

Contrasting MetacognitiveProfiles in Adults with Borderline Personality Disorder, Schizophrenia and Substance Use Disorder

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•METACOGNITION AND MENTAL HEALTH

METHODOLOGY

•ORIGINAL RESEARCH IN SCHIZOPHRENIA

• APPLICATIONS TO BORDERLINE PERSONALITY DISORDER

Clinical Implications

METACOGNITION

•METACOGNITION REFERS TO THE PROCESSES THAT ALLOW PERSONS TO FORM AND EVOLVE A SENSE OF SELF AND OTHERS IN THE MOMENT

- METACOGNITION ALLOWS US
 - •TO KNOW OURSELVES AND OTHERS AS UNIQUE BEINGS IN THE WORLD IN A GIVEN MOMENT
 - TO RESPOND ADAPTIVELY TO CHALLENGE
 - •TO COOPERATE WITH OTHERS
 - •TO BE DIVERSE BEINGS WITH MANY FACETS

METACOGNITION

THE TERM IS USED DIFFERENTLY IN THE STUDY OF

- EDUCATION
- COGNITION
- Psychopathology
- ATTACHMENT

METACOGNITION

A SPECTRUM OF ACTIVITIES

- RECOGNITION OF DISCRETE MENTAL EXPERIENCE
- INTEGRATION OF INFORMATION INTO COMPLEX IDEAS ABOUT THE SELF AND OTHERS
- WITH DIFFERENT FOCI
 - SELF
 - OTHERS
 - DECENTRATION
 - MASTERY

RELATED TERMS

- MENTALIZATION
- THEORY OF MIND
- SOCIAL COGNITION
- **EMOTIONAL INTELLIGENCE**
- **PSYCHOLOGICAL** MINDEDNESS
 - MINDFULNESS
 - SOBSERVING EGO

KEY ASSUMPTIONS

METACOGNITIVE ACTS ARE INTERSUBJECTIVE

- REDUCED METACOGNITIVE ABILITIES MAY REFLECT
 - DEVELOPMENTAL INSULT
 - ATROPHY
 - NEUROCOGNITIVE DAMAGE
 - SELF PROTECTION

KEY ASSUMPTIONS

METACOGNITIVE DEFICITS MAY BE PRESENT IN MULTIPLE FORMS OF SEVERE MENTAL ILLNESS

- As a cause
- As an effect
- AS A BARRIER TO RECOVERY
- DIFFERENT FORMS OF MENTAL ILLNESS MAY HAVE DIFFERENT METACOGNITIVE PROFILES

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MAS-A SUBSCALES

SELF REFLECTIVITY — KNOWING ONE'S OWN THOUGHTS AND FEELINGS

Understanding the mind of the other — knowing others' thoughts and feelings

DECENTRATION — UNDERSTANDING ONE IS NOT THE CENTER OF EVERYTHING

MASTERY — Using knowledge of mental states to solve psychological problems

MAS-A SUBSCALES

EACH SCALE IS ORDINAL

EACH ITEM OF EACH SCALE PRESUMES TO REFLECT
THE INTEGRATION OF A LARGER PIECE OF
INFORMATION

ONCE A PERSON CANNOT INTEGRATE
INFORMATION AS DESCRIBED BY A LEVEL IT IS NOT
POSSIBLE TO ATTAIN FURTHER LEVELS

THE NUMBER OF CONSECUTIVE ITEMS ATTAINED IN A SCALE IS THE SCORE

ASSESSMENT OF METACOGNITION WITHIN NARRATIVES: THE INDIANA PSYCHIATRIC ILLNESS INTERVIEW

- Interview typically lasts 30-60 min
- INTERVIEW SEEKS TO OFFER AN OPPORTUNITY TO TELL
 ABOUT LIFE AND CHALLENGES
- Unlike symptoms interviews specific aspects of illness/problems are not asked about
- ONLY NON-DIRECTIVE COMMENTS ARE SUGGESTED
- Conversational tone

Lysaker PH, Clements CA, Placak Hallberg C, Knipschure SJ & Wright DE (2002): Insight and personal narratives of illness in schizophrenia. *Psychiatry*, 65, 197-206.

THE INDIANA PSYCHIATRIC ILLNESS INTERVIEW

TINTERVIEW CONSISTS OF 6 SETS OF PROMPTS WHICH ARE OFFERED AS THE INTERVIEW PROGRESSES

- TELL ME THE STORY OF YOUR LIFE.
- TO YOU THINK YOU HAVE A MENTAL ILLNESS?
- ♣ BECAUSE OF THIS WHAT HAS AND HAS NOT CHANGED?
- ♦ WHAT DO YOU CONTROL/WHAT CONTROLS YOU?
- THOW DOES IT AFFECT OTHERS/HOW DO OTHERS AFFECT IT?
- WHAT DO YOU SEE IN THE FUTURE?

