highest turnover (NSI National Health Care Retention and RN Staffing Report, 2022). Nurse retention will likely continue to suffer as over one million nurses are expected to retire by 2030 (Auerbach et al., 2015; Smiley et al., 2020).

If nurse retention is not addressed patient care will suffer and healthcare costs will increase. Nursing turnover and subsequent poor staffing are related to greater adverse patient events (Cimiotti et al., 2012; Perry et al., 2018; Shang et al., 2019), patient and family dissatisfaction (Bae et al., 2010), poor quality of care (Gillet et al., 2018), and poor outcomes (McHugh et al. 2016), including 30-day mortality (Aiken et al., 2002; Huang et al., 2021; Lasater et al., 2021b; Musy et al., 2021). Research suggests inadequate nurse staffing increases healthcare-associated infections (HAIs) by 15% (Shang et al., 2019). Similarly, length of stay and odds of death increase by 16% with each additional patient assignment beyond recommended nurse-to-patient ratios (Aiken et al., 2010; Lasater et al., 2021b).

### **Cost Implications**

Financial implications of poor nurse retention are impressive. The average cost of turnover for a bedside nurse is \$46,100 and costs hospitals an average of \$7.1 million per year (NSI National Health Care Retention and RN Staffing Report, 2022). For ULH, expected turnover costs could be around \$14 million dollars per year at the current turnover rate of 32.7%. Furthermore, it will cost hospitals upwards of \$46 billion dollars to replace the nearly one million nurses who are expected to retire by 2030 (Auerbach et al., 2015; Smiley et al., 2020).

Adverse outcomes, lengths of stay, and readmissions add to the costs accrued from the nursing shortage. For example, the average cost of an HAI is approximately \$31,000 (Agency for Healthcare Research and Quality, 2017) and the average hospital expense per inpatient day is \$2,800 (Kaiser Family Foundation, 2023). Increased length of stay and avoidable readmissions

due to inadequate nurse staffing was estimated to cost New York hospitals \$720 million (Lasater et al., 2021a) and Illinois hospitals \$117 million (Lasater et al., 2021b).

### **Current Evidence-Based Interventions Targeting the Problem**

Current nurse retention strategies are vast and include mentoring (Coyne et al., 2020; Nei et al., 2015), improving manager leadership style (Halter et al., 2016; Van Osch et al., 2017), improving recognition (Abou Hashish, 2017), promoting shared governance (Kovener et al., 2016), social support (Coyne et al., 2020; Orgambidez-Ramos & Almeida, 2017), and improving workplace relationships and team cohesion (Dilig-Ruiz et al., 2018; Gibbs & Duke, 2021; Nei et al., 2015; Osch et al., 2017). While best strategies are unclear, workplace relationships, team cohesion, and workplace environment are strong themes throughout numerous studies (Brook et al., 2018; Brunges & Foley-Brinza, 2014; Coyne et al., 2020; Dilig-Ruiz et al., 2018; Kester et al., 2021; Krofft & Stuart, 2021; Reinhardt et al., 2020; Van Osch et al., 2018). This is consistent with research that suggests retention is highly influenced by job embeddedness (JE) (Jiang et al., 2012; Kim & Chang, 2013; Lee & Lee, 2022; Mitchell et al., 2001; Reitz et al., 2010; Tyndall and Scott, 2019; Vardaman et al., 2020; Zhao et al., 2012). Job embeddedness refers to “the extent to which people have links to other people or activities; the extent to which their jobs and communities are similar to or fit with the other aspects in their life spaces; and the ease with which links can be broken” (Mitchell et al., 2001, p. 1104). Thus, the “focus is more on the totality of embedding forces that keep a person on the job than the negative attitudes that prompt one to leave” (Holtom & O’Neill, 2004, p. 220).

### **Purpose**

Given the increasing frequency of turnover among nurses, the purpose of this study is to improve current retention efforts through implementation of mentorship and social events to

increase JE and ITS among ED nurses at the ULH. Intervention strategies seek to address nurse retention by strengthening JE and ITS. The specific aims of this study included:

1. To assess JE and ITS in ED nurses through a pre-intervention survey
2. To evaluate the impact of mentorship and social events on JE and ITS through a post-intervention survey
3. To identify factors that may lead to retention

### **Conceptual Framework**

To guide the implementation of the retention intervention, the Iowa Model of Evidence-Based Practice was used (Iowa Model Collaborative, 2017). The Iowa Model consists of seven constructs that “provide guidance for nurses and other clinicians in making decisions about clinical and administrative practices that affect healthcare outcomes” using a “pragmatic multiphase change process and feedback loops” (Melnyk & Fineout-Overholt, 2019, p. 389). The first step was to identify triggering issues/opportunities: nurse retention. The second step was to state the purpose which was to increase JE and ITS among ED nurses. This topic was identified as a priority at ULH due to a high turnover rate of 32.7%. The third step was to form a team that consisted of the ULH ED director and manager and the DNP Committee who helped support the intervention. The fourth step was to perform a literature search, appraise, and synthesize the findings which is detailed in the following section of this paper. The fifth step was to design and pilot the practice change which included a mentorship and social event intervention that is comprehensively addressed in the methods section. The results from this study, including participant feedback, were evaluated to determine significance and guide future efforts to improve nurse retention. The findings from this study can be used to facilitate step six, integrating and sustaining practice change, and step seven, dissemination. In this way, the Iowa

Model provides a framework for this study and supports future revisions to adequately address nurse retention.

## **Synthesis of Evidence in the Literature**

### **PICO Question and Search methods**

Literature relating to interventions that influence job embeddedness was lacking. Therefore, to determine the evidence supporting the use of mentorship and social events as retention strategies for nurses, a review of the literature was conducted using the following PICO question: Among emergency department nurses (**P**), how has the use of mentors and social events (**I**) compared to usual practice (**C**) affected nurse retention (**O**)? This literature search took place in the databases of Cumulative Index to Nursing and Allied Health Literature (CINAHL) and PubMed using the following key words: “emergency nurs\*” AND “mentor\*” OR “support group” OR “social” OR “cohesion” AND “intervent\*” OR “implement\*” AND “turnover” OR “retention” OR “attrition” OR “satisfaction”. Due to poor search results, “emergency” was removed from the search terms and replaced with “nurs\*”. Relevant major headings were selected in CINAHL. Studies included were those in English, academic journals, and published between 2012-2022. Studies excluded were those involving nursing students or nursing faculty. This resulted in 376 articles in CINAHL and 560 articles in PubMed. Ultimately, 12 studies were chosen using a combination of abstract appraisal and an ancestry approach to capture relevant studies.

### **Synthesis and Summary of Evidence**

The 12 studies in this review include four systematic reviews, two quasi-experimental studies, and five quality improvement projects (see Table 1). Two of the studies were pilot studies (Coyne et al., 2020; Rohatinsky et al., 2020). Most studies occurred in acute care

facilities in intensive care, emergency department, medical-surgical, and post anesthesia care. One study took place within a rural community of healthcare workers (Rohatinsky et al., 2019). Novice nurses were the target population of only five studies, otherwise nurses new to the unit or any willing nurses were included. Sample sizes ranged from three to 6,000 nurses. Mentorship was the sole intervention in most studies; however, some studies used a bundled approach of various “healthy work environment” interventions in addition to mentorship and/or socialization (Brunges & Foley-Brinza, 2014; Kester et al., 2021; Sattler et al., 2021). All studies reported improved outcomes and/or retention, but there was no consistency in the use of validated measurement tools. Similarly, there was no consensus on how these interventions should be achieved. Five studies suggested regular mentor-mentee meetings to discuss topics including self-care, communication, peer conflict, team building, and reflective practice; however, frequency and formality were unclear (Coyne et al., 2020; Schroyer et al., 2020; Vergara, 2017; Zhang et al., 2016). Personality compatibility was important when pairing mentees and mentors (Brook et al., 2019; Chen & Lou, 2014; Vergara, 2017). Furthermore, suggested socialization strategies included support groups, outings, and shared meals (Coyne et al., 2020; Kester et al., 2021). Several studies found greater efficacy with the use of multiple interventions (Brook et al., 2019; Brunges & Foley-Brinza, 2014; Lartey et al., 2014). While four studies provided strong evidence supporting the efficacy of these interventions, the remaining studies were moderate to weak in strength indicating the need for more research dedicated to retention interventions.

