**INTRODUCTION**

- Root Cause analyses of sentinel events have revealed issues in decision making related to human factors, including communication and teamwork.
- SA has been recognized as a critical factor for making decisions in work environments where the information flow can be high and poor decisions can lead to serious consequences.
- SA in healthcare requires an objective measurement of this concept.
- Endsley’s Situation Awareness Global Assessment Techniques (SAGAT) Instrument is an objective, direct measurement of SA.

**WHAT IS SITUATION AWARENESS (SA)?**

SA originated around the time of WWI and highlighted the importance of this concept with pilots and combat aircraft. SA is defined by Endsley (2000)* as the **perceptions of the elements in the environment within a volume of time and space, the comprehension of their meaning and the projection of their status in the near future.**

**VALIDITY & RELIABILITY**

**Validity:** Significant differences between SAGAT scores were analyzed based on level of training to lend statistical support for construct validity.

**Reliability:** A communication checklist was created for the purpose of computing correlations between this measure and the SAGAT score of the participants. The communication checklist was created based on core competencies from the professional organizations of each group.

**SIMULATION SCENARIO**

The simulation case study was crafted to focus on an emerging patient case within an out-patient setting focusing on individual situation awareness and team communication skills. Emerging case scripts highlighted the need for decision making and interaction between the registered nurse, nurse practitioner and first responders.

This project implemented a scripted communication-based simulation scenario with a convenience sample of 10 RNs, 10 APNs, 10 EMTs and 10 paramedics. Each scenario included a participant from each of the identified role groups for a 15 min. case that included 3 scripted freezes.

**SAGAT**

Using the SAGAT, a simulation scenario was crafted with strategically placed “freezes”. During this time, the simulation was suspended and any system displays were blanked. Participants were queried regarding their perception, comprehension and projection of future events specific to their case.

Sample Questions included:

- Level 1: Perception
  - What is the patient’s current pulse ox?
- Level 2: Comprehension
  - Do you identify any abnormalities on exam?
- Level 3: Projection
  - How will your actions impact the patient’s status?

**DATA RESULTS**

- Pre-determined “correct answers” were established for Level 1, 2 and 3 questions.
- Eight observations per role were collected using the SAGAT. Using a nonparametric analysis of variance, the RN tended to score the highest, although role-related differences were statistically significant only for comprehension (p = 0.170).
- The RN participants tended to also exhibit the highest communication skills. Based on chi-square statistics, there were no statistically significant differences by role due to the sample sizes.
- For core communication skills, correlations with SAGAT scores tended to be negative (the greater the communication scores translated into a lower score on the checklist and related to higher SAGAT performance).

**SUMMARY & CONCLUSION**

This study provides baseline data for the use of the SAGAT in further studies with the understanding that collection of psychometric data remain ongoing. Studies utilizing interventions to foster SA have been conducted in both the military and aviation sectors. In particular, research studies focusing on the strategies of the What, So What, What Now Model: Core communication, Prioritizing/Scanning the Environment & Self-reflection have great potential for application in nursing education.

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**Assessing Situation Awareness in an Interprofessional Simulation Scenario**

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