The Effect of Perıoperative Heated Sock Use in Preventing Hypothermia During Total Hip Prosthesis Surgery :A Randomized Controlled Trial

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Population and Sampling

The population for the research comprised patients undergoing THP surgeries between 15 October 2021 and 31 December 2022 in Samsun Gazi State Hospital. The sample for the population comprised patients who met the research criteria and who accepted participation in the research from among individuals in the population. Calculation of the effect size in the study used the calculation method (d value) developed by Cohen (Cheon & Yoon, 2017). To determine the d value for the effect size index, findings from studies researching the effect of perioperative heating on preventing hypothermia by Lee et al. (2018) and Lau et al. (2018) were used. In the calculations for these studies, the effect size obtained from comparing two groups was identified to be $d=1$ and above (large effect). However, with the aim of obtaining a larger sample group in this research, it was appropriate to take large effect size as reference for the initial limit for the t test to measure the difference between two groups. In this context, with $d=0.8$, $\alpha=0.05$ (error), $1-\beta=0.95$ (power), accompanied by the stated criteria, with the aid of the G-power (version 3.1) program, the sample group was determined to require a total of 70 people, with 35 in the experiment group and 35 in the control group.

Data analysis

The SPSS program was used for statistical analysis. The Kolmogorov Smirnov test was used to show whether data obtained from the groups had normal distribution or not. The independent samples T test and Mann-Whitney U test were used for comparisons between two groups of quantitative data. The one-way analysis of variance, or the non-parametric equivalent of the Kruskal-Wallis test, were used for comparisons of more than two groups. To test the differences in repeated measures, the paired samples test was used for data with normal distribution and the Wilcoxon test was used for data without normal distribution. Qualitative comparisons between groups used the Pearson chi-square or Fisher exact chi-square tests. Additionally, multiple linear regression modelling was used to measure the effect

of the independent variables on the dependent variable. Results were analyzed in the 95% confidence interval with $p<0.05$ indicating significance.