### **Current State, Desired State, Gaps**

Nurse retention is a nationwide crisis that is poorly addressed in the hospital setting due to its complexity and lack of robust research (Lartey et al., 2014). Despite many retention strategies described in the literature, best strategies remain uncertain. The University of

Louisville Hospital utilizes several evidence-based nurse retention strategies including free undergraduate education for family members of staff, clinical ladder advancement, nurse residency, paid preceptorship, shared governance, and several hospital-wide and unit-based recognition programs including DAISY, employee of the month, “sepsis superhero”, and. “good catch” awards. Despite these efforts, nurse retention remains a significant problem at ULH with an average turnover rate of 32.7%. The retention plan at ULH lacks key aspects including mentorship (Brook et al., 2019; Hoover et al., 2020; Schroyer et al., 2020; Zhang et al., 2016) and socialization opportunities for nurses (Coyne et al., 2020; Kester et al., 2021). The desired state is to improve retention on a single unit by integrating mentorship and social events into the established retention plan with the hope for hospital-wide implementation.

## **Design and Methods**

### **Study Design**

This study utilized a quasi-experimental one group pretest-posttest design to examine the effect of mentorship and social events on JE and ITS among ED nurses at the ULH. At the beginning of the study, participant mentors and mentees were paired by personality type using the Big Five Personality test (see Appendix A) and asked to attend a one-hour weekly event over a six-week period (see Table 2). Social events were held at the midpoint and the end of the study. Mentorship discussion meetings were held the remaining weeks. Quantitative data was collected before and after the intervention using the Global Job Embeddedness Scale (see Appendix B) and McCain’s Intent to Stay Scale (see Appendix C) via electronic surveys. Qualitative data was collected at the end of the study via an open response (see Appendix D) electronic survey that asked participants to share feedback and future suggestions to identify specific factors that influence JE and ITS.



## **Setting**

### ***Agency Description***

The study took place at ULH, an academic medical center distinguished as a Level One Trauma Center and Comprehensive Stroke Center. The University of Louisville Hospital is one of seven hospitals integrated within UofL Health. The ED at ULH encompasses thirty-one treatment rooms and four trauma resuscitation bays, treating more than 60,000 patients annually. Emergency department bedside nurse workforce includes seventy nurses of which a minimum of sixteen nurses are required to fully staff each shift.

### ***Project Congruence***

The mission of UofL Health is to transform the health of the communities they serve through compassionate, innovative, patient-centered care (UofL Health, 2022). The values of UofL Health are education and research, patient-centered care, quality and safety, diversity and inclusion, compassion, and stewardship (UofL Health, 2022). Engaging and nurturing physicians, nurses, and team members is the vision of ULH (UofL Health, 2022). Nurse retention continues to suffer despite a strategic retention plan. This project aimed to contribute to the mission, values, and vision of ULH by attempting to engage and nurture ED nurses through an innovative, evidence-based mentorship and social event intervention, and identify perceived barriers of retention at ULH.

### ***Stakeholders***

Several stakeholders were involved in this project. The DNP project committee consisted of Dr. Candice Falls (Committee Chair), Dr. Sheila Melander and Dr. Patricia K. Howard, (Committee Members), and Dr. Katherine Rogers (Clinical Mentor). Erin Riebel, ULH Emergency Department Director, and Alyssa Parra, ULH Emergency Department Manager,

agreed to support the project implementation and propagate the project information to the ED nurses. Lastly, the participation and engagement of ULH bedside ED nurses was imperative in this project.

### ***Facilitators and Barriers***

Completing this project at the ULH ED had numerous facilitators including departmental leadership support, availability of about 70 ED nurses to participate in the intervention including numerous novices and newly hired nurses, and alignment with the current unit and organizational goal to improve nurse retention. Furthermore, recent Magnet status achievement at ULH supports mentoring as a standard of excellence in nursing practice (American Nurses Credentialing Center, 2023).

The greatest barriers to the implementing this project were nurses' buy-in and off-site participation. Participation in mentorship meetings and social events was voluntary and occurred during the winter holidays which could have influenced participation. To address these barriers, the PI provided the off-site social events at no cost to participants. Additionally, ED nursing leadership and seasoned ED nurse colleagues encouraged study participation.

### **Sample**

A non-probability convenience sample of about 70 staff nurses from the ED were targeted for this study. Inclusion criteria for this study was ED registered nurses who were permanent staff members at ULH. Exclusion criteria includes: 1) non-emergency department nurses, 2) travel nurses, 3) float nurses, 4) nursing students, 5) nurse leadership, and 6) non-nurses.

## **Procedure**

### ***IRB Approval***

Preceding the submission of this project the Institutional Review Board (IRB), a letter of approval was obtained from Erin Riebel, ULH Emergency Department Director, and Alyssa Parra, ULH Emergency Department Manager (see Appendix E). An additional letter of approval for posting study advertisements was obtained from the ULH Emergency Department Director and Manager (see Appendix F). Approval was obtained from the University of Kentucky Medical IRB on October 13, 2022 (see Appendix G). The Office Interdisciplinary Research Oversight Council (IROC) at the University of Louisville issued approval of the study on October 19, 2022 (see Appendix H) and a reliance agreement was issued on October 28, 2022 (see Appendix I). These approvals were obtained prior to study implementation and data collection.

After IRB approval, participants were recruited by study advertisement (see Figure 1) displayed in the staff breakroom and during staff meetings. All participants were consented in-person at ULH ED during shift hours by the principal investigator (Kacie Albertsen). The consent (see Appendix J) form described the study purpose, interventions, and schedule of discussion meetings/social events. The consent clearly stated participation was voluntary and would not affect employment at ULH. Upon consenting, email addresses of participants were collected, and REDCap survey links were sent to collect anonymous pre-intervention data (see Appendix K).

### ***Description of Evidence-based Intervention***

This intervention was developed based on an integrative review of the literature that identified mentorship and social events as effective interventions that improve nurse retention

(Brooke et al., 2019; Hoover et al., 2020; Jones, 2017; Kester et al., 2021; Kroft & Stuart, 2021). Mentorship was facilitated by matching mentors and mentees by personality type (Brook et al., 2019; Chen & Lou, 2014). Four discussion meetings were led by the principal investigator to facilitate meaningful discussion and connection between mentors and mentees. Discussion meetings were informal and included a brief introduction of the topic and several discussion prompts. Discussion topics were derived from the literature review and included the value of mentorship, communication, self-care, and teamwork (Hoover et al., 2020; Schroyer et al., 2020; Zhang et al., 2016). Additionally, two social events were held including a brunch and a bowling night (Coyné et al., 2020; Kester et al., 2021) to facilitate relationship building. Post-intervention, participants were emailed a REDCap survey link to complete anonymous post-surveys (see Appendix L). Demographic information including age, race, gender, nursing education, years of nursing experience, and relationship status was obtained from all participants (see Appendix M).

### ***Measures and Instruments***

Personality type was assessed using the Big 5 Personality Test (Appendix), a validated and reliable 50 item self-report inventory (Cohen et al., 2015; Goldberg, 1992; Converse et al., 2018). This questionnaire utilizes a 5-point Likert scale with values ranging from 1 (“disagree”) to 5 (“agree”). Responses are summed using an algorithm. Calculations are between zero and forty with higher scores indicating more dominant personality traits.

Intent to stay was measured using the McCain’s Intent to Stay Scale, a validated and reliable subscale of McCain’s Behavioral Commitment Scale (AbuAlRub, 2010; Al-Hamdan et al., 2017; McCloskey, 1990) consisting of five items rated on a 5-point Likert scale, ranging

from 1 (“strongly disagree”) to 5 (“strongly agree”). Results are summed and divided by the number of items in the survey. A higher score indicates a higher intent to stay.

Job embeddedness was measured using the Global Job Embeddedness Scale (GJES), a validated and reliable scale consisting of seven items rated on a 5-point Likert scale, ranging from 1 (“strongly disagree”) to 5 (“strongly agree”) (Crossley et al., 2007; Sun et al., 2011; Zhao et al., 2013). Results are summed for a total score. Higher total scores indicate a higher job embeddedness. Permission to use this scale was obtain from Dr. Craig Crossley prior to the study (see Appendix N).

