

Dual Diagnosis

- The detection of psychiatric comorbidity among individuals with substance use disorders is an area of great clinical and public health interest.
- There is a shortage of valid instruments to identify co-occurring psychiatric disorders among people with SUDs.

Assessment of Dual Diagnosis

- Structured and semi-structured interviews
- Screening interviews

Structured and semi-structured interviews for psychiatric diagnoses (DSM-IV y CIE-10)

Name	Authors	Criteria	Structured Semi-structured	Clinical Experience	Use in studies	Time administration
SCID-IV	First et al. 1999	DSM-IV	Semi-structured	Clinical experience Training	Clinical studies	1-2 h
SCAN	Janca et al. 1994	CIE-10 DSM-IV	Semi-structured	Clinical experience Training	Clinical studies	1-3 h
PRISM-IV	Hasin et al. 2001	DSM-IV	Semi-structured	Clinical experience Training	Clinical studies	1-3 h
SSADDA	Pierucci- Lagha et al 2005	DSM-IV	Semi-structured	Non-clinical experience Training	Clinical studies	1-3 h
AUDADIS	Grant et al. 2001	DSM-IV	Structured	Non-clinical experience Training	Epidemiological studies	1-2 h
DIS	Robins et al. 1981	DSM-IV	Structured	Non-clinical experience Training	Epidemiological studies	1-2h
CIDI	WHO 1998	CIE-10 DSM-IV	Structured	Non-clinical experience Training	Epidemiological studies	1-3h

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Good test-retest reliability and validity properties in psychiatric diagnoses among substance users

Screening instruments to detect psychiatric disorders in clinical

Screening Instruments	Authors	Administration	Population	Time (Minutes)
MINI ¹	Sheehan et al 1998	Trained interviewer	General	15
PRIME-MD ²	Spitzer et al 1994	PQ self-administered CEG heteroadministered	General	10
PHQ ³	Spitzer et al 1999	Self-administered	General	20
SDDS-PC ⁴	Broadhead et al 1995	Self-administered	General	5
BCSFR ⁵	Lincoln et al 2006	Trained interviewer	Drug users	5
PDSQ ⁶	Zimmerman et al 2001	Self-administered	General & drug users	15
CIDI ⁷	ESEMeD/MHEDA-2000, 2004	Trained interviewer	General	15

¹MINI International Neuropsychiatric Interview ²Primary Care Evaluation of Mental Disorders ³Patient Health Questionnaire

⁴Symptom Driven Diagnostic System for Primary Care ⁵Boston Consortium of Services for Families in Recovery

⁶Psychiatric Diagnostic Screening Questionnaire ⁷Composite International Diagnostic Interview

BCSFR

Boston Consortium of Services for Families in Recovery Screening

- Hetero-administered
- Assess: demographics, mental health symptoms and physical and sexual violence exposure
- In 88 female drug users
- Validated only for PTSD (not for other mental illness)

PDSQ

Psychiatric Diagnostic Screening Questionnaire

- Self-administered: 126 questions
- 13 diagnoses in 5 areas: Eating D, Mood D, Anxiety D, SUD, Somatization and 6 items to screen psychosis
- Validated in a subsample of 133 substance users (mainly alcohol)

Tabla 7.- Sensibilidad y especificidad del PDSQ respecto del SCID en sujetos con Trastorno por Uso de Sustancias.

Trastornos (DSM-IV)	Sensibilidad (%)	Especificidad (%)
Depresión	96	64
Psicóticos	-	-
Pánico	94	73
Agorafobia	85	81
T. Ansiedad Generalizada	90	55
T. Obsesivo Compulsivo	90	53
Fobia Social	90	58

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S- CIDI

- Used in the European Study of the Epidemiology of mental Disorders (ESEMeD/MHEDEA-2000, 2004)
 - 27 items to assess Anxiety D, Mood D, ADHD.
 - 16 items to assess Psychosis.
 - 34 items Personality D.

Table I Sensitivity and specificity of the diagnoses obtained by means of the screen-CIDI in respect to diagnoses obtained with the PRISM in a sample of 175 opioid dependent patients.

