

Boot Camp Cardiac Rehabilitation Education Program

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Background

Cardiovascular events continue to be a challenge in healthcare. Major cardiovascular events result in significant challenges, such as reduced functionality, reduced survival, and decreased quality of life. Patients are rehabilitated using left ventricular assist devices (LVADs) to improve their cardiac health.

Problem: The use of LVADs is complex and requires advanced knowledge and skills to manage patients effectively during and post LVAD. Research evidence supports the implementation of effective education programs to improve nurses' knowledge and confidence in post-LVAD care resulting in better patient outcomes.

Theoretical Framework: The study used Roy's Adaptation model, which includes the relationship between person, environment, nursing, and health, which is clearly defined and consistent in the theoretical framework of the BCCRE program.

PICO Question and Purpose

PICO Question

Does the implementation of Boot Camp Cardiac Rehabilitation Education (BCCRE) Program improve nurse's knowledge in providing care for post Left Ventricular Assistive Device (LVAD) patients?

Purpose

This project aimed to implement a Boot Camp Cardiac Rehabilitation Education (BCCRE) Program for nurses taking care of post LVAD patients. Nurses caring for post LVAD patients will increase their knowledge in patient safety and better care management.

Methodology

- **Design:** A quantitative pre and post test survey design.
- **Instrument:** Jesus M Casida's Diffusion of Ventricular Assist Device Innovation in Nursing Appraisal Scale, a 28 Item Likert scale questionnaire was used pre and post BCCRE program.
- **Convenience Sample:** Participants included Registered Nurses working in the Cardiac Unit of Temple University Hospital (N=35).
- **Setting:** Temple University Hospital Heart & Vascular Department in Philadelphia, PA.
- **Intervention:** A Boot Camp Cardiac Rehabilitation Education Program was designed to educate nurses on post LVAD Care.
- **Statistical Analysis:** A Wilcoxon Signed Rank test was conducted to determine the statistical significance.

Demographic of Participants

Demographic Characteristics	Description	N (35)	100%
Gender	Male	3	8.60%
	female	32	91.40%
Ethnicity	Asian	11	31.40%
	Black	3	8.60%
	White	15	42.90%
	Prefer not to answer	6	17.10%
Level of Education	Diploma	1	2.90%
	Baccalaureate degree	31	88.60%
Years of clinical nursing experience	Master's degree	3	8.60%
	Less than or equal to five years	10	28.60%
	Six to fifteen years	13	37.10%
Years of LVAD clinical experience	More than sixteen years	12	34.30%
	Less than or equal to five years	17	48.60%
	Six to fifteen years	10	28.60%
Specialty Certification	More than sixteen years	8	22.90%
	Critical Care Nursing-CCRN	1	2.90%
	Progressive Care Nursing-PCCN	3	8.60%
	Cardiac Surgery/Cardiology Nursing-CSC/CMC	1	2.90%
Professional organization membership	Other certifications	30	85.70%
	American Association of Heart Failure Nurses	2	5.70%
	American Association of Critical Care Nurses	3	8.60%
	International Association of Heart and Lung Transplantation	1	2.90%
Job roles	Any other organization	29	82.90%
	Registered nurse	15	42.90%
	Registered nurse with preceptor role	3	8.60%
Shift assignments	Registered nurse with preceptor role and charge RN	17	48.60%
	Day shift	12	34.30%
Prior LVAD education program	Night shift	23	65.70%
	Yes	25	71.40%
	No	10	28.60%

