Why Do Nurses Make Errors? Everyone's Human!

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The Journey…

It all started with a YouTube video.

WHY did that nurse /physician make that mistake?

What are Human Factors?

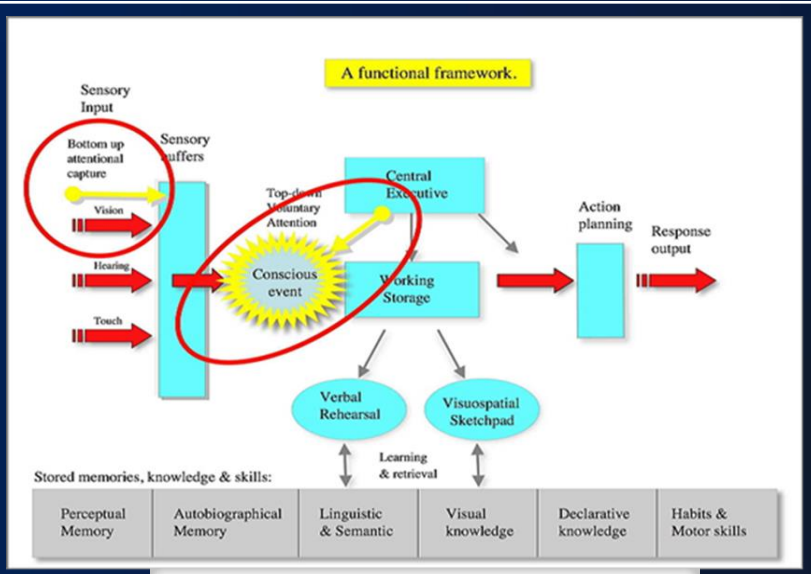
- The International Ergonomics Association (as cited in Human Ergonomics Society, 2000) defines human factors (which is also termed ergonomics) as the "scientific discipline concerned with the understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data, and other methods to design in order to optimize human well-being and overall system performance" (para. 5).

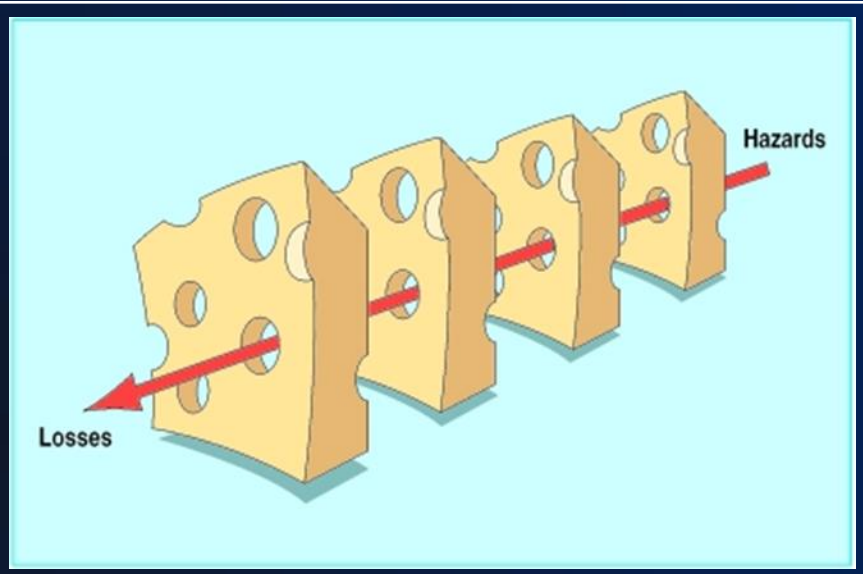
- What are the things we cannot control because we are human?
  - Fatigue
  - Environmental Issues
  - Miscommunication
  - Shock
  - Focus issues
  - Emotions
  - Time

