Can Music Provide Pain Relief During Vascular Access Cannulation for Hemodialysis?

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Hemodialysis for chronic kidney disease requires cannulation with two large bore needles 3 times every week for life, causing most patients significant pain. Research about the efficacy of music as a non-pharmacologic method for relief of pain generated from various sources provided the impetus for this pilot study. A random sample of 19 patients undergoing dialysis participated. A crossover experimental design with participants serving as their own control was used. Participants were randomly assigned to start the study with music or without music. Participants then alternated listening to music with not listening to music for a total of four treatment events with a minimum washout period of one day between events. Participants indicated their level of pain on a visual analog scale immediately following cannulation. Data were analyzed using a paired t test with p< 0.05 indicating significance. Although the pilot was not able to detect statistical significance, all of the participants stated they loved or liked listening to the music and that it reduced their perception of pain, suggesting need to conduct the study using a larger sample size. Pain relief is a critical service provided by nurses and music has potential for a new method of pain relief during dialysis cannulation.

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