Title:
Work-Related Musculoskeletal Disorders: Psychological Factors in Licensed Nurses

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Session Title:
Health of the Nursing Workforce
Slot:
A 08: Saturday, 28 October 2017: 2:15 PM-3:00 PM
Scheduled Time:
2:15 PM

Keywords:
Coping Strategies, Psychological Factors and Work-related Musculoskeletal Disorder

References:


Abstract Summary:
Licensed nurses complain of pain and leave the profession citing work-related musculoskeletal disorders (WMSD). Psychological factors affect injury response of avoidance or confrontation. Explore the self-reported characteristics of nurses with a WMSD and relationships among psychological factors (pain, personality traits, and coping strategies) to create evidence-based innovations for holistic rehabilitation.

Learning Activity:
# LEARNING OBJECTIVES

<table>
<thead>
<tr>
<th>The learner will be able to explain characteristics of a nurse with a work-related musculoskeletal disorder.</th>
<th>Participant results of self-reported demographic characteristics, psychological factors of pain, personality traits, and coping strategies in this study.</th>
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<tbody>
<tr>
<td>The learner will be able to analyze the associations among psychological factors and a WMSD.</td>
<td>Use the study findings (tables, charts, posters) of positive associations among psychological factors; a presentation handout will allow the participant to map (draw) the associations for a visual representation model.</td>
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<td>The learner will be able to develop innovative EBP interventions for holistic rehabilitation.</td>
<td>Group &quot;Think Tank&quot; (collaboration) to develop holistic rehabilitative interventions.</td>
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**Abstract Text:**

**Background:** Licensed nurses complain of musculoskeletal pain and leave the profession reporting work-related musculoskeletal disorders (WMSD). Physical risk factors for WMSDs among licensed nurses have been well established (ANA, 2013; Dawson & Harrington, 2012). Few studies have focused on relationships of WMSD and psychological factors (Harland & Ryan, 2013). Rehabilitation following WMSD traditionally focuses on physical dimensions, but both physical and psychological factors (Linton & Shaw, 2011) may be useful during rehabilitation (Theis & Finklestein, 2014), as suggested by the Fear Avoidance Model of Chronic Pain (FAMCP).

**Purpose:** With a goal of a culture of safety and evidence-based innovations, the purpose of this study was to describe demographic characteristics of nurses with and without WMSD and relationships among related psychological factors of pain (intensity, severity, and interference), personality traits (extraversion and neuroticism), and coping strategies (catastrophizing, diversion, reinterpreting, cognitive coping, fear avoidance, and depression) as postulated in accordance with the FAMCP.

**Methods:** This cross-sectional study used a convenience sample. An online survey was posted on the websites of three nursing organizations: STTI, ANA, and INNA. Nurses with a WMSD (n=124 of 243 participants) completed demographics, WMSD History, Numeric Pain Rating Scale (NPRS), Coping Strategies Questionnaire-24 (CSQ-24), Fear Avoidance Belief Questionnaire (FABQ), Eysenck Personality Questionnaire- Brief Version (EPQ-BV), and Centers for Epidemiological Studies Depression Scale (CES-D). Nurses without a WMSD (n=119 of 243 participants) completed three sections, demographics, EPQ-BV, and CES-D.

**Results:** Overall, nurses (n=243) were predominately Caucasians (82%), females (94%), and married/partnered (68%). In age, 40% were 50 to 59 years old and 44% were employed as a staff nurse in a hospital. Nurses with WMSD reported higher educational level, with 43% having a MSN degree. The highest level for nurses without WMSD was a BSN degree (44%). Nurses with WMSD also reported higher depressive symptoms in relation to the pain experience. Findings were in accordance with the conceptual model in that the relationships of negative coping strategies directed an avoidance pathway. Catastrophizing showed a positive relationship to all psychological factors except cognitive coping and extraversion. Nurses with WMSD showed strong positive correlations between catastrophizing and pain severity, $r(124) = 0.622$, $p = .01$, catastrophizing and fear avoidance related to work activity, $r(124) = 0.549$, $p = .01$, and catastrophizing and depression, $r(124) = 0.502$, $p = .01$. Overall, the strongest correlation was between neuroticism and depression, $r(124) = 0.733$, $p = .01$.

**Conclusions:** Relationships between concepts (catastrophizing, fear avoidance, depression) in the FAMCP and psychological risk factors are supported. Catastrophizing is associated with pain severity,
fear avoidance, and depression, and fear avoidance is associated with neuroticism, elevated pain levels, and depression. Extroversion is inversely associated with depression. Further work is needed prior to the development of interventions for rehabilitation of nurses with WMSD.