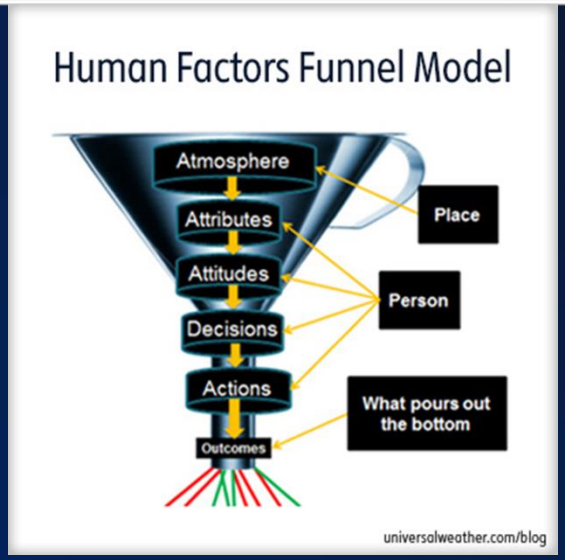
Human Factors Examples

Brain Games

Conceptual Framework







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Delphi Surveys

- Delphi Survey with two iterations
- *Using Delphi Technique to Identify Human Factors Contributing to Nursing Errors*
  - What are the human factors that contribute to nursing errors?
- *Hospital Nurses' Perceptions of Human Factors Contributing to Nursing Errors*

MISCONCEPTIONS

When you are under pressure due to dwindling time or resources, your brain releases adrenaline and noradrenaline to pump you up to attend to the task at hand.

This is helpful in truly life-threatening circumstances but when it comes to a cognitive task, these chemical cause your pre-frontal cortex, responsible for cognitive function, performance and emotion, to function **less** effectively.

Sample

- Hospital-Based Nursing Survey
  - 1808 Registered Nurses employed
  - Survey sent out from Quality Director through Managers and Directors
  - n=393

Instrument Survey 3

	How likely is this item to cause a nursing error?	How much ability does the nurse have to intervene is this item?	How important is this item to the chance of an error?	How common is this item in nursing errors?
Fatigue from lack of sleep	1-2-3-4-5-6-7-8-9-10	1-2-3-4-5-6-7-8-9-10	1-2-3-4-5-6-7-8-9-10	1-2-3-4-5-6-7-8-9-10
Fatigue from too many hours worked	1-2-3-4-5-6-7-8-9-10	1-2-3-4-5-6-7-8-9-10	1-2-3-4-5-6-7-8-9-10	1-2-3-4-5-6-7-8-9-10
Swamping too heavy work load	1-2-3-4-5-6-7-8-9-10	1-2-3-4-5-6-7-8-9-10	1-2-3-4-5-6-7-8-9-10	1-2-3-4-5-6-7-8-9-10
Work too fast paced	1-2-3-4-5-6-7-8-9-10	1-2-3-4-5-6-7-8-9-10	1-2-3-4-5-6-7-8-9-10	1-2-3-4-5-6-7-8-9-10
Non-clinical demands	1-2-3-4-5-6-7-8-9-10	1-2-3-4-5-6-7-8-9-10	1-2-3-4-5-6-7-8-9-10	1-2-3-4-5-6-7-8-9-10
Lack of nursing competency or knowledge	1-2-3-4-5-6-7-8-9-10	1-2-3-4-5-6-7-8-9-10	1-2-3-4-5-6-7-8-9-10	1-2-3-4-5-6-7-8-9-10

Top Five Likely, Intervenable, Important, and Common Reasons

- Likely
  1. Nurse impaired by substance
  2. Swamping
  3. Problem with communication
  4. Lack of Critical Thinking
  5. Errors made by others that nurses are expected to fix

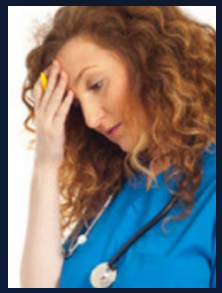
- Important
  1. Swamping
  2. Nurse impaired by substance
  3. Errors made by others that nurses are expected to fix
  4. Problem with communication
  5. Lack of critical thinking

- Intervenable
  1. Nurse impaired by a substance
  2. Nurse acting outside the scope of practice
  3. Problem with communication
  4. Problem with teamwork
  5. Errors made by others that nurses are expected to fix

- Common
  1. Swamping
  2. Work is too fast-paced
  3. Problem with communication
  4. Fatigue from too many hours worked
  5. Errors made by others that nurses are expected to fix

Swamping

This patient is complaining of tightness in the chest



This patient needs pain meds now

This patient is waiting on you for discharge

The bed alarm is going off on this patient

Attentional Divot

Why did I walk in this room?

