Bellarmine University
ScholarWorks@Bellarmine

Graduate Theses, Dissertations, and Capstones | Graduate Research

4-5-2023

Effects of an Evidence-Based Practice Bundle Project on Nurse Empowerment

Kevin Jay Inman
Bellarmine University, kinman02@bellarmine.edu

Follow this and additional works at: https://scholarworks.bellarmine.edu/tdc

 Part of the Nursing Administration Commons

Recommended Citation

Inman, Kevin Jay, "Effects of an Evidence-Based Practice Bundle Project on Nurse Empowerment" (2023). *Graduate Theses, Dissertations, and Capstones*. 151.
https://scholarworks.bellarmine.edu/tdc/151

This Capstone is brought to you for free and open access by the Graduate Research at ScholarWorks@Bellarmine. It has been accepted for inclusion in Graduate Theses, Dissertations, and Capstones by an authorized administrator of ScholarWorks@Bellarmine. For more information, please contact jstemmer@bellarmine.edu, kpeers@bellarmine.edu.

Effects of an Evidence-Based Practice Bundle Project on Nurse Empowerment

Kevin Inman

Bellarmine University

Abstract

The project determined the effect of an Evidence-Based Practice bundle program on nurses' perception of empowerment. The EBP bundle included 7 interventions implemented simultaneously throughout a small community hospital. There was a significant increase in nurses' perception of empowerment ($p<.001$), EBP beliefs ($p<.001$), and use of EBP ($p<.001$) after the implementation of an EBP bundle.

The nursing shortage is projected to grow to 203,200 nurses each year.(1) Because of the growing shortage hospital leaders must find ways to retain the nurses they currently employee. Multiple studies have found higher levels of nurses' perception of empowerment correlate with lower levels of nurse turnover.(2-5) In addition, Belden, Leadman, Nehrenz, and Miller found stronger levels of evidence-based practice (EBP) beliefs and more frequent EBP use increase nurses' perception of empowerment.(6) The purpose of this project was to determine the effect of implementing an EBP bundle program on nurses' perception of empowerment.

Background

Empowerment

Rao defined nurse empowerment "as a state in which an individual nurse has assumed control over his or her practice, enabling him or her to fulfill professional nursing responsibilities within an organization successfully".(7) Nurses' beliefs about empowerment are important because stronger perceptions have been identified with higher levels of job satisfaction,(2,3,8) lower levels of burnout,(9,10) and lower levels of turnover(3-5,11). Belden, Leafman, Nehrenz, and Miller found a positive correlation between perception of empowerment and EBP use with 42 rural staff nurses.(6)

Evidence-based Practice Beliefs

EBP is defined as "a problem-solving approach to clinical decision making with a health-care organization".(12, p. 5) A nurse's EBP belief is defined as their value of, and confidence in, implementing EBP.(13,14) Multiple studies have identified the benefits nurses perceive when EBP is used in their workplace.(10,14-21) Melnyk, Fineout-Overholt, Giggleman, and Cruz found EBP beliefs were positively correlated with nurses' and other health professionals' job satisfaction.(15) One reason for increased satisfaction was that clinicians with higher levels of EBP beliefs had greater perceptions of empowerment and were more satisfied with their job.(15) In addition, nurses who used evidence in their practice were more satisfied with their role and their organizations had better clinical outcomes for patients.(14-16) Evidence-based practice enhances retention, accountability, and nurse satisfaction.(17,18,21) Melnyk, Fineout-Overholt, Gallagher-Ford, and Kaplan proposed the use of EBP renews the nurse's professional spirit, a key measure of nurse satisfaction.(20)

Project Bundle

A bundle is a group of evidence-based interventions implemented simultaneously. The bundle in this project included adding elements of EBP to the Nursing Department's strategic plan, offering an education program to staff nurses, creating an EBP budget, including EBP in the nursing clinical ladder program, modifying the nurse job descriptions, identifying EBP identification champions, implementing the Johns Hopkins EBP model, and creating a dedicated EBP intranet site. A complete list of bundle interventions and their evidence sources are in Table 1.

Methodology

Project Design

The project was conducted in a 250-bed non-profit, community hospital. Participating staff nurses were selected by nursing directors based on their interest in EBP, committee attendance records, and years of service at the organization. Nurses were selected from both inpatient and outpatient units from all service lines. The Johns Hopkins' EBP model was used as a guide for the project.(12)

The hospital's EBP Steering Committee, the Clinical Practice Council, and the Professional Development Council were involved in the project. The EBP Steering Committee, formed specifically for this project, included the Chief Nursing Officer (CNO), Director of Quality, and the hospital's Clinical Nurse Specialist (CNS), and were responsible for the overall implementation of the EBP bundle. The Clinical Practice Council and the Professional Development Council were hospital level self-governance committees. The Clinical Practice Council focused on clinical practice policy and procedure development while the Professional Development Council focused on staff development and was the owner of the clinical ladder program. After the bundle was fully implemented the Clinical Practice Council assumed leadership of EBP for the Nursing Department.

