



Towards a specific psychopathology of Substance Use Disorders

Icro Maremmani, MD, FISAM





DISCLOSURE



VOLUNTARY DISCLOSURE



- No sponsor played a role in this presentation
- I currently serve or I served in the past as Board Member or Consultant for Indivior, Molteni, Mundipharma, D&A Pharma, CT Sanremo, Lundbeck, Gilead, Merck & Co, Angelini

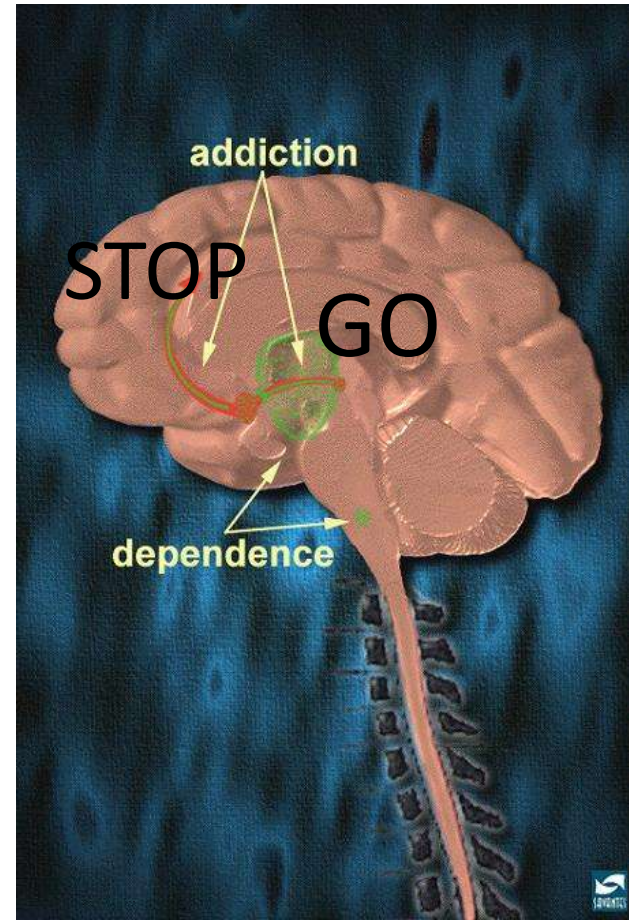


Neurobiological point of view



What is the specific
psychopathology of heroin addicts?

**Only CRAVING
and RELAPSE?**





Contents lists available at [ScienceDirect](#)

Journal of Affective Disorders

journal homepage: www.elsevier.com/locate/jad



Review

Delineating the psychic structure of substance abuse and addictions: Should anxiety, mood and impulse-control dysregulation be included?

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PRIMARY RESEARCH

Open Access

Subtyping patients with heroin addiction at treatment entry: factor derived from the Self-Report Symptom Inventory (SCL-90)

Icro Maremmani^{*†1,2,3}, Pier Paolo Pani^{†4}, Matteo Pacini^{†1,3}, Jacopo V Bizzarri^{†5}, Emanuela Trogu^{†4}, Angelo GI Maremmani^{†1,2,3}, Gilberto Gerra^{†6}, Giulio Perugi^{†1,3} and Liliana Dell'Osso^{†1}



Psychic structure of SCL-90



Psychiatric patients

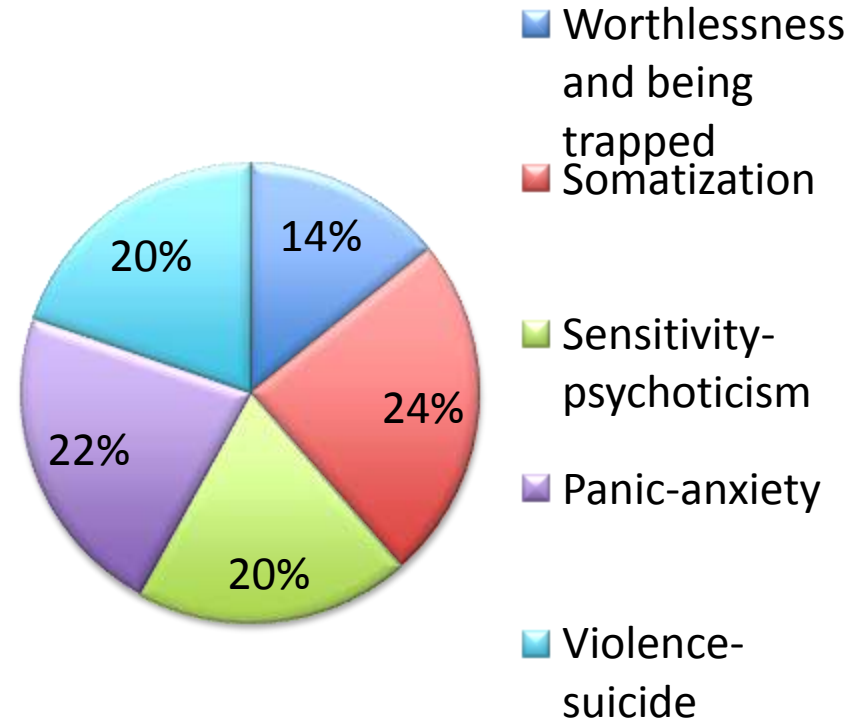
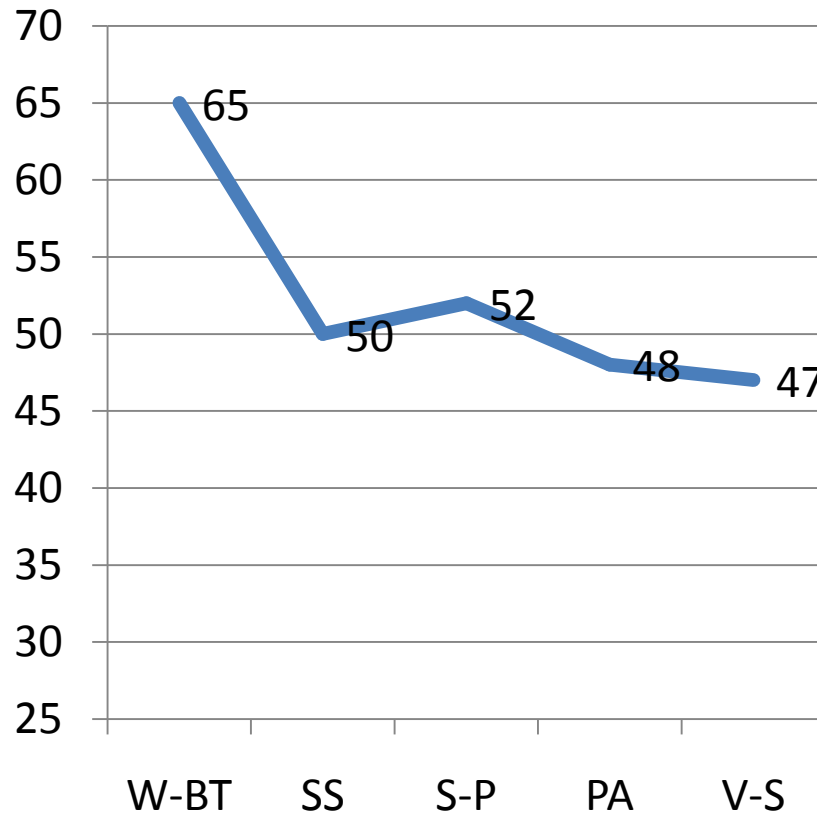
- Somatization
- Obsessive-compulsive
- Interpersonal sensitivity
- Depression
- Anxiety
- Hostility
- Phobic anxiety
- Paranoid ideation
- Psychotic ideation

