



Poster 9



Impact of Delirium Education on a Post-Surgical Unit

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BACKGROUND

- Delirium is a common issue experienced by many hospitalized older adults. However, it is often under-recognized and misdiagnosed by nurses and healthcare providers resulting in the delay of treatment. Literature indicates that up to 75% of the time nurses fail to recognize this condition for many reasons (Ahmed et al., 2014; Rice et al., 2011).
- 56% of hospitalized older adults develop delirium during their hospital stay (Ahmed et al., 2014; Inouye, 2016) contributing to \$164 billion in health care costs annually and an increased risk of mortality (Leslie et al., 2011; Weinreb, Johannsdottir, Karaman, & Gusgra, 2015; Wilcox et al., 2010).
- The Agency for Healthcare Research and Quality (AHRQ) has included delirium as a quality marker and is one of the top three conditions that need to be improved the geriatric population (Inouye, 2016).
- Recommendation for delirium prevention is to implement nonpharmacological interventions, which includes providing nurses education targeting the delirium risk factors (American Geriatric Society, 2014).

PURPOSE

The purpose of this project was to determine whether the delirium education program increased nurses' knowledge of delirium management and prevention and retention of knowledge three months post-intervention.

Literature Review

The three most popular programs that healthcare organizations implemented to improve geriatric outcomes were the Hospital Elder Life Program (HELP), Nurses Improving Care for Healthsystem Elders (NICHE) program, and the multicomponent intervention program. These programs emphasized nonpharmacological interventions and nursing education (NICHE, n.d; HELP, 2018). While the NICHE and HELP programs have been around for more than 20 years and have shown positive results in the geriatric population, it is not always feasible to implement such programs due to lack of financial and human resources. The table below describes, outcomes, pros and cons, and feasibility of each program.

Intervention Methods	Outcomes	Pros	Cons	Feasibility
HELP Program (uses volunteers & geriatricians)	Decreased delirium incidence, hospital length of stay	Uses volunteers to provide care	Cost Extensive training	No funding and availability of volunteers
NICHE Program (nurses led activities & nurse led activities)	Improve geriatric outcomes	Comprehensive geriatric education program Nurses will receive 21 contact hours	Very expensive Nurses do not want to spend 21 hours to do NICHE modules	No
New Education (education setting or website training)	Nurses' knowledge, recognition, and management of delirium Decreased delirium incidence	Care effective	Difficult enlisting nurses to participate in the project Participant's work schedule	Yes

METHODOLOGY

Methods:

- A quasi-experimental mixed-method with pre-test and post-test design was used to evaluate the effect of the education program

Sample: A convenience sample of 88 nurses (4 male and 84 female); Nursing experience >1-26 years; Education level: ADN - MSN

Setting: Two post-surgical units at a large urban hospital) located in the South East Region of the U.S.
• Urology and Hepatology (Control unit) and General-Surgery unit (Intervention unit)- 36 beds

Interventions: Develop the education program and conduct education training sessions - one-on-one training and two groups session of 3-3 participants

RESULTS

Quantitative Results

Participants Demographic (N = 65) and Completion Rate	Follow-up test N (%)	Participants' Professional Degree	n (%)
Gender	n (%)	Highest Nursing Degree	
Male	4 (6)	Associate Degree	33 (50)
Female	61 (94)	Baccalaureate Degree	29 (45)
		Masters Degree	3 (4.6)
Work Location	n (%)	Years of RN Experience	n (%)
Control Unit	31 (48)	Less than 1 year	9 (14)
Intervention Unit	34 (52)	1-4 years	27 (42)
		5-9 years	9 (14)
		10-14 years	8 (12)
		15-19 years	4 (6)
		> 20 years	5 (7)
Completion Rate	n (%)	Participants Received NICHE Training	n (%)
Control Unit	25 (80)	Control Unit	7 (22.5)
Intervention Unit	32 (94)	Intervention Unit	12 (35)

Knowledge Assessment Results

Test Results	M Pre-Test	M Post-Test	M Follow-up Test
Mean (M) test scores	7.74	7.24	8.29
Control Unit	7.74	7.24	
Intervention Unit	7.61	9.24	8.29
T-tests	P value		
Independent t-test at baseline (control unit vs. intervention unit)	$p < 0.711$		
Independent t-test: post-intervention control unit vs. intervention unit	$p < 0.000$		
Paired t-test:	$p < 0.000$	$p < 0.038$	
pre-test vs. post-test of the intervention unit			

Multivariate linear regression

Education level ($P = .50$); Nursing Experiences ($P = .86$); NICHE Training ($P = 0.03$). NICHE Training is the only variable that has a statistically significant of $P < 0.05$.

Participants who had NICHE Training had a higher test score compared to nurses without training
Education level and years of nursing experience have no association with delirium knowledge

RESULTS

Qualitative Results

Three Themes

Understand the risk factors

"I plan to use this knowledge on my geriatric patients, especially after surgery when narcotics, Foley catheter etc. are all present, and how these factors play a role in delirium"

Use non-pharmacological prevention and treatment strategies

"I now know how to properly assess for true delirium and many non-pharmacological options vs going straight to pharmacological solutions."

Advocate for patients

"Advocate for our patients, pain management, and no benzo"

KEY FINDINGS

- Nurses who participated in the delirium education program rated their knowledge higher than nurses who did not receive the education. The participants felt that the education improved their skills of identifying early signs and symptoms and risks associated with delirium and applying multicomponent intervention strategies.
- NICHE training is the only confounding variable that can influence the outcome measures.

IMPLICATIONS

- Delirium education proves to be effective in improving nurses' knowledge. When nurses are equipped with adequate of delirium knowledge they feel confident advocating for patients when provides prescribed high risk medication. As a result, it can improve quality care in the geriatric population by preventing hospital acquired delirium. However, continued delirium education is vital to help nurses stay up-to-date or encouraged nurse to undergo NICHE training since this facility is a NICHE designated hospital.

CONCLUSIONS

The results of this study are similar with previous studies that educational programs are effective in improving nurses' knowledge of delirium and increase their confidence in identifying symptoms, implementing appropriate prevention strategies, and managing the condition effectively (McCrow et al., 2016). However, continued education is essential to help nurses stay abreast with the information. Further investigation is needed exploring nurses' knowledge of delirium and their understanding of the Confusion Assessment Method tool across the hospital settings and correlating of such programs with clinical practice outcomes such as delirium incidence, LOS, and hospital-acquired complications (Kang et al., 2016). In addition, future research should explore the use of delirium clinical pathway and computerized decision support identifying high risk population to prompt nurses implement prevention strategies.

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