Ethical Considerations

Institutional Review Board approval was obtained. Approval was also obtained from Johns Hopkins for use of their EBP model and tools. Authors of the EBP Beliefs Scale, EBP Implementation Scale, the Psychologic Empowerment Instrument (PEI) provided approval for their instruments use.

Instrumentation

The EBP Beliefs Scale is a 16-item instrument using a 5-point Likert-scale from 1 (strongly disagree) to 5 (strongly agree).(14) The instrument measures respondents' beliefs about the value of EBP and confidence in implementing EBP.(14) Total scores range between 16 and 80 with higher scores indicating stronger beliefs in the value of EBP. The EBP Beliefs Scale has been used in many studies (14,22-24) and has a Cronbach's alpha exceeding 0.85.(14,23,25) For this project the Cronbach's alpha was 0.86.

The EBP Implementation Scale is an 18-item instrument using a 5- point ordinal frequency scale with a total score range from 0 to 72.(14) The instrument measures how often in the past 8 weeks a nurse performed an EBP activity with lower scores indicating less frequency. The EBP Implementation Scale has a Cronbach's alpha and Spearman-Brown *r* reliability coefficients exceeding 0.85.(14,23,25) For this project the Cronbach's alpha was 0.95.

This project used the 12-item PEI with a 7-point Likert scale (very strongly disagree to very strongly agree) to measures nurses' perceptions of workplace empowerment.(26) The PEI is comprised of four 3-item subscales of meaning, competence, self-determination, and impact. The 3 items creating each subscale are averaged to give a total score ranging from 1 to 7 with higher scores indicating stronger nurse perceptions of empowerment in that subscale. The 4 subscales are then averaged to give an overall PEI score ranging from 1 to 7 with higher scores indicating stronger nurse perceptions of empowerment.(27) The PEI has a Cronbach's alpha exceeding 0.72.(6,26,28,29) For this project the Cronbach's alpha was 0.90. Subscale Cronbach's alpha were meaning 0.87, competence 0.82, self-determination 0.81, and impact 0.92.

All 3 paper instruments were completed twice by the nursing staff, once before and once approximately 1-2 months after the entire EBP bundle was implemented. The EBP Belief Scale and EBP Implementation Scale were used to validate if there was a change EBP beliefs and EBP use. The PEI was used to determine the effect of the EBP bundle on nurses' perception of empowerment.

Data were analyzed using SPSS software. Univariate analysis examined demographic data while paired *t*-tests compared the means of the EBP Beliefs Scale, EBP Implementation Scale and PEI total and sub-scores before and after the EBP bundle implementation.

Theoretical Framework

The 10-stage transtheoretical model of organizational change was selected for the project's framework.(22) The transtheoretical model was developed from the transtheoretical model of behavioral change with studies demonstrating its use to influence change at the organizational level in healthcare.(22,30) How the model was applied to this project is shown in Table 2.

The EBP Bundle Interventions

The EBP bundle included 7 interventions implemented simultaneously. The EBP Steering Committee, with assistance from the Clinical Practice Council and the Professional Development Council, led the project throughout.

Nursing strategic plan

The first intervention incorporated EBP elements into the Nursing Department's strategic plan. The strategic plan's EBP elements were developed by the EBP Steering Committee and the Clinical Practice Council and subsequently approved by Chief Executive Officer (CEO).

EBP education program

An education program (Table 3) was developed and delivered to staff nurses by the EBP Steering Committee, as they had previously completed the online Johns Hopkins EBP course. The course was a 1 day, 8-hour program to introduce the Johns Hopkins EBP model concepts. A total of five class days were offered to promote staff attendance. Participants were paid for attending, and learning materials, lunch, and snacks were provided.

EBP budget

The EBP Steering Committee, with assistance from the Clinical Practice Council, developed an EBP budget (Table 4). The EBP budget was part of the overall nursing administration budget. The EBP Steering Committee and

Clinical Practice Council approved the EBP budget. The EBP Steering committee and unit managers monitored the budget throughout the project.

Staff nurse job description updated

Elements of EBP were added to the staff nurse job descriptions including EBP use, attending or facilitating journal clubs, and using EBP to develop order sets and policies. Job descriptions were developed by the Clinical Practice Council and the CNO.