Addicted patients

- Worthlessness and being trapped
- Somatic symptoms
- Sensitivity – psychoticism
- Panic – Anxiety
- Violence – Suicide



Psychopathological typology





Pacini Editore & AU CNS

Regular article

Heroin Addict Relat Clin Probl 2012; 14(1): xx-xx

**HEROIN ADDICTION &
RELATED CLINICAL
PROBLEMS**

www.europad.org

Heroin addicts' psychopathological subtypes. Correlations with the natural history of illness

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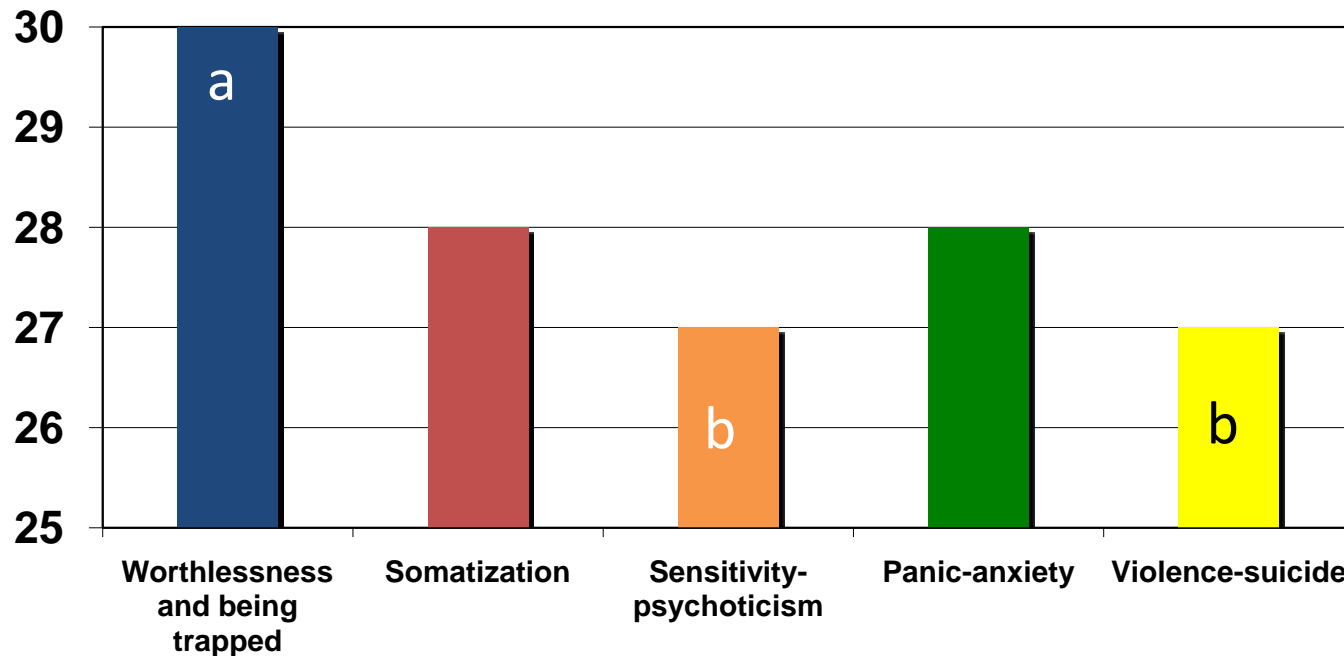
4. Social-Health Services, Health District 8 (ASL 8) Cagliari, Sardinia, Italy, 09127.



HUD* patients' age in psychopathological subtypes at treatment entry or re-entry



a-b=p<005



* Heroin Use Disorder



HUD patients' psychopathology stability



- Independent of the choice of treatment (*Pani et al., 2014; Ann Gen Psychiatry 13(1): 35.*)
- Independent of active substance use (*Pani et al., 2015; Heroin Addict Relat Clin Probl 17(2-3): 17-24*)
- Independent of lifetime psychiatric problems (*Pani et al., 2016; Addict Disord Their Treatment 15(1): 6-16.*)
- Independent of the choice of substance used (heroin, alcohol, cocaine) *Pani et al., 2016; Ann Gen Psychiatry 15:13.*
- Independent of the choice of substance used (heroin, alcohol, cocaine in mono-user patients) *Carbone et al., 2018; Heroin Addict Relat Clin Probl First on line.*



HUD patients' psychopathology stability



- Independent of stress sensitivity (*Maremmanni et al., 2018; Comp Psychiatr, 80: 132–139*)
- Independent of 3month non-use in TC (*Iantomasi's doctoral dissertation 2019*)
- Independent of ethnicity (migrants) (*Carbone, et al. (Published Ahead of Print). Heroin Addict Relat Clin Probl.*)
- Independent of ethnicity (Slovenian/Italian) (*Maremmanni, et al. (2019). Heroin Addict Relat Clin Probl* **21 (4)**: 35-39.)



HUD patients' psychopathology stability



- Strictly correlated to addictive behaviours (*Della Rocca et al., 2017; Heroin Addict Relat Clin Probl, 19(6):13-20*)
- Strictly correlated to stress sensitivity (*Maremmanni et al., 2018; Comp Psychiatr, 80: 132–139*)



Differentiation from other psychopathology



- Major depression (*Maremmanni et al., 2015; Heroin Addict Relat Clin Probl 17(6): 9-16*)
- *Chronic Psychosis* (*Rugani, et al., 2019; Heroin Addict Relat Clin Probl 21 (3): 53-59.*)
- Obesity (*Maremmanni et al 2017., Int J Environ Res Public Health. 14(8): 943.*)
- Problematic/nonproblematic internet use (*Maremmanni et al, in press*)
- Gambling (*Maremmanni et al, 2018., Ann Gen Psychiatry. 17(3): 1-9.*)

The five-dimension SCL-90 solution can

- well discriminate psychopathology between **Major Depression, Chronic Psychosis,** and **Heroin Use Disorder** patients
- partially discriminate psychopathology between **Obese (non psychiatric)** and **Heroin Use Disorder** (47.2 of obese individuals were reclassified as HUD patients)
- Perfectly discriminate psychopathology between problematic/non problematic internet use
- discriminate psychopathology between **Gamblers** and **Heroin Use Disorder** patients only by means of Somatic-Symptoms dimension



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Mood dysregulation: Worthlessness and being trapped

Anxiety dysregulation: Panic anxiety

Impulse-control dysregulation: Violence and suicide

Somatic symptoms, Sensitivity and Psychoticism

Stress sensitivity???

the
Spectrum
ASSESSMENTS

a complementary way of describing
and assessing psychopathology.

TAL SPECTRUM *tal*
trauma and loss spectrum

Note: each items is scored as "0" (NO), "1" (YES).