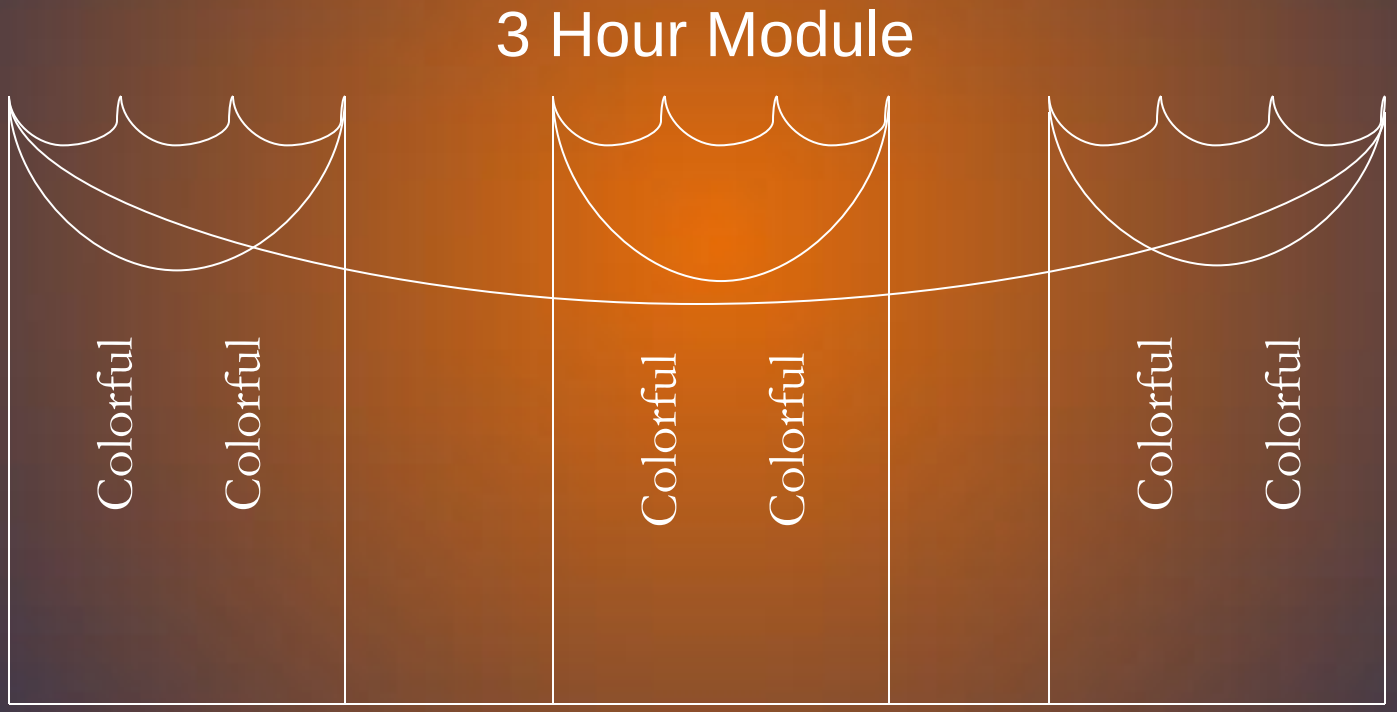
Recommendations

- Education for nurses on signs of substance impairment
- Focused education for nurses on the impact of fatigue and swamping
- New tools to identify swamping and work that is too fast-paced and methods to intervene
- Research expanding on the identified factors and themes: swamping, attentional divot, inattentional blindness

Recommendations

- New technology to facilitate communication
- All team members held accountable for errors by others that nurses are expected to recognize and fix
- Development of nursing model that identifies common reasons for loss of focus
- Work with nurses to develop a healthy work environment

The Von Restorff Effect



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