

# INFLUENCE OF WORK ENVIRONMENT CONDITIONS ON THE ABILITY OF CRITICAL CARE NURSES TO PROVIDE EFFICACIOUS NURSING CARE IN PUERTO RICO

A Proposal



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# Purpose

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- The purpose of this study is to explore the elements in the work environment that influence the ability of critical care nurses to provide efficacious nursing care.
- No evidence describes the relationship between working conditions and the ability of nurses to deliver safe, quality, and efficient care in Puerto Rico.

# Specific Aims

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1. Measure the perceptions of the empowering structures in the work environment of the critical care nurses in Puerto Rico.
2. Measure the perceptions of caring efficacy of the critical care nurses in Puerto Rico.
3. Explore if the socio-demographic factors age, education and experience predict work empowerment.
4. Explore if the socio-demographic factors age, education and experience predict caring efficacy.
5. Measure the association between critical care nurses' perceptions of empowering structures in the work environment and nurses caring efficacy.

# Conceptual Framework

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- **Structural Empowerment**

The individual's access to support (i.e., guidance from supervisors and peers), resources (i.e., money, time, equipment, and supplies), information (i.e., knowledge about the organization goals, technical knowledge), opportunity (i.e., growth, advancement) results in empowered behaviors (Kanter, 1977; Chandler, 1986).

## **Caring Efficacy**

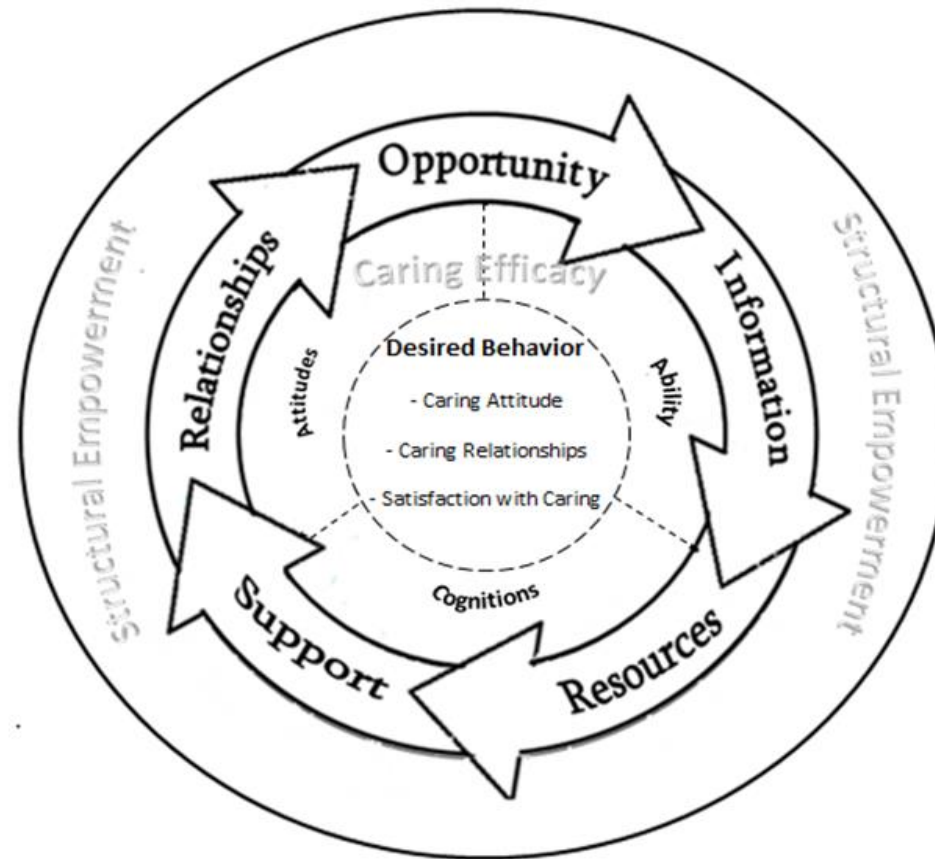
Grounded on Bandura (1977) caring efficacy infers that the nurse possesses the attitudes, behaviors and cognition to produce the desired outcomes (Coates, 1997) and Watson's (1997) caring relationship, focusing in the process of caring.

## **Proposed Association**

Power is the ability of getting things done (Kanter, 1993). Caring efficacy refers to the nurse's perceived power to demonstrate the desired behaviors of caring attitudes, caring relationships, and satisfaction with caring (Coates, 1997). We can then assume that structural empowerment has a direct effect on caring efficacy.

