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A new brief scale to assess suicidality: Scale for impact of suicidality-management, assessment and planning of care (SIS-MAP- brief scanner)

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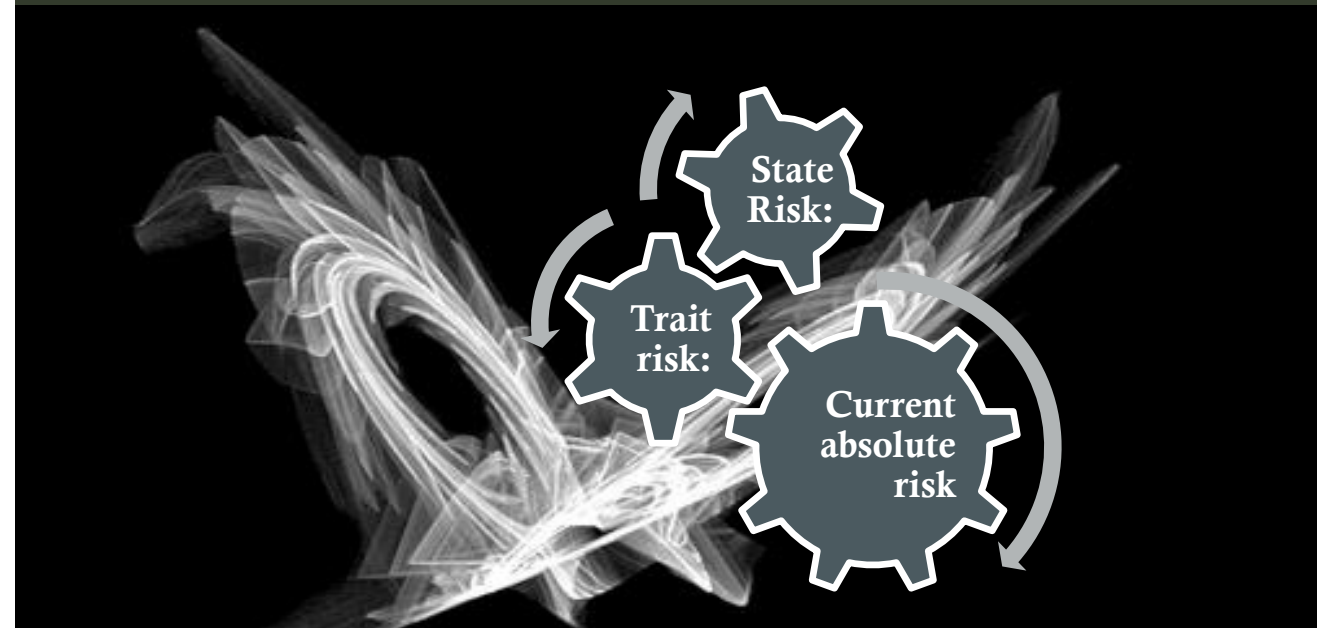Miky Kaushal, *Western University*
Robbie Campbell, *Western University*
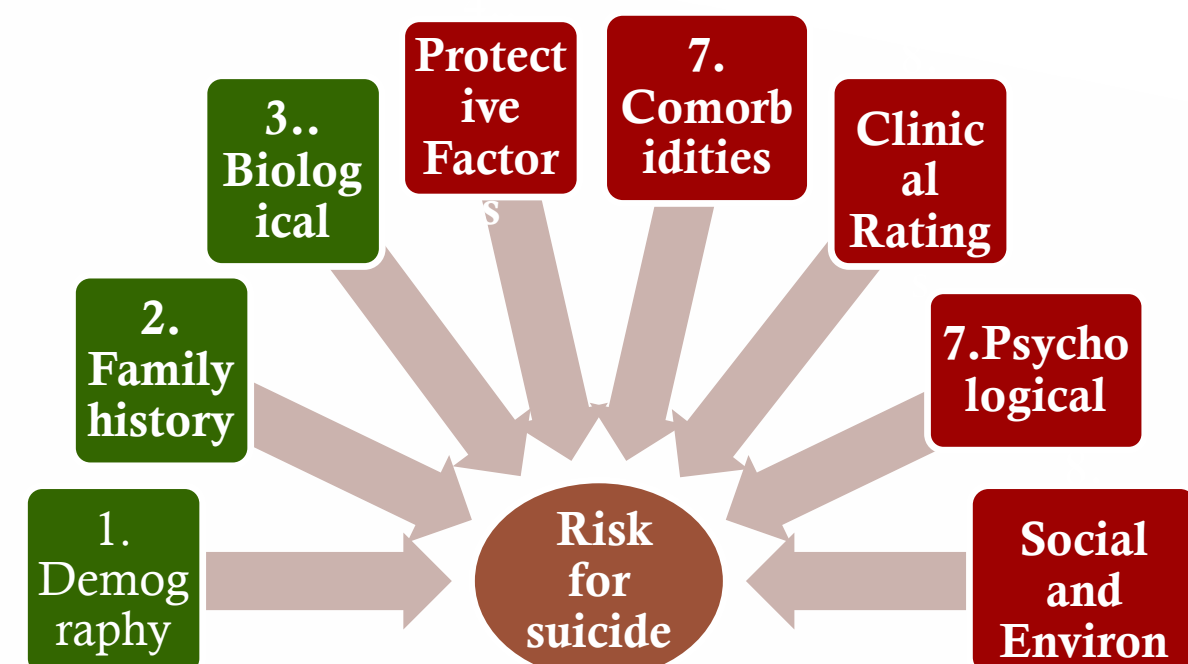Charles Nelson, *Western University*

