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Psychometric properties of the Dutch version of the Mini PAS-ADD

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Introduction

- increased vulnerability of persons with ID to develop psychiatric problems
- early recognition and accurate diagnosis of these problems are necessary for qualitative treatment interventions, but are very challenging



Introduction

Problems encountered in early detection and diagnosis of psychiatric disorders in persons with ID

- their limited cognitive and communicative competences make it difficult to get insight in their thoughts and feelings
- diagnostic overshadowing
- specific and atypical expressions of certain psychiatric disorders
- complex pattern of influencing developmental, biological, socio-emotional and environmental factors
- lack of reliable and valid instruments
- lack of knowledge and expertise in direct support staff to recognise symptoms of psychiatric problems and mental health needs of their clients
- lack of specialists / services that have knowledge and expertise in diagnosing psychiatric disorders in persons with ID
- ...



Aims of the project

- translate the Mini PAS-ADD in Dutch
- disseminate the use of this instrument in Flanders / the Netherlands
- train staff of services for persons with ID to use the instrument and to acquire more knowledge and sensitivity for mental health needs of their clients
- analyse the psychometric properties of the Dutch version of the Mini PAS-ADD



Research questions

Is the Mini PAS-ADD (Dutch version)

- a reliable instrument?
- a valid instrument?
- a useful instrument?



Description of the PAS-ADD Scales

Psychiatric Assessment Schedules for Adults with Developmental Disabilities

- PAS-ADD Checklist (questionnaire) (Moss et al., 1998)
- PAS-ADD 10 (semi-structured interview) (Moss et al., 1993)
- Mini PAS-ADD (version 1 – checklist) (Prosser et al., 1998)
- Mini PAS-ADD (adapted version) (Moss et al., 2002)



Description of the Mini PAS-ADD

- Semi-structured and standardised interview by a staff member of a direct support staff / family member
- Identification of psychiatric disorders on Axis 1 (DSM-IV-R)
 - 66 items rated on a 2 or 4 point rating scale
 - subscale scores (with threshold value) for psychosis, (hypo)mania, autism spectrum disorder, depression, unspecified (incl. dementia), anxiety, obsessive compulsive disorder



Design

- General group
 - adults with ID in day care centres and group homes, with and without the diagnosis of a psychiatric disorder
 - minimum of 10 clients per interviewer, randomly selected by the interviewer
 - each interviewer interviewed 2 informants (direct support staff) about the same client
- Clinical group
 - adults with ID that are referred to ambulatory or residential mental health services
 - each interviewer interviewed 1 informant (direct support staff)
 - administration of Mini PAS-ADD + Reiss scale of the same informant and client
 - (preliminary and final) DSM-IV-TR-diagnosis by a psychiatrist of the mental health service



Procedure

- Information given to services
- 2-days training package of interviewers by S. Moss
 - background of the instrument, training to score the instrument, information about the research project
- Selection and informed consent of clients
- Data-collection
 - background information, PAS-ADD interviews, Reiss-interviews, DSM-IV-TR psychiatric diagnoses
- Data-analysis

A photograph of a large, historic building with a prominent tower and a clock tower, likely a university or institutional building, under a blue sky with light clouds.

Description of the samples

- General sample: n= 377
 - 60% male, 40% female
 - mean age 40 years
 - 8% profound, 22% severe, 40% moderate and 30% mild ID
 - Partly living with (foster) parents and visiting a day care centre, partly living in community houses
- Clinical sample: n= 99
 - 57% male, 43% female
 - mean age 36 years
 - 0% profound, 7% severe, 19% moderate and 74% mild ID
 - Mostly referred to residential mental health service (n=90)



Item-analysis

Scale	N items	α (R1) (n=476)	α (for a hypothetical number of 18 items (n=476)	median item-total correlation (n=476)
Depression	18	0.82	0.82	0.41
Anxiety	8	0.63	0.79	0.27
Hypomania	11	0.67	0.77	0.34
OCD	4	0.46	0.79	0.30
Psychotic	8	0.58	0.76	0.38
Unspecified	8	0.65	0.81	0.39
Autism	17	0.85	0.86	0.60

Conclusion:

- Cronbach's alpha is insufficient for 5/7 subscales, possibly due to the limited number of items in some subscales
- Moderate median item-total correlations in 5/7 subscales