Additionally, an “Open Response” was included in the post-intervention survey. This provided an opportunity for participants to provide feedback and future suggestions to identify key factors that may influence JE, ITS, and nurse retention. Themes from the responses were analyzed by the principal investigator (see Table 5).

### ***Data Collection***

Data was collected pre- and post-intervention utilizing REDCap, a secure web-based application for building and managing online surveys available through the University of Kentucky. Survey links were sent to consented participants’ email addresses. Separate links were sent for pre- and post-surveys. A separate link to The Big Five Personality Type survey was included in addition to the pre-survey links. The link to the personality survey included an identifier to facilitate mentor pair matching by personality type. The other survey links were anonymous.

Pre-intervention surveys included demographic information, Big Five Personality Type, McCain’s Intent to Stay, and Global Job Embeddedness Scale. Pre-intervention survey links were available to participants from November 21, 2022, to November 30, 2022. After the six-

week intervention, post-interventions surveys were emailed participants via REDCap survey link for anonymous completion. The post-intervention surveys were available from January 6, 2023, to January 20, 2023.

### ***Data Analysis***

Descriptive statistics were used to analyze the sample's demographic distribution, including means with standard deviations and frequencies with percentages. Inferential statistics using paired t-tests was used to analyze differences in ITS and JE before and after the intervention. All statistical data was analyzed using SPSS software with an alpha of .05. The principal investigator analyzed open response answers by theme.

### **Results**

A total of twenty-six ED nurses completed the demographic pre-survey. The majority were under age 30 (56.5%; see Table 3), Caucasian (84.6%), and female (92.3%). Most had a Bachelor of Science in Nursing (65.4%). More than one-half had less than three years of nursing experience (53.9%). Most were unmarried (65.3%).

Eighteen of the 26 participants answered the post surveys (see Table 4). Based on a potential range of 1-5, mean ITS scores on the pre-survey were 3.19 (SD=0.53) compared to a mean of 3.21 (SD=0.78) in the post, which was not significant ( $p=.92$ ). Based on a potential range of 5-30, mean JE scores on the pre-survey were 18 (SD=4.62) and 19.9 (SD=5.02) in the post, which was not significant ( $p=0.19$ ).

Only two participants provided feedback in the open response post-survey (see Table 5). One participant found it difficult to meet outside of work and suggested providing activities while at work. Other suggestions included increasing pay, adding more part-time and as-needed positions, and providing awards for small accomplishments.

## Discussion

The purpose of this study was to determine the effects of mentorship and social events on JE and ITS, which are indicative of retention. The results from this project found that mentorship and social events did not significantly increase JE and ITS in ED nurses as expected. This is not consistent with prior studies that found mentorship and social events increased retention (Hoover et al., 2020; Kester et al., 2021; Sattler et al., 2021; Rohatinsky et al.; 2019; Vergara, 2017; Van Osch et al., 2017). There are several potential causes of these findings. First, the timeframe of this study was six-weeks whereas prior studies occurred over three months to one year (Brook et al., 2019; Chen & Lou, 2014; Hoover et al., 2020; Jones, 2017; Kester et al., 2021; Vergara, 2017). Another potential cause of these results may be related to the type and timing of social events that were chosen by the PI. Social events in previous studies were chosen by staff and included potluck lunches, softball tournaments, parties, afterhours happy hours, and annual retreats (Brunges & Foley-Brinza, 2014; Kester et al., 2021; Ketih et al., 2021). Feedback from one participant indicated meeting outside of work for social events was a barrier. This study took place during the winter holiday months, and participation could have been an added burden to other participants preventing participation. Barriers to scheduling is cited in several studies (Schroyer et al., 2016; Wittenberg-Lyles et al., 2014; Zhang et al. 2015), but research addressing this is lacking (Zhang et al. 2015). Finally, mentors were not formally trained to provide mentorship to mentees as in prior studies which may have made a more significant impact (Chen & Lou, 2014; Rohatinsky et al., 2020; Schroyer et al., 2020; Vergara. 2017; Zhang et al., 2016).

Despite these findings, off-site social events continue to be organized by the ED Caucus at the request of several participants who enjoyed meeting outside of work during this study. This may suggest that this population values co-worker relationships. This could also indicate

healthy relationships between co-workers within this population. Low JE and ITS means from this study support the urgent need for more research that focuses on interventions aimed at addressing nurse retention.

Participant feedback provided several suggestions that may improve JE and ITS in ED nurses at ULH including increasing recognition, pay, and staffing. These findings are consistent with themes in prior studies that indicate healthy work environments (Abou Hashish, 2017; Brunges & Foley-Brinza, 2014; Fan et al., 2016; Brooke et al., 2019; Kelly & Lefton, 2017; Kester et al., 2021; Perry et al., 2018; Ulrich et al., 2022; Wei et al., 2018) and organizational culture (Goyal & Kaur, 2023) increase nurse retention. Research conducted by the American Association of Critical Care Nurses (2016) suggests six essential standards for a healthy work environment which include: communication, true collaboration, effective decision making, appropriate staffing, meaningful recognition, and authentic leadership. Similar themes are also endorsed by the American Organization for Nursing Leadership (2019a). More specifically, participant feedback aligns with the following themes that are known to influence retention and engagement of millennial nurses: professional relationships, rewards, communication, professional development, and workload/staffing (Keith et al., 2021; Waltz et al., 2020). Notably, while compensation is known to influence ITS in millennials (Keith et al., 2021), it is unclear if this variable influences JE or engagement. Research suggests meaningful recognition may be perceived by nurses as reasonable compensation (Keith et al., 2021; Leger et al., 2021; Sweeney & Wiseman, 2023). Regardless, research suggests millennial turnover may be prevented by efforts to create a healthy, supported, and team-oriented work environment (McCain et al., 2022). This is important as most participants in this study were younger than age 30 and had three years or less of nursing experience. Research has found the greatest amount of



turnover occurs in new nurses and nurses with less than five years of tenure (Brooke et al., 2019; NSI National Health Care Retention and RN Staffing Report, 2022; Schroyer et al., 2019; Waltz et al., 2020).

Evidence-based interventions that address participant feedback and increase engagement and ITS in millennial nurses include utilizing an open forum to discuss established recognition programs, rewarding years of service with plaques and pins, publicly acknowledging individual accomplishments in newsletters, pay increases for professional certifications, raises and bonuses, competitive increases in paid-time-off accrual for tenured nurses, education and certification reimbursements, financial compensation for nurse mentors, coffee/movie ticket for outstanding patient care, and making recognition a core value (Brunges & Foley-Brinza, 2014; Keith et al., 2021; Kester et al., 2021; Waltz et al. 2020). Participant feedback in this study indicates critical areas in need of improvement in the ED at ULH. These findings suggest mentorship and social events may not be enough to overcome other workplace barriers that impact JE and ITS in the ED setting.

### **Implications for Practice, Education, Policy, and Research**

Despite mentorship, social events, and several hospital wide retention strategies in place prior to this study, low pre- and post-intervention JE and ITS in ED nurses suggest ULH will continue to have poor retention. Leaders must recognize the site-specific barriers reported by their nursing staff and modify interventions to effectively address retention in ED nurses at ULH. Feasible and sustainable participant suggestions include on-site social events and providing more frequent unit-based recognition which could be added to the current retention strategy at ULH. Meeting on-site could capture ED nurses who are unable or unwilling to meet outside of work, which was a cited barrier of a participant in this study as well as a cited barrier found in literature

(Schroyer et al., 2016; Wittenburg-Lyles et al., 2014; Zhang et al., 2015). Successful on-site social interventions reported in the literature include meals, after shift “happy hours”, and ice-cream socials (Brunges & Foley-Brinza, 2014; Keith et al., 2021; Kester et al., 2021). Cultivating group cohesion and building relationships is imperative to the engagement and retention of millennial nurses (Keith et al., 2021; McCain et al., 2022; Waltz et al., 2020).

Additionally, the literature supports several strategies to improve recognition including verbal acknowledgement, written acknowledgement of complimentary patient evaluations and remembrance of special days, and publicly awarding outstanding job performance (Abou Hashish, 2017; Kester et al., 2021; Tang & Hudson, 2019). Engagement activities support positive organizational culture and retention (Goyal & Kaur, 2023). Facilitating nurse led committees that focus on continuous improvement of these issues supports nurses’ sense of ownership within the unit (Burnges & Foley-Brinza, 2014; Kester et al., 2021). Furthermore, it is imperative to establish a retention goal (NSI National Health Care Retention and RN Staffing Report, 2022).