Clinical ladder update

The existing clinical ladder had 4 levels of achievement by completing various predetermined responsibilities. The clinical ladder was updated to provide credit for EBP order set and policy development. Established and approved by the Professional Development Council and the EBP Steering Committee the clinical ladder changes were included in levels 3 and 4. Nurses applied yearly to the clinical ladder program.

EBP champions

Select managers and directors were chosen as initial EBP champions because they had previously attended EBP classes and developed EBP order sets and policies. After the completion of the EBP course staff nurses were then asked to self-identify as champions for future projects and to maintain sustainability.

EBP intranet site

An EBP intranet site was designed by the Clinical Practice Council and the EBP Steering Committee, and included references for EBP, examples of EBP based policies, and exemplars of nurses using EBP to improve patient outcomes. All nurses were given access to the intranet site. Journal articles were also included in the intranet site though the Journal Club was not initiated.

Journal clubs

The original project proposal included a hospital-based journal club facilitated by the Clinical Practice Council. Due to the short time frame of the project journal clubs were not implemented until after completion of the project.

Results

Fifty-three nurses were recruited for the program, attended the education program, and completed the 3 instruments pre- and post-bundle implementation (Table 5). Nurses' ages ranged from 22 years to 64 years old (M=42.43; SD=11.8). Years of nursing experience ranged from range 1.5 to 44.0 (M=16.4; SD=12.2) and 10 different areas of clinical practice were represented.

A significant increase in the EBP Belief Scale mean scores (Table 6) was found when comparing pre to post implementation of the EBP bundle (p<.001). There was also a significant increase in how often nurses reported performing EBP from pre to post bundle implementation (p<.001). Nurses' perceived empowerment significantly improved after bundle's implementation compared to before implementation (p<.001). There was a significant change in only 1 of the 4 PEI subscales. The impact subscale, measuring nurses' perceived influence on their department, had a significant increase from pre and post bundle implementation (p<.001).

Plans to assess bundle component outcomes were developed by the EBP Steering Committee (see Table 7). The bundle's comprehensive assessment plan was not completed because the author relocated to another state shortly after the post survey assessment was completed. However, outcomes are important to track over time for health care leaders because nurses' perception of empowerment positively correlate with job satisfaction, (3, 8) lower levels of burnout, (10) and lower levels of turnover. (3-5)

Discussion

Results of this project support the use of an EBP bundle to increase EBP beliefs, EBP use, and nurses' perception of empowerment as previously established. Results support Belden et al. who found a positive correlation between overall EBP use, EBP beliefs, and rural nurses' perception of empowerment.(6) Including an education component

in the EBP bundle supports work done by Varnell, et al.,(22) Abu- Baker et al.,(31) Singleton,(32) and Majid et al.(33) who found an increase in nurse's EBP beliefs and EBP use after an education program.

While overall there was a statistically significant increase in psychological empowerment, only the impact subscale produced a significant increase in mean scores when comparing pre to post bundle implementation. The impact subscale measures the degree employees feel they can influence their work environment, that their ideas are heard, and that they can make a difference.(26) It may be that after completion of a bundle that included a comprehensive EBP strategic plan, formal education program, and new clinical ladder, participating nurses could envision making a positive impact in their clinical practice. However, the short time frame between the bundle's implementation and post survey assessment likely did not allow adequate time for nurses' perceptions to be significantly impacted with regards to the subscales of meaning, self-determination, and competence. Several of the studies examined the effects of an evidence-based practice education program after a longer time from education to post survey ranging 4 months to 1 year.(17,34-37)

Similar to this project, 2 studies found a significant change in only 1 or 2 of the PEI subscales.(38,39) Ducko et al. found a significant improvement in the meaning subscale after an education program to prepare for national certifications.(38) Sawyer et al. found a significant improvement in the overall PEI score and in the competence and impact subscales after a psychoeducational group education program.(39)

Limitation of Project

The project took place in a 250-bed community hospital and limits generalizability to other organizations with different cultures, structures, and sizes. A larger sample size and continual education programming may produce different results. In addition, there was a short timeframe between the EBP bundle implementation and measuring nurses' perceptions. A longer time between implementation and assessing for change in EBP use and perceptions of empowerment is recommended to determine sustainability. The long-term results of valuing and consistent use of EBP, perceptions of workplace empowerment, and patient outcomes were not included in this project and also need evaluated to determine sustainable results after bundle implementation.

Due to the project's shortened timeframe journal clubs were not implemented. In addition, while a change in job descriptions, strategic plan, budget, and clinical ladder programs were implemented, the full effect of those changes were not immediately evident. The committee responsible for the project's implementation believed changes potentially impacting nursing culture would take time and should be evaluated annually. Additional items that should be assessed over time include number of staff champions and number of EBP policies and order sets updated and created. Feedback from the nursing staff on which bundle interventions were most helpful should also be collected.