(1) loss events	sum of items 1-10
(2) grief reactions	sum of items 11 - 37
(3) potentially traumatic events	sum of items 38 - 58
(4) reactions to losses or upsetting events	sum of items 59 - 76
(5) re-experiencing	sum of items 77-85
(6) avoidance and numbing	sum of items 86-97
(7) maladaptive coping	sum of items 98-105
(8) arousal	sum of items 106-110
(9) personal characteristics/risk factors	sum of items 111-116



Pacini Editore & AU CNS

Regular article

Heroin Addict Relat Clin Probl 2011; 13(3): 17-26

**HEROIN ADDICTION &
RELATED CLINICAL
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Life events (loss and traumatic) and emotional responses to them in heroin-dependent patients before and after the dependence age of onset

Fabio Rugani ¹, Angelo Giovanni Icro Maremmani ^{1,2}, Luca Rovai ¹, Salvatore Mautone ¹, Giulio Perugi ^{1,3}, Pier Paolo Pani ⁴, Liliana Dell'Osso ¹, and Icro Maremmani ^{1,2,3}

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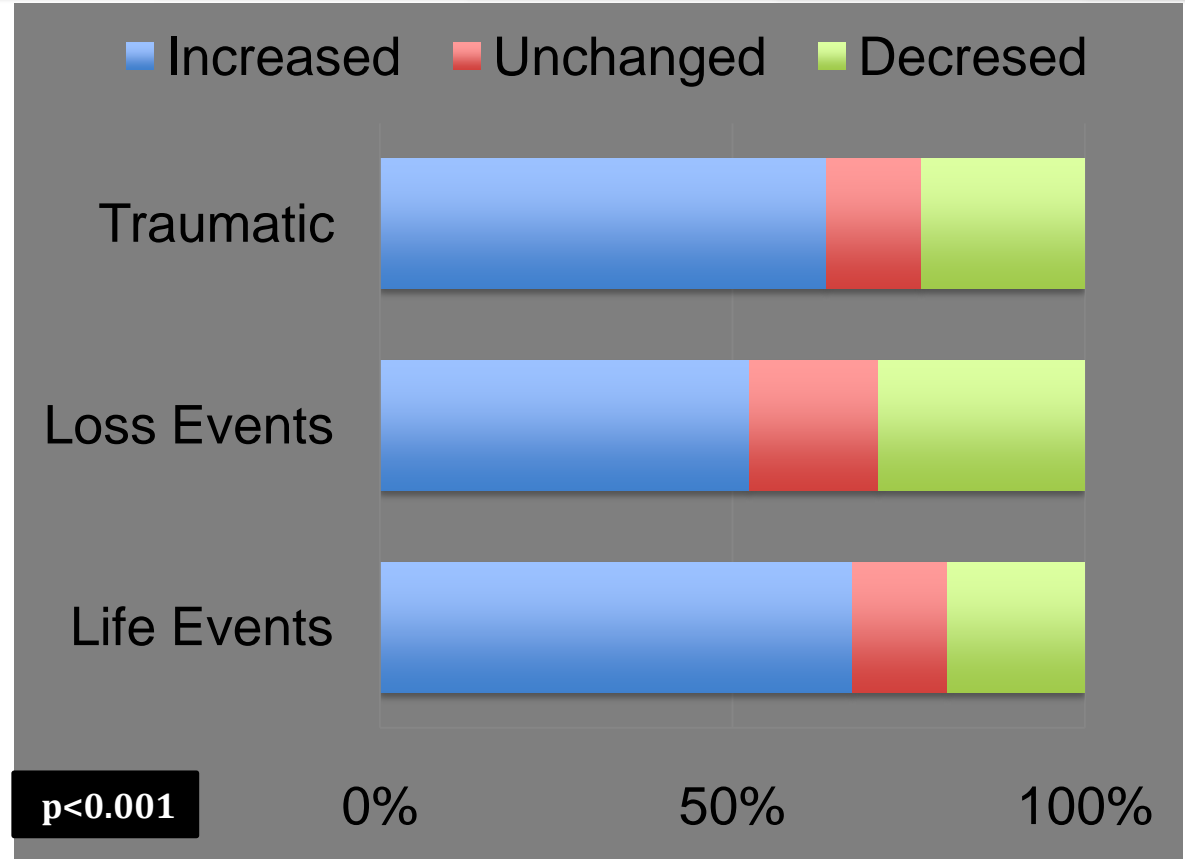
4 Sardinia Health and Social Administration, ASL, Cagliari, Italy, EU



Life Events (Loss and Traumatic) in Heroin Addicts before and after their dependence Age of Onset



Is there a variation in the **number** of stressful life events between before and after HUD age of onset?

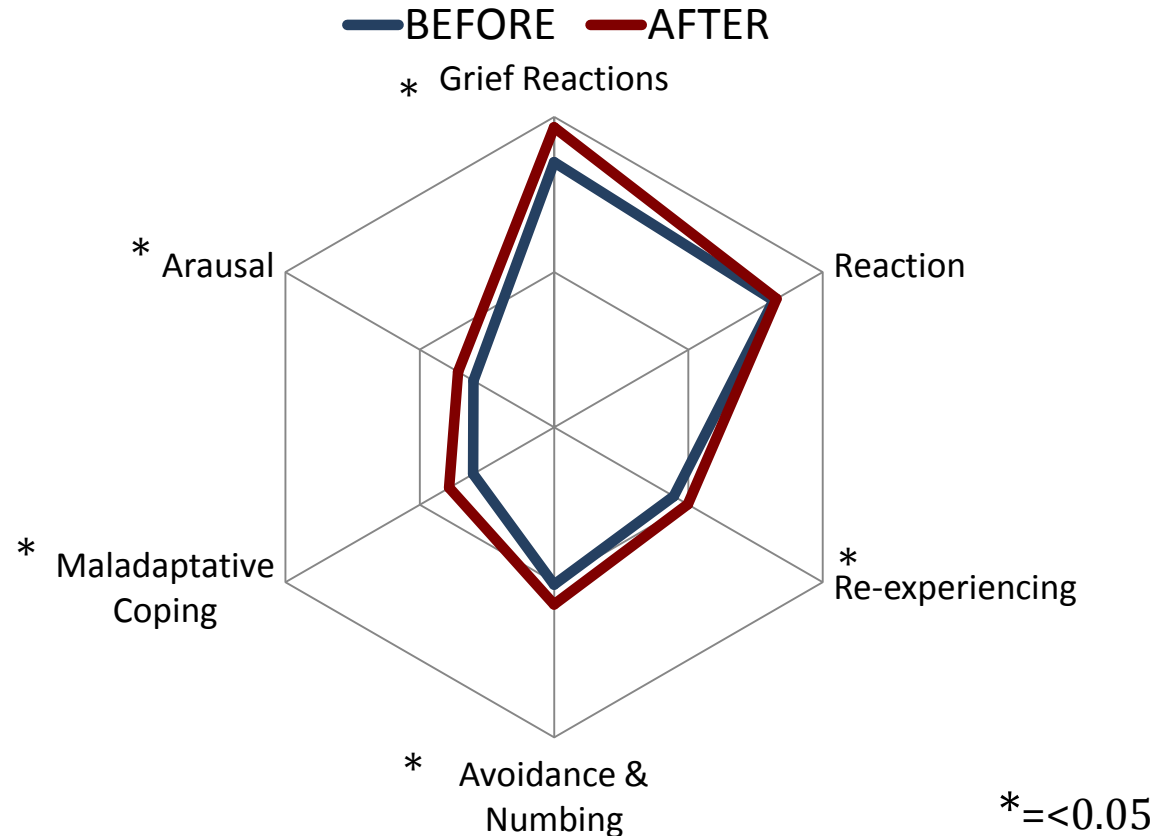




Severity of reaction to life events in Heroin Addicts before and after their dependence Age of Onset



Is there a variation in the **emotional responses** to stressful life events between before and after HUD age of onset?



