

HOW ARE YOU DEPRESSED?

A CLUSTERING APPROACH TO THE HETEROGENEITY OF DEPRESSION

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International Convention of Psychological Science, Vienna, 03.24.2017

Symposium: 'Investigating the Heterogeneity of Major Depression With Novel Symptom-, Factor-, and Network-Based Models'

Chairs: Eiko Fried & Klaas Wardenaar



INTRODUCTION



INTRODUCTION

- The heterogeneity of depression is more and more evidenced... (e.g., Fried & Nesse, 2015; Parker et al., 2014; Rush, 2007; Wagener et al., 2016; Zimmerman et al., 2014)
 - Symptomatology profiles
 - Course
 - Treatment responsiveness
 - Gender
 - Etc.

- ➔ A clearer overview of the heterogeneity of depression will help...
 - (1) To deeper understand its underlying psychological processes and disturbed mechanisms,
 - (2) To tailor clinical treatments (i.e., psychological interventions and/or antidepressant medications)

INTRODUCTION

→ How to investigate the heterogeneity of depression?

→ For instance, through a *cluster-analysis approach*

Andreasen et al. (1980)	Schacht et al. (2014)	Hybels et al. (2013)	Guidi et al. (2011)
Schedule for Affective Disorders and Schizophrenia	Hamilton Depression Rating Scale	Center for Epidemiologic Studies-Depression Scale	Structured Clinical Interview for DSM-IV
Depressed patients	Depressed patients	Community seniors	Medically ill patients
3 clusters	5 clusters <ul style="list-style-type: none">- Lack of insight- Sleep/sexual/somatic- Typical MDD- Gastrointestinal/weight loss- Mild MDD	3 clusters	2 clusters <ul style="list-style-type: none">- Depressed somatizers- Irritable/anxious depression

→ 2 to 5 different clusters of depressive individuals

INTRODUCTION

- **Aim of the current study?**

- Replicating and extending previous findings in a **general population of adults presenting depressive symptoms**

WHILE

- Addressing previous studies' shortcomings

→ Use of the Beck Depression Inventory – Second Edition < most frequently used assessment of depression

→ Definition of the clusters based on the *PRESENCE* of the symptoms rather than their *SEVERITY*...symptoms' severity of the BDI-II can be misrepresentative of the phenomenology of depression

- **Hypothesis?**

→ Different clusters will be highlighted // results of previous research



METHODS



METHODS

- **Initial sample**
 - 619 adults (18-60 years) from the community & mental healthcare centers
 - At least 5 symptoms on the BDI-II (// DSM-V criteria)
 - Irrespective of their severity
 - Min. sadness and/or loss of pleasure and/or loss of interest
 - Online survey / paper-pen
- **Replication sample**
 - 260 adults (18-60 years) from the community & mental healthcare centers
 - Same criteria & experimental protocol

METHODS

- **Statistical analyses**
 - Hierarchical procedure (Ward's method with squared Eucladian distance measurement)
 - Nonhierarchical procedure (K-means cluster analysis)