Conclusions

The purpose of this project was to determine the effect of an EBP bundle program on nurses' perception of empowerment. Higher levels of nurses' perception of empowerment have been identified with lower levels of nurse burnout, higher levels of nurse satisfaction and higher nurse retention. This project shows that after the implementation of an EBP bundle nurses' perception of psychological empowerment, belief of EPB, and use of EBP increased in the short-term.

References

1. United States Department of Labor. *Occupational Outlook Handbook*. 2022. Accessed January 10, 2023. https://www.bls.gov/ooh/healthcare/registered-nurses.htm.
2. Li H, Shi Y, Li Y, et al. Relationship between nurse psychological empowerment and job satisfaction: A systematic review and meta-analysis. *J Nurs Adm (John Wiley & Sons, Inc).* 2018;74(6):1264-1277. doi:10.1111/jan.13549.
3. Cai C, Zhou Z. Structural empowerment, job satisfaction, and turnover intention of Chinese clinical nurses. *Nurs Health Sci.* 2009;11(4):397-403. doi:10.1111/j.1442-2018.2009.00470.x.
4. Hauck A, Griffin M, Fitzpatrick J. Structural empowerment and anticipated turnover among critical care nurses. *J Nurs Manag (John Wiley & Sons, Inc).* 2011;19(2):269-276. doi:10.1111/j.1365-2834.2011.01205.x.
5. Spence-Lashinger H, Leiter M, Day A, Gilin D. Workplace empowerment, incivility, and burnout: impact on staff nurse recruitment and retention outcomes. *J Nurs Manag.* 2009;17(3):302-311. doi:10.1111/j.1365-2834.2009.00999.x.
6. Belden CV, Leafman J, Nehrenz G, Miller P. The Effect of Evidence-Based Practice on Workplace Empowerment of Rural Registered Nurses. *Online J Rural Nurs Health Care.* 2012;12(2):64-76. doi:10.14574/ojrnhc.v12i2.87.
7. Rao A. The Contemporary Construction of Nurse Empowerment. *J Nurs Scholarsh.* 2012;44(4):396-402. doi:10.1111/j.1547-5069.2012.01473.x.
8. Ning S, Zhong H, Libo W, Qiujie L. The impact of nurse empowerment on job satisfaction. *J Adv Nurs. (Wiley-Blackwell).* 2009;65(12):2642-2648. doi:10.1111/j.1365-2648.2009.05133.x.
9. Fang K, Jing Z, Yan X, Yan C, Correlation between psychological empowerment and job burnout among nurses in a hospital for infectious diseases. *Nursing of Integrated Traditional Chinese & Western Medicine.* 2020;6(8):7-10. doi:10.11997/nitcwm.202008002.
10. O'Brien JL. Relationships Among Structural Empowerment, Psychological Empowerment, And Burnout in Registered Staff Nurses Working in Outpatient Dialysis Centers. *Nephrol Nurs J.* 2011;38(6):475-482.
11. Loes CN, Tobin MB. Does empowerment enhance nurses' organizational commitment? *J Nurs Manag (John Wiley & Sons, Inc)*. 2022;30(7):3123-3130. doi:10.1111/jonm.13725.