THE INDIANA PSYCHIATRIC ILLNESS INTERVIEW (IPII)

The goal is a sample There is an opportunity to observe and quantify metacognitive capacity

WHICH IS SCAFFOLDED.

ASSESSING METACOGNITION WITH THE IPII

 IPII NARRATIVES ARE TRANSCRIBED WITH IDENTIFYING INFORMATION REMOVED

 BLIND RATERS THEN RATE THE TRANSCRIPT FOR METACOGNITIVE CAPACITY USING AN ADAPTED VERSION OF THE METACOGNITION ASSESSMENT SCALE-ABBREVIATED (MAS-A)

RELIABILITY

- INTERRATER RELIABILITY: SIGNIFICANT INTRACLASS CORRELATIONS FOR ALL FOUR MAS SCALES RANGING FROM R = 0.61 (DECENTRATION) TO R = 0.93 (TOTAL SCORE) 2 RATERS RATING 25 TRANSCRIPTS¹.
- Internal consistency: coefficient alpha = .80, p < .05 (for all four subscales)².
- GOOD TEST-RETEST RELIABILITY (INTRACLASS R FOR 3 POINTS: 0.70 0.84)

- ¹Lysaker, Warman, Dimaggio, et al. (2008). Metacognition in prolonged schizophrenia: Associations with multiple assessments of executive function. J Nerv Ment Dis
- ²Lysaker, Dimaggio, Buck et al. (2007). Metacognition within narratives of schizophrenia: Associations with multiple domains of neurocognition. Schizophr Res 93: 278-287.

VALIDITY

- CORRELATIONS OF MAS-A WITH ASSESSMENTS OF
 - COGNITIVE INSIGHT¹
 - TRADITIONAL MEASURES OF AWARENESS OF ILLNESS²
 - ASSESSMENTS OF SOCIAL COGNITIONS USING THE TAT³
 - COPING STYLE USING THE WAYS OF COPING QUESTIONAIRE⁴
 - ACCURACY OF SELF ASSESSMENT OF WORK PERFORMANCE
- ¹Lysaker, Warman, Dimaggio, et al. (2008). Metacognition in prolonged schizophrenia: Associations with multiple assessments of executive function. J Nerv Ment Dis 196: 384-389.
- ²Lysaker, Carcione, Dimaggio et al (2005). Metacognition amidst narratives of self and illness in schizophrenia: Associations with insight, neurocognition, symptom and function. *Acta Psychiatric Scandinavica*. 112, 64-71.
- ³Lysaker, Dimaggio, Daroyanni et al., (2010) Assessing metacognition in schizophrenia with the Metacognition Assessment Scale: Associations with the Social Cognition and Object Relations Scale. Psychology and Psychotherapy
- ⁴Lysaker PH, Erickson MA, Ringer J, et al. (2011). Metacognition in schizophrenia: the relationship of mastery to coping, insight, self-esteem, social anxiety and various facets of neurocognition. British Journal of Clinical Psychology. 50(4), 412- 424

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METACOGNITIVE CAPACITY IN SCHIZOPHRENIA COMPARED TO OTHER GROUPS?



	SZ(1) n=183	PTSD(3) n=51	HIV+(4) n=51	F	Post hoc (p<. 05)
Self-					
reflectivity	4.2(1)	6.1(2)	6.4(2)	38.39	1<2,3,4
Awareness of					
Other	3.0(1)	4.3(1)	4.3(1)	30.4	1<2,3,4
Decentration	0.8(1)	1.4(1)	1.6 (1)	11.12	1<2,3,4
Mastery	3.6(2)	4.8(1)	6.0(2)	28	1<3,4; 4>2,3,4
					1<3,4
Total	11.6(4)	16.6(4)	18.3(4)	38.6	4>2,3,4





	First Episode (1) (n=26)	Prolonged Psychosis (2) (n=72)	Substance Abuse (3) (n =15)	F	Post hoc (<i>p</i> <.05)
Self-reflectivity	4.3(1.7)	4.3(1.3)	6.8(1.5)	17.6***	3>1,2
Other	2.3(1.1)	3.0(0.9)	4.2(1.1)	15.9***	3>2>1
Decentration	0.5(0.7)	1.0(0.9)	1.7 (1.5)	8.5***	3>2>1
Mastery	3.9(1.8)	3.7(1.6)	4.1(1.5)	0.4	ns
Total	11(4.9)	12(4.1)	17(4.1)	9.1***	3>1,2

Vohs et al (2014). Metacognition, social cognition, and symptoms in patients with first episode and prolonged psychosis. *Schizophrenia Research*, 153, 54-59.