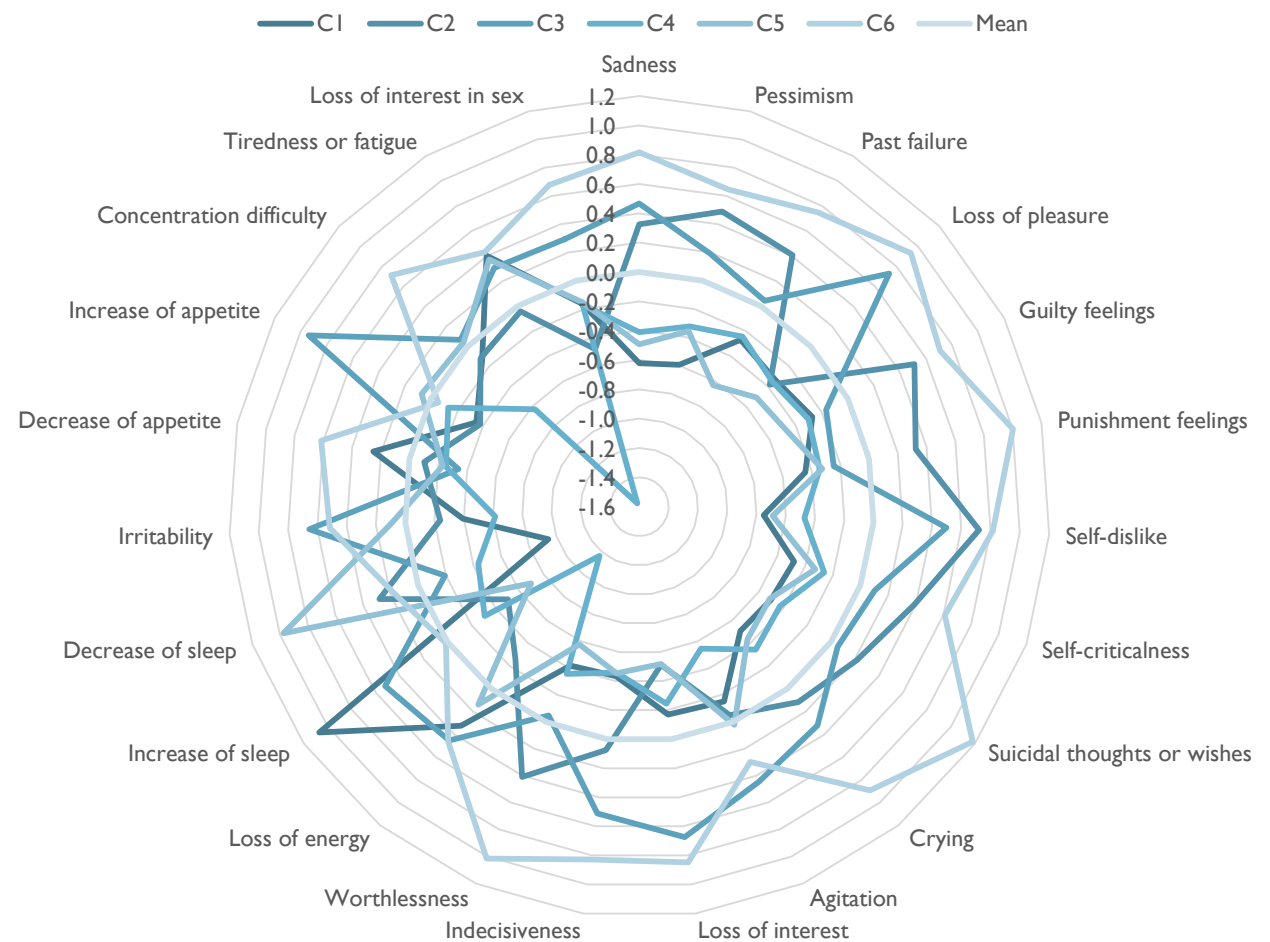


RESULTS

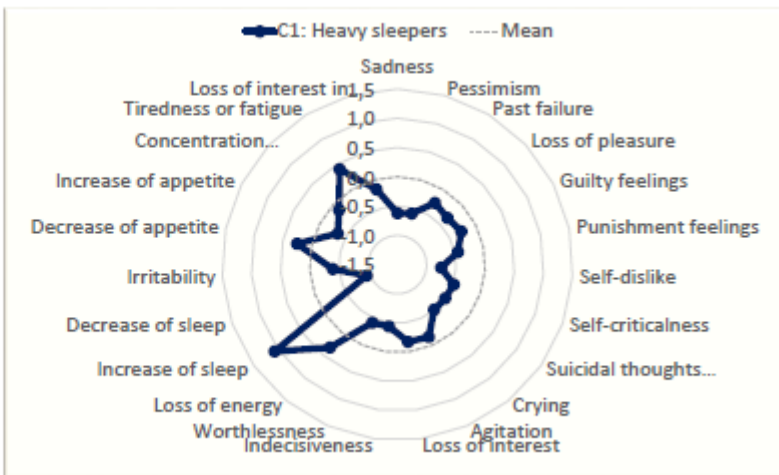


RESULTS – INITIAL SAMPLE

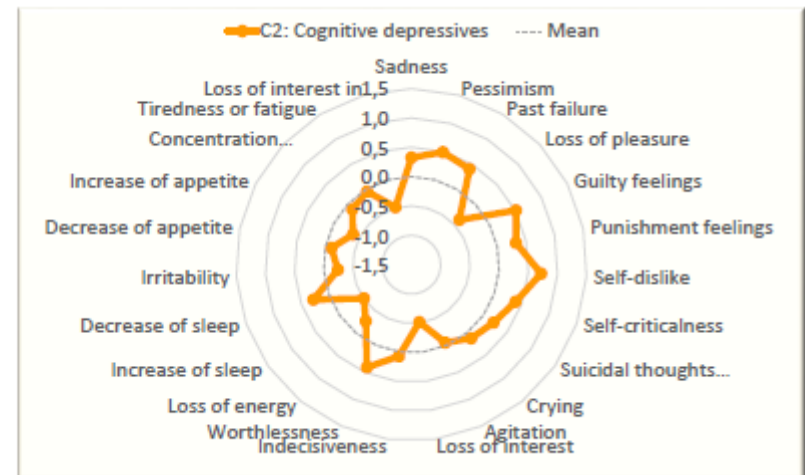
- A six-factor solution was highlighted



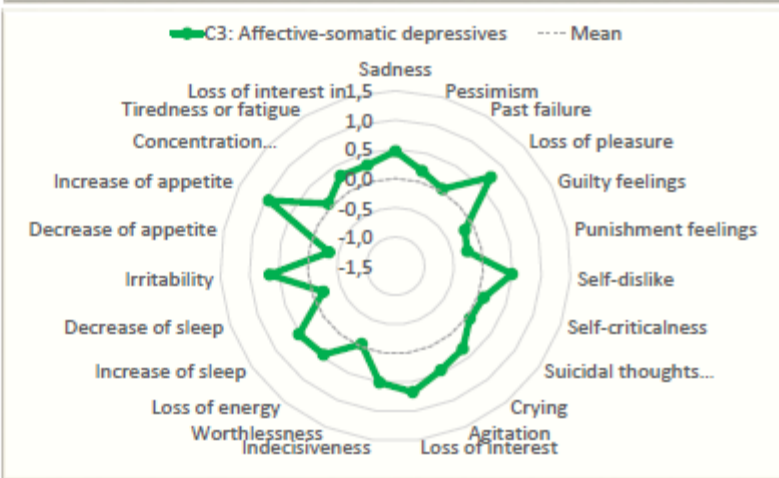
Heavy sleepers	
	N (105)
Women	60
Men	45
	M (SD)
Age	32.57 (13.34)