Disorders (DSM-IV)	Sensitivity (%)	Specificity (%)
Affective	100	11
Psychosis	50	74
Panic	100	26
Social Phobia	78	66
Specific Phobia	100	32

Objective

- To develop and validate a brief tool, the Dual Diagnosis Screening Instrument (DDSI), to identify psychiatric disorders in substance users in clinical and non clinical samples

Methods

Subjects

- A convenience sample of 827 substance user subjects, recruited in clinical and non-clinical settings

Variables

- DSM-IV diagnoses

Instruments

- DDSI
- PRISM (standard criterion)
- Both administered to all participants, by trained interviewers, in a blinded manner
- 0-5 days interval

Analysis

- Sensitivity, specificity, negative and positive predictive values, as well as positive and negative likelihood ratios were calculated.

Results

Table 1: Depression questions in the Screening of the Composite International Diagnostic Interview (S-CIDI) and the Dual Diagnosis Screening interview (DDSI) questionnaires

S-CIDI	DDSI
F*SC21. At any time in your life has there been a period when you felt <u>sad</u> , <u>empty</u> or <u>depressed</u> for <u>most of the day</u> ?	F*SC21 ¿At any time in your life has there been a period when you felt <u>sad</u> , <u>empty</u> or <u>depressed</u> for <u>most of the day</u> , <u>almost every day</u> , <u>for two weeks or more</u> ?
F*SC22. At any time in your life has there been a period when you felt <u>very discouraged</u> about how your life was going <u>for most of the day</u> ?	F*SC22 At any time in your life has there been a period when you felt <u>very discouraged</u> about how your life was going <u>for most of the day</u> , <u>almost every day</u> , <u>for two weeks or more</u> ?
F*SC23. At any time has there been a period when you <u>lost interest</u> in most of the things you generally enjoyed, such as work, hobbies and personal relations, <u>almost every day</u> ?	F*SC23 At any time has there been a period when you <u>lost interest</u> in most of the things you generally enjoyed, such as work, hobbies and personal relations, <u>almost every day</u> , <u>for two weeks or more</u> ?
	F*SC230 During <u>this period</u> did you feel tired or low in energy almost every day despite not having worked much?
	F*SC231 During <u>this period</u> , did you find it much more difficult than usual to concentrate, almost every day?
	F*SC232 During <u>this period</u> , did you lose self-confidence or feel completely useless almost every day or felt less capable than others?
	F*SC233 During <u>this period</u> did you often think about death, whether your own death, the death of others, or death in general?

Table 2: Diagnosis correspondence between the Psychiatric Research Interview for Substance and Mental Disorders (PRISM) and the Dual Diagnosis Screening interview (DDSI)

PRISM	DDSI
Depression, Induced Depression	Depression
Dysthymia	Dysthymia
Manic Episode, Bipolar I Disorder, Hypomaniac Episode	Mania
Schizophrenia, Schizophreniform Disorder, Schizoaffective Disorder, Delusional Disorder, Brief Psychotic Disorder, Psychotic Disorder not otherwise specified + Induced Psychosis	Psychosis
Panic Disorder with and without Agoraphobia	Panic Disorder
Agoraphobia	Agoraphobia
Simple Phobia	Simple Phobia
Social Phobia	Social Phobia
Generalized Anxiety Disorder	Generalized Anxiety Disorder
Posttraumatic Stress Disorder	Posttraumatic Stress Disorder
Attention Deficit Hyperactivity Disorder	Attention Deficit Hyperactivity Disorder

Table 3: Sociodemographic characteristics of the subjects (n= 827)

Sociodemographic characteristics		Subjects N=827
Age (years, mean \pm SD)		28,56 \pm 9,87
Sex (%)		
	Male	66,5
	Female	33,5
Civil Status (%)		
	Single	69,3
	Married or cohabiting	17,8
	separated, divorced or widowed.	12,9
Years of education (mean \pm SD)		13 \pm 3,34
Imprisoned (%)		
	At least once	15
Working status (%)		
	Employed	36,9
	Unemployed	27,9
	Studying/receiving disability pensions or were retired.	35,2

Table 4. Lifetime Substance Abuse and Dependence diagnoses (N=827)

DSM-IV Diagnosis	Abuse		Dependence	
	Current N (%)	Past N (%)	Current N (%)	Past N (%)
Alcohol	194 (23,46)	267 (32,28)	133 (16,08)	163 (19,71)
Cannabis	185 (22,37)	280 (33,86)	114 (13,78)	164 (19,83)
Cocaine	138 (16,69)	218 (26,36)	177 (21,40)	252 (30,47)
Hallucinogens	6 (0,72)	59 (7,13)	5 (0,60)	17 (2,06)
Heroin	28 (3,38)	69 (8,34)	85 (10,28)	143 (17,29)
Methadone	2 (0,24)	5 (0,60)	5 (0,60)	7 (0,85)
Opioids	9 (1,08)	7 (0,85)	13 (1,57)	16 (1,93)
Sedatives	39 (4,71)	46 (5,56)	42 (5,08)	47 (5,68)
Stimulants	18 (2,18)	58 (7,01)	17 (2,06)	40 (4,84)

Table 5. Psychometric properties of the Dual Diagnosis Screening interview (DDSI).