METACOGNITIVE CAPACITY AND OUTCOME?

METACOGNITION AND CONCURRENT FUNCTION

POORER METACOGNITION IS RELATED TO:

SUBJECTIVE ACCOUNTS OF RECOVERY
FUNCTIONAL CAPACITY
SOCIAL RELATIONSHIPS
INSIGHT
FORENSIC HISTORY
STIGMA RESISTANCE
SEDENTARY LIFE STYLE
REASONING STYLE

METACOGNITION AND PROSPECTIVE FUNCTION

Poorer metacognition related to is prospective assessments of

- WORK PERFORMANCE
- NEGATIVE SYMPTOMS
- **INTRINSIC MOTIVATION**
- CAPACITY FOR SOCIAL CONNECTEDNESS

REPLICATION

Prolonged Schizophrenia Samples

- TALY
- **♥** ISRAEL
- + CHINA
- **⊕** TURKEY
- **GERMANY**

FIRST EPISODE SAMPLES IN

- TRENCH CANADA
- **DENMARK**
- **\$** SCOTLAND

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Clinical Implications

Alterations in the ability to recognize and think about one's own and others' mental states has long been considered to be a hallmark of Borderline Personality Disorder

These deficits have been proposed as underlying causes of many characteristic behaviors of Borderline PD including stormy interpersonal relationships, lack of a core sense of identity, affective instability, and chronic failure to effectively respond to psychological and social challenges

EVIDENCE TO SUPPORT THE PRESENCE OF ALTERATION IN METACOGNITION, IN BORDERLINE PD INCLUDES:

STUDIES HAS FOCUSED OF THE LINK OF BORDERLINE PD WITH UNIQUE DEFICITS AND ABILITIES RECOGNIZING SPECIFIC KINDS OF INTERNAL STATES.

STUDIES OF DIFFICULTIES FORMING AND UTILIZING HIGHER ORDER REPRESENTATIONS ABOUT THE SELF AND OTHERS RATHER THAN FAILURES TO PERCEIVE DISCRETE PSYCHOLOGICAL ELEMENTS

IT IS UNCLEAR:

WHETHER THERE IS A UNIQUE PATTERN OF METACOGNITIVE DEFICITS
IN BORDERLINE PD

ARE THE DEFICITS MORE OR LESS SEVERE THAN FOUND IN OTHER GROUPS?

We thus tested whether metacognitive levels differed between BPD schizophrenia and substance use groups

WE ALSO COMPARED LEVELS OF THE RELATED CONSTRUCTS OF ALEXITHYMIA, AND EMOTIONAL RECOGNITION

INSTRUMENTS:

SCID

SCID-P*

MAS-A

BLERT

TAS

SCL-90*

^{*} Assessed in BPD and SUD only

INCLUSIONS CRITERIA

ADULTS

ABILITY TO OFFER INFORMED CONSENT

NON-ACUTE STATE

COMPARISONS OF DEMOGRAPHICS

	1	2	3	F	Post Hoc	X ²
	BPD	SUD	Sz		Comparison	18
(N=	=34) (N=	:32) (N :	=65)			
AGE	46(11)	43(10)	50(11)	5.27*	2<3	
EDUCATION	13(2)	13(2.)	13(2)	0.76	NS	
GENDER (M/F)	27/5	31/1	62/3			4.48
RACE (C/AA)	15/19	20/12	28/37			3.55
Traits – BPD	20(9)	8(7)		28.73**	* 1>2	
SCL 90 GSI	55(11)	42(9)		28.31**	* 1>2	

^{*}P<.05; ***P<.001

COMPARISONS OF MAS-A SCORES

	1	2	3	F	Post Hoc
	BPD (N=34)	SUD (N=32)	Sz (N =65)		Comparisons
SELF	5.7(1.6)	6.3(1.6)	4.3(1.5)	15.39**	* 2,1>3
OTHER	3.7(0.9)	4.1(1.0)	2.8 (1)	23.70**	* 2,1>3
DECENTRATION	0.7(0.5)	1.4(1.3)	0.5(0.5)	10.86**	* 2>1,3
MASTERY	3.7(1.3)	4.51.1)	3.5(1.7)	3.65*	2>1,3
TOTAL	13.9(3)	16.4(4)	11.2(4)	18.99**	* 2>1>3