BDI-II total score	9.63 (3.63)



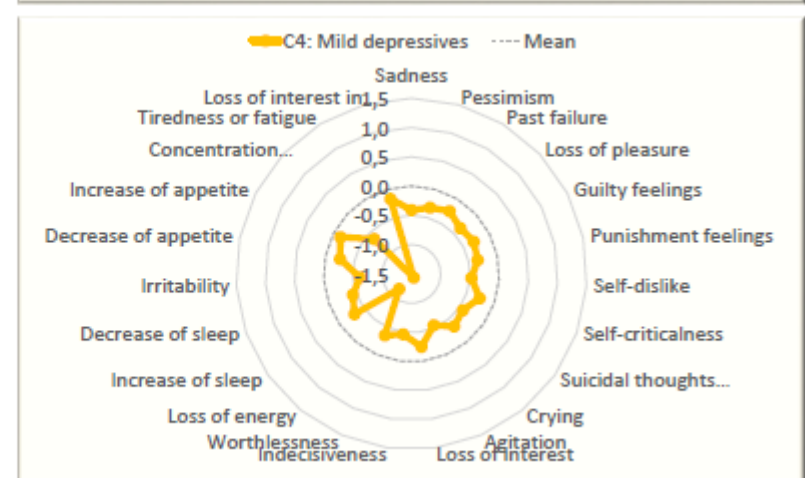
Cognitive depressives	
	N (100)
Women	68
Men	32
	M (SD)
Age	29.97 (11.57)
BDI-II total score	16.26 (5.47)



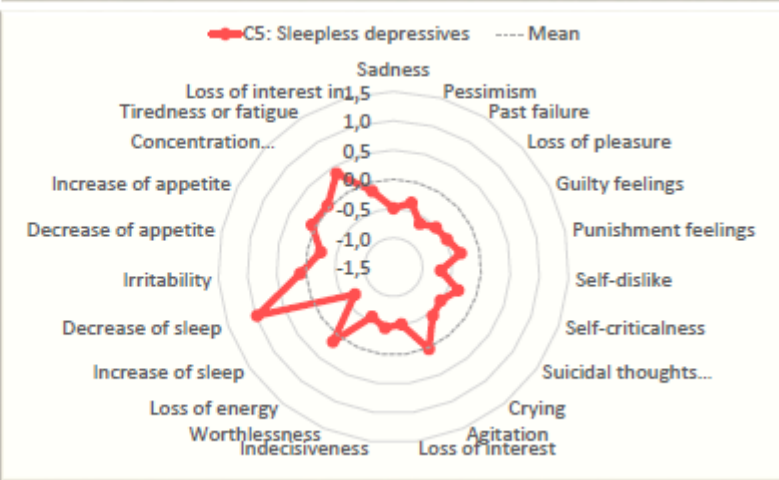
Affective-somatic depressives	
	N (91)
Women	74
Men	17
	M (SD)
Age	30.84 (10.83)
BDI-II total score	19.79 (5.18)



