Quantitative Functional Evaluation: an Alternative to Categorical and Dimensional Approaches to Depression

Monestès, JL.[a], Delsaux, J.[b], Villatte, M.[c], Ferdynus, C.[a], Loas, G.[b], & Rusinek, S.[d]

[a] Mental Health Services University of Reunion, [b] University of Picardie, [c] University of Louisiana, [d] University of Lille

PSITEC

CENTRE HOSPITALIER PHILIPPE PINEL

INTRODUCTION

The taxonomy of mental health problems represents a central strategy since at least 50 years. But **major flaws of categorical approaches (DSM, CIM) have been pointed out** :

- Comorbidity: A single clinical presentation can frequently receive several categorical diagnoses, even in case of clinicians agreement (First, 2003). **Only 55 percent of clients receive a single diagnosis, when 23 percent receive three diagnosis or more** (Kessler, Chiu, Demler, & Walters, 2005). Comorbidity is pervasive in depressive disorders, but it is not random: most disorders show systematic association with specific diagnoses (Clark, Watson, & Reynolds, 1995).

-Heterogeneity: depressive disorder diagnosis relies on a variety of symptoms. **Very dissimilar clinical presentations can receive the same diagnosis of depression.**

-NOS: Clinical presentations that don't match any category, namely, not-otherwise specified (NOS) disorders, are intended to be residual categories. Yet, **NOS often are the most frequently observed categories in routine clinical practice**.

By mean of quantification of symptoms, the dimensional approach to depression (for example, Beck Depression Inventory) is more precise than categorical approaches, but is, like the categorical approaches, **only descriptive**.

The goal of both approaches to **discover common etiologies in depression disorders has remained elusive,** because both approaches **intend to be a-theoretical: no hypothesis is proposed for psychological processes**.

Besides, categorical and dimensional approaches to depression disorders **don't provide any treatment strategy to clinicians.**

A quantitative functional analysis is warranted to evaluate psychological processes in depression disorders.

Quantitative functional analysis could help to detect psychological processes differences in clients with different severity of depression.

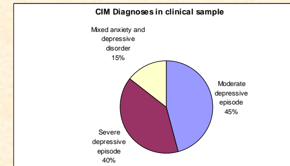
We compared DSM diagnosis, BDI, and functional analysis of depression disorders.

MATERIAL & METHODS

PARTICIPANTS

130 inpatients with depressive disorders

(mean age 43.88; male=23.68%)



MEASURES

Categorical: CIM diagnosis

Dimensional: Beck Depression Inventory-II

(BDI-II, 13 items, Beck & Beamesderfer, 1974)

Functional

- **Experiential avoidance:**
  Acceptance and Action Questionnaire-II
  (AAQ-II, Bond et al., 2011, 7 items, range: 7-49)
- **Fusion:**
  Cognitive Fusion Questionnaire
  (CFQ, Gillanders et al., 2010, 13 items, range: 13-91)
- **Lack of contact with present moment**:
  Mindfulness Attention and Awareness Scale
  (MAAS, Brown & Ryan, 2003, 15 items, range: 15-90)
- **Difficulties in perspective taking:**
  Perspective Taking items
  from Interpersonal Reactivity Index
  (PT from IRI, Davis, 1980, 7 items, range: 0-28)
- **Values not clearly defined:**
  Valued Living Questionnaire
  (VLQ, Wilson et al., 2010, 10 items, range: 10-100)
- **Lack of engagement in values:**
  Valued Living Questionnaire
  (VLQ, Wilson et al., 2010, 10 items, range: 10-100)

SUMMARY OF ANALYSIS

ANOVAs with post-hoc comparisons (LSD correction)

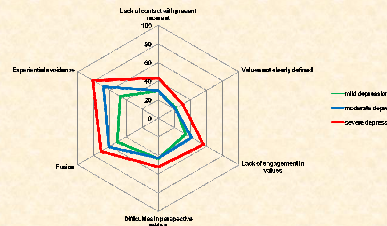
To ensure comparisons, all measures are transformed in percentages, and MAAS, VLQ and PP scores are reversed to indicate problematic expression of psychological processes.