Participant suggestions that may be more challenging to address include increasing pay and increasing staff members. Inadequate pay and lack of sufficient staff are cited as barriers to retention by nurses in a Kentucky-wide survey (KNA, 2021) and in many studies (Dilig-Ruiz et al., 2018; Gillet et al., 2017; Marufu et al., 2020; Relias, 2022). The University of Louisville Hospital should strongly consider increasing nurse compensation. Nurse pay at this facility is not competitive. For example, new nurses at ULH start at \$27 per hour and the average nurse in Kentucky earns \$32.34 (Becker’s Hospital Review, 2022a). Moreover, with the recent removal of “incentive pay” (pay in place to compensate staff picking up extra shifts that were short-

staffed), nurse retention and staffing at ULH will likely worsen. Competitive pay could incentivize nurse retention and recruitment at ULH.

There are several federal and state policies aimed at increasing the nursing workforce and improving nurse retention. At the Federal level, the American Association of Colleges of Nurses (AACN) is advocating for the Future Advancement of Academic Nursing Act (S.246/H.R. 851) which proposes \$1 billion in funding for the education of nurses, nurse faculty payment, and the improvement in the nursing payment structure. In response to the critical nursing shortage in Kentucky, Senate Bill 10 was emergently passed in 2022 to improve out-of-state nurse practice reciprocity, expand class sizes in successful nursing programs, and broaden qualifications for nursing instructors. Utilizing travel nurses to fulfill staffing needs is expensive as the average weekly pay is around \$3,200 per travel nurse (Becker's Hospital Review, 2022b), and it will take years to graduate new nurses. Perhaps the most well-known advancement in addressing the nursing shortage was the passage of AB 394 and implementation of mandatory nurse-to-patient ratios in California. Ratios were set for specific hospital units by the state Department of Health Services (DHS) which resulted in lower patient mortality and "nurse outcomes predictive of better nurse retention" (Aiken et al., 2010, p. 904). In 2014, Massachusetts also implemented mandatory nurse-to-patient ratios with the passage of House Bill 4228. Other states including Illinois, New Jersey, New York, Rhode Island, and Vermont have followed similar suit with implementation of mandatory disclosure and reporting of staff ratios in efforts of transparency (Davidson, 2022). Policy change at this level often takes years and will likely be difficult to attain in Kentucky without significant results from methodical and rigorous research studies at the state level.

Future research should assess the impact of the participant suggestions on JE and ITS in a longitudinal design. Implementing mentorship programs that last six months to one year with more on-site social events and nurse recognition may have a more significant impact on JE and ITS in this population (Brook et al., 2019; Chen & Lou, 2014; Hoover et al., 2020; Jones, 2017; Kester et al., 2021; Vergara, 2017). A power-analysis should be conducted to determine sufficient sample size prior to implementation.

Future studies should also focus on the perceived barriers of the participants. A structured format in addition to an open response opportunity should be used to evaluate barriers in future studies (Twigg & McCullough, 2014). Surveys were successfully used to assess barriers to nurse retention in several studies (KNA, 2021; NSI National Health Care Retention and RN Staffing Report, 2022). Utilizing the AACN Healthy Work Environment Assessment Tool could illuminate areas of improvement on the organizational and unit level (Connor et al., 2018). A survey format should also be utilized to assess participant preferences regarding on-site social events, recognition, and scheduling of events prior to study implementation.

Additionally, mentorship programs should be implemented on several units to improve significance of results and inferences. Training for mentors should be considered in future studies which may improve the value of this intervention (Chen & Lou, 2014; Rohatinsky et al., 2020; Schroyer et al., 2020; Vergara, 2017; Zhang et al., 2016), and participation in the interventions should be monitored. Finally, pre- and post-survey results should be matched to assess changes among population subgroups.

### **Limitations**

There are several limitations to this study related to sample size, design, and data collection. First, the sample size was small, demographically homogenous, and taken from a

convenience sample in a single unit. These factors limit generalizability and could bias the sample. Second, the study was voluntary and participation in discussion meetings and social events was not tracked. Participants could have completed pre- and post-surveys without participating in the interventions which limits the strength of the results. This study was conducted in the ED where the primary investigator works as a bedside nurse which may also bias participation. Additionally, this study took place over six weeks and did not measure changes in ED nurse retention but instead measured JE and ITS, which are indicators of retention. Finally, pre- and post-surveys were manually entered into REDCap, and one question from the Global Job Embeddedness scale was inadvertently omitted. The omitted question was, “It would be easy for me to leave this organization”. This could have altered results. Data was analyzed in aggregate which could conceal differences between and among subgroups.

### **Conclusion**

In conclusion, nurse retention continues to suffer years after the effects of the COVID-19 pandemic. Nurses are essential to the safety of patients and their outcomes (Huang et al., 2021; Gillet et al., 2018; Perry et al., 2018); however, personal reasons, retirement, and other workplace variables remain a threat to retention (NSI National Health Care Retention and RN Staffing Report, 2022). Despite a robust retention strategy, ULH continues to experience poor nurse retention. Current literature suggests JE significantly impacts retention (Lee & Lee, 2022; Mitchell et al., 2001; Tyndall and Scott, 2019; Vardaman et al., 2020). As such, evidence-based mentorship and social events were implemented in the ED at ULH.

The findings from this study suggest that mentorship and social events may not be enough to overcome other workplace barriers that impact JE and ITS in the ED setting. Themes from participant feedback suggested the lack of a healthy work environment which may indicate

a poor organizational culture (Goyal & Kaur, 2023). Future research should be longitudinal and focus on the impact of participant suggestions. A comprehensive and dynamic approach tailored to site-specific barriers of retention is likely needed to make an impact on this complex and costly issue.

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**Table 1: Literature Review**

<b>Study</b>	<b>Intervention</b>	<b>Turnover</b>	<b>Retention</b>	<b>Intent to Stay</b>
<b>Brooke et al., 2018</b> Level V	Mentorship/Preceptorship	↓ <sup>c</sup>	↑ <sup>c</sup>	NE
<b>Brunges &amp; Foley-Brinza 2014</b> Level VI	HWE (mentorship and social events)	↓ <sup>c</sup>	↑ <sup>c</sup>	NE
<b>Chen &amp; Lou, 2014</b> Level V	Mentorship	↓ <sup>a</sup>	NE	NE
<b>Coyne et al., 2019</b> Level VI	Mentorship	↓ <sup>c</sup>	↑ <sup>c</sup>	NE
<b>Kester et al., 2021</b> Level VI	HWE (social events)	Stable <sup>c</sup>	↑ <sup>c</sup>	NE
<b>Krofft &amp; Stuart, 2021</b> Level VI	Mentorship	NE	NE	Stable <sup>c</sup>
<b>Lartey et al., 2014</b> Level V	Mentorship, teamwork, use of multiple interventions	↓ <sup>a</sup>	↑ <sup>c</sup>	NE
<b>Rohatinsky et al., 2019</b> Level VI	Mentorship	NE	NE	↑ <sup>c</sup>
<b>Sattler et al., 2021</b> Level VI	Mentorship, use of multiple interventions	↓ <sup>c</sup>	↑ <sup>c</sup>	NE
<b>Schroyer et al., 2020</b> Level VI	Mentorship	NE	↑ <sup>a</sup>	NE
<b>Vergara, 2017</b> Level VI	Mentorship	↓ <sup>c</sup>	NE	NE
<b>Zhang et al., 2016</b> Level V	Mentorship	↓ <sup>a</sup>	NE	NE

**LEGEND: ↑ = INCREASED, ↓ = DECREASED, NE = Not Evaluated**

**<sup>a</sup> statistically significant finding; <sup>b</sup> non-statistically significant findings; <sup>c</sup> statistical significance not reported**

**Table 2: Intervention Schedule**

Timepoint	Activity	Discussion Topic	Location
Screening to see if you qualify	Enrollment and Informed Consent	N/A	ULH Emergency Department Conference Room
Begin Study	Pre-surveys (1 week to complete)		Online Surveys
Week 1	Discussion Meeting	Value of Mentorship	ULH Emergency Department Conference Room
Week 2	Discussion Meeting	Communication	ULH Emergency Department Conference Room
Week 3	Brunch	N/A	Waffle House
Week 4	Discussion Meeting	Self-Care	ULH Emergency Department Conference Room
Week 5	Discussion Meeting	Teamwork	ULH Emergency Department Conference Room
Week 6	Bowling	N/A	Ten Pin Strike and Spare Bowling Alley
End Study	Post-Surveys (2 weeks to complete)	N/A	Online Surveys

