Pediatric Postoperative Pain Management in Surgical Wards – an Intervention Study

Unique Protocol ID: 2019/388 [Regional Committee for Medical Research Ethics Norway]

Statistical Analysis Plan

Changes in healthcare providers knowledge and attitudes of pediatric pain management

- Evaluated with "The Pediatric Nurses' Knowledge and Attitudes Survey Regarding Pain Questionnaire - Norwegian version" (PNKAS-N).

The data will be analyzed with statistical methods using SPSS version 25 (IBM SPSS Statistics for Windows, version 25.0. IBM Corp, Armonk, NY, USA). Descriptive and correlational statistics will be used to describe and summarize data. Means, standard deviations, medians, and interquartile ranges will be calculated for continuous data. Frequency counts and proportions will be calculated for categorical data. Multiple linear regressions for repetitive measurement will be used for analyzing the effect of the intervention.

Nurses pediatric postoperative pain management practices in surgical wards

- Evaluated with non-participant observation using a structured observational tool (checklist) and field notes

The observational data will be analyzed with statistical methods using SPSS version 25 (IBM SPSS Statistics for Windows, version 25.0. IBM Corp, Armonk, NY, USA). Descriptive and correlational statistics will be used to describe and summarize data. Means, standard deviations, medians, and interquartile ranges will be calculated for continuous data. Frequency counts and proportions will be calculated for categorical data

Children's experiences of pain and pain management after surgery

- Measured with interview with children about postoperative pain using semi-structured interviews with children after surgery

Children's responses to the interview questions will be transcribed verbatim and structured using NVivo (QRS NVivo Pro for Windows, version 11). Content analysis will be used to the transcripts by using a six-step approach:

1. Creating and organizing files for the data
2. Reading through the text and forming initial codes
3. Coding the data
4. Describing the social setting, people involved, and events
5. Analyzing data for identifying emerging themes
6. Interpreting and making sense of the findings

Healthcare providers experience barriers and facilitators for effective pediatric postoperative pain management

- Measured with focus group interview with healthcare providers about barriers and facilitators for effective postoperative pain using semi-structured interviews with healthcare providers

Healthcare providers' response to the interview will be transcribed verbatim and structured using NVivo (QRS NVivo Pro for Windows, version 11). Content analysis will be used to the transcripts by using a six-step approach:

1. Creating and organizing files for the data
2. Reading through the text and forming initial codes
3. Coding the data
4. Describing the social setting, people involved, and events
5. Analyzing data for identifying emerging themes
6. Interpreting and making sense of the findings