^{*}P<.05; ***P<.001

COMPARISONS OF BLERT AND TAS SCORES

	1 BPD (N=34)	2 SUD (N=32)	3 Sz (N =65)	=	Post Hoc
TAS TOTAL	60.6 (10.6)	44.4 (12.7)	58.0 (11.8)	17.80**	* 2<1,3 ¹
BLERT TOTAL	14.7 (4)	15.1(2.6)	13.3 (3.6)	1.54	NS

^{*}P<.05; ***P<.001

SUMMARY

METACOGNITIVE PROFILE OF ADULTS WITH BPD
 DIFFERS FROM WHAT IS FOUND IN SZ AND SUD

•BPD IS ASSOCIATED WITH DEFICITS IN MASTERY AND DECENTRATION INDEPENDENT OF SEVERITY OF GLOBAL PSYCHOPATHOLOGY AND PERSONALITY DYSFUNCTION

METACOGNITION AND MENTAL HEALTH

METHODOLOGY

•Original Research in Schizophrenia

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CLINICAL IMPLICATIONS

•TREATMENT THAT TARGETS AND EFFECTIVELY IMPROVES METACOGNITIVE CAPACITY IN BORDERLINE PD MAY BE USEFUL

 METACOGNITIVE REFLECTION AND INSIGHT THERAPY (MERIT) COULD BE ONE SUCH TREATMENT

MERIT

- •A MEASURABLE SYSTEM DEVELOPED TO TARGET

 METACOGNITION
 - FOCUSED ON A CAPACITY NOT SPECIFIC
 CONTENT OR SOLVING A PROBLEM
- •IMPROVEMENTS AS OCCURRING ALONG ON A CONTINUUM NOT CATEGORICALLY
- IMPROVEMENT WITH REPETITION AND PRACTICE

MERIT

- •MERIT REQUIRES ASSESSMENTS OF THREE CAPACITIES
 - •Self-reflectivity
 - AWARENESS OF THE OTHER
 - MASTERY

8 INTEGRATIVE ELEMENTS

CONTENT: PATIENT AGENDA IS PRIMARY

INSERTION OF THERAPIST'S MIND

NARRATIVE EPISODE

PSYCHOLOGICAL PROBLEM

PROCESS FOCI ON INTERSUBJECTIVE PROCESSES

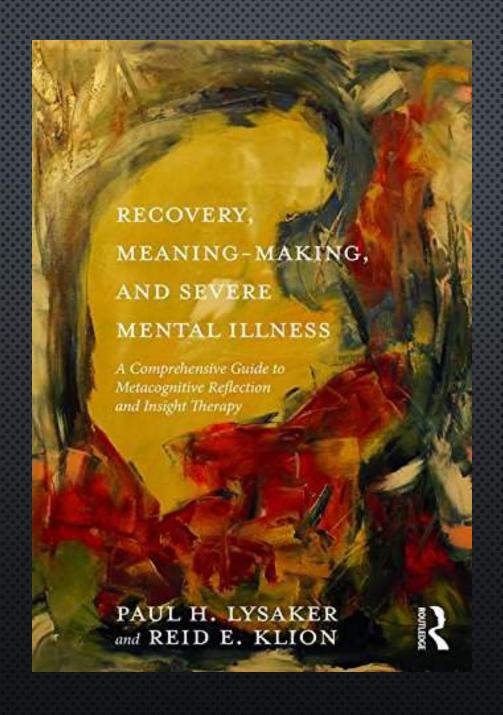
Attention to progress

Superordinate Stimulation of self/other reflection
Stimulation of mastery

PUBLISHED CASE STUDIES IN BPD

BUCK, K.D., VERTINSKI, M., & KUKLA, M. (IN PRESS). METACOGNITIVE REFLECTIVE AND INSIGHT THERAPY: APPLICATION TO A LONG-TERM THERAPY CASE OF BORDERLINE PERSONALITY DISORDER. AM J PSYCHOTHERAPY

Vohs JL and Leonhardt (2016). Metacognitive Reflection and Insight Therapy for Borderline personality disorder: A case illustration of an individual in a long term institutional setting. Journal of Contemporary Psychotherapy 46(4) 255-264



LIMITATIONS

- PARTICIPANTS WERE ALL ACTIVELY INVOLVED IN TREATMENT AND GENERALIZABILITY IS LIMITED
- RESEARCH WITH MORE DIVERSE SAMPLES ARE NEEDED
- RESEARCH WAS CROSS SECTIONAL WITH LIMITED INSTRUMENTATION
- LONGITUDINAL STUDY IS NEEDED WITH MORE BROAD ASSESSMENT PROCEDURES
- MERIT IS A DEVELOPING METHOD
- THE TREATMENT MAY BE TIME CONSUMING
- ASSESSMENT METHODS MAY BE FURTHER DEVELOPED