**Table 3. Summary of Demographic Characteristics (N = 26)**

	<i>n (%)</i>
Age	
20-25	8 (34.8%)
26-30	5 (21.7%)
31-35	4 (17.4%)
36-40	2 (8.7%)
41-45	2 (8.7%)
46-50	1 (4.3%)
56-60	1 (4.3%)
Race	
African American	2 (7.7%)
Asian	2 (7.7%)
Caucasian	22 (84.6%)
Gender	
Female	24 (92.3%)
Male	2 (7.7%)
Nursing Education	
Associates Degree in Nursing	6 (23.1%)
Bachelor of Science in Nursing	17 (65.4%)
Masters Degree in Nursing	3 (11.5%)
Years of Nursing Experience	
6 months-1 year	6 (23.1%)
>1 year-3 years	8 (30.8%)
4-5 years	4 (15.4%)
6-10 years	3 (11.5%)
11+ years	5 (19.2%)
Relationship Status	
Single	15 (57.7%)
Married	9 (34.6%)
Divorced	1 (3.8%)
Other	1 (3.8%)



**Table 4. Comparison of Intent to Stay and Job Embeddedness Pre- and Post-intervention**

	Potential range	Pre-intervention ( <i>n</i> = 26) <i>Mean</i> (SD)	Post-intervention ( <i>n</i> = 18) <i>Mean</i> (SD)	<i>p</i>
Intent to stay	1-5	3.19 (0.53)	3.21 (0.78)	.92
Job embeddedness	5-30	18 (4.62)	19.9 (5.02)	.19

**Table 5. Open Response Feedback**

<b>Participant 1</b>	“The base pay should be increased and more PRN/PT RN positions for this organizations”
<b>Participant 2</b>	“trying to do activities outside of work is hard, especially for me as I have kids and other duties. I suggest providing things that can be accomplished while here. Maybe find things we have in common, like do lovers vs cat lovers. Give us info about our coworkers that we dont know like who has been here the longest, who has the most kids. Random facts about us. Make games for us to challenge each other while here, like turnovers, or IV placements. Give out awards for random accomplishments, things that are funny. Help us have fun and connect.”

Figure 1: Study Advertisement

**Mentorship,  
Brunch, and  
Bowling**

A Research Study

**Searching for Mentors and Mentees!**

This is a 6-week study that seeks to improve emergency department nurse retention at ULH through mentorship and social events. Make meaningful relationships and have fun!

**Details:**

- Match with a mentor/mentee
- 1 Hour weekly discussion meetings
- Free Brunch & Bowling Night

Available to all permanently employed ULH emergency department staff nurses!

Contact: Kacie Albertsen BSN, RN, TCRN, CEN  
University of Kentucky AGACNP-DNP Student  
Phone: 502.593.3666  
Email: KLFA226@UKY.EDU

## Appendix A: The Big Five Personality Test

(Public Domain)

### Introduction

This is a personality test, it will help you understand why you act the way that you do and how your personality is structured. Please follow the instructions below, scoring and results are on the next page.

### Instructions

In the table below, for each statement 1-50 mark how much you agree with on the scale 1-5, where 1=disagree, 2=slightly disagree, 3=neutral, 4=slightly agree and 5=agree, in the box to the left of it.

### Test

Rating	I...	Rating	I....
	1. Am the life of the party.		26. Have little to say.
	2. Feel little concern for others.		27. Have a soft heart.
	3. Am always prepared.		28. Often forget to put things back in their proper place.
	4. Get stressed out easily.		29. Get upset easily.
	5. Have a rich vocabulary.		30. Do not have a good imagination.
	6. Don't talk a lot.		31. Talk to a lot of different people at parties.
	7. Am interested in people.		32. Am not really interested in others.
	8. Leave my belongings around.		33. Like order.
	9. Am relaxed most of the time.		34. Change my mood a lot.
	10. Have difficulty understanding abstract ideas.		35. Am quick to understand things.
	11. Feel comfortable around people.		36. Don't like to draw attention to myself.
	12. Insult people.		37. Take time out for others.
	13. Pay attention to details.		38. Shirk my duties.
	14. Worry about things.		39. Have frequent mood swings.
	15. Have a vivid imagination.		40. Use difficult words.
	16. Keep in the background.		41. Don't mind being the center of attention.
	17. Sympathize with others' feelings.		42. Feel others' emotions.
	18. Make a mess of things.		43. Follow a schedule.
	19. Seldom feel blue.		44. Get irritated easily.
	20. Am not interested in abstract ideas.		45. Spend time reflecting on things.
	21. Start conversations.		46. Am quiet around strangers.
	22. Am not interested in other people's problems.		47. Make people feel at ease.
	23. Get chores done right away.		48. Am exacting in my work.
	24. Am easily disturbed.		49. Often feel blue.
	25. Have excellent ideas.		50. Am full of ideas.

$$\begin{aligned}
E &= 20 + (1) \text{ \_\_\_\_} - (6) \text{ \_\_\_\_} + (11) \text{ \_\_\_\_} - (16) \text{ \_\_\_\_} + (21) \text{ \_\_\_\_} - (26) \text{ \_\_\_\_} + (31) \text{ \_\_\_\_} - (36) \text{ \_\_\_\_} + (41) \text{ \_\_\_\_} - (46) \text{ \_\_\_\_} = \text{ \_\_\_\_} \\
A &= 14 - (2) \text{ \_\_\_\_} + (7) \text{ \_\_\_\_} - (12) \text{ \_\_\_\_} + (17) \text{ \_\_\_\_} - (22) \text{ \_\_\_\_} + (27) \text{ \_\_\_\_} - (32) \text{ \_\_\_\_} + (37) \text{ \_\_\_\_} + (42) \text{ \_\_\_\_} + (47) \text{ \_\_\_\_} = \text{ \_\_\_\_} \\
C &= 14 + (3) \text{ \_\_\_\_} - (8) \text{ \_\_\_\_} + (13) \text{ \_\_\_\_} - (18) \text{ \_\_\_\_} + (23) \text{ \_\_\_\_} - (28) \text{ \_\_\_\_} + (33) \text{ \_\_\_\_} - (38) \text{ \_\_\_\_} + (43) \text{ \_\_\_\_} + (48) \text{ \_\_\_\_} = \text{ \_\_\_\_} \\
N &= 38 - (4) \text{ \_\_\_\_} + (9) \text{ \_\_\_\_} - (14) \text{ \_\_\_\_} + (19) \text{ \_\_\_\_} - (24) \text{ \_\_\_\_} - (29) \text{ \_\_\_\_} - (34) \text{ \_\_\_\_} - (39) \text{ \_\_\_\_} - (44) \text{ \_\_\_\_} - (49) \text{ \_\_\_\_} = \text{ \_\_\_\_} \\
O &= 8 + (5) \text{ \_\_\_\_} - (10) \text{ \_\_\_\_} + (15) \text{ \_\_\_\_} - (20) \text{ \_\_\_\_} + (25) \text{ \_\_\_\_} - (30) \text{ \_\_\_\_} + (35) \text{ \_\_\_\_} + (40) \text{ \_\_\_\_} + (45) \text{ \_\_\_\_} + (50) \text{ \_\_\_\_} = \text{ \_\_\_\_}
\end{aligned}$$

The scores you calculate should be between zero and forty. Below is a description of each trait.

- **Extroversion (E)** is the personality trait of seeking fulfillment from sources outside the self or in community. High scorers tend to be very social while low scorers prefer to work on their projects alone.
- **Agreeableness (A)** reflects much individuals adjust their behavior to suit others. High scorers are typically polite and like people. Low scorers tend to 'tell it like it is'.
- **Conscientiousness (C)** is the personality trait of being honest and hardworking. High scorers tend to follow rules and prefer clean homes. Low scorers may be messy and cheat others.
- **Neuroticism (N)** is the personality trait of being emotional.
- **Openness to Experience (O)** is the personality trait of seeking new experience and intellectual pursuits. High scores may day dream a lot. Low scorers may be very down to earth.

