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Prior knowledge in student and experienced nurses' clinical problem solving

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Abstract

This study reports an investigation of student and experienced nurses' use of prior knowledge in clinical problem solving. 30 experienced and 30 student nurses were asked to verbalise their thoughts while undertaking a simulated clinical problem solving task. All verbal protocols were coded for use of prior knowledge based on a coding scheme developed for the study. The theoretical basis of the coding scheme was derived from the knowledge-driven models indicating that the development of expertise is strongly linked with the evolution of sophisticated knowledge structures. Repeated measures MANOVA were used to examine group differences across the coding categories. Results indicated that the experienced nurses were more likely to have available a more readily accessible and highly structured knowledge base, allowing for rapid recognition of highly significant clinical data and the transformation of that data into highly relevant clinical schemes. The student nurses relied on a less accessible and less structured knowledge base and were only able to identify and interpret less significant clinical data at a surface level. The results suggest an important role for prior knowledge in explaining clinical problem solving performance. Implications for nurse education are discussed.

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