SUICIDE

A New Brief Scale to Assess Suicidality: Scale for Impact of Suicidality-Management, Assessment and Planning of Care - Brief Screener (SIS-MAP-Brief Screener)

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Part A: Construction of the Scale: Objective and Background

A hypothetical sketch

State Risk:
Trait risk:
Current absolute risk

Concept of Risk: We believe Risk is a Multi-dimensional Construct consisting of 8 Domains.

Method

Risk factors
Resilience
Vulnerability
Protective factors

We completed an assessment of 79 (Mean age 38.26 years (SD 14.78, Range 19–75) patients out of 95 subjects. These were randomly selected from inpatient and outpatients facilities at RMHC.London, Ontario. Data was analyzed by SAS.
37 patients were male and 42 females
44 inpatient & 35 from outpatient

Risk for suicide domains:
- 1. Demography
- 2. Family history
- 3. Biological
- Protective Factor
- 7. Comorbidities
- Clinical Rating
- 7.Psychological
- Social and Environ

We further believe that 'Absolute' Risk appears when an individual's resilience is compromised by various risk factors, making an individual more vulnerable.
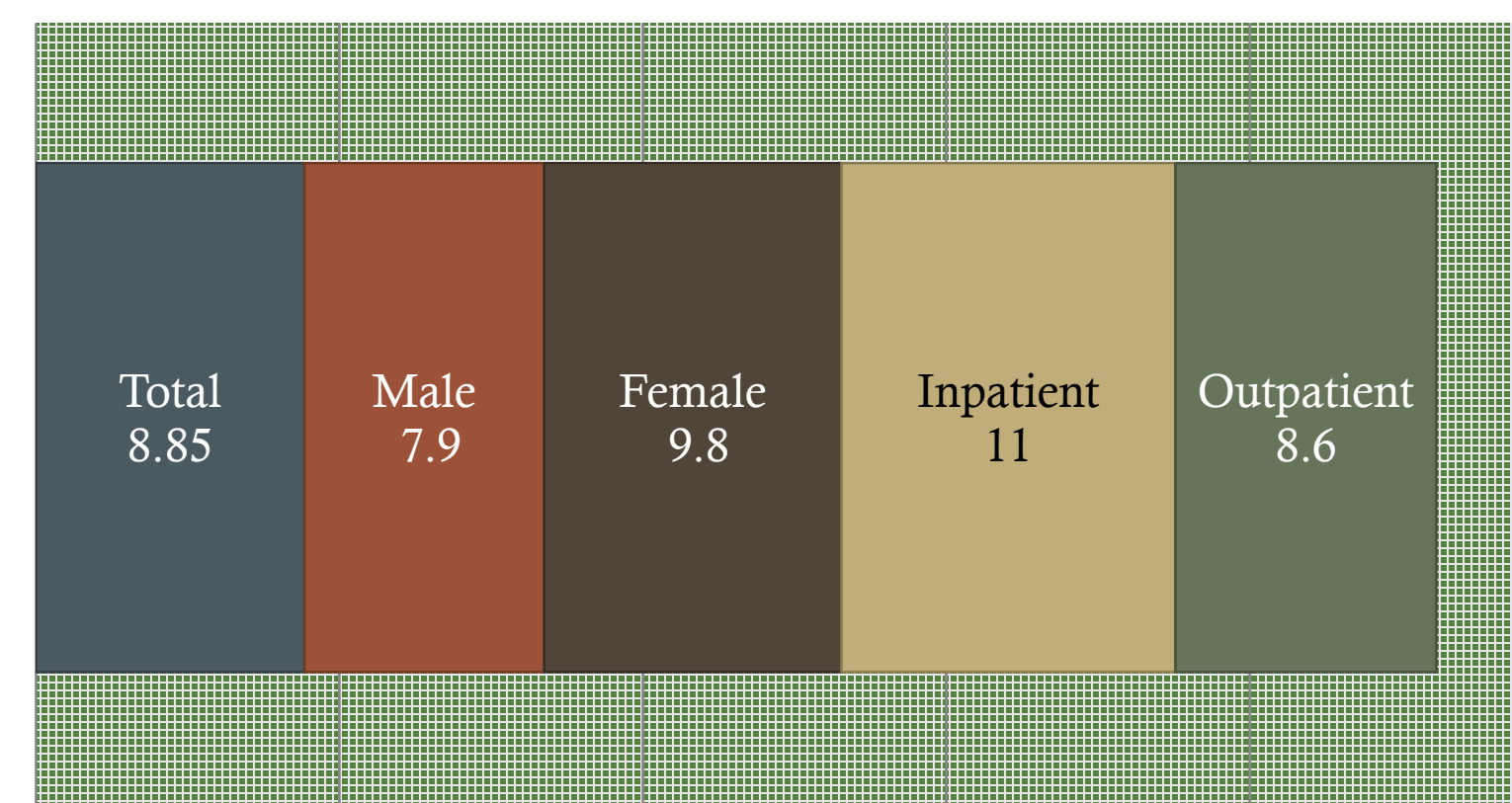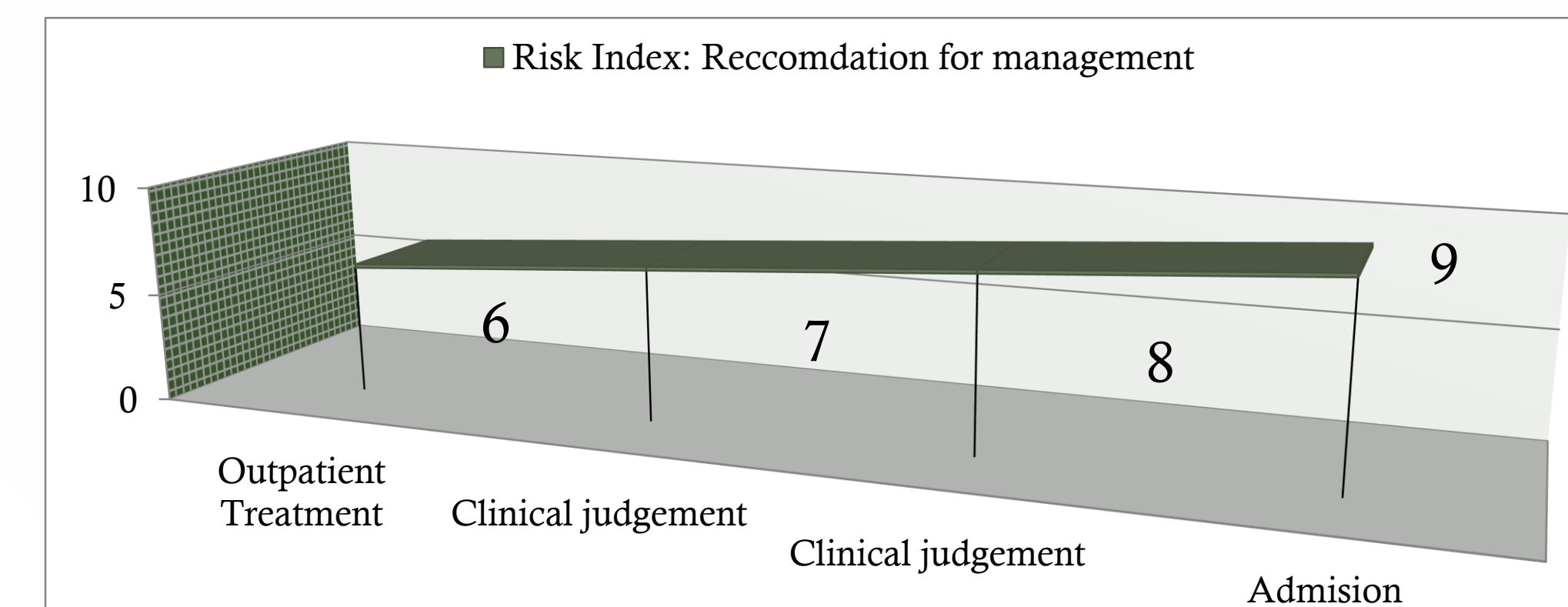
5. Risk of Suicide is a clinical entity which is multidimensional in origin & 'Absolute' Risk appears when an individual's resilience is compromised, in relation to a number of inherent and environmental factors, making an individual more vulnerable.