12. Dang D, Dearholt SL, Bissett K, Ascenzi J, Whalen, M. Johns Hopkins Nursing Evidence-Based Practice for Nurses and Healthcare Professionals Model & Guidelines. 4th ed. Sigma Theta Tau International; 2021.
13. Melnyk BM, Hsieh AP, Gallagher FL, et al. Psychometric Properties of the Short Versions of the EBP Beliefs Scale, the EBP Implementation Scale, and the EBP Organizational Culture and Readiness Scale. *Worldviews Evid Based Nurs.* 2021;18(4):243-250. doi:10.1111/wvn.12525
14. Melnyk BM, Fineout-Overholt E, Mays MZ. The Evidence-Based Practice Beliefs and Implementation Scales: psychometric properties of two new instruments *Worldviews Evid Based Nurs.* 2008;5(4):208-216. doi:10.1111/j.1741-6787.2008.00126.x
15. Melnyk BM, Fineout-Overholt E, Giggleman M, Cruz R. Correlates among cognitive beliefs, EBP implementation, organizational culture, cohesion and job satisfaction in evidence-based practice mentors from a community hospital system. *Nurs Outlook.* 2010;58(6):301-308. doi:10.1016/j.outlook.2010.06.002.
16. Melnyk BM, Fineout-Overholt E (Eds.) Evidence-based practice in nursing and healthcare*,* 5th ed. Wolters Kluwer; 2023.
17. Kim SC, Ecoff L, Brown CE, Gallo A- M, Stichler JF, Davidson JE. Benefits of a Regional Evidence-Based Practice Fellowship Program: A Test of the ARCC Model. *Worldviews Evid Based Nurs*. 2017;14(2):90-98. doi:10.1111/wvn.12199.
18. Beck MS, Staffileno BA. Spotlight on Evidence-Based Practice. Implementing Evidence-Based Practice During an Economic Downturn. *J Nurs Adm.* 2012;42(7/8):350-352. doi:10.1097/NNA.0b013e318261914d.
19. Vratny A, Shriver D. A conceptual model for growing evidence-based practice. *Nurs Adm Q.* 2007;31(2):162-170. doi:10.1097/01.naq.0000264866.79711.08.
20. Melnyk B, Fineout-Overholt E, Gallagher-Ford L, Kaplan L. The State of Evidence-Based Practice in US Nurses: Critical Implications for Nurse Leaders and Educators. *J Nurs Adm.* 2012;42(9):410-417. doi:10.1097/NNA.0b013e3182664e0a.
21. Melnyk BM, Tan A, Hsieh AP, Gallagher FL. Evidence-Based Practice Culture and Mentorship Predict EBP Implementation, Nurse Job Satisfaction, and Intent to Stay: Support for the ARCC© Model. *Worldviews Evid Based Nurs.* 2021;18(4):272-281. doi:10.1111/wvn.12524.

22. Varnell G, Haas B, Duke G, Hudson K. Effect of an educational intervention on attitudes toward and implementation of evidence-based practice. *Worldviews Evid Based Nurs.* 2008;5(4):172-181. doi:10.1111/j.1741-6787.2008.00124.x.
23. Estrada N. Exploring perceptions of a learning organization by RNs and relationship to EBP beliefs and implementation in the acute care setting. *Worldviews Evid Based Nurs.* 2009;6(4):200-209. doi:10.1111/j.1741-6787.2009.00161.x.
24. Sortedahl C. Effect of Online Journal Club on Evidence-Based Practice Knowledge, Intent, and Utilization in School Nurses. *Worldviews Evid Based Nurs.* 2012;9(2):117-125. doi:10.1111/j.1741-6787.2012.00249.x.
25. Melnyk BM, Tan A, Hsieh AP, Gallagher FL. Evidence-Based Practice Culture and Mentorship Predict EBP Implementation, Nurse Job Satisfaction, and Intent to Stay: Support for the ARCC© Model. *Worldviews Evid Based Nurs*. 2021;18(4):272-281. doi:10.1111/wvn.12524.
26. Spreitzer GM. Psychological empowerment in the workplace: Dimensions, measurement, and validation. *Acad Manage J*. 1995;38(5):1442-1465. doi:10.2307/256865.
27. Spreitzer GM, Quinn RE. *A company of leaders: Five disciplines for unleashing the power in your workforce.* John-Wiley & Sons Inc; 200.
28. Pines EW, Rauschhuber ML, Norgan GH, et al. Stress resiliency, psychological empowerment and conflict management styles among baccalaureate nursing students. *J Adv Nurs (John Wiley & Sons, Inc)*. 2012;68(7):1482-1493. doi:10.1111/j.1365-2648.2011.05875.x.
29. DiNapoli JM, O''Flaherty D, Musil C, Clavelle JT, Fitzpatrick JJ. The Relationship of Clinical Nurses' Perceptions of Structural and Psychological Empowerment and Engagement on Their Unit. *J Nurs Adm*. 2016;46(2):95-100. doi:10.1097/NNA.0000000000000302.
30. Prochaska JM, Prochaska JO, Levesque DA. A transtheoretical approach to changing organizations. *Adm Policy Ment Health*. 2001;28(4):247-261. doi:10.1023/A:1011155212811.
31. Abu-Baker NN, AbuAlrub S, Obeidat RF, Assmairan K. Evidence-based practice beliefs and implementations: a cross-sectional study among undergraduate nursing students. *BMC Nursing.* 2021;20(1):1-8. doi:10.1186/s12912-020-00522-x.
32. Singleton JK. Evidence-Based Practice Beliefs and Implementation in Doctor of Nursing Practice Students. *Worldviews Evid Based Nurs.* 2017;14(5):412-418. doi:10.1111/wvn.12228.