## Appendix B: Global Job Embeddedness Scale

(Used with Permission)

Please indicate the degree of your agreement or disagreement with each statement by checking a number from 1 to 5 using the scale below.

*1 = strongly disagree; 2 = disagree; 3 = neutral; 4 = agree; 5 = strongly agree*

- |   |   |   |   |   |   |
|---|---|---|---|---|---|
| 1. I feel attached to this organization.                      | 1 | 2 | 3 | 4 | 5 |
| 2. It would be difficult for me to leave this organization.   | 1 | 2 | 3 | 4 | 5 |
| 3. I'm too caught up in this organization to leave.           | 1 | 2 | 3 | 4 | 5 |
| 4. I feel tied to this organization.                          | 1 | 2 | 3 | 4 | 5 |
| 5. I simply could not leave the organization that I work for. | 1 | 2 | 3 | 4 | 5 |
| 6. I am tightly connected to this organization.               | 1 | 2 | 3 | 4 | 5 |

## Appendix C: McCain's Intent to Stay Scale

(Public Domain)

**Scoring:** Each item is scored from 1 “strongly disagree” to 5 “strongly agree”. Scores are summed and divided by the number of items to attain a mean. A higher score indicated higher intent to stay.

**Directions:** Please circle the number that best reflects your response to each statement.

ITEMS	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
1. I plan to work at my present job for as long as possible.	5	4	3	2	1
2. I will probably spend the rest of my career in this job or the jobs that it leads to in this hospital.	5	4	3	2	1
3. Even if this job does not meet all my expectations, I will not quit.	5	4	3	2	1
4. Under no circumstances would I leave my present job.	5	4	3	2	1
5. I plan to keep this job for at least two or three years.	5	4	3	2	1

## **Appendix D: Open Response**

In the space provided below, please provide your suggestions, comments, and/or concerns regarding nurse retention and how it may be improved. Please note this portion is optional:



## Appendix E: Leader Support



June 30, 2022

To whom it may concern,

I am writing this letter in support of Kacie Albertsen and her 6- week mentorship study that she would like to implement in the emergency department at University of Louisville hospital. Nursing retention, burnout, and staffing shortages have become increasingly problematic in the emergency department. As a leader, strategies to retain employees have become priority and are more challenging today than ever.

The stress in the emergency department makes nursing retention difficult. The chaotic environment, increasing patient demands, and insufficient staffing is among many reasons that nurses choose to leave. A mentor program could allow for staff to build relationships and have increase support to develop coping mechanisms to better deal with the daily stress.

We look forward to watching her study flourish in the emergency department and she has full support from the leadership team. If you have any questions or concerns, please reach out to us at your convenience.

Sincerely,

*Erin Riebel*  
*ED Director*  
*Erin.riebel@uoflhealth.org*  
*502-599-5388*

*Alyssa Parra*  
*ED Nurse Manager*  
*Alyssa.parra@uoflhealth.org*  
*606-205-0781*

## Appendix F: Advertisement Support



July 22, 2022

To Whom it May Concern,

I am writing a letter of support for Kacie Albertsen to advertise her study in the emergency department at University of Louisville hospital. The emergency department is a high area of nursing burn-out and staffing shortages and believe her study will flourish. If you have any additional questions and concerns, please do not hesitate to reach out.

Sincerely,

*Erin Riebel*

*ED Director*

*[Erin.riebel@uoflhealth.org](mailto:Erin.riebel@uoflhealth.org)*

*502-599-5388*

*Alyssa Parra*

*ED Nurse Manager*

*[Alyssa.parra@uoflhealth.org](mailto:Alyssa.parra@uoflhealth.org)*

*606-205-0781*



## Appendix H: University of Louisville IROC Approval



October 19, 2022

Re: The Effect of Mentorship and Social Events on Emergency Department Nurse Retention

Dear Kacie Albertsen,

On October 18, 2022, the Interdisciplinary Research Oversight Council (IROC) completed a scientific review of your proposed study. The committee members determined that there were no threats to internal and external validity of the study, and that the study had the potential to advance scientific knowledge in the field. In addition, the study does not appear to have an adverse operational or financial impact on any nursing unit. As a means of follow-up, the IROC would appreciate an update on your progress the last month of each quarter at their monthly business meeting.

University of Louisville IRB submission for review is not necessary due to your submission to the University of Kentucky IRB as noted in the reliance agreement.

**Please note that data collection at UofL Health cannot begin until all approvals have been received.**

Thank you for advancing the nursing research enterprise at UofL Health.

Sincerely,

*Adam Booth, PhD, RN*

Adam Booth, PhD, RN  
Member, Interdisciplinary Research Oversight Council  
Evidence Based Practice Coordinator  
University of Louisville Hospital  
(502) 439-1861  
[adam.booth@uofhealth.org](mailto:adam.booth@uofhealth.org)

cc: [research@uofhealth.org](mailto:research@uofhealth.org), Kathy Larsen

## Appendix I: Reliance Agreement

### Institutional Review Board (IRB)/Independent Ethics Committee (IEC) Authorization Agreement

Name of Institution or Organization Providing IRB Review (Institution/Organization A):

University of Kentucky

IRB Registration #: IRB00000423 U Kentucky IRB #1: IRB00000424 U Kentucky IRB #2:

IRB00000977 U Kentucky IRB #3: IRB00005975 U Kentucky IRB #6

Federalwide Assurance (FWA) #, if any: FWA00005295

Name of Institution Relying on the Designated IRB (Institution B): UofL Health- UofL Hospital

FWA #: FWA00002163

The Officials signing below agree that UofL Health- UofL Hospital dba University Medical Center, Inc may rely on the designated IRB for review and continuing oversight of its human subjects research described below:

(check one)

This agreement applies to all human subjects research covered by Institution B's FWA.

This agreement is limited to the following specific protocol(s):

Name of Research Project: "The Effect of Mentorship and Social Events on Emergency Department Nurse Job Embeddedness" IRB# 80204

Name of Principal Investigator: Kacie Albertsen, BSN RN,

Sponsor or Funding Agency:      Award Number, if any:

Other (describe): \_\_\_\_\_

The review performed by the designated IRB will meet the human subject protection requirements of Institution B's OHRP-approved FWA. The IRB at Institution/Organization A will follow written procedures for reporting its findings and actions to appropriate officials at Institution B. Relevant minutes of IRB meetings will be made available to Institution B upon request. Institution B remains responsible for ensuring compliance with the IRB's determinations and with the Terms of its OHRP-approved FWA. This document must be kept on file by both parties and provided to OHRP upon request.

Signature of Signatory Official (Institution/Organization A):

**Lisa Cassis**

Digitally signed by Lisa Cassis  
Date: 2022.11.03  
14:30:18 -04'00'

Date: 11/3/2022

Print Full Name:  Lisa A. Cassis, Ph.D.  Institutional Title:  Vice President for Research

Signature of Signatory Official (Institution B):



Date: 10/28/2022

Print Full Name:  Kenneth P Marshall  Institutional Title:  COO

## Appendix J: Consent

IRB Approval  
10/13/2022  
IRB # 80204  
IRB3



### Consent to Participate in a Research Study

#### KEY INFORMATION FOR THE EFFECT OF MENTORSHIP AND SOCIAL EVENTS ON EMERGENCY DEPARTMENT JOB EMBEDDEDNESS AND INTENT TO STAY

We are asking you to choose whether or not to volunteer for a research study about the effects of mentorship and social events on emergency department job embeddedness and intent to stay. Research suggests that both factors are related to nurse retention. We are asking you because you are an emergency department registered nurse that is permanently employed at the University of Louisville Hospital (ULH). This page is to give you key information to help you decide whether to participate. We have included detailed information after this page. Ask the research team questions. If you have questions later, the contact information for the research investigator in charge of the study is below.