# Structural Empowerment and Caring Efficacy a Conceptual Framework Model

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# Research Questions

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1. Do the socio-demographic variables; age, education and experience, explain levels of work empowerment in the tested Puerto Rican critical care nurses population?
2. Do the socio-demographic variables; age, education and experience, explain levels of caring efficacy the tested Puerto Rican critical care nurses population?
3. Is there a significant relationship between critical care nurses 'perceptions of empowering structures in the work environment and nurses' caring efficacy?

# Significance to Nursing

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- The significance of this research designed to explore the influence of work empowerment in the ability of critical care nurses to provide efficacious nursing care will provide theoretical understanding of the conditions of work effectiveness and its influence over caring efficacy of nurses in critical care environments.
- The results of this study will provide managers and administrators baseline information conducting to the optimization of working conditions of nurses, leading to the achievement of quality patient outcomes through the provision of nursing efficacious care.
- The results of this study will provide nurse managers and administrators in Puerto Rico baseline data about the working conditions of critical care nurses.

# Review of Literature – PR, Cultural Influence, Nursing Working Conditions

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- Commonwealth of the United States since 1952. Puerto Ricans are born US citizens.
- Population of 3.8 million (US Census Bureau, 2012), mostly bilingual (English/Spanish).
- Rich Hispanic culture greatly influenced by US culture. Both cultures and basic philosophies merge into one.
- Lack of legislation, nursing shortage, low salaries, burnout, lack of resources and opportunities, and the documented exodus of health care professionals to the US searching for better working conditions are having a direct impact on nurses in Puerto Rico (Hay Brown, 2002; Nolan, 2002; Ovenberg 2012; Cotto, 2013 & Alvarez, 2014).

*Division of Statistical Analysis (DSA) of Puerto Rico’s Department of Health (PRDH), (2012) reported **19,733** Registered Nurses:*

Education	Number of Registered Nurses (2007 – 2010)
<b>ADN</b>	4,871
<b>BSN</b>	13,940
<b>MSN</b> or “Nurse Specialist” (Post BSN Certificate)	922

*Minimum Salary for Nurses in Puerto Rico (2007) as approved by state law no. 28 in 2005:*

Practice Level	Minimum Monthly Salary
<b>LPN</b> w/o Experience	\$1,500.00
<b>ADN</b> w/o Experience	\$2,000.00
<b>BSN</b> w/o Experience	\$2,350.00
<b>BSN</b> w Experience	\$2,500.00

# Review of Literature – Work Empowerment

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- Kanter's organizational behavioral theory (1977), adapted to nursing for the first time by Chandler (1986) applying Martha Rogers' (1970) principle of integrality suggests that human and environment cannot be studied separately.
- Laschinger's (1996) developed a program of research. Has examined with colleagues the relationship of empowerment with a number of nursing work variables: commitment to the organization, job satisfaction, organizational trust, patients' safety culture, work effectiveness, job strain and burnout (Wilson & Laschinger, 1994; Sabiston & Laschinger, 1995; Laschinger & Wong, 1999; Hatcher & Laschinger, 1996; Laschinger & Havens, 1997; Laschinger, Wong, McMahon & Kaufmann, 1999; Laschinger, Finegan Shamian & Casier, 2000; Laschinger, Finegan & Shamian, 2001; Laschinger, Finegan, Shamian & Wilk, 2001; Finegan & Shamian, 2001; Laschinger & Manojlovich, 2002).
- More recent studies have studied the relationship of work environments and nurse and patient outcomes (Purdy, Laschinger, Finegan, Kerr & Olivera, 2010); Civility, respect and engagement (Laschinger and colleagues, 2012); patient safety culture among critical care nurses (Armellino & colleagues, 2010); job satisfaction, job stress and emotional exhaustion for hemodialysis nurses (Douglas and Bonner, 2014).

# Review of Literature – Caring Efficacy

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- The Caring Efficacy Scale (CES) was developed by Coates (1997) to assess the individual's confidence in (or sense of efficacy about) his ability to express a caring orientation and establish a caring relationship with patients.
- Based on the conceptual frameworks of Watson's Transpersonal Caring Theory, emphasizing the caring relationship and on Bandura's social learning theory.
- Used to assess self-reported caring competency of a cross-section of baccalaureate nursing students (Coates, 1997; Sadler, 2003).
- Manojlovich (2005) studied environmental factors, perception of self-efficacy and professional behaviors.
- The CES has demonstrated both reliability and versatility in its use (Manolovich, 2005a, 2005b; Betcher, 2010, Amendolair, 2012; Leger, Sramek, Conklin & Nelson, 2005; Nelson & Watson, 2012; Eggenberger, Keller, Chase and Payne, 2012).

