"TESTING THE RELIABILITY AND ACCURACY OF URGENCY RATINGS DETERMINED BY TRIAGE NURSES FOR MENTAL HEALTH SCENARIOS, USING THE CANADIAN TRIAGE AND ACUITY SCALE"

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Introduction

- State of Canadian Emergency Departments
- High demands on over-stretched resources
- Process of prioritization: Triage
- Triage scales have been developed internationally
- Canadian Triage and Acuity Scale

Purpose

- To test the inter-rater reliability and accuracy of triage nurses assignment of urgency ratings to mental health patient scenarios
- Utilizing the CTAS

Research Questions

- 1) What is the inter-rater reliability among triage nurses assigning levels of urgency to mental health patient scenarios, based on 2008 CTAS guidelines, using a computerized tool (EDIS)?
- 2) How accurate are triage nurses in assigning levels of urgency to mental health patient scenarios, based on the 2008 CTAS guidelines, using a computerized tool (EDIS)?

Background

- Concept of triage
- Mental Disorders: 1 in 5 Canadians will experience a mental illness
- Mental Health in EDs: Increasing mental health presentations
- Mental Health Triage: Lower rates of accuracy reported

Theoretical Framework

- Theories of Clinical Decision Making
- Cognitive Continuum Theory (CCT): Hammond 1996
- Broad unifying approach
- Not widely used in nursing
- Triage decision and the CCT

Literature Review

- Mental health presentations to EDs
- Triage nurses and mental health patients
- Emergency department triage
- Accuracy and reliability of triage

Methodology

- Specific Aims: determine the validity of the CTAS, in assigning levels of urgency to mental health scenarios by:

1) Testing inter-rater reliability
2) Determining accuracy

Additionally,

a) Explore potential differences in accuracy…
b) Investigate potential influences of comfort…

Research Design: Use of Scenarios

- Benefits of patient scenarios
- Weaknesses
- Rationale for choice

Research Design

- Developing the scenarios
- Reviewing scenarios for face and content validity
- Each participant triaged same 20 scenarios

Research Design

- Inter-rater reliability
- Fleiss Kappa
- Kendall's Coefficient of Concorrdance

Results

- Sample: Sites and participants
- Number of years of triage experience
- Specialized mental health training
- Comfort Level: mental health patient presentations

Results: Comfort Level

Presentation	Not at all comfortable	Mildly confident	Moderately confident	Very Confident	Total N=18
Mental health pts	0	4	7	7	18
Psychotic sxs	0	6	8	4	18
Manic sxs	0	4	9	5	18
Anxiety	0	0	9	9	18
Depression	0	1	9	8	18
Suicidal Ideation	0	1	10	7	18
Aggressive	0	4	9	5	18
Behaviour/ PD	2	7	5	4	18

Results: Agreement & Accuracy

- Agreement: Fleiss Kappa=0.31180 [p<0.0001]
- Kendall's Coefficient = 0.67964 [p<.0001]
- Accuracy: "Light" statistic = p<0.001
- Over-triage by one level
- Under-triage by one level
- % correct by CTAS urgency level

Scenario #	Correct Resp	# of Nurses	% correct	Over triaged	Under triage	Total n=18
1	3	13	72.2%	1	3	17
2	4	17	94%	1	0	18
3	2	4	22.2%	8	6	18
4	4	14	77.7%	4	0	18
5	2	4	22.2%	6	6	14
6	3	13	72.2%	3	2	18
7	4	17	94%	0	1	18
8	1	14	77.7%	0	4	18
9	2	7	38.8%	6	4	17
10	3	13	72.2%	3	1	17
11	3	11	61.1%	2	5	18
12	1	13	72.2%	0	2	15
13	2	8	44.4%	1	9	18
14	3	12	66.6%	0	6	18
15	4	14	77.7%	3	1	18
16	5	2	11.1%	11	0	13
17	**5**	**2**	**11.1%**	**2**	**0**	**4**
18	2	6	33.3%	0	9	15
19	3	9	50%	8	1	18
20	4	1	0.05%	14	0	15

