DEVELOPMENT OF AN EVIDENCE-BASED NURSING PRACTICE GUIDELINE FOR MEASURING NONINVASIVE BLOOD PRESSURE IN CHILDREN

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Noninvasive blood pressure (BP) measurement is widely used in pediatrics. From the clinical instructor's experiences, some undergraduate nursing students still had difficulties in measuring noninvasive BP, particularly using oscillometric technique in ill children. These difficulties were inability to measure BP, taking long time of each evaluation, improper position, variation of cuff placement, and inappropriate cuff size. Inaccurate BP measurement may delay investigation of pediatric health status, diagnosis, and treatment. The project objective was to search for evidence-based practice of accurate noninvasive BP measurement, which would assist nursing students to gain current knowledge and improve skills to assess pediatric BP in terms of rapid and safe technique, and decreased possible errors in measuring. Databases (Medline, CINAHL, Cochrane Collaboration, Joanna Briggs Institute, and National Guideline Clearinghouse) were searched over the last 14 years (1993-2007). The search was performed with combinations of three key words: blood pressure measurement, evidence based guideline, and children. Then, online/published study researches/documents indicating the strength of evidences were selected and analyzed. The obtained evidences were finally synthesized. Results revealed best practice for measuring pediatric noninvasive BP which included 1) Patient preparation: Perform in a quiet, non-anxiety producing environment and arrange children to take a rest for at least 3 to 5 minutes prior BP assessing, 2) Site of BP measurement: Select right arm as preferred site based on readings of standardized BP tables, and avoid applying thigh site, 3) Body and arm position: Place children in sitting position with back supported, feet resting on the floor, and arm resting at their side. 4) Cuff size: Choose inflatable bladder width for at least 40% of arm circumference, and bladder length covering 80% to 100% of arm circumference. This project suggested that evidence-based practice of noninvasive BP measurement should be applied in clinical supervision for nursing students consistently.