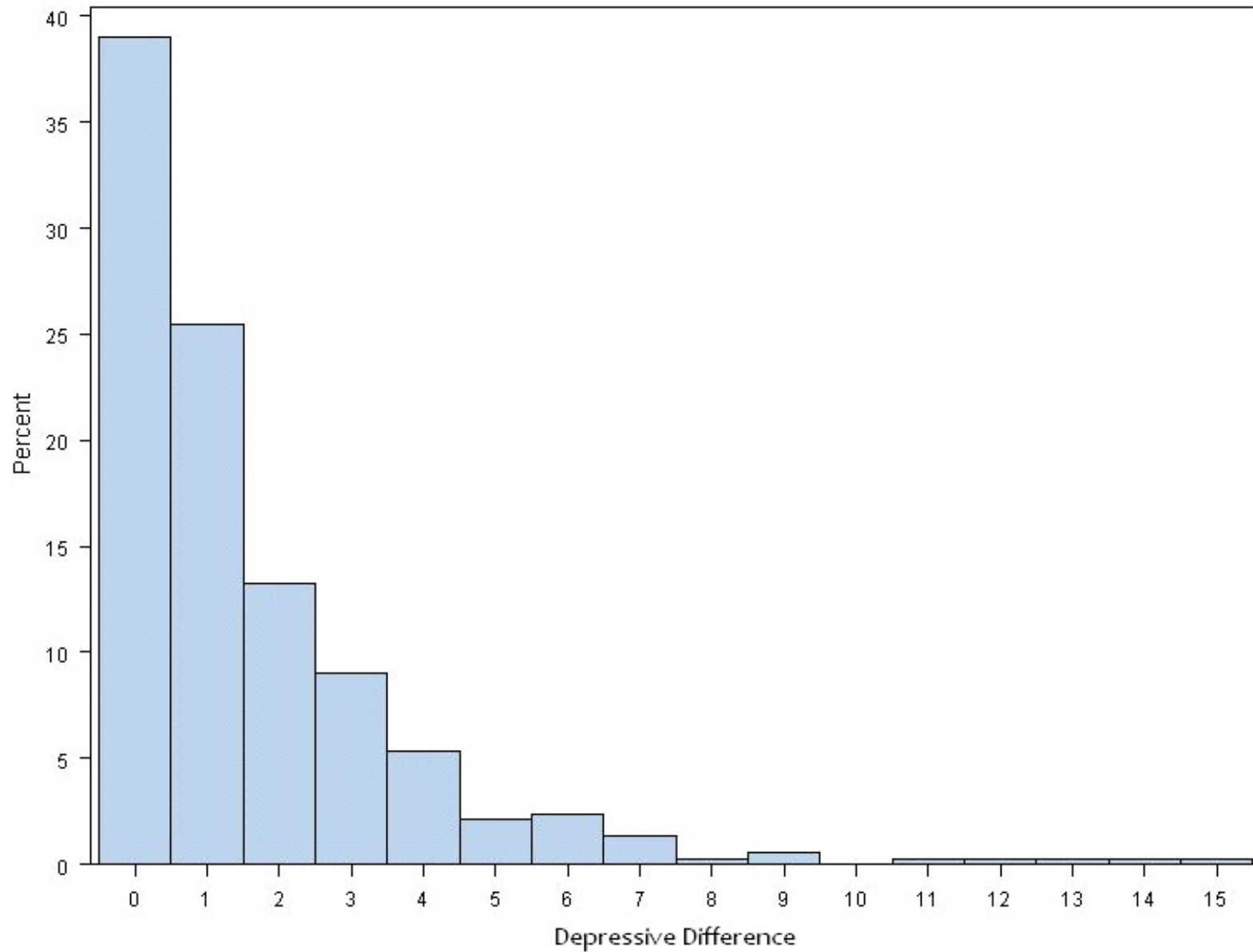


Concordance between informants

- Mean of 90% concordance between two informants over all items
- Mean scale score differences between the two informants are very limited, although the range of scale score differences may be broad (table)

Scale N=377	Max. score	Mean scale score difference	Mean scale score difference / max. score	Min – Max
Depression	30	1.6	0.05	0 – 15
Anxiety	22	1.8	0.08	0 – 19
(Hypo)mania	19	0.9	0.05	0 – 11
OCD	10	0.6	0.06	0 – 10
Psychotic	13	0.3	0.02	0 – 6
Unspecified	11	0.6	0.06	0 – 7
Autism Spectrum	17	1.6	0.09	0 - 12