6. We examine the merits of a 24-item scale: SIS-MAP-Brief Screener developed from the original 108-item scale.

7. The measurement is called RISK INDEX, which was defined after deducting score of protective factors from total score, used for assessment and prediction of risk. State and Trait Risk interacting in a complex manner.

1. Mechanism of interaction between Risk and Protective factors, its constituents and constructs are not known. Suicide Risk: A continuously evolving concept.
2. Available instruments: Do not capture comprehensive nature of risk.
3. Furthermore, a shorter version of tools are required for emergency room and primary care.
4. Primary objective of this study is to create a brief & valid instrument for decision-making in a short period of time

The Scale - based upon a multidimensional concept

SIS-MAP Brief Screener
final stepwise regression models predicting total SIS-MAP scores from subscale items

Subscale	Item	Standardized Beta	t	p-value
Demographs (Overall Model: F (1, 47) = 5.84, p = .02)				
	Is the individual an inpatient?	.33	2.42	.02
Ideation/Self-injury (Overall Model: F (3, 44) = 16.35, p < .001)				
	Do you often hurt yourself by cutting or overdosing on pills?	.43	4.09	.00
	Do you feel you are vulnerable to hurting yourself?	.33	2.99	.005
	Do you think you would be better off dead?	.31	2.79	.008
Management (Overall Model: F (3, 44) = 9.71, p < .001)				
	Do you fear losing control and attempting suicide?	.40	3.33	.002
	Do you wish to die?	.29	2.44	.02
	Can you control these (ideation) thoughts?	.28	2.25	.03
Assessment (Overall Model: F (3, 43) = 21.34, p < .001)				
	Have you attempted to kill yourself?	.62	6.15	.00
	Do you feel helpless?	.51	4.86	.00
	Do you currently feel suicidal?	.21	2.10	.04
Planning (Overall Model: F (1, 43) = 22.39, p < .001)				
	Do you think you will attempt suicide in the future?	.59	4.73	.00