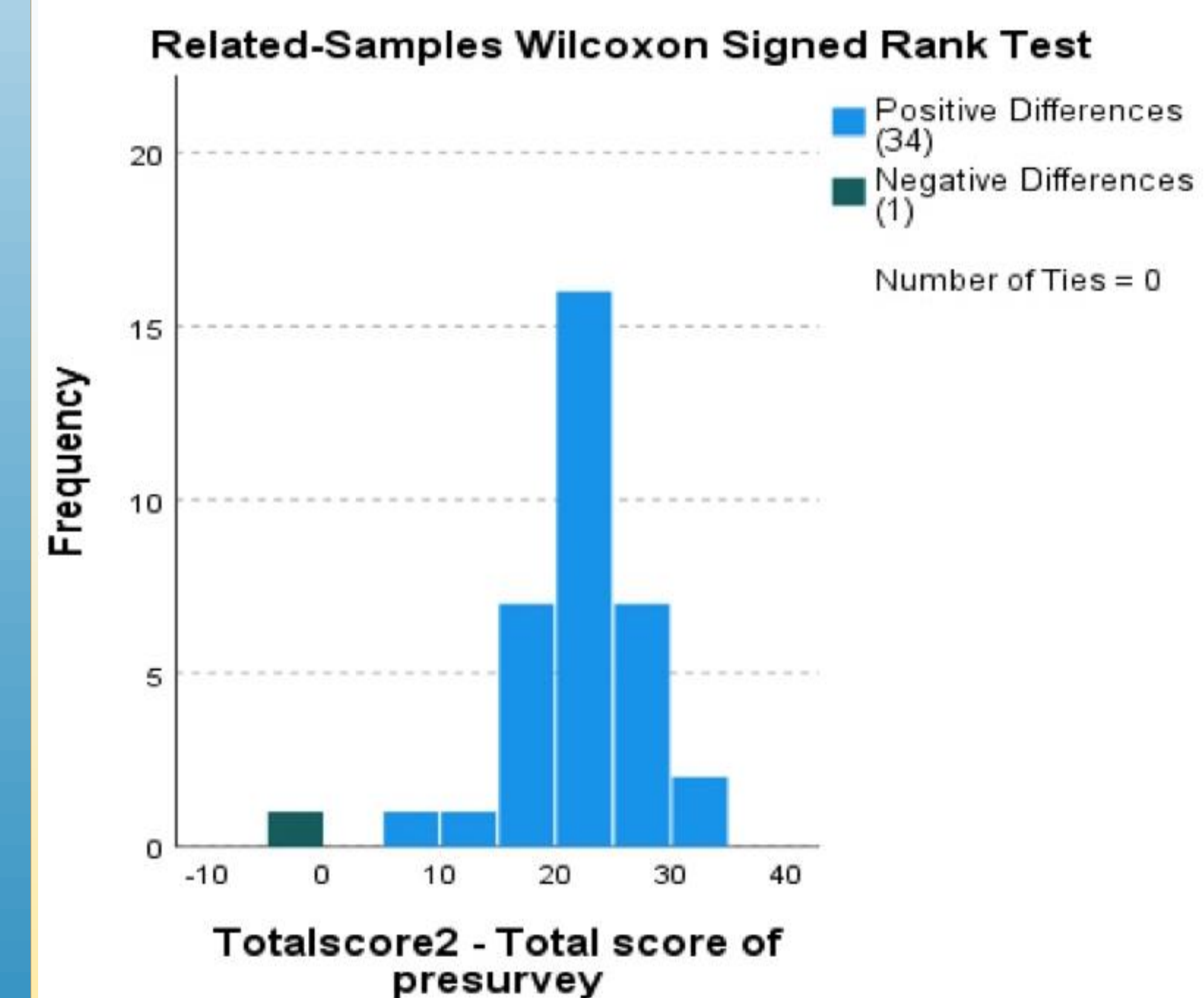
Results

The study results indicated 100% response rate with 35 cardiac nurses completing the study. A Wilcoxon Signed Rank Test was conducted. The statistical results indicated a t score of 629 and a z score of 5.148. The findings revealed significant differences between pre and post intervention survey with a p value that was <.001. The Boot Camp Cardiac Rehabilitation Education (BCCRE) intervention improved the level of LVAD knowledge in care for LVAD patients.

Related-Samples Wilcoxon Signed Rank Test

Total score of presurvey, Total score 2

Total N	35
Test Statistic	629
Standard Error	61
Standardized Test Statistic	5.148
Asymptotic Sig.(2-sided test)	<.001



Conclusion

The BCCRE program was effective in improving nurses' knowledge to deliver quality care for patients post-LVAD. Implementation of monthly boot camp educational programs in the cardiac units would improve nurses' knowledge, quality of care and safety provided to patient.

Limitations and Future Recommendations

Limitations

- The study had a small sample size (N=35) reducing the analysis power of the results.
- The study conducted in a single facility limits the generalizability of the findings.
- Only three male participants.

Recommendations

- The healthcare facilities should implement boot camp cardiac rehabilitation education to improve safety and patient outcomes in all the departments.
- Additional research is required with large sample size.

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