

Implementation of an Anxiety Decreasing Protocol to Help Improve Outcomes for ICD Patients

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PROBLEM STATEMENT

- Sudden Cardiac Death (SCD) affects more than 356,000 people annually in the U.S. with 90% of events being fatal.
- Implantable cardiac defibrillators (ICDs) deliver early defibrillation which can terminate lethal arrhythmias and therefore, remain the treatment of choice to prevent SCD.
- Even though ICDs are lifesaving devices, patients demonstrate depression and anxiety when faced with the life changes and insecurities that living with an ICD brings.
- The current practice is to explain and provide patients verbal and written information regarding the benefits for ICD implantation prior to their procedure.
- There is a gap between the provided physical condition treatment and psychological distress that arises post ICD insertion.
- Enhancing coping strategies and increasing ICD patient education, improves patient quality of life.

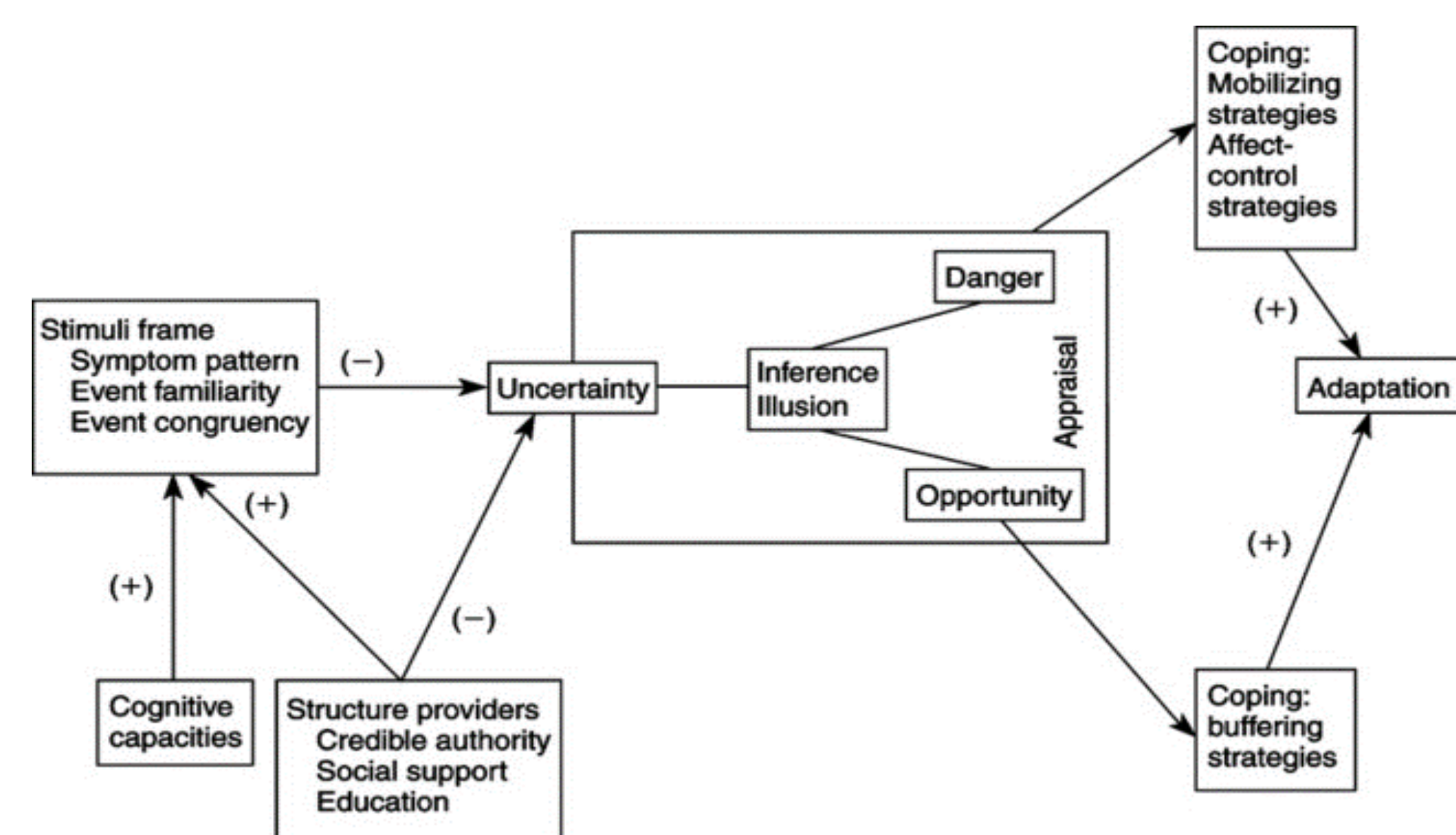
PROJECT PURPOSE

- To reduce anxiety level and increase quality of life levels in post operative ICD patients
- Project aim:** to develop and implement protocol to decrease anxiety in patients receiving ICDs.
- Clinical Question:** Will the implementation of an educational and anxiety decreasing protocol for patients receiving ICD implantation, decrease anxiety, and improve QOL over a 3-month period as measured by the MUIS, ICDC, FSAS and MLHF questionnaires as compared to current practice?