# Design

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- Descriptive-transverse correlational research study using a survey design.
- Instruments:
  - Conditions for Work Effectiveness Questionnaire (Chandler, 1986,1991)
    - Opportunities
    - Information
    - Support
    - Resources – such as equipment, supplies and time.
    - Relationships
  - Caring Efficacy Scale (Coates, 1997)
    - Cognitions
    - Attitudes
    - Behavioral Repertoire

# Methods

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- The approach for the study will be as follows:
  1. Instruments will be translated to Spanish and adapted to the Puerto Rican culture through a rigorous process to maintain conceptual and linguistic equivalency, thus maintaining previously established validity and reliability, which will be correlated to the Spanish versions' Cronbach's alpha coefficients.
  2. Survey the participants to establish a descriptive profile in terms of their socio demographic data and their perceptions toward their working conditions and caring efficacy.
  3. Correlation analysis would be performed to determine the association between both variables. Linear and multiple regression analysis will be performed if significant correlation is identified among the confounding variables.

# Translation and Adaptation Method

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- Evidenced based process designed by the researcher:
  - Forward Translation
  - Bilingual-Bicultural Expert Committee (BBEC) evaluation
  - Backward translation
  - Evaluation
  - Pilot testing
- Pilot Testing Results: 10% of the projected sample of the target population (n=30)

Instrument	Internal Consistency Translation	Internal Consistency English Instrument
CWEQ	.968	.76 - .88
CES	.890	.85 - .92

# Setting and Sample

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- **Setting** – 2 public hospitals in San Juan, Puerto Rico with a total of 320 reported critical care nurses
- **Sample** – 175 (or more) based on the table constructed for reference by Krejcie and Morgan (1970). According to these authors, that is the minimum responses required to achieve a 95% confidence interval and a  $\pm 5$  percentage point confidence interval in generalizing to the 320 nurses.
- **Inclusion Criteria** – Male or female nurses, at least 21 years old, who provide critical care at the selected units in either hospital that constitute the research setting.

# Data Collection

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- Authorization from ASEM and the CCPRC was obtain in writing from the hospitals' administrations for data collection.
- Participants will be approached by the researcher and asked for their willingness to participate in the research study. If volunteered to participate, they will be provided with a numbered envelope at time of recruitment. Each envelope will include the Survey Consent Form, Socio-Demographic Data Sheet, CWEQ, and the CES. The documents will be identified with the same number of the envelope for data management and analysis.
- The researcher will be provided with a list with the names of the nurses from each unit. Each name will be assigned a number in ascending order starting from number one. Participants will be coded on a separate control sheet which will include the name list assigned number of the participants along with an assigned code. The code will be the same as the assigned envelope. Each hospital will be coded with Roman numeral I or II.
- The researcher will visit the scheduled units during the different working shifts. Visits will be scheduled throughout all shifts adequate and time saving data collection procedures.

# Survey Procedures

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- Consenting participants will be approached according the researcher's schedule on a one to one basis.
- After consenting to participate a coded envelope will be handed to the participant at the beginning of the shift.
- Participants will complete the surveys at their convenience during the shift.
- Sealed envelopes will be picked up at the end of each shift.
- Each participant will receive an "I ♥ Nursing Research" silicone wristband for his/her participation.

# Ethical Considerations

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- Survey Consent Form
- Participant's confidentiality will be kept
- Questionnaires will receive a pre-coded number not related with identification characteristics or information of the nurses.
- Participants will be instructed to abstain from writing their names on any document
- The nurses' names list will be kept in a locked file at the researcher's office in a separate envelope and will be properly destroyed and discarded at the end of the data analysis process.
- The study will be submitted to the University of Massachusetts Institutional Review Board for approval.

# Data Analysis

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- The latest version of IBM SPSS Statistics, version 19, will be used for data analysis.
- Descriptive analysis of the study sample and variables will be conducted.
- Alpha reliability coefficients will be used to test inter-correlation among items for each of the variables to test internal consistency of both CWEQ and CES.
- Correlational analysis will be performed to identify relationships between or among variables.
- A correlational matrix based on Pearson product-moment coefficients ( $r$ ) and significance level ( $p$ ) will be developed to describe the existence of a significant association between the variables, and its strength and direction.

# Strengths and Limitations

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- Strengths
  - Researcher in direct communication with the authors of both instruments
  - Both instruments have been used and found to be reliable and valid
- Limitations
  - The CES was not originally design to measure the concept of caring efficacy in clinical practice
  - Another limitation is the social desirability response effect bias, which should be considered a limitation in any study where participants rate their own behaviors (Ganster, Hennessey & Luthans, 1983; Podsakoff & Organ, 1986).



# Questions

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