33. Majid S, Foo S, Luyt B, et al. Adopting evidence-based practice in clinical decision making: nurses' perceptions, knowledge, and barriers. *J Med Libr Assoc*. 2011;99(3):229-236. doi:10.3163/1536-5050.99.3.010.
34. Speroni KG, McLaughlin MK, Friesen MA. Use of Evidence-based Practice Models and Research Findings in Magnet-Designated Hospitals Across the United States: National Survey Results. *Worldviews Evid Based Nurs*. 2020;17(2):98-107. doi:10.1111/wvn.12428.
35. Green A, Jeffs DA, Boateng BA, Lowe GR, Walden M. Evaluating Evidence-Based Practice Knowledge and Beliefs Through the e-Learning EBP Academy. *J Contin Educ Nurs.* 2017;48(7):304-311. doi:10.3928/00220124-20170616-07.
36. Smith AL. Evidence-based practice training in nurse residency programs: Enhancing confidence for practice implementation. *Teach Learn Nurs*. 2021;16(4):315-320. doi:10.1016/j.teln.2021.05.005.
37. Tucker S, McNett M, O'Leary C, et al. EBP education and skills building for leaders: An RCT to promote EBP infrastructure, process and implementation in a comprehensive cancer center. *Worldviews Evid Based Nurs*. 2022;19(5):359-371. doi:10.1111/wvn.12600.
38. Ducko JI, Stewart S. The Effect of Peer-to-Peer Education about the Significance of Specialty Certification on Empowering Nurses Working in Dialysis. *Nehrol Nurs J.* 2022;49(3):241-254. doi:10.37526/1526-744X.2022.49.3.241.
39. Sawyer AT, McManus K, Bailey AK. A mixed-methods pilot study of a psychoeducational group program for nurse managers during the COVID-19 pandemic. *J Nurs Manag* (John Wiley & Sons, Inc). 2022;30(8):4126-4137. doi:10.1111/jonm.13881.
40. Hauck S, Winsett RP, Kuric J. Leadership facilitation strategies to establish evidence-based practice in an acute care hospital. *J Adv Nurs* (John Wiley & Sons, Inc). 2013;69(3):664-674. doi:10.1111/j.1365-2648.2012.06053.x.
41. Johansson B, Fogelberg-Dahm M, Wadensten B. Evidence-based practice: the importance of education and leadership. *J Nurs Manag* (John Wiley & Sons, Inc). 2010;18(1):70-77. doi:10.1111/j.1365-2834.2009.01060.x.
42. DuGan JE. "Keeping You in the Know": The Effect of an Online Nursing Journal Club on Evidence-Based Knowledge Among Rural Registered Nurses. *Comput Inform Nurs.* 2019;37(4):190-195. doi:10.1097/CIN.0000000000000507.

43. Peacock A, Ward-Smith P, Elmore R. Providing an Online Nursing Journal Club and Ensuring the Rigor of the Experience. *Nurs for Women's Health*. 2020;24(6):453-459. doi:10.1016/j.nwh.2020.09.005.
44. Smith SD, Stalter AM, McElroy KG. Association of Community Health Nursing Educators', 2020 evidence-based project priorities: A national blueprint for unifying research and evidence-based practice priorities. *Public Health Nurs.* 2020;37(5):778-788. doi:10.1111/phn.12763.
45. Kauffman K, Genieveve J, Stacia M. A ladder that matters: Conceptual development of a clinical ladder program for nurse practitioners and physician assistants. *J Am Assoc of Nurs Pract.* 2022;34(2):230-237. doi:10.1097/JXX.0000000000000662.

Table 1. EBP bundle.

	EBP intervention	Source of Evidence
1.	Incorporate EBP in the hospital Nursing Department's strategic plan: **a.** Increase knowledge of EBP of hospital staff nurses: **i.** Develop, implement and evaluate an EBP education program. **ii.** Establish EBP journal clubs. **b.** Establish EBP support at the organization level and unit level: **i.** Develop an EBP budget. **ii.** Identify EBP champions from each unit. **iii.** Establish an EBP intranet site. **iv.** Include elements of EBP into the staff nurse job descriptions. **v.** Include elements of EBP into the clinical ladder program.	(12,16,40,45)
2.	Implement EBP education program. (Table 3)	(12,15,16,19,22,31,33-35 ,40,41)
3.	Develop EBP budget. (Table 4)	(12,16,18,40)
4.	Incorporate EBP into staff nurse job descriptions.	(12,16,34,40)
5.	Integrate EBP into staff nurse career ladder.	(16,34,40,45)
6.	Identify EBP champions.	(12,13,15,16,19,21,33,40,41)
7.	Implement journal clubs.	(12,15,16,42,43)
8.	Develop EBP intranet site.	(16,40,43)

Table 2. Transtheoretical model.