MODEL & NURSING THEORY

The project implementation utilized the Quality Improvement model: Plan-Do-Act-Check.

The Perceived Uncertainty in Illness model provided the Quality Improvement project framework.



METHODS

Sample & Setting

- A convenience sample of 18 post operative adult patients receiving new implantable cardiac defibrillators were included in the QI project.
- The setting was an electrophysiology private practice in Fort Lauderdale, Florida

INSTRUMENTS/TOOLS

Instrument / Tool	Measured Outcome	Instrument/ Tool Description
Mishel Uncertainty in Illness Scale (MUIS)	Uncertainty in illness	5 item questionnaire. 5-point Likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree), higher scores indicate greater concerns. Reliability $\alpha=0.70$ and face validity was satisfactory with values between -0.30 to 0.35
ICD concern Questionnaire (ICDC)	ICD concerns	8-item questionnaire. 5-point Likert scale scored from 0 (not at all) to 4 (very much so). Higher scores indicate higher ICD concerns. Reliability had a Cronbach $\alpha=.91$ and a validity was linguistically tested and validated from the original Swedish version
Florida Shock Anxiety Scale (FSAS)	ICD shock anxiety	10-item questionnaire 5-point Likert scale ranging from 1 (not at all) to 5 (all the time). Higher values representing a greater shock anxiety. Reliability of Cronbach $\alpha= 0.89$ and validity values between -0.2 to 0.4
Minnesota Living with Heart Failure Questionnaire (MLHF)	Quality of Life	21- item questionnaire 6-point Likert scale ranging from 0 (none) to 5 (very much). Higher scores are associated with poorer heart failure related quality of life. The HLHF questionnaire has a reliability of Cronbach $\alpha= 0.91$ and a validity of 0.87
Online ICD Anxiety Reduction and Self-Management Strategies	Amount of time website link was accessed	Online link containing Patient education material in addition to ICD anxiety reduction online self-management strategies

Key: V1= Baseline/ Visit 1; V2= Visit 2

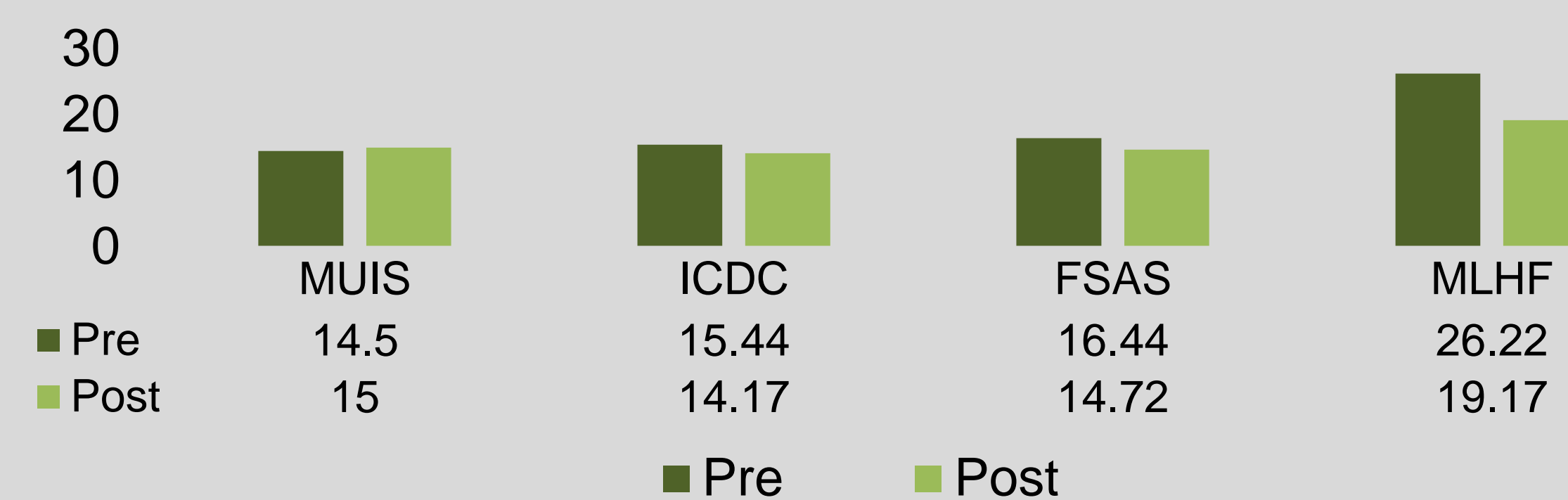
INTERVENTION/DATA COLLECTION

Prior to Intervention	IRB approval was obtained. Educational material and online ICD anxiety reduction online self-management strategies were created. Office staff and providers were informed of QI project activities. All patients scheduled to receive a new ICD were invited to participate in QI project..
30-Day Post Operative Visit 1 (V1)	Baseline MUIS, ICDC, FSAS, MLHF Questionnaires were completed online. A 20-minute educational session including information regarding general cardiomyopathy, heart failure disease process, ICD knowledge and a demonstration of online intervention access containing a series of ICD anxiety reduction self-management strategies was provided.
3-Month Post Intervention Visit 2 (V2)	Completed follow up MUIS, ICDC, FSAS, MLHF Questionnaires