Towards a unitary perspective between Post-Traumatic Stress Disorder and Substance Use Disorder Heroin use disorder as case study

Liliana Dell'Osso^a, Fabio Rugani^b, Angelo Giovanni Icro Maremmani^{b,c}, Sara Bertoni^b,
Pier Paolo Pani^d, Icro Maremmani^{b,c,e,*}

Question Marks

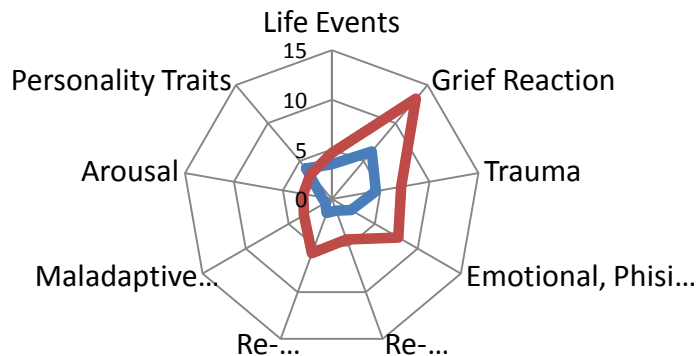
- Are correlations between PTSD spectrum and severity of heroin addiction significant?
- Are opioid medications able to reduce reactions to life events in Heroin Addicts during treatment?



Are correlations between PTSD spectrum and severity of heroin addiction significant?

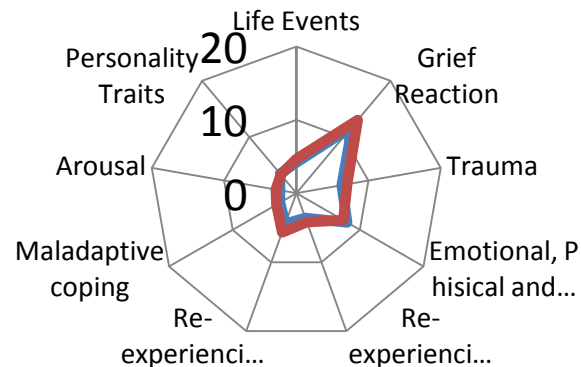


— Stages 1 and 2 — Stage 3



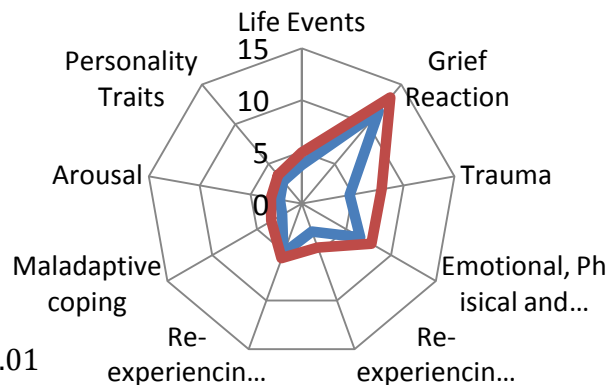
$p < 0.01$

— Daily or less — More than daily



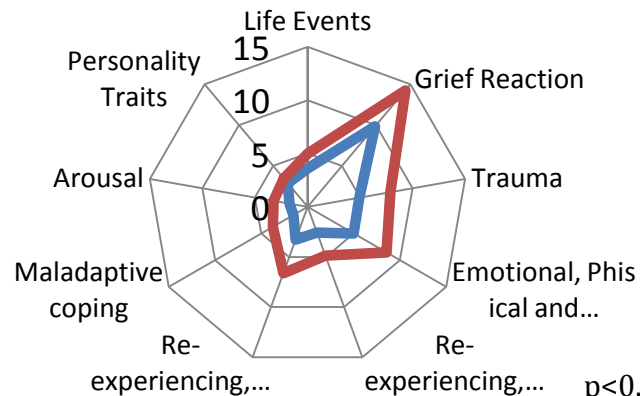
$p = ns$

— NO Polyabuse — YES Polyabuse



$p < 0.01$

— NO Previous Treatments — YES Previous Treatment



$p < 0.01$



Correlations between opioid medication dosage and severity of reactions to life events in Heroin Addicts during treatment



Are opioid medications able to reduce reactions to life events in HUD patients during treatment?

	Opioid Medication Dosage
Severity of reactions to life events	N=82 r=-0.225 p=0.042

Does psychopathology of addiction exist?

**CAN HEROIN ADDICTION GENERATE A
SORT OF PTSD?**



ROC analysis on PTSD spectrum database of survivors of the 2009 L'Aquila earthquake

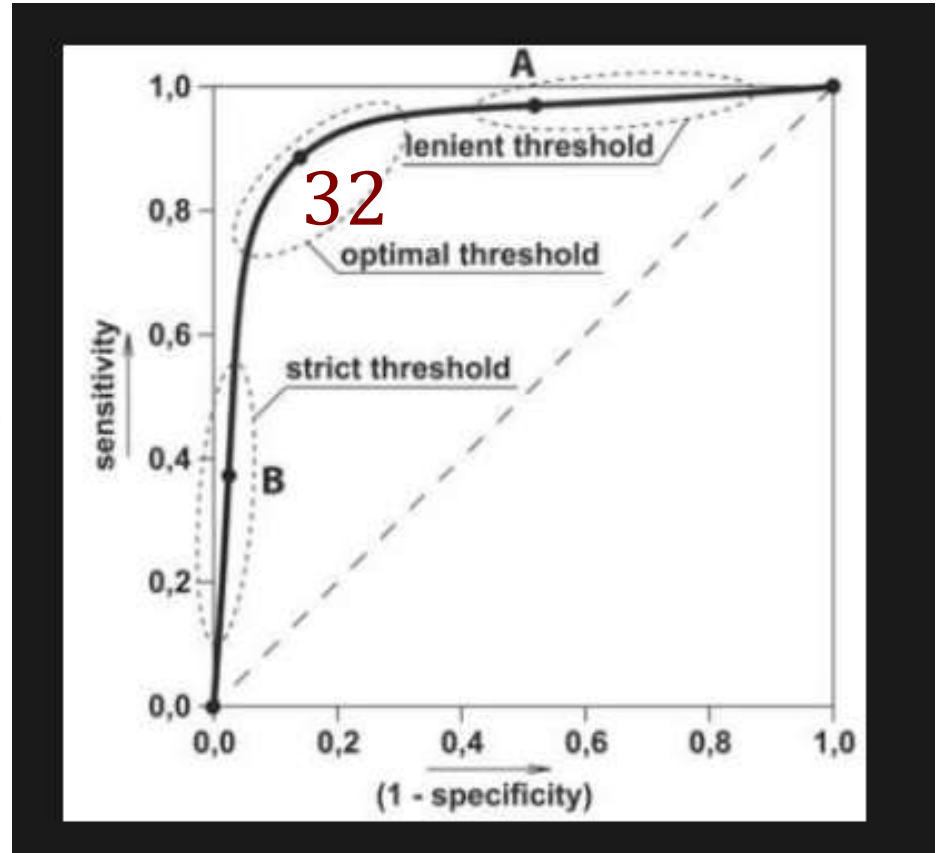
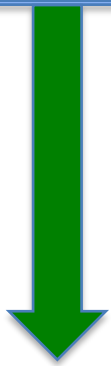