Percentage of absolute scale score differences for Depression





Mean scores and standard deviation in general resp. clinical groups

Scale	General Informant 1	General Informant 2	Clinical residential	Clinical ambulatory	F	p
Depression	2.5 (3.6)	2.5 (3.5)	6.7 (5.1)	5.9 (3.6)	41.62	<0.0001
Anxiety	2.4 (3.9)	2.4 (3.7)	2.9 (3.6)	3.8 (3.7)	1.24	0.2891
(Hypo)mania	1.2 (2.1)	1.1 (1.8)	2.0 (2.4)	2.2 (2.1)	5.3	0.0053
OCD	0.8 (1.4)	0.7 (1.4)	0.4 (0.9)	0.8 (1.1)	3.3	0.0377
Psychotic	0.3 (1)	0.3 (1.1)	0.3 (1.3)	0.4 (0.8)	0.46	0.6328
Unspecified	0.8 (1.6)	0.8 (1.4)	1.7 (1.8)	1.4 (1.3)	10.47	<0.0001
Autism Spectrum	3.5 (3.7)	3.5 (3.8)	3.1 (3.4)	2.7 (2.7)	0.79	0.4529

Conclusion:

- For 4/7 subscales, there were significant differences between the mean scores of the different groups. The clinical groups scored higher than the general group.



Association with Reiss-scores

- Clinical group (n=99)
- Moderate to high correlations between corresponding subscales
 - PAS-ADD Depression – Reiss Depression behaviour: .61
 - PAS-ADD Depression – Reiss Depression vital: .58
 - PAS-ADD Psychosis – Reiss Psychotic: .41
 - PAS-ADD Autism Spectrum Disorder – Reiss Autism: .58
- Other high correlations (> .50):
 - PAS-ADD unspecified – Reiss Depression vital: .55
 - PAS-ADD Autism Spectrum Disorder – Reiss Avoiding: .67



Association with psychiatric diagnoses

- Significant differences between diagnostic groups, with higher mean scores for persons with a specific diagnosis on the corresponding subscale
 - general group: for depression (n=42), ASD (n=68), anxiety (n=11), OCD (n=23), psychosis (n=47), but not for hypomania (n=13)
 - clinical group: only for depression (n=16) and ASD (n=16)



Sensitivity and specificity

Scale	Specific sensitivity	General sensitivity	Specificity
Depression	39%	62%	91%
Anxiety	56%	72%	85%
Hypomania	0%	46%	97%
OCD	39%	57%	91%
Psychotic	29%	60%	93%
Autism Spectrum	32%	65%	98%

Conclusion:

- The sensitivity of the scale is very low on the level of particular disorders / subscales, but increases if one is interested in identifying psychiatric problems in general (based on any threshold)
- The 'total score' on the Mini PAS-ADD significantly predicts the presence of a psychiatric diagnosis



Factor Analysis

- Exploratory factor-analysis yielded 5 factors that explain 23% of the variance

	Factor 1 Depression	Factor 2 Autism Spectrum	Factor 3 Anxiety	Factor 4 Hypomania	Factor 5 Psychosis
Number of items	16	14	19	11	7
Range of factor loadings	.32 - .79	.30 - .76	.32 - .64	.33 - .63	.32 - .62
Number of items from original scale	14/18	14/17	8/8	8/11	4/8



Different subgroups of ID

Depression: Mild > Moderate > Severe/Profound

Anxiety: Mild > Moderate > Severe/Profound

Hypomania: Mild > Moderate > Severe/Profound

OCD: Mild < Moderate < Severe/Profound

Psychosis: Mild > Moderate = Severe/Profound

Unspecified: Mild > Moderate > Severe/Profound

ASS: Mild < Moderate < Severe/Profound

Comparison between subgroups:

- No differences in Cronbach's alpha
- No differences in mean scale score differences between the informants

Conclusion:

- No indications that the reliability and validity of the Mini PAS-ADD is different between different levels of functioning
- In 5/7 subscales the scale scores are higher in the higher functioning groups



Conclusions

- Reliability
 - low internal consistency, moderate item-total correlations
 - good concordance between informants
- Validity
 - moderate to high correlations between corresponding subscales of PAS-ADD and Reiss
 - higher mean scores for persons with a specific diagnosis on the corresponding subscale
 - low sensitivity for a specific psychiatric disorder, but high sensitivity for psychiatric disorders in general
 - Mini PAS-ADD 'total score' very predictive for the presence of a psychiatric diagnosis
 - factor analysis confirms 5/7 subscales
- Usefulness
 - no indications that the reliability and validity is different between different levels of functioning



Recommendations

- data about reliability and validity support further (large scale) use of the instrument
- adjustments of the instrument are recommended, e.g.
 - changing the thresholds
 - redefining and enlarging the subscales
- users should not focus on identifying specific psychiatric disorders with the instrument, but rather evaluate the presence of a (range of) psychiatric disorder(s) in general
- using the instrument should be embedded within a sensibilisation and training program for support staff