RESULTS

Online patient education and anxiety decreasing self management strategies was accessed 122 times over the period of the QI project.

Pre and Post Mean Intervention Differences



Paired Sample t Test

	Mean	Standard Deviation	Standard Error Mean	95% C.I. of the difference		t	Df	Sig (2 tailed)
				Lower	Upper			
MUIS- Post MUIS	-0.5	3.4	0.801	-2.191	1.191	-6.24	17	0.541
ICDC- Post ICDC	1.278	7.797	1.838	-2.6	5.155	-6.95	17	0.496
FSAS-Post FSAS	1.722	5.644	1.33	-1.085	4.529	1.295	17	0.213
MLHF- Post MLHF	7.056	18.057	4.256	-1.924	16.035	1.658	17	0.116

There was no statistical difference noted from baseline to 3 months.

DISCUSSION

- Results showed that despite the lack of statistical significance, there was a clinical positive change noted in most of the measured scores suggesting that the anxiety decreasing protocol may have some clinical utility.
- Uncertainty scores measured by MUIS, showed a negative change, This observation suggests that the level of uncertainty is inversely related to the amount of the patients' level of concern, anxiety or quality of life.
- Lack of statistical significance might have resulted from a shorter than desirable QI education program, or that the program did not contain all the factors that may induce anxiety, depression or uncertainty in the population studied
- Future recommendations include a longer QI project duration and with a larger number of participants, and a post-intervention evaluation of the intervention components to capture what may be missing or needed to improve anxiety, depression and uncertainty while improving overall QOL for patients receiving ICDs

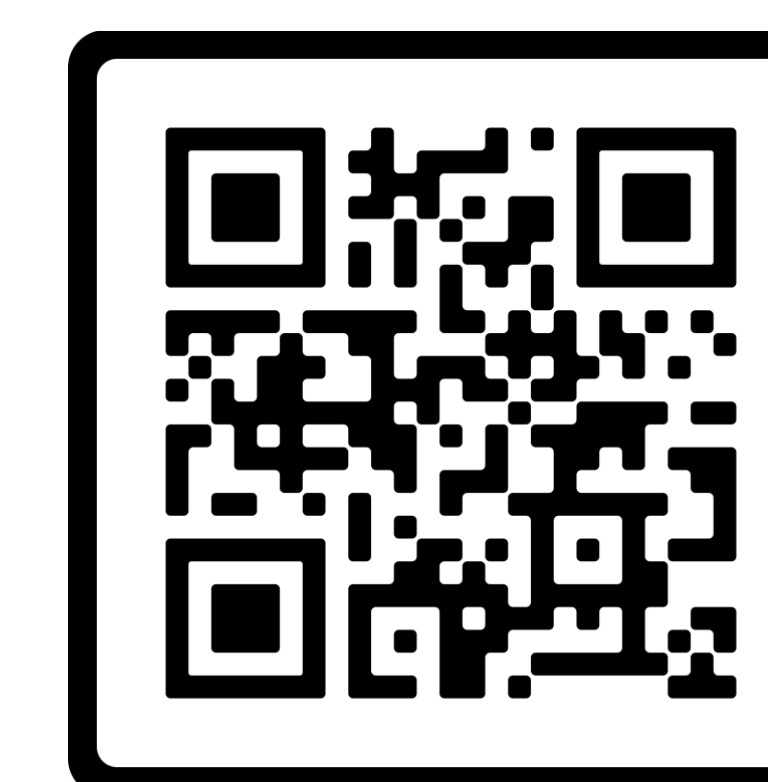
IMPLICATIONS FOR ADVANCE PRACTICE NURSING

- Goal of using QI project's anxiety decreasing protocol is to change standard care for ICD patients by implementing routine ongoing anxiety assessment offering anxiety decreasing strategies and referral to psychiatric professional.
- APRNs that care for post ICD patient directly can improve patient outcomes.

SUSTAINABILITY

- Patient education material and anxiety decreasing strategies remain in the clinical site website and as a handout form for any ICD patient to visit.
- Post project protocol was developed, to be implemented by clinical site for ongoing patient anxiety.

REFERENCES



Implementation of an anxiety decreasing protocol in post ICD patients lacks statistical significance, however results suggest some clinical utility.