Diagnosis Category	N	N Dx PRISM (%)	N Dx DDSI (%)	Sensitivity	Specificity	PPV	NPV
Depression	632	159 (25,16)	217 (34,33)	0.82 (0.76-0.88)	0.82 (0.78-0.85)	0.6 (0.54-0.67)	0.93 (0.91-0.96)
Mania	636	13 (2.04)	51 (8.02)	0.85 (0.65-1)	0.94 (0.92-0.96)	0.22 (0.1-0.33)	1 (0.99-1)
Panic	632	20 (3.16)	66 (10.44)	0.80 (0.62-0.98)	0.92 (0.90-0.94)	0.24 (0.14-0.35)	0.99 (0.99-1)
Social phobia	827	13 (1.57)	94 (11.37)	0.92 (0.78-1)	0.9 (0.88-0.92)	0.13 (0.06-0.2)	1
Simple phobia	434	11 (2.53)	21 (4.84)	0.91 (0.74-1)	0.97 (0.96-0.99)	0.48 (0.26-0.69)	1 (0.99-1)
Psychosis	827	65 (7.86)	112 (13.54)	0.80 (0.7-0.9)	0.92 (0.9-0.94)	0.46 (0.37-0.56)	0.98 (0.97-0.99)
ADHD	56	15 (26.78)	19 (33.93)	0.87 (0.69-1)	0.85 (0.75-0.96)	0.68 (0.48-0.89)	0.95 (0.87-1)
PTSD	61	14 (22.95)	21 (34.43)	0.86 (0.67-1)	0.79 (0.66-1)	0.57 (0.36-0.78)	0.94 (0.87-1)

Figure 1. Sensitivity of the Dual Diagnosis Screening interview (DDSI).