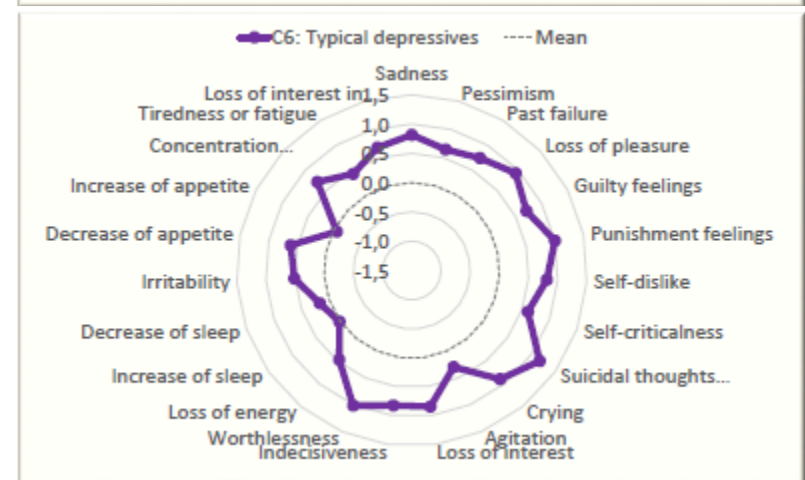
Mild depressives	
	N (99)
Women	64
Men	35
	M (SD)
Age	30.31 (11.51)
BDI-II total score	7.87 (2.59)



Sleepless depressives	
	N (116)
Women	77
Men	49
	M (SD)
Age	29.31 (11.11)
BDI-II total score	10.10 (3.75)