Discussion

- Influence of the sample
- Agreement and accuracy by CTAS level

Discussion

- Over-triage
- Under-triage
- Use of over-ride

Discussion

- Influence of education
- Influence of comfort level
- Application of theory

Cognitive Continuum Theory

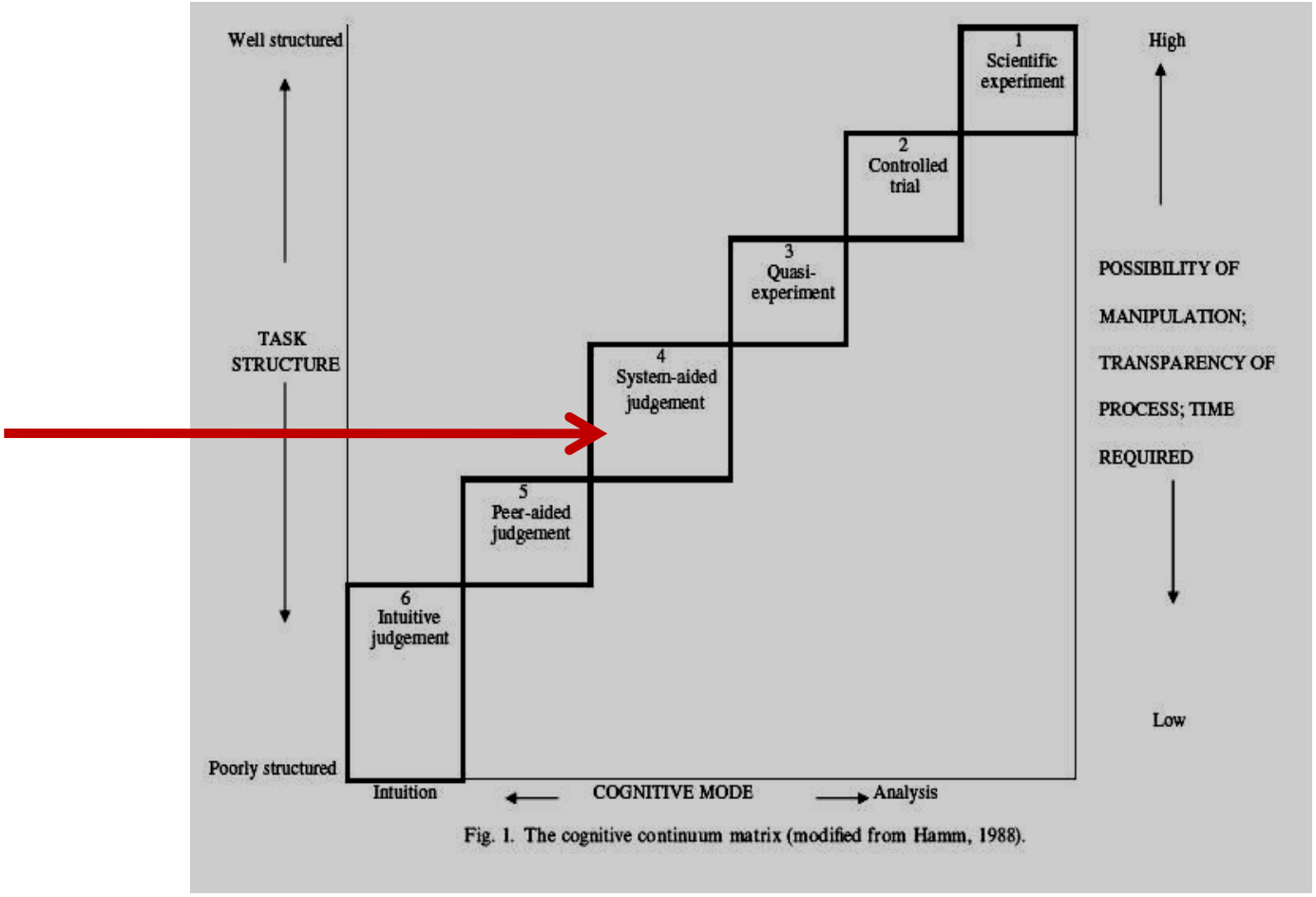

Fig. 1. The cognitive continuum matrix (modified from Hamm, 1988).

Conclusion

- Several limitations exist
- Observation from this study may guide; future research or
- Future Research