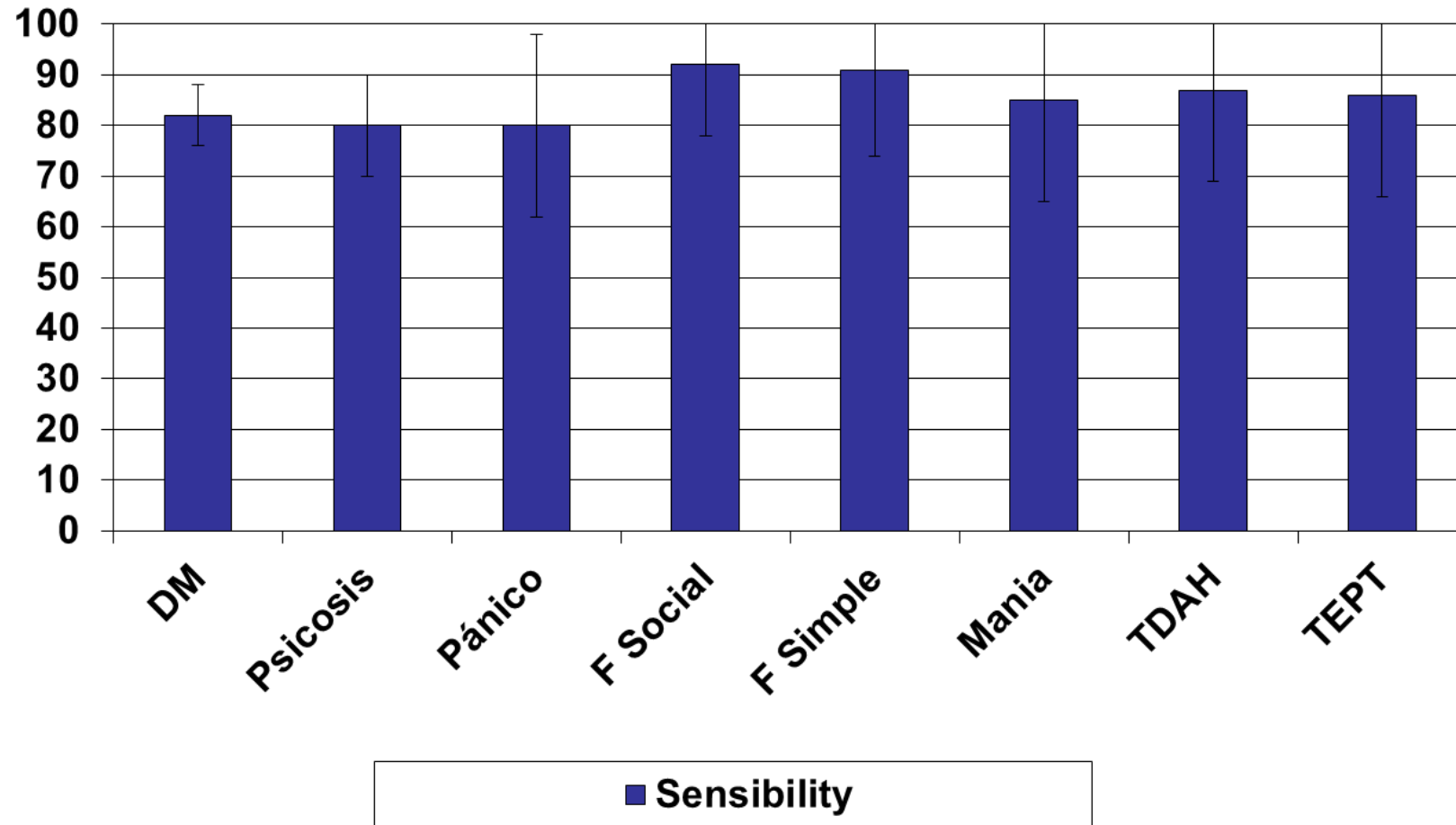


Figure 2. Sensitivity and Specificity of the Dual Diagnosis Screening Interview (DDSI).