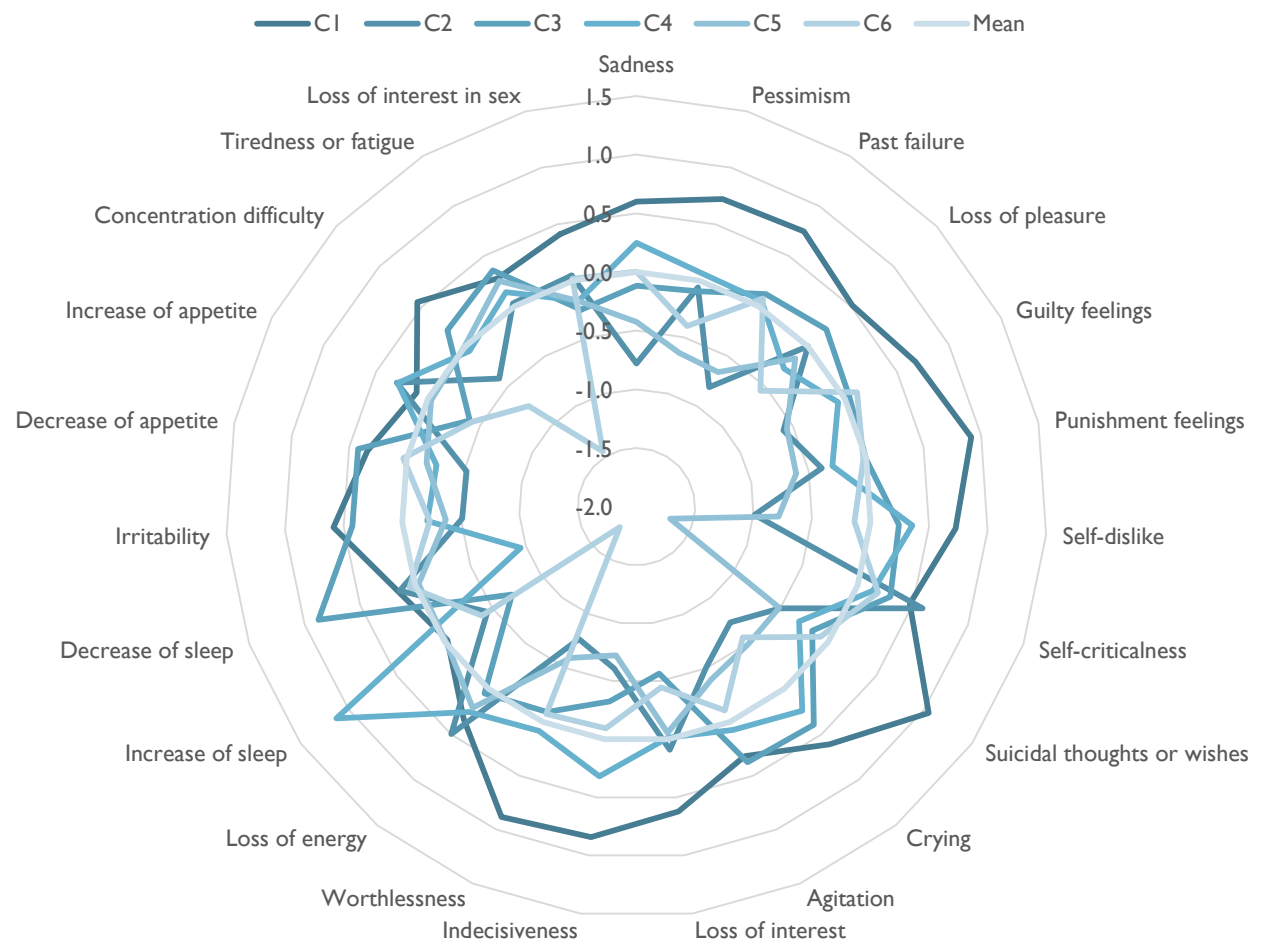


Typical depressives	
	N (108)
Women	74
Men	44
	M (SD)
Age	33.64 (12.34)
BDI-II total score	31.79 (9.18)



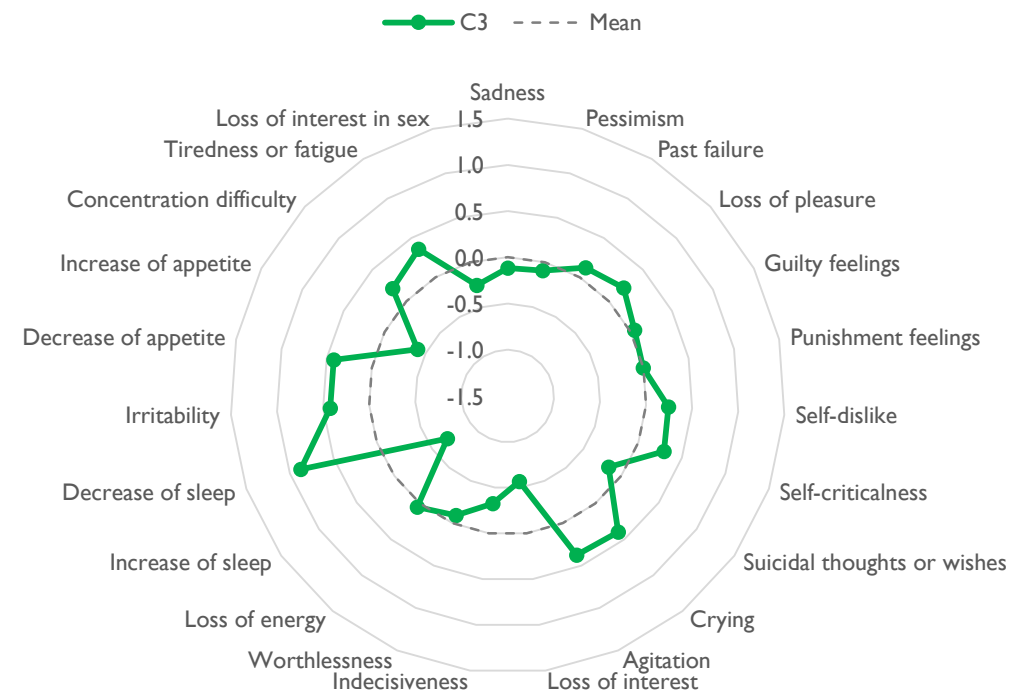
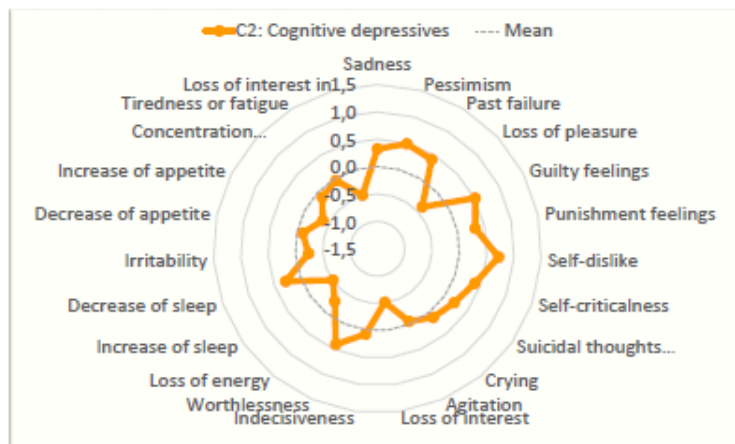
RESULTS – REPLICATION SAMPLE