Co-morbidities (Overall Model: F (3, 43) = 9.30, p < .001)				
	History of drug abuse	.22	1.72	.09
	Current alcohol abuse or dependence	.41	3.23	.002
	History of sexual abuse	.41	3.10	.003
Family History (Overall Model: F (1, 46) = 7.04, p = .01)				
	Family history of mental illness	.36	2.65	.01
Biological (no variables were entered into the equation)				
Protective Factors (Overall Model: F (3, 40) = 15.73, p < .001)				
	Do you have good self-esteem (believe you are a worthwhile person)?	-.29	-2.38	.02
	Is your family practically supportive of your problems and your recovery?	-.44	-3.90	.00
	Do you savour life's satisfying moments?	-.40	-3.28	.002
Clinical Ratings (Overall Model: F (4, 36) = 10.98, p < .001)				
	Is there evidence of a personality disorder or issues related to personality?	.33	2.71	.01
	Is there presence of psychosis?	.39	3.44	.001
	Would you consider client vulnerable due to existential issues (i.e. no meaning in life)?	.29	2.69	.01
	Would you consider client vulnerable due to a dysfunctional or chaotic home environment?	.28	2.29	.03
Psychosocial/Environmental (Overall Model: F (2, 44) = 8.79, p = .001)				
	Problems with primary support group	.36	2.68	.01
	Problems with access to health care services	.29	2.16	.04

B.1: SISMAP score of RISK INDEX

Total 8.85	Male 7.9	Female 9.8	Inpatient 11	Outpatient 8.6

B.2: Risk Index & care planning

■ Risk Index: Reccomdation for management

- Outpatient Treatment — 6
- Clinical judgement — 7
- Clinical judgement — 8
- Admision — 9

Part B: Examining Clinical Merits of the Scale: Risk Index

Treatment Gap

Rich Countries are not Rich for Mentally Ill Patients
More than 25% have No access to care & more than 40% live in Poverty

People are asking
Mental Health Services
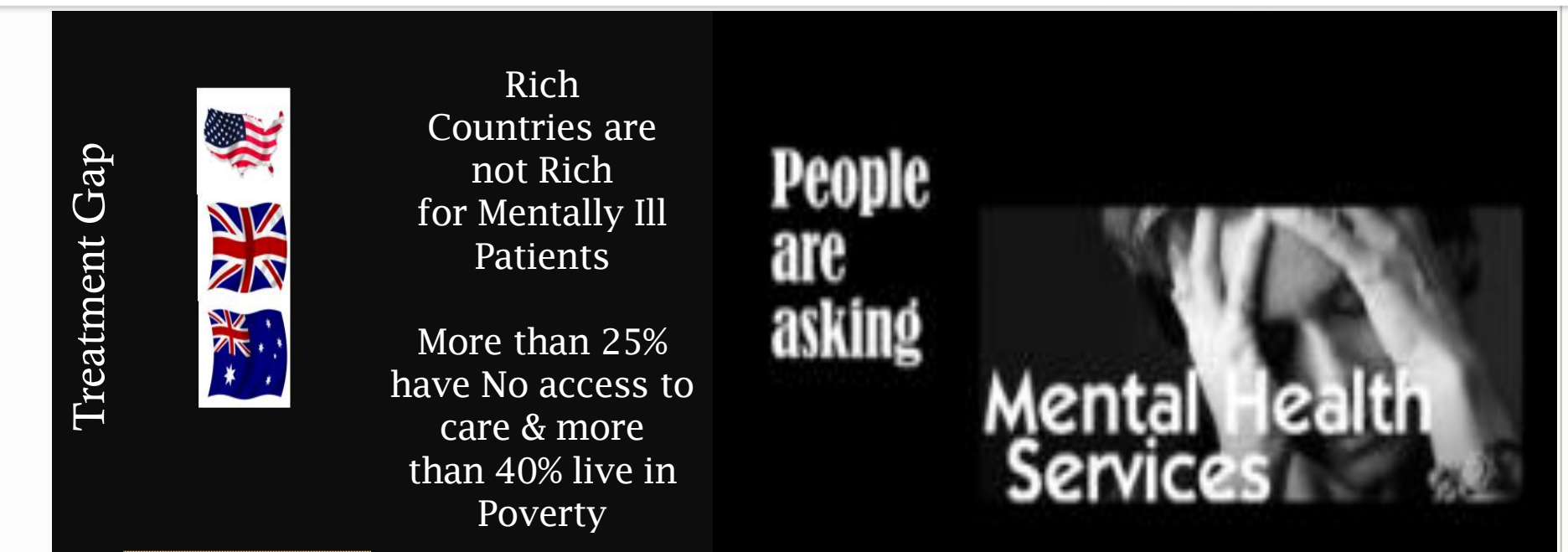
A.4. Common RISK FACTORS identified from the scale