Subjects developing
PTSD after L'Aquila
earthquake



32

Subjects No-
developing PTSD after
L'Aquila earthquake





Percentage of subjects with a PTSD spectrum >32 in long lasting HUD patients, No-PTSD and PTSD earthquake survivors

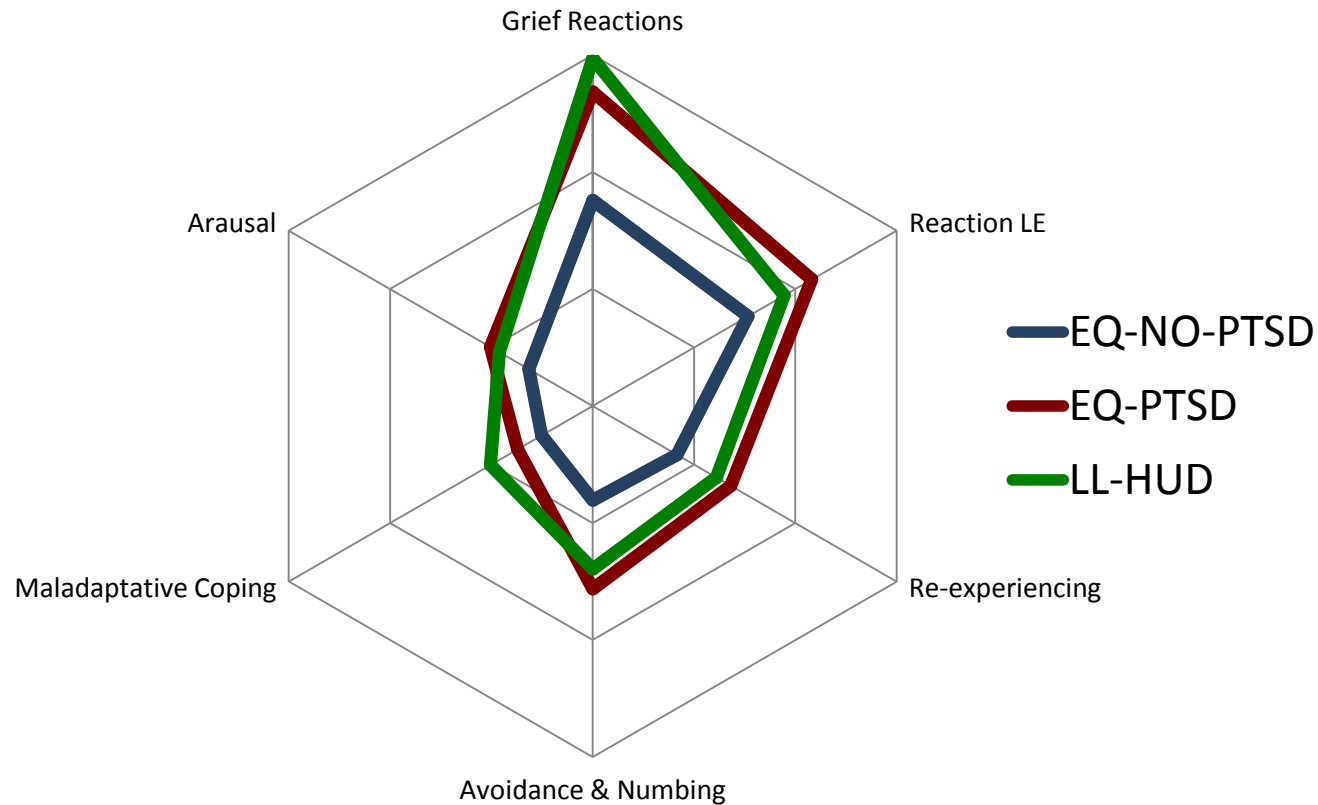


No-PTSD earthquake survivors	PTSD earthquake survivors	Long lasting HUD patients
11 (14.3%) (b)	56 (72.7%) (a)	51 (66.2%) (a)

Each letter denotes a subset of categories whose column proportions do not differ significantly from each other at the 0.05 level

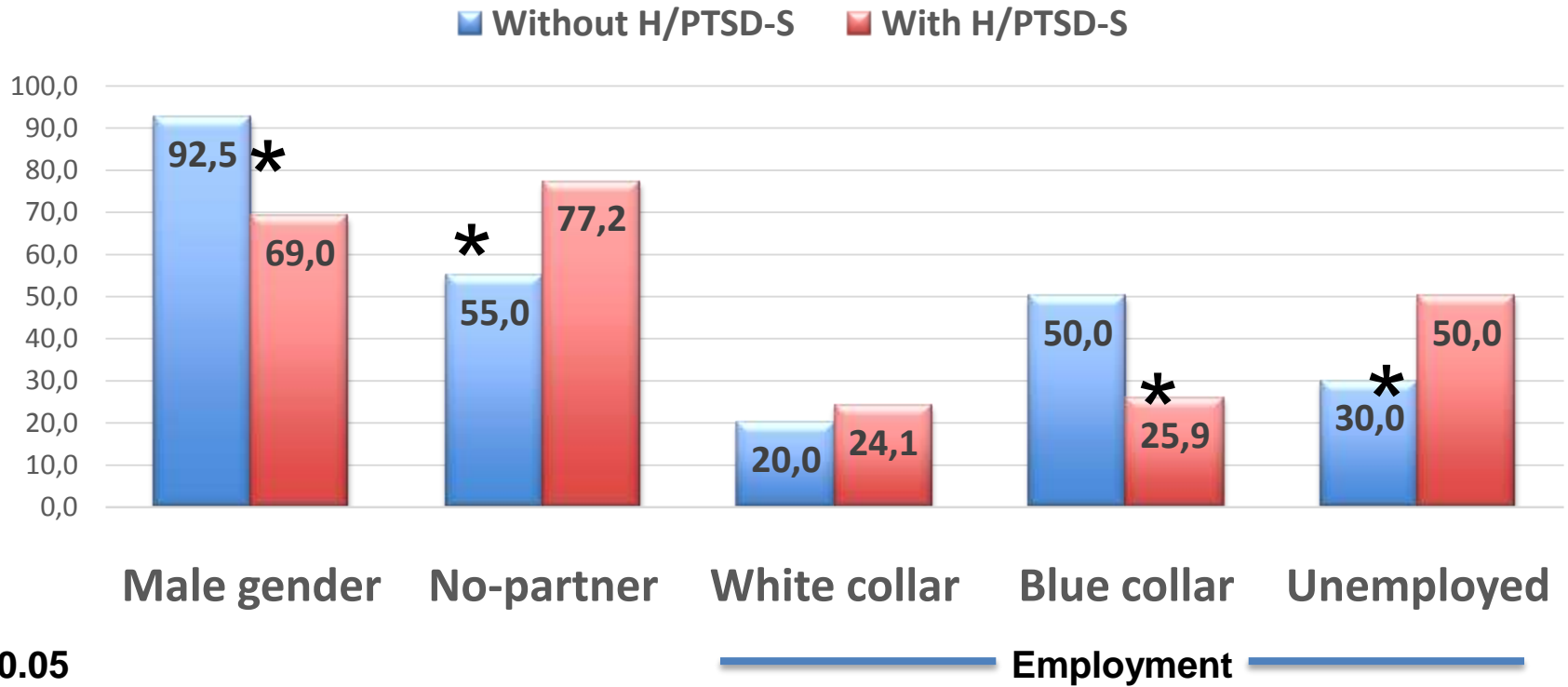


PTSD spectrum in long lasting HUD patients, No-PTSD and PTSD earthquake survivors