- A six-factor solution was highlighted
 - 4 clusters // initial sample
 - 2 clusters: mixed profiles



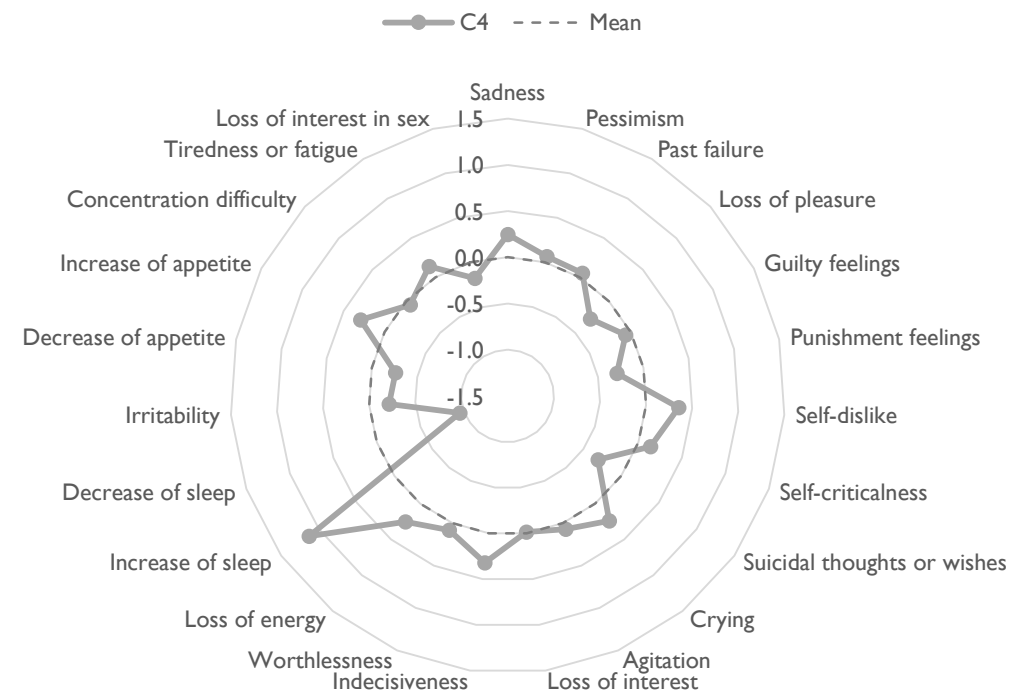
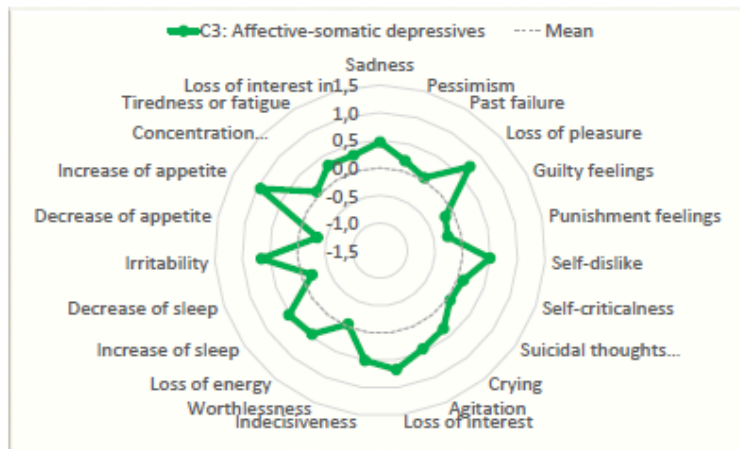
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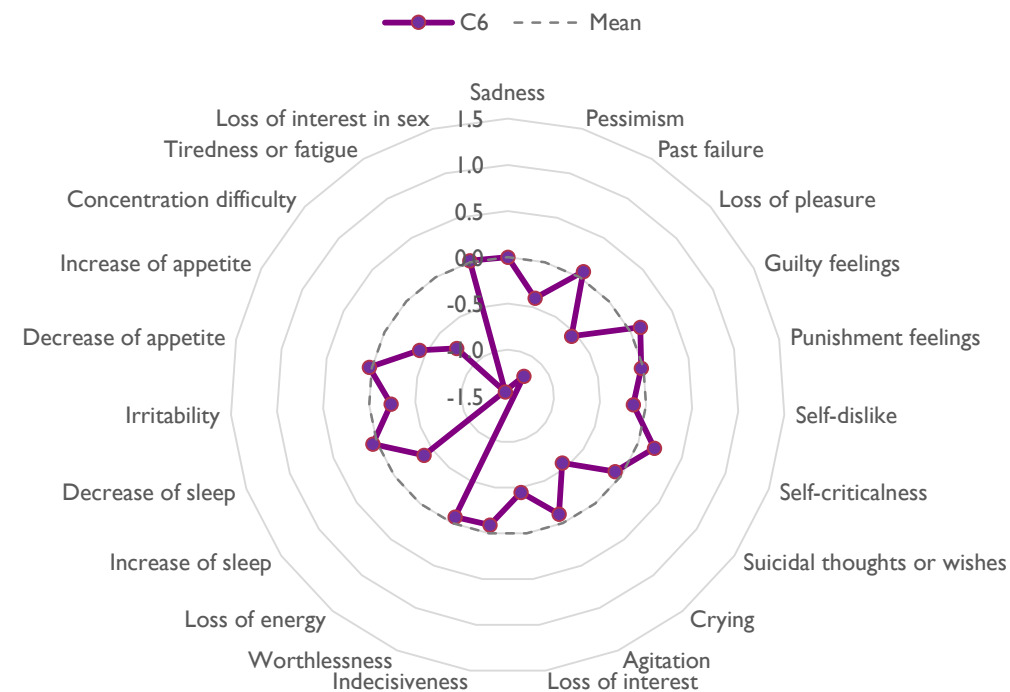