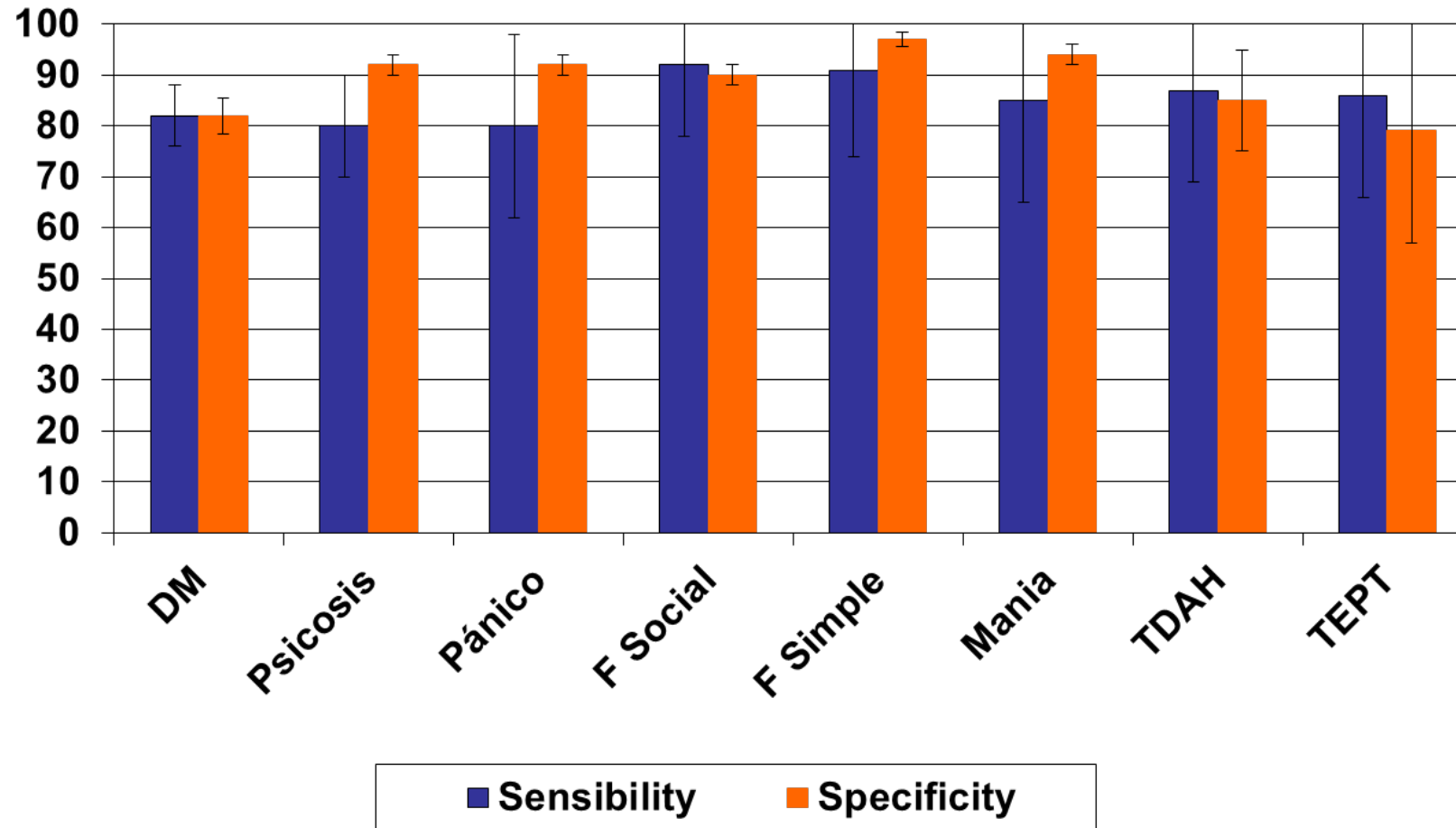


Table 6. PPV and NPV of the Dual Diagnosis Screening Interview (DDSI)

Categoría		VPP	VPN
Diagnóstica	N	(IC 95%)	(IC 95%)
Depresión	632	0,6 (0,54-0,67)	0,93 (0,91-0,96)
Manía	636	0,22 (0,1-0,33)	1 (0,99-1)
Pánico	632	0,24 (0,14-0,35)	0,99 (0,99-1)
Fobias social	827	0,13 (0,06-0,2)	1
Fobia Simple	434	0,48 (0,26-0,69)	1 (0,99-1)
Psicosis	827	0,46 (0,37-0,56)	0,98 (0,97-0,99)
TDAH	56	0,68 (0,48-0,89)	0,95 (0,87-1)
TEPT	61	0,57 (0,36-0,78)	0,94 (0,87-1)

Dual Diagnosis Screening Interview (DDSI)

A: **Anxiety** (18 questions)

- Panic (3 q)
- Generalized Anxiety (3 q)
- Simple Phobia(7 q)
- Social Phobia(2q)
- Agoraphobia (2 q)

B: **Mood** (14 questions)

- Depression (7 q)
- Dysthymia (2 q)
- Mania (5 q)

C: **Psychosis** (24 questions)

D: **ADHD** (6 questions)

E: **PTSD** (2 questions)

F: **Observations** (3 questions)

Conclusions

Conclusions

1. The Dual Diagnosis Screening interview (DDSI) is a valid screening instrument to detect the most frequent comorbid psychiatric disorders in substance users: **Depression, Psychosis, Panic, Mania, ADHD, Social Phobia, and PTSD**
2. The DDSI shows a sensibility and specificity equal or superior to 80% in all the diagnoses assessed
3. The duration of the DDSI administration is about less than 20 minutes

Conclusions

4. The DDSI can be administered by lay interviewer after a short training course (90 minutes).
5. The availability of the web version of the DDSI facilitates its administration and data management.
6. Its psychometric results, together with the brevity of training and administration, make the DDSI a suitable instrument for dual diagnosis screening in specialized care settings and community health facilities.

The strengths

- The large sample size for most diagnoses
- The wide range of substances of abuse included (heroin, cocaine, ecstasy, cannabis, alcohol)
- The focus on the most prevalent comorbid psychiatric diagnoses in substance users (mood, anxiety and psychotic disorders)
- The use of DSM-IV-TR psychiatric diagnoses obtained with the criterion standard PRISM.

Limitations

- The DDSI does not differentiate between primary and substance induced diagnoses
- The DDSI does not assess for personality disorders
- Specific analysis of nicotine dependence was not conducted.
- The reliability test-retest study was not undertaken

Dual Diagnosis Screening Interview to Identify Psychiatric Comorbidity in Substance Users: Development and Validation of a Brief Instrument

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