Severity of suicide risk was positively correlated with Risk Factors like:

1. Low level of resilience (CD-RISC Scale)	n=44, r=-0.265 p=0.082	5. Marriage	(F=3.071, p=0.042)
2. Duration of Illness	(r=0.334, p<0.05)	6. Reason for Admission	(F= 4.238, P=0.008)
3. Severity of Depressive Symptoms	(r=0.62, p<0.001)	7. History of Physical Assault	(F=5.079, p=0.031)
4. Severity of Psychotic Symptoms	(r=0.413 p.014)	8. Problem with friends or neighbor or relatives	(F=7.931, p=0.008)

A .Characteristics of the scale

A.1 Discriminant function analysis to predict inpatient/outpatient status from SIS-MAP-scn scores

74.8% of total cases correctly classified
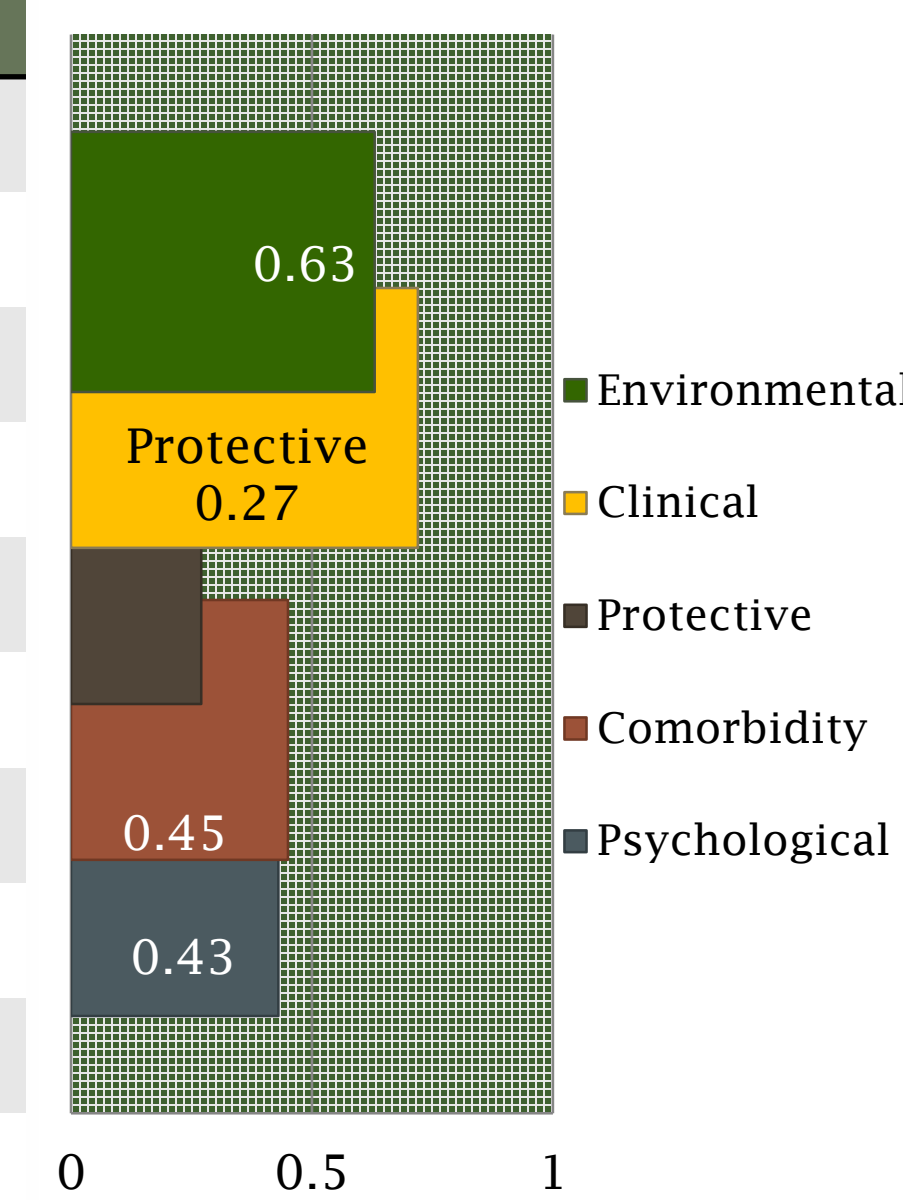
Wilk's Lamba (1) = .838, Chi-square = 20.556, p < .001