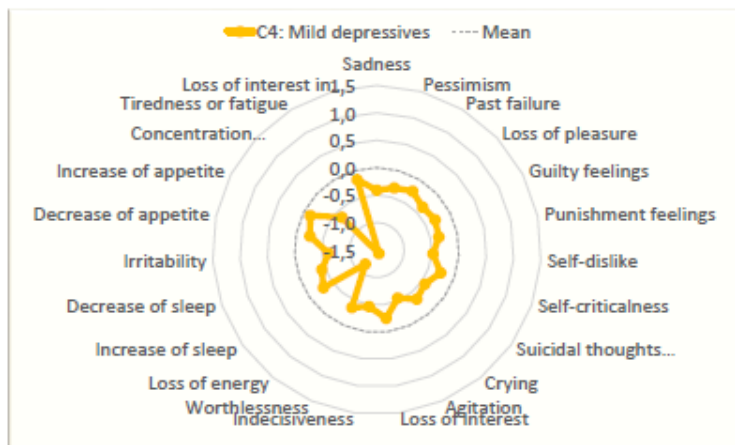
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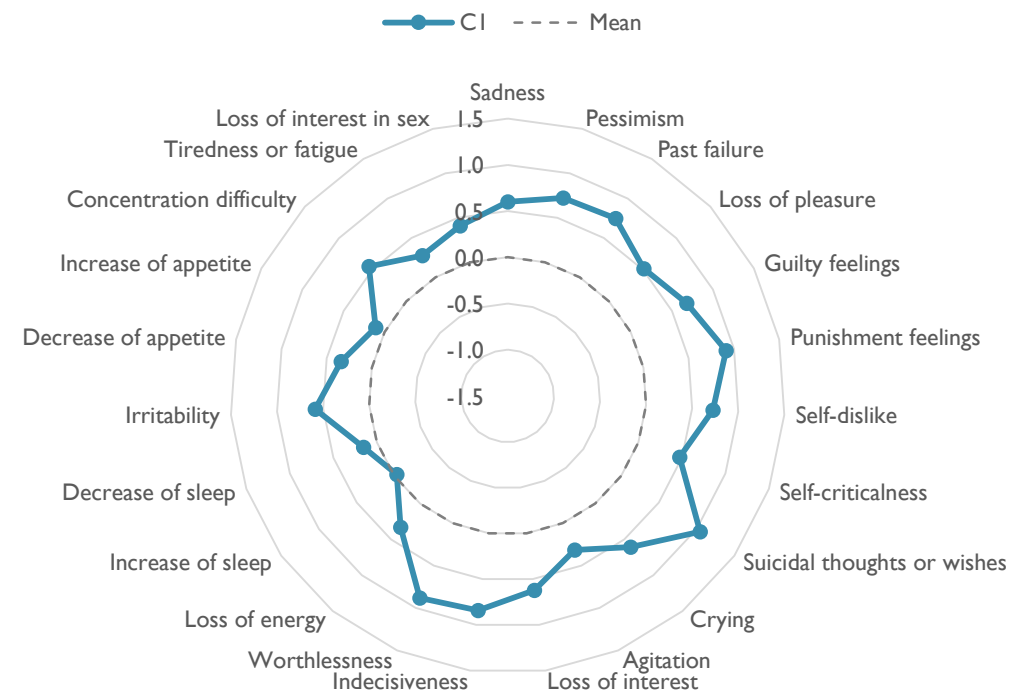
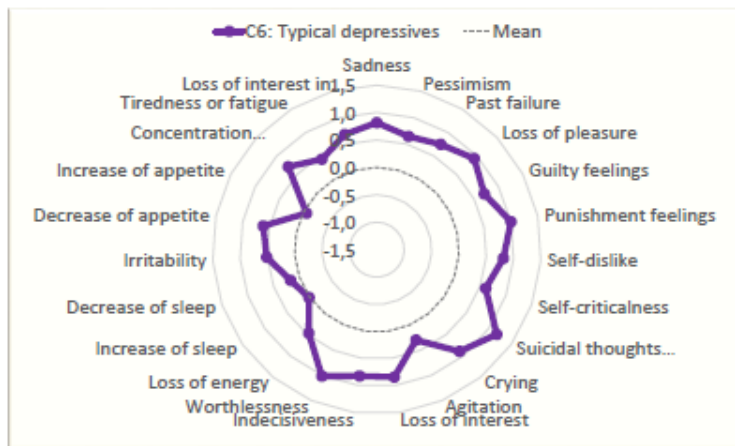
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DISCUSSION