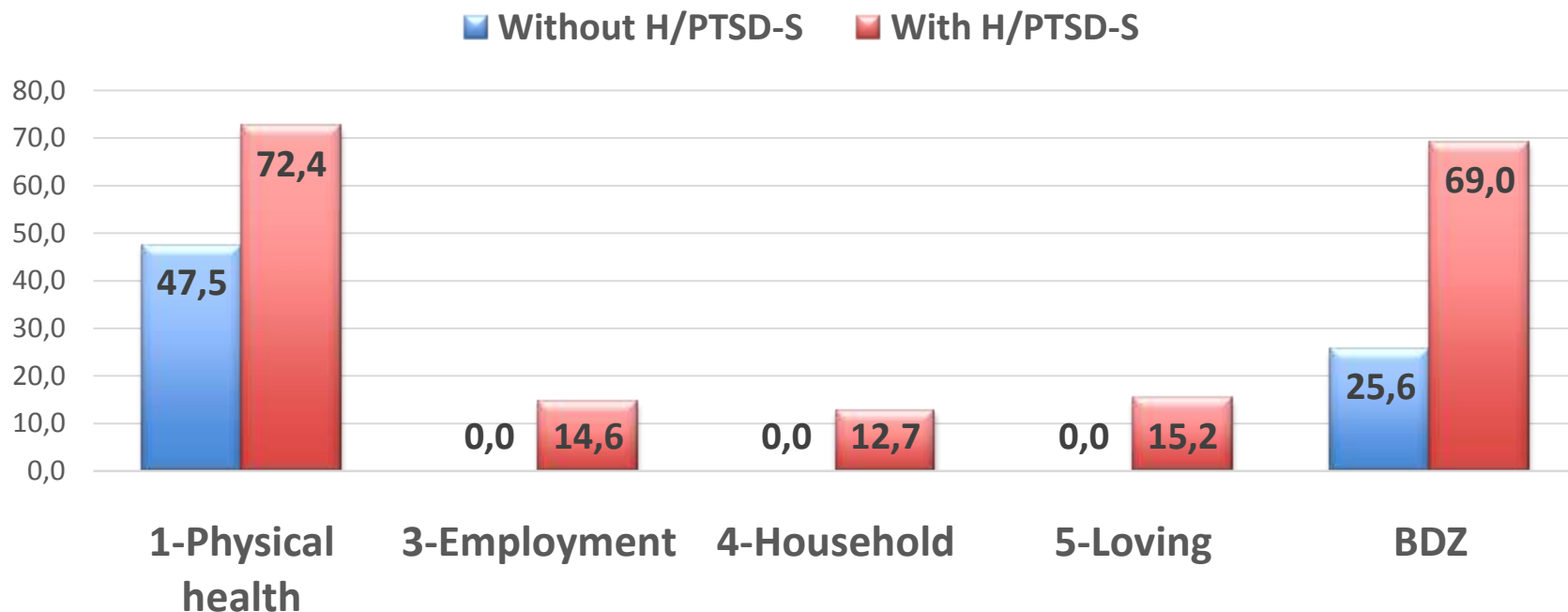


Prominent characteristics of H/PTSD-S patients during AOT Treatment: demographic data



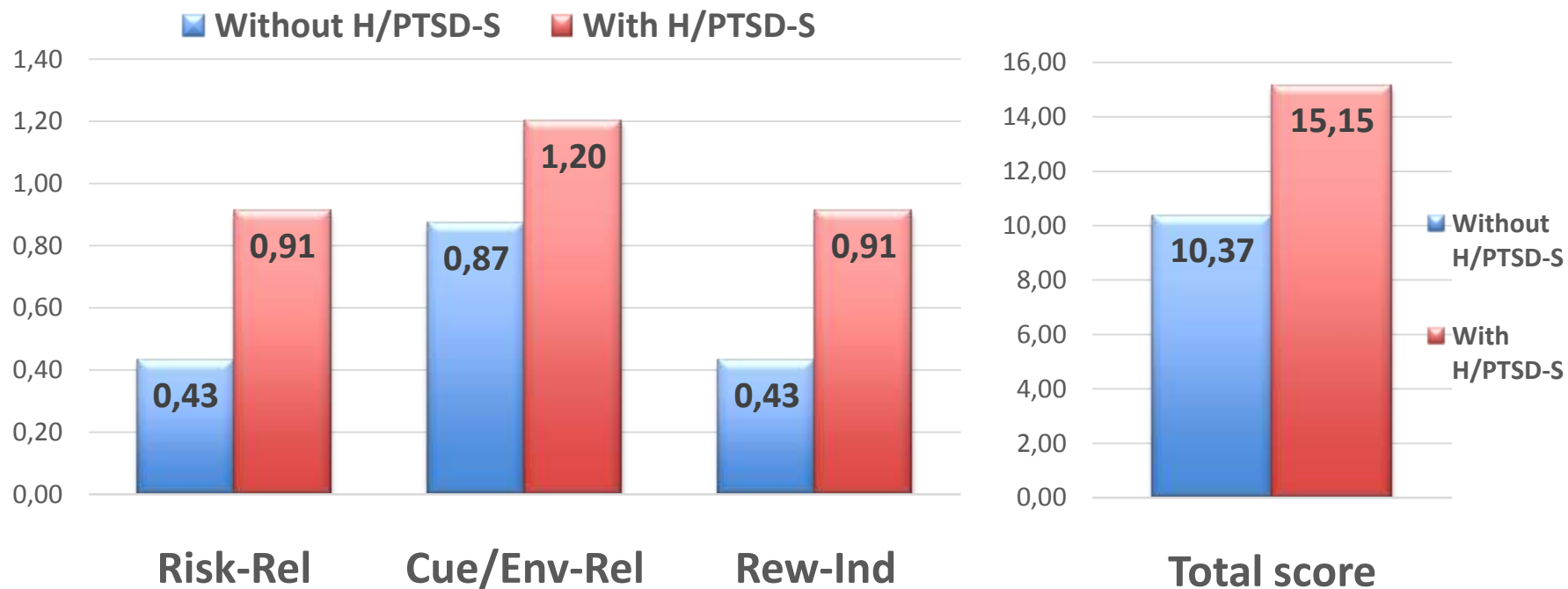


Prominent characteristics of H/PTSD-S patients during AOT Treatment: DAH-Q factors