#### WHAT IS THE STUDY ABOUT AND HOW LONG WILL IT LAST?

By doing this study, we hope to learn more about how participation in mentorship and social events with peers effect job embeddedness and intent to stay. Only nurses who are permanently employed in the emergency department at ULH will qualify to be in the study. If you qualify and agree to participate, you will be asked to take several short surveys and will be matched with a mentor/mentee by personality type and years of nursing experience. Prior to the beginning of the study, you will be asked to complete the following four surveys: Demographic, Big Five Personality Type Survey, McCain's Intent to Stay, and Global Job Embeddedness. You will be matched with a mentor/mentee based upon personality type and years of nursing experience. You will be asked to attend four weekly meetings lead by the primary investigator that seek to stimulate meaningful discussions between mentor/mentee. These meetings will encourage discussion about various topics and will last one hour. Additionally, a free brunch and a bowling night will be provided. The brunch will occur during week three and the bowling night will occur during week six. You will be asked to fill out three short surveys at the end of the study which include the following: McCain's Intent to Stay, Global Job Embeddedness, and an Open Response. All survey responses are anonymous except the Big Five Personality Type survey. The full program is described in the Detailed Consent. This study will take place over six weeks. Your participation in this research will last about 6 hours.

#### WHAT ARE KEY REASONS YOU MIGHT CHOOSE TO VOLUNTEER FOR THIS STUDY?

This study may help to create meaningful relationships with co-workers and build teamwork. Additionally, some participants appreciate knowing they have contributed to research that may benefit others in the future. You can withdraw from the study at any time. For a complete description of benefits, refer to the Detailed Consent.

#### WHAT ARE KEY REASONS YOU MIGHT CHOOSE NOT TO VOLUNTEER FOR THIS STUDY?

There is a possibility that some of the discussion topics will make you feel uncomfortable. If some questions do upset you, we can tell you about some people who may be able to help you with these feelings. For a list of resources, refer to the Detailed Consent. If you do not wish to participate in this study, ULH offers several other programs that aim to improve retention. For a complete description of alternate programs, refer to the Detailed Consent and/or Appendix.

#### DO YOU HAVE TO TAKE PART IN THE STUDY?

If you decide to take part in the study, it should be because you really want to volunteer. You will not lose any services, benefits or rights you would normally have if you choose not to volunteer. As an employee, if you decide not to take part in this study, your choice will have no effect on your job status or job duties.

#### WHAT IF YOU HAVE QUESTIONS, SUGGESTIONS OR CONCERNS?

If you have questions, suggestions, or concerns regarding this study or you want to withdraw from the study contact Kacie L. Albertsen (Principal Investigator) of the University of Kentucky, College of Nursing at 502-593-3666. If you have any concerns or questions about your rights as a volunteer in this research, contact staff in the University of Kentucky (UK) Office of Research Integrity (ORI) between the business hours of 8am and 5pm EST, Monday-Friday at 859-257-9428 or toll free at 1-866-400-9428.

**DETAILED CONSENT:****ARE THERE REASONS WHY YOU WOULD NOT QUALIFY FOR THIS STUDY?**

This study focuses on the retention of permanently employed ULH emergency department nurses. Nonemergency department nurses, travel nurses, float nurses, nursing students, and non-nurses do not qualify for this study.

**WHERE WILL THE STUDY TAKE PLACE AND WHAT IS THE TOTAL AMOUNT OF TIME INVOLVED?**

The research procedures will be conducted at The University of Louisville Hospital, Emergency Department and at two off-campus social research events. The first social event will occur during week 3 of the study at Waffle House. The second event will occur during week 6 at Ten Pin Strike and Spare bowling alley. You will need to come 6 times during the study. Each of those visits will take about 1 hour. The total amount of time you will be asked to volunteer for this study is 6 hours over the next 6 weeks.

**WHAT WILL YOU BE ASKED TO DO?**

This study will last six weeks. You will be asked to fill out four short online surveys at the start of the study. You will receive a link via email to the REDCap surveys. These surveys are a demographic survey, personality type survey, a survey about job embeddedness, and a survey about intent to stay. Completing the surveys will take about 10 minutes. You will be given one week to complete the surveys. You will be matched with a mentor or mentee by personality type and years of nursing experience. You will be asked to attend weekly discussion meetings about different topics. Topics include value of mentorship, communication, self-care, and team building. These meetings will last an hour and will be held at ULH in the emergency department conference room. You are invited to attend a brunch and a bowling night free of charge. This will provide a time to mingle with your peers and have fun. The brunch will occur on week three of the study at Waffle House. The bowling night will occur on week six of the study at Tin Pin Strike and Spare bowling alley. At the end of the study, you will be asked to fill out three short online surveys. These surveys include the following, a survey about job embeddedness, a survey about intent to stay, and an open response area for you to write your comments and concerns about nurse retention and/or this study. You will be given two weeks to complete the surveys. A detailed schedule of the procedure is located in Appendix: Procedures.

This research focuses on how mentorship and social events impacts emergency department job embeddedness and intent to stay.

**WHAT ARE THE POSSIBLE RISKS AND DISCOMFORTS?**

While unexpected, there is a possibility that some of the discussion topics will make you feel uncomfortable. If some questions do upset you, we can tell you about some people who may be able to help you with these feelings. ULH offers free and confidential counseling services and resources through the Employee Assistance Program (EAP). You may also contact ULH Human Resources for further help. The contact information is below:

**Employee Assistance Program**

PHONE: 502-451-8262 OR 1-800-441-1EAP

**ULH Human Resources**

PHONE: 502-815-7370

EMAIL: [HR\\_ULH@UofLHealth.org](mailto:HR_ULH@UofLHealth.org)

In addition to risks described in this consent, you may experience a previously unknown risk or side effect.

**WILL YOU BENEFIT FROM TAKING PART IN THIS STUDY?**

We do not know if you will get any benefit from taking part in this study. However, some people have experienced better relationships with peers and a better fit at their place of employment when involved in mentorship and peer social events. However, if you take part in this study, information learned may help others with your condition.

**IF YOU DON'T WANT TO TAKE PART IN THE STUDY, ARE THERE OTHER CHOICES?**

If you do not want to take part in the study, there are other choices ULH offers as nurse retention strategies including free undergraduate education for family members, clinical ladder advancement, nurse residency, paid preceptorship, shared governance opportunities, and several hospital-wide and unit-based recognition programs. Your participation in these programs could offer the same amount of benefit.

**WHAT WILL IT COST YOU TO PARTICIPATE?**

Participating in this study is free. The cost of the brunch (values at \$10/per person or less) and bowling game (valued at \$4/per person or less) will be paid by the Principal Investigator (Kacie L. Albertsen). You will be responsible for any costs greater than what is provided by the Principal Investigator.

**WHO WILL SEE THE INFORMATION THAT YOU GIVE?**

When we write about or share the results from the study, we will write about the combined information. We will keep your name and other identifying information private. We will make every effort to prevent anyone who is not the principal investigator (Kacie Albertsen) or faculty advisor (Candice Falls) from knowing that you gave us information, or what that information is. Email addresses will be collected for purposes of survey distribution. The personality type survey (Big Five Personality Type) requires your name to facilitate mentor/mentee matching, however all other answers to surveys will remain anonymous. REDCap is a secure web-based application for building and managing online surveys and databases. REDCap accounts are password protected. The server is behind a firewall. The electronic data collection forms will be kept secure on the primary investigator's that is password protected in their private home. Only the PI has access to this computer. No identifiable data will be reported in this study. When results are reported, the data will be grouped so no individual response can be identified. The final data will be retained a minimum of 6 years after the study is over per IRB protocol; then data will be deleted using UK Policy A13-050 and A05-055. The PI will delete the password-protected documents using data overwriting software to ensure that the data will not be modified per IRB protocol. Data will not be used for other projects and the data will not be shared with others who are not the PI or faculty advisor.

You should know that in some cases we may have to show your information to other people because of mental health concerns or child/elder abuse.

For example, the law may require or permit us to share your information with:

- authorities, such as child or adult protective services, if you report information about a child or elder being abused;
- authorities or a mental health professional if you pose a danger to yourself or someone else (e.g. suicidal thoughts).

We will make every effort to safeguard your data, but as with anything online, we cannot guarantee the security of data obtained by way of the Internet. Third-party applications used in this study may have Terms of Service and Privacy policies outside of the control of the University of Kentucky. REDCap is a secure, web-based program to capture and store data at the University of Kentucky. We will make every effort to safeguard your data in



REDCap. However, given the nature of online surveys, we cannot guarantee the security of data obtained by way of the Internet.

To ensure the study is conducted properly, officials at the University of Kentucky may look at or copy pertinent portions of records that identify you.