Stage	Definition	Actual intervention
1. Consciousness Raising /Increasing Awareness.(14,22,30)	Raising awareness of the issue and potential solution.(30)	Leaders raised awareness of unit staff in unit-based meetings, nurse councils, and leadership meetings.
2. Dramatic Relief/ Emotional Arousal.(14,22,30)	Producing a strong emotion to create arousal example fear or inspiration to change.(30)	Nursing leadership and senior leadership created inspiration for change to improve patient outcomes by showing EBP outcomes vs hospital outcomes.
3. Self-Reevaluation /Self Reappraisal.(14,22,30)	Belief the change will have a positive impact to self-identity, happiness, and success.(30)	Nurses developed belief EBP will bring rewards of nurses' perception of empowerment and improved patient care. Added EBP elements to both job descriptions and clinical ladder program.
4. Self-Liberation/Committing.(14,22,30)	Believing and committing to the change.(30)	Nurses were aware EBP commitment and have increased nurses' perception of empowerment. EBP education program.
5. Environmental Reevaluation /Social Reappraisal.(14,22,30)	Understanding change is important to the work and social environment.(30)	Evidence-Based Practice elements were added to clinical ladder and job descriptions by nurse leaders. EBP champions were given paid time to complete policies.
6. Reinforcement Management/ Rewarding.(14,22,30)	Rewards for change both intrinsic and extrinsic.(30)	Reward was paid time to complete class, to complete policies, and clinical ladder.
7. Counter Conditioning/Substituting.(14,22,30)	Replacing old ways of working with new actions and thinking.(30)	Nurses looked for opportunities to use EBP to improve care. Added to nursing strategic plan. Developed EBP policies and guidelines.
8. Helping Relationship/Supporting.(14,22,30)	Finding social support to make change.(30)	Evidence-Based Practice champions mentored and facilitated EBP changes.
9. Stimulus Control /Re-engineering.(14,22,30)	Restructuring the environment to promote the changed behaviors and discourage old behaviors.(30)	Evidence-Based Practice searches were conducted, and staff nurses updated order sets using EBP. Added EBP elements to both job descriptions and clinical ladder program.
10. Social Liberation /Environmental Opportunities.(14,22,30)	Provide resources to enable change.(30)	EBP budget redesigned, staff given paid time weekly and to attend education. Intranet site was developed.

Table 3. Evidence-based Practice Education Plan.*

Objectives	Content	Time Frame	Instructional Strategies
Define evidence-based practice.	1. EBP Beliefs survey. 2. What is EBP? 3. Where do practice questions come from? 4. Journal clubs.	1 hour.	PowerPoint. Lecture.
Identify how to formulate a PICO question.	1. Overview of Johns Hopkins model. 2. Building a PICO question.	1 hour.	PowerPoint. Lecture. Activity.
Identify how to search for evidence-based practice.	1. Using the PICO for search terms. 2. Database search.	1 hour.	PowerPoint. Lecture. Activity.
Identify how to find quality evidence.	1. Levels of evidence. 2. Appraisal of articles. 3. Johns Hopkins tools. 4. Translating the evidence. 5. Review of statistics.	1 hour.	PowerPoint. Lecture. Activity.
Determine how to appraise the evidence.	1. Forms. 2. Group evaluation of an article. 3. Level & quality of article. 4. Summary forms, synthesis & recommendation tools.	2 hours.	PowerPoint. Lecture. Activity.
Determine how to summarize the evidence & beyond.	1. Discuss synthesis of evidence. 2. Practice changes indicated. 3. Fit, feasibility, and appropriateness of change. 4. Implementation of change. 5. Evaluation of change.	2 hours.	PowerPoint. Lecture. Activity.

*8 hours of continuing education were awarded participants.

Table 4. Project Budget.

Budget item	**Cost**
Student time donated.	$21,000.
Education Materials.	$200.
Nursing Staff education time.	$8,000.
Nursing time to work on EBP policies and order sets 4 hours every other week.	Repurposed nonproductive time on each unit, no increase in cost.
Management time.	$10,000.
Online EBP journals. -already provided to the staff.	
Books resources for EBP- Johns Hopkins.	5x 32.99= $164.95.
Johns Hopkins Online Education Program (for instructors).	3X $90= $270.
Classroom donated by facility.	
Snacks for class time.	$500.
Statistician.	$500.
Total cost.	**$40,634.95.**

Table 5. Demographic Characteristics.

