

## Factor Associated with Uncertainty Undergoing Hematopoietic Stem Cell Transplantation

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**Abstract :** Uncertainty has been studied in patients with different types of cancer, except in patients with hematologic cancer and undergoing transplantation. The purpose of this study was to identify factors associated with uncertainty in adults patients with malignant hemato-oncology diseases who are scheduled to undergo hematopoietic stem cell transplantation based on Merle Mishel's Uncertainty theory. This was a cross-sectional study with an analytical purpose. The study sample included 50 patients with leukemia, myeloma, and lymphoma selected by non-probability sampling by convenience and intention. Sociodemographic and clinical variables were measured. Mishel's Scale of Uncertainty in Illness was used for the measurement of uncertainty. A bivariate and multivariate analyses were performed to explore the relationships and associations between the different variables and uncertainty level. For this analysis, the distribution of the uncertainty scale values was evaluated through the Shapiro-Wilk normality test to identify statistical tests to be used. A multivariate analysis was conducted through a logistic regression using step-by-step technique. Patients were 18-74 years old, with a mean age of 44.8. Over time, the disease course had a median of 9.5 months, an opportunity was found in the performance of the transplantation of < 20 days for 50% of the patients. Regarding the uncertainty scale, a mean score of 95.46 was identified. When the dimensions of the scale were analyzed, the mean score of the framework of stimuli was 25.6, of cognitive ability was 47.4 and structure providers was 22.8. Age was identified to correlate with the total uncertainty score ( $p=0.012$ ). Additionally, a statistically significant difference was evidenced between different religious creeds and uncertainty score ( $p=0.023$ ), education level ( $p=0.012$ ), family history of cancer ( $p=0.001$ ), the presence of comorbidities ( $p=0.023$ ) and previous radiotherapy treatment ( $p=0.022$ ). After performing logistic regression, previous radiotherapy treatment (OR=0.04 IC95% (0.004-0.48)) and family history of cancer (OR=30.7 IC95% (2.7-349)) were found to be factors associated with the high level of uncertainty. Uncertainty is present in high levels in patients who are going to be subjected to bone marrow transplantation, and it is the responsibility of the nurse to assess the levels of uncertainty and the presence of factors that may contribute to their presence. Once it has been valued, the uncertainty must be intervened from the identified associated factors, especially all those that have to do with the cognitive capacity. This implies the implementation and design of intervention strategies to improve the knowledge related to the disease and the therapeutic procedures to which the patients will be subjected. All interventions should favor the adaptation of these patients to their current experience and contribute to seeing uncertainty as an opportunity for growth and transcendence.

**Keywords :** hematopoietic stem cell transplantation, hematologic diseases, nursing, uncertainty

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