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# Reaching the Core of Nursing Quality: Defining Situation Awareness in Nursing

# Background

- Patient care error remains the eighth leading cause of death.
- Nursing work requires a constant state of attention to the unexpected with the capacity to perceive multiple perspectives.
- Nursing work environments are high-hazard, cognitively demanding, interdependent with little margin for human error.
- Patient care errors have been attributed to human factors in 80 percent of the cases.
- The greatest factor influencing attention is situation awareness (SA).

# Purpose

The purpose of the study was to conduct a hybrid concept analysis to identify the significance of situation awareness in nursing.

# Methods

Hybrid concept analysis has been useful in defining concepts that are important to nursing: mental health nursing, self-care management, oncology nursing and pediatric nurses. This method integrates theoretical analysis and field experience, incorporating the nurse participant perspective, which is uniquely relevant to the study of situation awareness in the acute care nursing work environment. The hybrid concept model is comprised of three phases:

- **1**) Theoretical phase
- 2) Fieldwork phase
- 3) Analytic phase

#### **Phased Approach to Hybrid Concept Analysis**

#### Phase 1 – Theory

- Concept selection
- Literature search
- Identifying concept meaning
- Measurement
- Phase 2 Fieldwork
- Setting the stage
- Negotiating entry
- Selecting cases
- Collecting and analyzing data

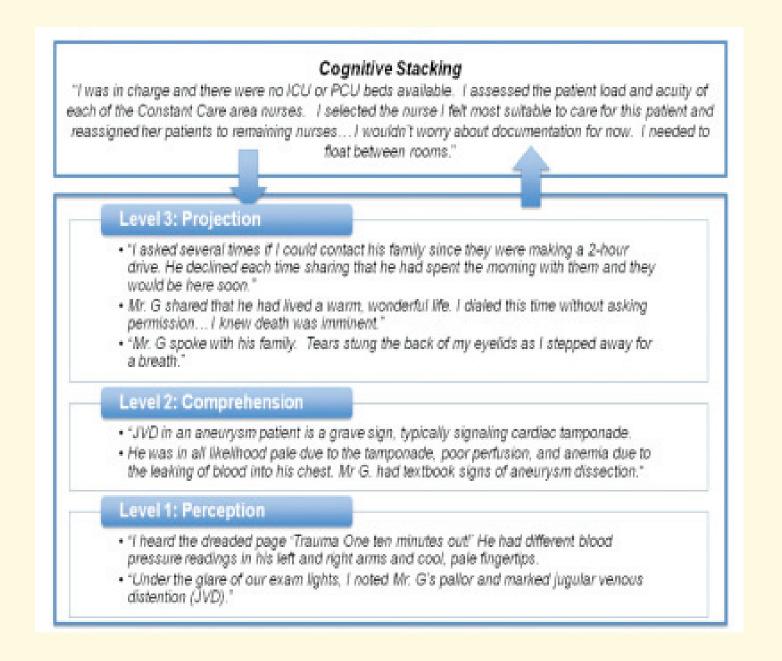
Phase 3 – Analysis

- Identify the importance and application of the concept
- Analyze concept against empirical findings

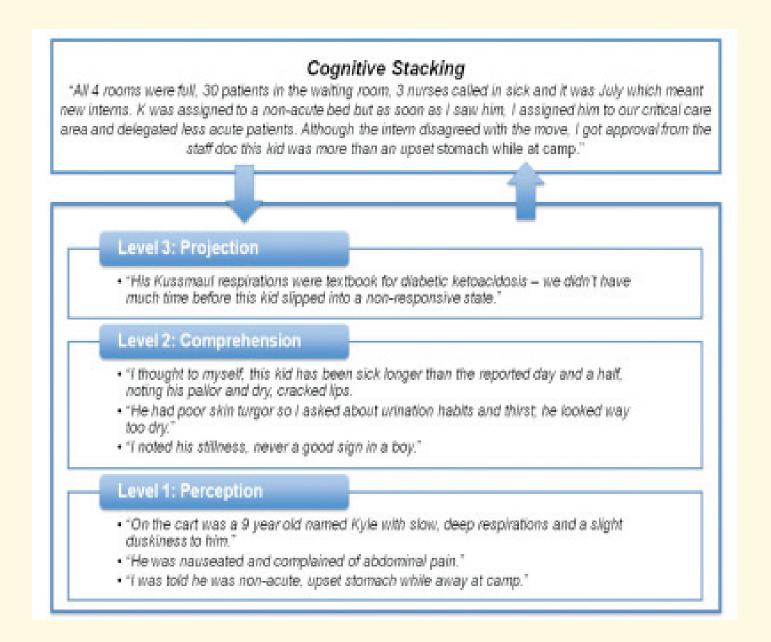
# Data/results

- Nine defining themes emerged: perception, comprehension, projection, knowledge and expertise, cognitive overload, interruption management, task management, instantaneous learning, and cognitive stacking.
- Relational analysis was then used to explore the relationships between the concepts identified and stated as inquiry. Following analysis of the nature of situation awareness, the resulting themes were more accurately illustrated in relationship with SA and encompassed five categories or main themes:
  - SA and expertise
  - SA and cognitive overload
  - SA and interruption management
  - SA and task management
  - SA and cognitive stacking

#### **SA and cognitive stacking: Exemplar 1**



#### **SA and cognitive stacking: Exemplar 2**



## Definition of SA in nursing

- L1: A dynamic process in which a nurse perceives each clinical cue relevant to the patient and his or her environment;
- L2: Comprehends and assigns meaning to those cues resulting in a patient-centric sense of salience: and
- L3: Projects or anticipates required interventions based on those cues.

(Sitterding, et al, 2012)



# Conclusions and implications

Hybrid concept analysis verified the relevance and significance of situation awareness in nursing.

The category of SA and cognitive stacking was a differentiating characteristic among novice and expert nurses. Implications for practice and future research include:

- Quantify the empirical relationship between interruption management, task management, cognitive overload and SA in nursing.
- Examine the effectiveness of methods aimed at accelerating the novice-to-expert trajectory and the impact on SA and cognitive stacking in nursing.
- Understand how SA develops across nurse career trajectories and what institutional factors enhance and impede to inform developmental strategies.

# Acknowledgements

The author thanks nursing leadership at IU Health for unwavering support of nursing excellence, the exploration of new knowledge and innovations, and the ongoing advancement of professional practice.

### References

Sitterding, et al, (2012). Understanding Situation Awareness in Nursing Work: A Hybrid Concept Analysis. Advances in Nursing Science. Vol. 35, No. 1, pp. 77–92.

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