Factors Predicting Weaning Success in Patients with Respiratory Failure Receiving Invasive Mechanical Ventilator

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Abstract

Purpose: This secondary analysis aimed to study predictive power of age, gender, perceived self-efficacy for weaning, perceived severity of illness, and anxiety on weaning success in patients with respiratory failure receiving invasive mechanical ventilator. Spontaneous breathing trial at first 120 minutes was used as the method of weaning in this study.

Design: Correlational predictive design.

Methods: From the primary study, the data were collected at two tertiary hospitals. In this study, the data from 147 participants in both groups of weaning success and failure were used for analysis using descriptive statistics and logistic regression.

Main findings: About half (53.1%) of the participants were male, and average age were 66.3 years. Only 2 factors could significantly predict weaning success at p < .05. That is, perceived self-efficacy for weaning increased chance in succeed weaning (odds ratio = 1.08, 95% CI 1.05 - 1.12); and anxiety decreased chance in succeed weaning (odds ratio = 0.98, 95% CI 0.96 - 0.99). All study factors could explain 66% of the variance in weaning success.

Conclusion and recommendations: Nursing interventions should be developed to promote perceived self-efficacy for weaning and reduce anxiety before performing spontaneous breathing trial in each patient.

Keywords: anxiety, perceived self-efficacy, perceived severity of illness, weaning