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- In line with our hypothesis (😊 😊!)
 - **The heterogeneity of depression is supported** < 6 clusters have been identified (twice...)
- Further:
 - **The existence of certain particular profiles is also supported** (i.e., cognitive depressives, affective-somatic depressives, mild depressives, typical depressives)

2 of our clusters // 2 clusters of Schacht et al. (2014)	2 of our clusters // 2 networks of Bringmann et al. (2015)
Sleepless depressives // « sleep/sexual/somatic » <ul style="list-style-type: none">• Symptoms related to insomnia and tiredness	Cognitive depressives // network of cognitive symptoms <ul style="list-style-type: none">• E.g. guilty feelings, worthlessness, pessimism
Mild depressives // « mild MDD » <ul style="list-style-type: none">• Low to average levels on all symptoms	Affective-somatic depressives // network of physical and affective symptoms <ul style="list-style-type: none">• E.g., loss of energy and pleasure



**Take
home message*

CONCLUSION

CONCLUSION



**Take
home message*

DEPRESSION = HETEROGENEOUS CONDITION

→ It is necessary to tailor our psychological interventions !

→ Experimental perspectives: Investigate the relevance of specific clinical treatment (e.g., behavioral activation) depending on patients' profile

CONCLUSION

- More info?
 - Poster Session III from 12.30 to 13.20
 - [Hopefully]
 - Wagener, A., Baeyens, C., Van der Linden, M., & Blairy, S. (Under review). Is behavioral activation a relevant intervention for all depressives? Evidences through a cluster-analysis investigation.

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