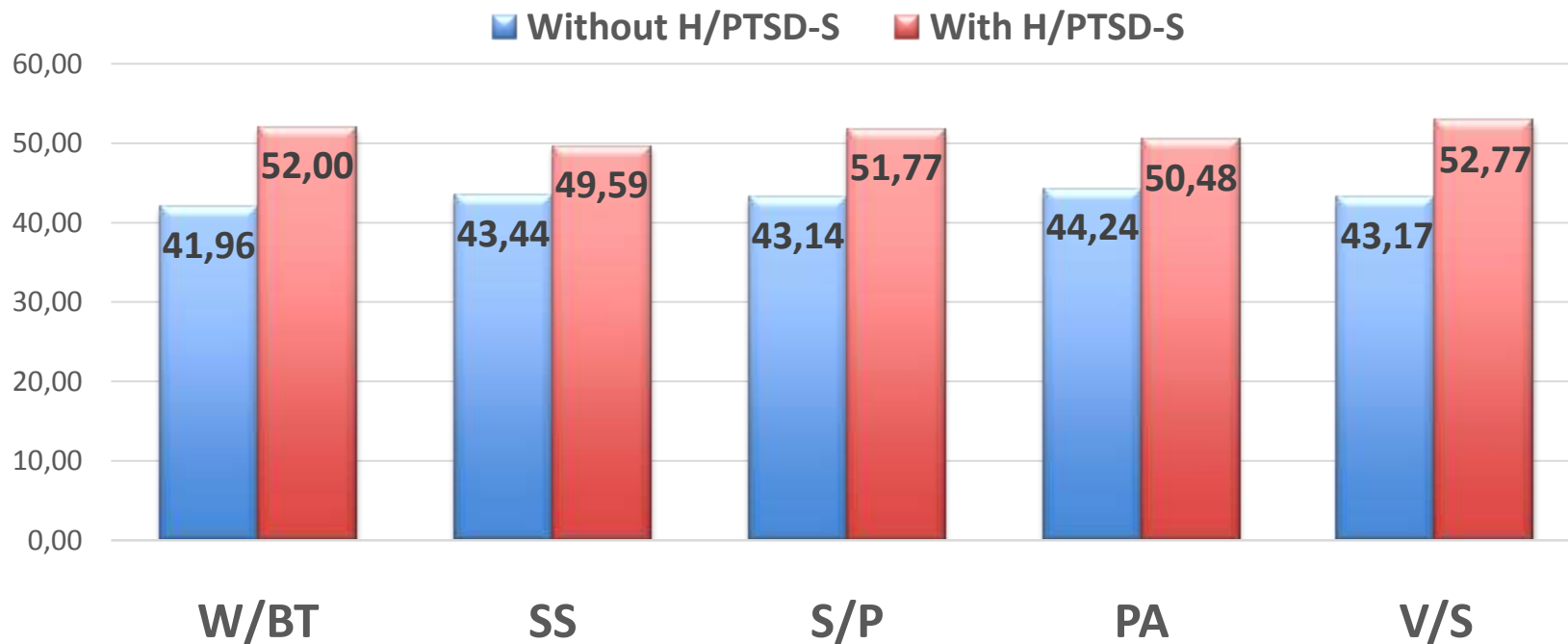


Prominent characteristics of H/PTSD-S patients during AOT Treatment : addictive behaviours



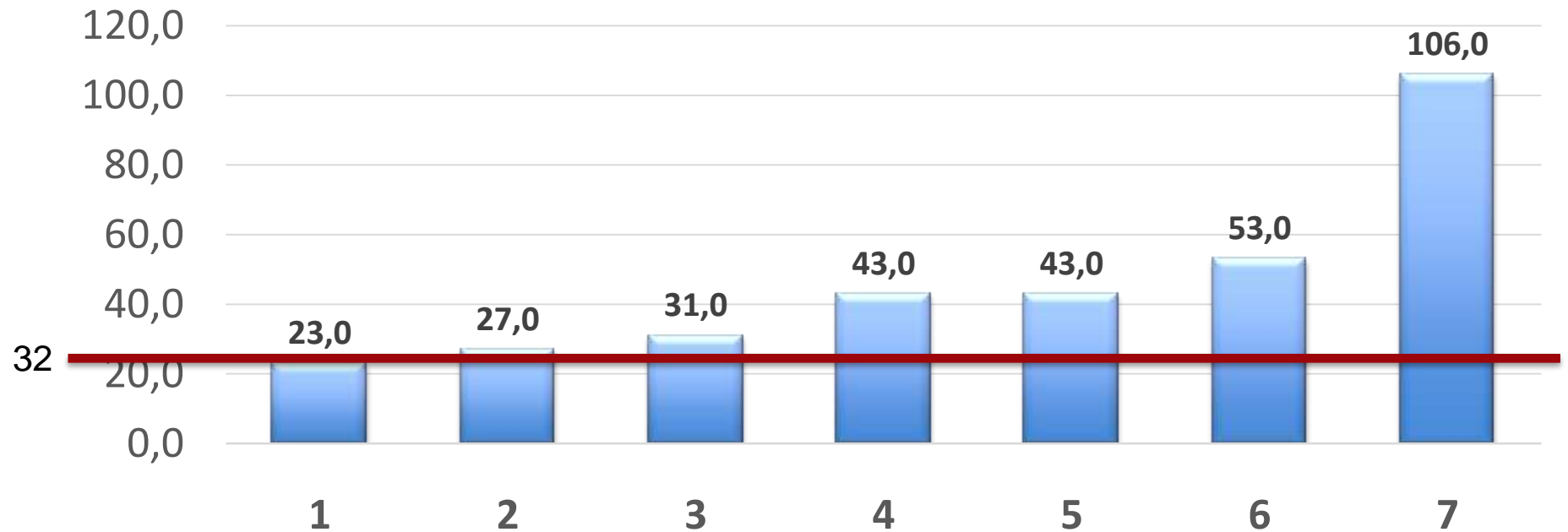


Prominent characteristics of H/PTSD-S patients during AOT Treatment: Severity of psychopathology





H-PTSD/S after 27 ± 7 years (min 20, max 40) in AOT





PRIMARY RESEARCH

Open Access

Do methadone and buprenorphine have the same impact on psychopathological symptoms of heroin addicts?