**CAN YOU CHOOSE TO WITHDRAW FROM THE STUDY EARLY?**

You can choose to leave the study at any time. You will not be treated differently if you decide to stop taking part in the study. If you choose to leave the study early, data collected until that point will remain in the study database and may not be removed. The investigators conducting the study may need to remove you from the study. You may be removed from the study if:

- you are not able to follow the directions,
- we find that your participation in the study is more risk than benefit to you

**ARE YOU PARTICIPATING, OR CAN YOU PARTICIPATE, IN ANOTHER RESEARCH STUDY AT THE SAME TIME AS PARTICIPATING IN THIS ONE?**

You may take part in this study if you are currently involved in another research study. It is important to let the investigator know if you are in another research study. You should discuss this with the investigator before you agree to participate in another research study while you are in this study.

**WILL YOU RECEIVE ANY REWARDS FOR TAKING PART IN THIS STUDY?**

You will receive brunch (valued at \$10/person or less) and a game of bowling (valued at \$4/person or less) for taking part in this study.

**WHAT IF NEW INFORMATION IS LEARNED DURING THE STUDY THAT MIGHT AFFECT YOUR DECISION TO PARTICIPATE?**

We will tell you if we learn new information that could change your mind about staying in the study. We may ask you to sign a new consent form if the information is provided to you after you have joined the study.

**WILL YOU BE GIVEN INDIVIDUAL RESULTS FROM THE RESEARCH TESTS?**

Generally, tests done for research purposes are not meant to provide clinical information. We will not provide you with individual research results. You may also withdraw your consent to be contacted with information about research results or incidental findings by sending a written request to Kacie L. Albertsen.

Phone: 502-593-3666

Address: 10115 Springbark Drive  
Louisville, KY 40241

**WHAT ELSE DO YOU NEED TO KNOW?**

If you volunteer to take part in this study, you will be one of about 70 subjects at the University of Louisville.

The principal investigator is a graduate student at the University of Kentucky College of Nursing. She is being guided in this research by Faculty Advisor Candice Falls PhD, MSN, ACNP-BC, CVNP-BC. There may be other people on the research team assisting at different times during the study.

**WILL YOUR INFORMATION BE USED FOR FUTURE RESEARCH?**

Your information collected for this study will NOT be used or shared for future research studies, even if we remove the identifiable information like your name and email address.

**Appendix: Procedures**

*\*specific meeting dates and times will be added upon IRB approval*

Timepoint	Activity	Discussion Topic	Location
Screening to see if you qualify	Enrollment and Informed Consent	N/A	ULH Emergency Department Conference Room
Begin Study	Pre-surveys (1 week to complete)		Online Surveys
Week 1	Discussion Meeting	Value of Mentorship	ULH Emergency Department Conference Room
Week 2	Discussion Meeting	Communication	ULH Emergency Department Conference Room
Week 3	Brunch	N/A	Waffle House
Week 4	Discussion Meeting	Self-Care	ULH Emergency Department Conference Room
Week 5	Discussion Meeting	Teamwork	ULH Emergency Department Conference Room
Week 6	Bowling	N/A	Ten Pin Strike and Spare Bowling Alley
End Study	Post-Surveys (2 weeks to complete)	N/A	Online Surveys

**Appendix: Alternative Options**

If you do not want to take part in the study, there are other choices ULH offers as nurse retention strategies. Your participation in these programs could offer the same amount of benefit. Other nurse retention strategies offered at ULH include the following:

- free undergraduate education for family members
- clinical ladder advancement
- nurse residency
- paid preceptorship
- shared governance opportunities,
- and several hospital-wide and unit-based recognition programs

**INFORMED CONSENT SIGNATURES**

This consent includes the following:

- Key Information Page
- Detailed Consent
- Appendices: Procedures, Alternative Options

You will receive a copy of this consent form after it has been signed.

_____ Signature of research subject	_____ Date
_____ Printed name of research subject	
_____ Printed name of [authorized] person obtaining informed consent	_____ Date

## Appendix K: Pre-Survey E-Mail

### Pre-Survey Email with REDCap Link

Dear [Name]:

Thank you for agreeing to participate in the study I am conducting titled *The Effect of Mentorship and Social Events on Emergency Department Job Embeddedness and Intent to Stay*.

Below you will find the link to the REDCap Pre-surveys. The four pre-surveys include a demographic survey, the Big Five Personality Type survey, McCain's Intent to Stay Scale, and the Global Job Embeddedness Scale. Participation will take about 10 minutes.

As a reminder, the Big Five Personality Type survey will have your name attached to it to facilitate mentor/mentee matching. All other survey answers are totally anonymous. You do not have to answer any questions that you do not want to answer.

**Big Five Personality Type Survey:**

<https://redcap.uky.edu/redcap/surveys/?s=EY749WMJNA44HEHN>

**Other surveys:** <https://redcap.uky.edu/redcap/surveys/?s=TEFMTFND8R8WERWP>

If you have any questions, please let me know.

Thank you again for your participation!

Kacie L. Albertsen  
BSN, RN, TCRN, CEN  
AGAC-NP DNP Student  
Principal Investigator  
Phone: 502.593.3666  
EMAIL: KLFA226@UKY.EDU

## Appendix L: Post-Survey E-Mail

### Post-Survey Email with REDCap Link

Dear [Name]:

Thank you for agreeing to participate in the study I am conducting titled *The Effect of Mentorship and Social Events on Emergency Department Job Embeddedness and Intent to Stay*.

Below you will find the link to the REDCap Post-surveys. The three post-surveys include a McCain's Intent to Stay Scale, Global Job Embeddedness Scale, and an Open Response. Participation will take about 5 minutes.

As a reminder, all survey answers are totally anonymous. You do not have to answer any questions that you do not want to answer.

REDCap Survey Link: <https://redcap.uky.edu/redcap/surveys/?s=TEFMTFND8R8WERWP>

If you have any questions, please let me know.

Thank you again for your participation!

Kacie L. Albertsen  
BSN, RN, TCRN, CEN  
AGAC-NP DNP Student  
Principal Investigator

Phone: 502.593.3666  
EMAIL: KLFA226@UKY.EDU

## Appendix M: Nurse Demographics

### (Public Domain)

#### Demographic Data

Participant # \_\_\_\_\_ Date \_\_\_\_\_ Dept \_\_\_\_\_

To assist in data analysis and interpretation, please provide the following information.  
All information will be held strictly confidential.

Circle the number beside your age range (1) 2-30 (2) 31-40 (3) 41-50 (4) 51-64 (5) 65 +

What is your ethnicity?

(1) African American (2) American Indian or Alaskan Native (3) Asian (4) Caucasian  
(5) Hispanic/Latino (6) Native Hawaiian or other Pacific Islander (7) Other \_\_\_\_\_

To which identity do you most identify?

(1) Female (2) Male (3) Transgender Female. (4) Transgender Male (5) Gender Variant/Non-Conforming (6) Not Listed (7) Prefer not to answer

Circle the number beside your highest level of nursing education

(1) LVN (2) ADN (3) Diploma (4) BSN (5) Master's Degree in Nursing (6) Doctorate  
(7) Other \_\_\_\_\_

Circle the number of years of nursing experience you have (1) 6mo - 1 yr (2) 1 - 3 yrs (3) 4-5 yrs  
(4) 6-10 yrs (5) 11 + yrs

What level of expertise do you believe that you have?

(1) novice (2) advanced beginner (3) competent (4) proficient (5) expert

What is your relationship status?

(1) Single (2) Married (3) Widowed. (4) Divorced (5) Divorced. (6) Other



## Appendix N: Permission for Global Job Embeddedness Scale

**From:** Kacie Albertsen [e-mail address redacted]

**Sent:** 4/15/2022

**To:** Craig Crossley [e-mail address redacted]

**Subject:** Permission to use Global Job Embeddedness Scale

Dr. Crossley,

I hope this email finds you well! I am a DNP student at the University of Kentucky hoping to make an impact on nurse retention. I am writing to you to obtain permission to use your Global Job Embeddedness Scale as an instrument in my DNP project which seeks to improve emergency department nurse retention through several evidence-based interventions. This scale will only be used in my research. I would be very grateful for your permission and look forward to hearing from you.

Thank you!

**Kacie Albertsen**  
BSN, RN, TCRN, CEN  
AGACNP DNP Student

**From:** Craig Crossley

**Sent:** 4/16/2022

**To:** Kacie Albertsen

Hi Kacie,

You have my permission to use the scale.

Good luck with your research!

Craig