Characteristic	Total (*n*=53)
Gender.	
Male.	3.8% (2).
Female.	96.2% (51).
Age.	Range 22-64 *(M*=42.43; *SD*=11.8).
Age 20-29.	18.9% (10).
Age 30-39.	18.9% (10).
Age 40-49.	30.2% (16).
Age 50-59.	22.6% (12).
Age 60-65.	9.4% (5).
Nurse Experience.	Range 1.5 to 44 (*M*=16.4; *SD*=12.2).
0-2 years.	7.5% (4).
3-5 years.	15.1% (8).
6-10 years.	18.9% (10).
11-20 years.	26.4% (14).
21-30 years.	15.1% (8).
31-40 years.	11.3% (6).
41-45 years.	5.7% (3).
Highest Education Level.	
Diploma.	1.9% (1).
ASN.	30.2% (16).
BSN.	49.1% (26).
MSN.	7.5% (4).
MBA.	1.9% (1).
MHA.	7.5% (4).
MHA/MBA.	1.9% (1).
Currently in School for.	
No.	77.4% (41).
BSN.	9.4% (5).
MSN.	9.4% (5).
Other.	3.8% (2).
Completed Statics/Research Course?	
Yes.	66% (35).
No.	34% (18).
Clinical Area of Practice.	
Cardiology.	9.4% (5).
Critical Care.	9.4% (5).
Emergency Services.	15.1% (8).
Women's Services.	13.2% (7).
Medical/ Surgical.	32.1% (17).
Neuro/Heart.	3.8% (2).
Surgical Services.	9.4% (5).
Progressive Care.	3.8% (2).
Other.	3.8% (2).

Percentage (frequency) are given.

Table 6. Results.

Variable	*M*	*SD*	*t*	*p*
EBP Belief Scale pre EBP-Bundle Implementation.	55.91.	6.8.		
EBP Belief Scale post EBP-Bundle Implementation.	62.15.	6.12.	(-0.69) =52.	<.001.
EBP Implementation Scale pre EBP-Bundle-Implementation.	9.79.	8.61.		
EBP Implementation Scale post EBP Bundle-Implementation.	16.77.	12.16.	(-4.12) =52.	<.001.
PEI overall score pre EBP-Implementation.	5.59.	0.75.		
PEI overall score post EBP-Implementation.	5.91.	0.53.	(-3.58) =52.	<.001.
Meaning subscale pre EBP-Implementation.	6.14.	0.95.		
Meaning subscale post EBP-Implementation.	6.38.	0.61.	(-1.63) =52.	.108.
Competence subscale pre EBP-Bundle Implementation.	5.84.	0.93.		
Competence subscale post EBP-Bundle Implementation.	5.93.	0.72.	(-0.69) =52.	.45.
Self-determination subscale pre EBP-Bundle Implementation.	5.5.	0.94.		
Self-determination subscale post EBP-Bundle Implementation.	5.73.	0.73.	(-1,86) =52.	.068.
Impact subscale pre EBP-Bundle Implementation.	4.85.	1.11.		
Impact subscale post EBP-Bundle Implementation.	5.61.	1.05.	(-4.83) = 52.	<.001.

Table 7. Comprehensive Assessment Plan for EBP Bundle.

Component	Responsible governance & administrative authority	Expected outcome	Frequency of assessment	Assessment methods
Incorporate EBP into the Nursing Department's strategic plan.	EBP Steering Committee, Clinical Practice Council, and CEO.	2 or more new EBP policies or order sets approved annually by unit.	Annually.	Annual staff survey on EBP beliefs and EBP implementation. Number of new EBP policies and order sets by unit.
Implement EBP education program.	EBP Steering Committee.	4 EBP education programs offered annually.	Quarterly.	Class rosters for each quarter.
Develop EBP budget.	EBP Steering Committee and unit managers.	Unit managers meet budget monthly by comparing actual cost to budgeted cost.	Monthly.	CNO reviews budget results monthly with unit managers in budget meeting.
Incorporate EBP into staff nurse job descriptions.	Clinical Practice Council and the CNO.	Completed job descriptions with EBP elements.	Annually.	Review of nurse job description by EBP Steering Committee, Clinical Practice Council, and the CNO.
Integrate EBP into staff nurse career ladder.	Clinical Practice Council and the EBP Steering Committee.	Number of 3 and 4 level nurses increases annually.	Annually.	Human Resources summary of new number of 3 and 4 level nurses compared to prior year.
Identify EBP champions.	Unit managers, EBP Steering Committee.	4 champions per unit.	Annually.	List of champions per unit.
Develop an EBP intranet site.	EBP Steering Committee.	EBP intranet site built and operational.	Quarterly.	Number of nurses accessing the site.
Implement journal clubs.	Unit EBP champion and unit manager.	Journal club offered every 1-2 months.	Quarterly.	List of journal clubs by unit reviewed in EBP steering Committee.
Nurses' perceptions of empowerment.	Clinical Practice Council, CNO.	Perceptions increase.	Annually.	Nurses surveyed with PEI instrument.