Percent of cases correctly classified

Actual	Predicted	
	Inpatient	Outpatient
Inpatient	75.4%	24.6%
Outpatient	25.9%	74.1%

A.2. . Validity

Subscales	Cronbach's alpha	Item-Subscale M (SD)	Correlations Range
Ideation	0.801	0.473 (0.133)	0.18 – 0.61
Management of Ideation	0.621	0.292 (0.104)	0.17 – 0.45
Current Suicidality	0.656	0.200 (0.385)	0.03 – 0.89
Planning	0.378	0.204 (0.281)	0.11 – 0.54
Comorbidities	0.600	0.253 (0.155)	0.03 – 0.45
Family History	0.695	0.487 (0.166)	0.32 – 0.70
Biological	0.251	0.124 (0.134)	0.003 – 0.27
Protective	0.719	0.369 (0.174)	0.007 – 0.61
Clinical	0.503	0.198 (0.263)	0.05 – 0.51
Psychosocial/ Environmental	0.679	0.357 (0.111)	0.17 – 0.50

A.3. SISMAP: mean value of subdomains

- Environmental 0.63
- Clinical (Protective 0.27)
- Protective 0.45
- Comorbidity
- Psychological 0.43

0 — 0.5 — 1

A. 5 Top Five Most Frequent Responses:

16. Is your family practically supportive of your problems and your recovery?	5. When you have thoughts about hurting yourself or about death, can you control those thoughts?	17. Do you savor life's satisfying moments?	24. Do you find it difficult to know where to find or access health care services?	22. Do you ever feel like there is no meaning or purpose in your life?

Conclusions

1. SIS-MAP–Brief Screener appears to be a clinically useful tool for assessment of suicide behaviour for deciding planning for care.
2. Most frequent responses, significant risk factors and Score on Risk Index together can give better idea about risk for suicide, when assessment in required to be completed in a short time period.
3. A Score of Risk Index of 9 and more suggests a need for hospitalization. A score of 7 and 8 indicates need of caution in clinical judgement.
4. Future research in this area may find more precise pathways for decision making in management of suicide.

Risk arises from a Combination of State and Trait Risk Interacting in a Complex Manner

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