RESULTS

Mean scores

	BDI-II	AAQ-II	CFQ	MAAS	VLQ Importance	VLQ Consistency	PP from IRI
Mean	15.90	35.42	59.72	3.52	74.75	50.38	15.84
SD	7.44	8.94	9.87	1.05	13.65	20.60	4.80

Comparison of psychological processes within dimensional approach (BDI-II)

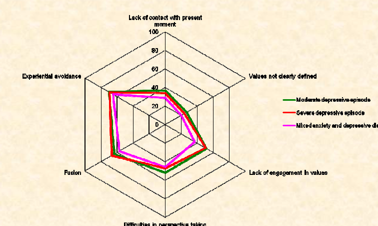


BDI-II cutoffs: <3 minimal depression, <7 mild depression, <15 moderate depression, >15 severe depression (Cottraux & Collet,1986)

While psychological processes impairements seem to increase with depression severity qualified with BDI-II, an ANOVA with post-hoc tests revealed :

- progressive increase with depression severity of non-acceptance (F=20.34, p<.01) and cognitive fusion (F=18.42, p<.01)
- greater lack of contact with present moment and difficulties in perspective taking for severe depression, but no difference between mild and moderate depression (p=.41; p=.62)
- values are less clearly defined, and engagement is weaker in severe depression in comparison to moderate depression, but there is no difference between severe and mild depression (p=.23; p=.11)

Comparison of psychological processes within categorical approach (CIM)



CIM diagnoses: F32.1, F32.2, F41.9

Psychological processes impairements are identical across CIM diagnoses. ANOVA with post-hoc tests revealed no difference in any processes studied.

	F	Significance
AAQ-II	.21	.81
CFQ	1.98	.15
MAAS	.56	.58
PP from IRI	.76	.47
VLQ Importance	.55	.58
VLQ Consistency	1.33	.27

DISCUSSION

The comparison of psychological processes across dimensional categories of depression disorders showed that **experiential avoidance and cognitive fusion are the most important processes in depression**. The greater the experiential avoidance and fusion, the greater depression severity.

Severe depression is the only category that differs from other pathological categories on lack of contact with present moment and difficulties in perspective taking: severe depressed clients according to BDI are more impaired on these processes.

The absence of difference on values definition and on commitment between severe and mild depression suggests that **combination of psychological processes could be an important parameter to study**.

The **absence of differences on psychological processes across categorical diagnoses suggests that the separation between categories may be arbitrary**.

The functional approach **improves classical diagnosis systems** by detecting **common psychological processes among different categories of depression** and by **quantifying them**.

Quantification with the hexaflex constitutes a useful tool to identify the psychological processes responsible for a loss of psychological flexibility:

- in clinical practice, it would **help clinicians to choose which process to target first** for treatment

- in research, it would **ensure a precise description** of **samples**, a quantitative **evaluation of psychotherapies**, and would **help discovering etiologies** of human suffering.

Future directions:
Our research group is currently comparing categorical, dimensional and functional analyses in anxiety disorders, addictive behaviors, and DSM 's axis II (personality disorders).
A global evaluation of disorders is warranted to evaluate the capacity of quantitative functional approach to refer as a valid diagnosis system

REFERENCES

Beck, A. T., & Beamesderfer, A. (1974). Assessment of depression: the depression inventory. *Modern Problems of Pharmacopsychiatry, 7*, 151–169.

Bond, F. W., Hayes, S. C., Baer, R. A., Carpenter, K. C., Guenole, N., Orcutt, H. K., Waltz, T. and Zettle, R. D. (2011). Preliminary psychometric properties of the Acceptance and Action Questionnaire – II: A revised measure of psychological flexibility and acceptance. *Behavior Therapy, 42(4)*, 676-688.

Brown, K. W., & Ryan, R. M. (2003). The benefits of being present: Mindfulness and its role in psychological well-being. *Journal of personality and social psychology, 84(4)*, 822–848.

Clark, L. A., Watson, D., & Reynolds, S. (1995). Diagnosis and classification of psychopathology: Challenges to the current system and future directions. *Annual review of psychology, 46(1)*, 121–153.

Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology, 44*, 113-126.

First, M. (2003). Psychiatric classification. In A. Tasman, J. Kay, & J. Lieberman (Eds.), *Psychiatry* (2nd ed., Vol. 1, pp. 659–676). Chichester, England: Wiley.

Gillanders, D. T., Bolderston, H., Bond, F. W, Dempster, M., Campbell, L., Kerr, S., Tansey, L., Clarke, S., Remington, B., Flaxman, P., Deans, G. (2010). The Cognitive Fusion Questionnaire: Further developments in measuring cognitive fusion. *Conference presentation at the Association for Contextual Behavioral Science, World Congress VIII, Reno, NV, June 2010*. Available to download at: http://contextualpsychology.org/node/4249

Kessler, R. C., Chiu, W. T., Demler, O., & Walters, E. E. (2005). Prevalence, severity, and comorbidity of 12-month DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry, 62*, 617-627.

Wilson, K. G., Sandoz, E. K., Kitchens, J., & Roberts, M. (2010). The Valued Living Questionnaire: Defining and Measuring Valued Action within a Behavioral Framework. *The Psychological Record, 60*, 249-272.

Contact: Jean-Louis Monestès
✉ jlmonestes@yahoo.fr