Situational Awareness in Field-Level Multi-Casualty Incidents: Implications for Nursing Practice, Education and Research

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Objectives

- To identify the terms situational awareness and multi-casualty incidents and situate them within the realm of nursing and nurse practitioner practice.
- To analyze the newly developed theory within nursing, the Busby Theory of Situational Awareness in Multi-Casualty Incidents.
- To analyze and synthesize the implications of this new theory with respect to Benner’s Novice to Expert theory, and to discuss the implications for nursing practice, education and research.

SA in MCI

- FNP
- PhD in Nursing with Homeland Security Nursing Specialty (1 of 6 in the U.S.)
- Local Involvement
- National Involvement
- Federal DMAT

Nursing Needs to be Involved!

SA In MCI

- Methodology
  - Define MCI – None appropriate, This study 2-25 pts. (8,17)
  - Qualitative
  - Grounded Theory (8-10)
- Data Collection and Analysis
  - 15 Responder Interviews
  - Resulted in over 900 codes
  - Open, Focused and Axial Coding
  - Theoretical Sensitivity
  - Resulted in 11 categories which were then related to one another
  - Theoretically Sampled for
  - Experience, Profession and Context

Situational Awareness (SA) in Multi-Casualty Incidents (MCI)

- Conceptually
  - Aviation, Battlefield, Direction, Business (1-4)
  - Human Factors Research (8-10)
- Healthcare Applications Limited
  - Admin - CDC (Biosense) (13)
  - Hospital - Anesthesia, Perioperative (13-15)
  - Field – Triage, Patient Disposition, Scene Safety (14-16)
- Dissertation Focus – Add to current state of the knowledge and situate the research within nursing

Table 1 - Participant Demographics

<table>
<thead>
<tr>
<th>Participant</th>
<th>Gender</th>
<th>Race</th>
<th>Education</th>
<th>Experience</th>
<th>Profession</th>
<th>Context</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant 1</td>
<td>M</td>
<td>W</td>
<td>BS</td>
<td>5 years</td>
<td>EMT/FF</td>
<td>Field</td>
</tr>
<tr>
<td>Participant 2</td>
<td>F</td>
<td>W</td>
<td>BS</td>
<td>3 years</td>
<td>Paramedic</td>
<td>Clinic</td>
</tr>
<tr>
<td>Participant 3</td>
<td>M</td>
<td>W</td>
<td>BS</td>
<td>4 years</td>
<td>EMT/VFF</td>
<td>Hospital</td>
</tr>
<tr>
<td>Participant 4</td>
<td>M</td>
<td>W</td>
<td>BS</td>
<td>6 years</td>
<td>Physician</td>
<td>Clinic</td>
</tr>
</tbody>
</table>

8/6/2009
Categories/Properties

- Experience - significance, benefit
- Interval Action - general preparation
- Contextually-Based Situation - mechanism, numbers, location
- Appreciating Context and Complexity - dynamic, anticipating, perceiving, geographic and environmental
- Handling Information - general, initial, updates, communication
- Establishing and Maintaining Control - degree, accepting responsibility, coordinating, decision-making

Categorical Properties

- Roles and Relationships - professional, team and interaction roles, personal and professional relationships
- Managing Resources - personnel, equipment, time
- The Human Element - emotions experienced, methods for managing
- Safety - goals, threats, actions
- Patient Care - triage, care, disposition

Examples of Category, Properties and Selected Dimensions

Busby Theory of Situational Awareness in Multi-Casualty Incidents (copyright registration pending)
Implications for Public Health
- Local and National Issue
  - House committees – on SA
  - “major” issue[^2]
  - #1 issue[^3]
- Multi-Disciplinary Approach
- Inter-Disciplinary Understanding
- All field-level providers may benefit
- Coping Mechanisms

Nursing Practice
- Benner (23-26)
  - This project bears out – inexperienced are more self-focused and less situation-focused
  - Working on boundaries
- Role of Nurses – both field and facility level, RN and advanced practice
- More and more responders (23)
- Utilize all or some parts of the model in multiple settings
- Organizational use = “Human Element”, “Roles and Relationships”

Education
- Schools may utilize model in education and training
- Experiential learning
  - Benner (23-26)
  - Field-trips/Field experience
- Computer assist
- Inter-disciplinary Education

Research
- Theory refinement and testing
- Broader geographic area and more diverse groups
- Define and study larger-scale incident

Situational Awareness in Multi-Casualty Incidents In Action

References
References


17. simplified START. Journal of Emergency Medicine, 37, 448-455.


Thank You!

Questions?

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