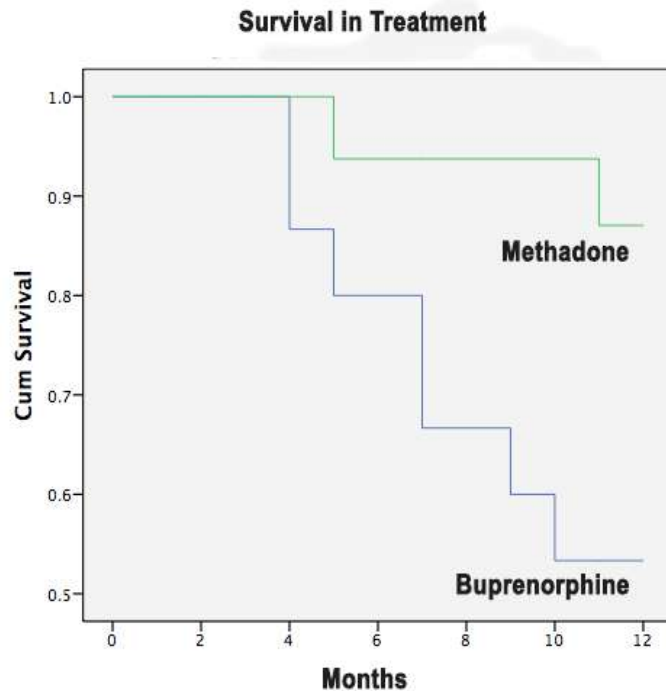
Angelo Giovanni Icro Maremmani^{1,2,3}, Luca Rovai¹, Pier Paolo Pani⁴, Matteo Pacini^{1,3}, Francesco Lamanna⁵, Fabio Rugani¹, Elisa Schiavi¹, Liliana Dell'Osso¹ and Icro Maremmani^{1,2,3*}



Survival in treatment of buprenorphine or methadone maintained HUD patients according to psychopathological typology

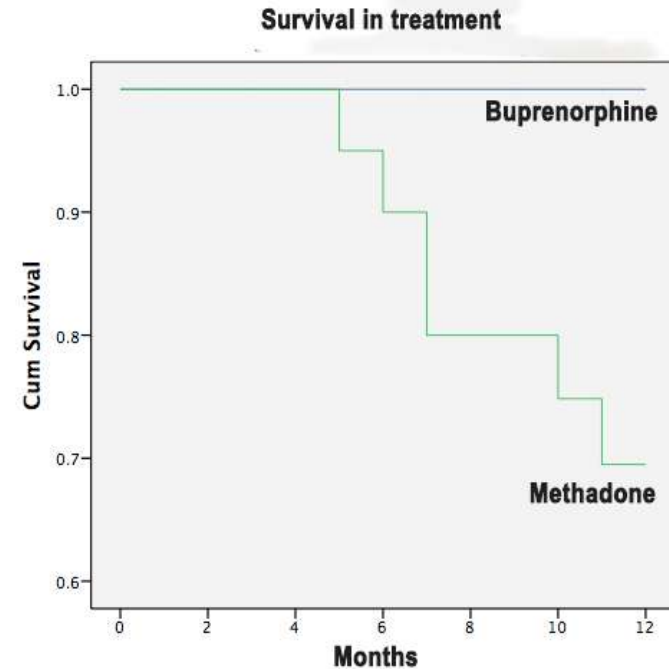


Sensitivity-Psychoticism



Wilcoxon = 4.63; $p=0.03$

Violence-Suicide



Wilcoxon = 6.44; $p=0.01$

PRIMARY RESEARCH

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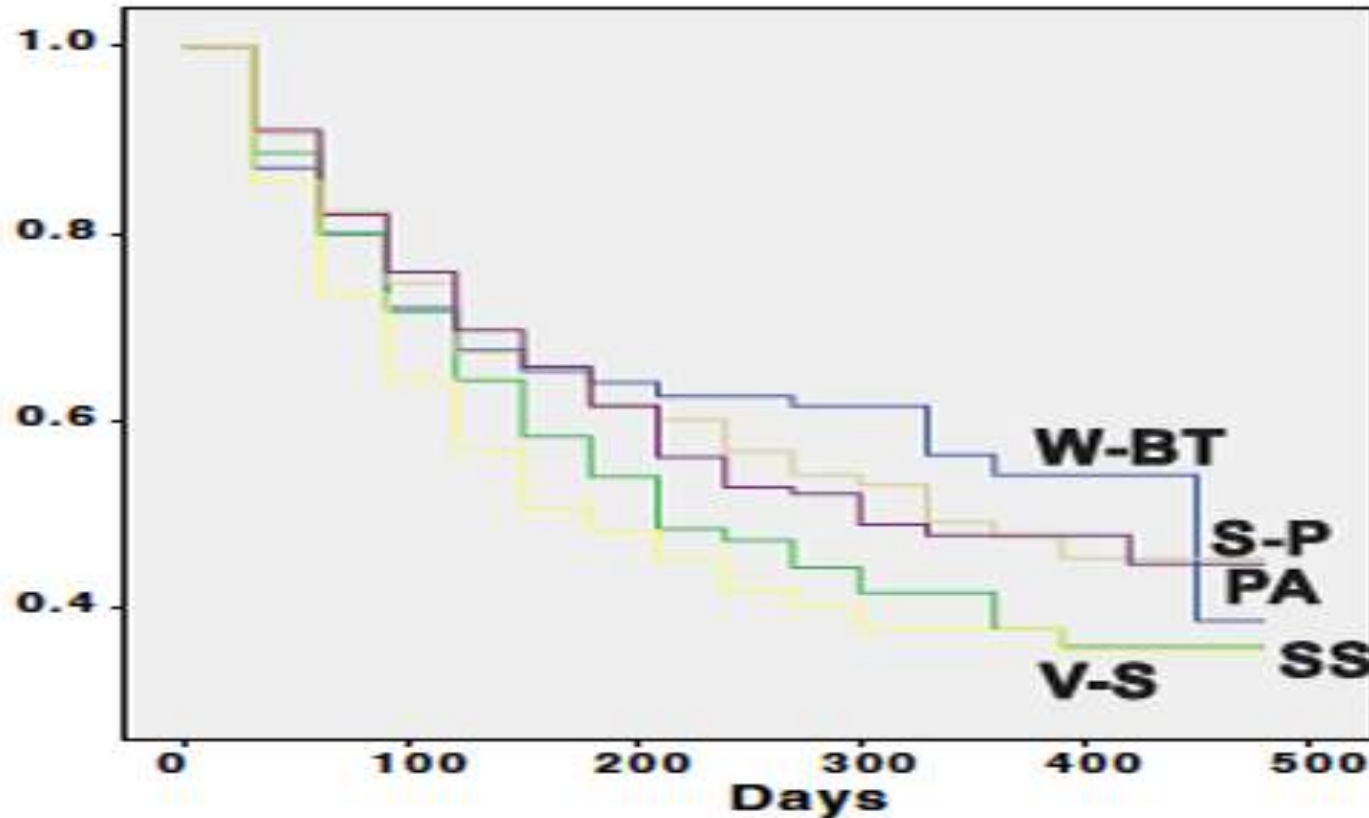


The impact of psychopathological subtypes on retention rate of patients with substance use disorder entering residential therapeutic community treatment

Angelo G. I. Maremmanni^{1,2}, Pier Paolo Pani³, Emanuela Trogu⁴, Federica Vigna-Taglianti^{5,6}, Federica Mathis⁵, Roberto Diecidue⁵, Ursula Kirchmayer⁷, Laura Amato⁷, Joli Ghibaudi⁸, Antonella Camposeragna⁸, Alessio Saponaro⁹, Marina Davoli⁷, Fabrizio Faggiano¹⁰ and Icro Maremmanni^{1,2,11*}



SUD patients' psychopathological subtypes and retention rate in a residential treatment



Maremmani A. G. I. et al. (2016): *Ann Gen Psychiatry*. 15(29).



Thank You for your attention

PISA-School of Clinical and Experimental Psychiatry
Institute for Improving Neuroscientific Knowledge