

Developing Nursing Student's Critical Thinking Ability Through Concept Mapping

JULIE A PERRY, MSN, RN, ROBINGALE A PANEPINTO, DNP, RN | SCHOOL OF NURSING, VANDERBILT UNIVERSITY NASHVILLE, TN



OBJECTIVES

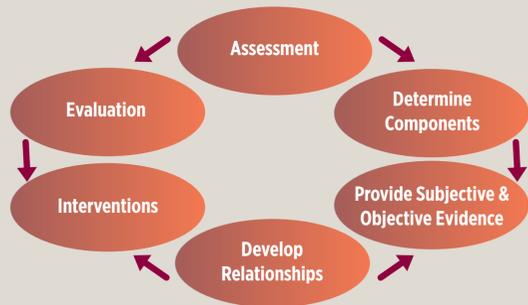
The learner will be able to

- understand how concept mapping may be implemented within their institution
- apply the steps of concept mapping to further student critical thinking

WHY CONCEPT MAPPING?

- Fosters utilization of previous knowledge
- Encourages creative outlets of thinking
- Student centered learning
- Incorporates multiple learning styles
- Promotes communication

Process of Concept Mapping



How to Build a Concept Map

- Identify a problem, issue, or knowledge domain
- Identify related concepts
- Rank the concepts
- Add concepts as needed
- Build map with most inclusive concepts highlighted
- Add sub-concepts
- Connect concepts
- Restructure map as needed
- Cross link concepts
- Concept map changes with understanding of concepts

Novak, Joseph D. *Learning, creating, and using knowledge: Concept maps as facilitative tools in schools and corporations.* Rutledge 1998

Student Concept Map

- CONCEPT:** Sleep Pattern Disturbance/Ineffective Management of Therapeutic Regimen
- SUPPORTING DATA:** Patient (child, 2nd grade) did not receive 0700 and 1045 respiratory therapy scheduled treatment due to refusal and sleeping pattern.
- ECO:** By end of shift patient and caregiver will verbalize a plan of home therapeutic management and a reward program to encourage therapy goals on time daily.
- INTERVENTION:** Develop with patient and caregiver a system of rewards and treatment regiment, by end of shift.
- EVALUATION:** Unsuccessful

- CONCEPT:** Self Care Deficit (feeding, bathing/hygiene, dressing/grooming)
- SUPPORTING DATA:** Patient showed resistance to bathing, brushing hair and teeth, allowing nurse access to g-tube for meals.
- ECO:** By end of shift, patient will cooperate with bath and hygiene.
- INTERVENTION:** Negotiated a time with child to perform these needed tasks.
- EVALUATION:** Unsuccessful

- CONCEPT:** Parental Role Conflict/Caregiver Role Strain r/t caregiver health problems and patient chronic illness of CF
- SUPPORTING DATA:** Upon interview of patient and grandmother, discovered grandmother is main caregiver. Mother is not supportive of patient's care.
- ECO:** Caregiver expresses positive feeling with caregiver role.
- INTERVENTION:** Encourage caregiver to identify available family and friends who can assist with caregiving.
- EVALUATION:** Caregiver was unable to identify family or friends to provide assistance.

Medical Diagnosis

Cystic Fibrosis (CF) with Unspecified Community Pneumonia and Flu, Asthma, GERD, and Pancreatic insufficiency

Related Meds

Antibiotics
Enzymes
Respiratory Therapy

- CONCEPT:** Nutrition Deficit r/t anorexia, chronic malabsorption due to CF
- SUPPORTING DATA:** Lack of solid meals, abnormal multiple lab values supporting anemia, vitamin B and folate deficiency, inability to absorb proteins/fats affecting the pancreas and digestive intestines. Administer daily supplemental multi-vitamins.
- ECO:** Patient will consume snacks in addition to meals by end of shift.
- INTERVENTION:** Encourage social eating of favorite snack bid. Social eating is a distraction technique to focus patient more on the social interaction, rather than the eating or feeling full.
- EVALUATION:** Yes, met, ate a vanilla ice cream.

- CONCEPT:** Ineffective Airway Clearance r/t increased sputum production and mucous plugging r/t new or increased bacterial growth in airways
- SUPPORTING DATA:** Growth chart for weight of 20.55kg at 25%, height of 111.5cm at 4%. Nutrition deficit due to advanced CF.
- ECO:** Patient will be proficient in using effective airway clearance therapies to clear secretions, as evidenced by clearer lung sounds by end of shift.
- INTERVENTION:** Use play distraction during respiratory therapy treatment to ensure positive compliance and encourage productive coughs through out shift.
- EVALUATION:** Productive coughing occurred throughout day. Clearer lung sounds were present on left side upon afternoon respiratory assessment.

- CONCEPT:** At Risk for Skin Integrity
- SUPPORTING DATA:** Poor nutrition, immobility, PICC line, g-tube, Port-A-Cath. Patient diaphoretic at rest.
- ECO:** Skin remains intact as evidenced by no redness, edema, moisture, bleeding, or signs of infiltration during shift.
- INTERVENTION:** Maintain clean, dry, and moist skin. Lotion applied to bony prominences, hips, arms, elbows, shoulders, and legs tid. Discussed/teaching g-tube site home care.
- EVALUATION:** Maintained skin integrity throughout shift.

CONCEPT MAPPING?



Improving Student Critical Thinking

- Engagement Activities
- Observations
- Clinical Judgement
- Outcome Criteria
- Interventions

Teaching and Evaluation

Teaching Skills

- Categorizing priorities
- Prompting
- Questioning

Evaluation Methods

- Group Discussion
- Priority Problem
- Interventions
- Outcomes
- Reflection
- Student & faculty feedback

Conclusion

EVALUATION OF STUDENT'S CRITICAL THINKING OCCURRED THROUGH REFLECTIVE ACTIVITIES AND STUDENT, FACULTY, AND CLINICAL SITE FEEDBACK. STUDENT ENGAGEMENT AND CRITICAL THINKING, UTILIZING THE USE OF CONCEPT MAPPING, ENHANCED STUDENT PROGRESSION THROUGH THE NURSING PROGRAM.