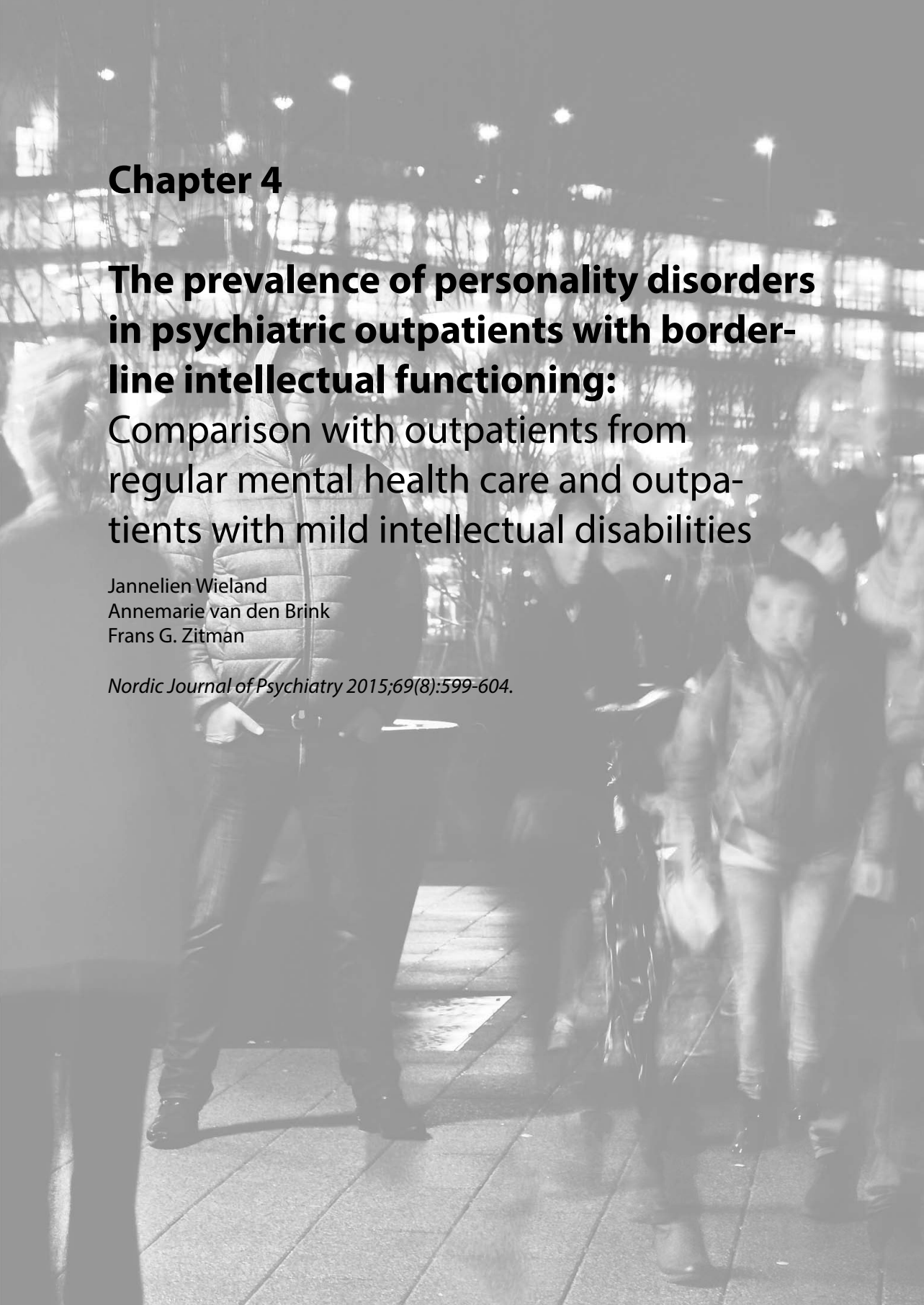

Chapter 4

The prevalence of personality disorders in psychiatric outpatients with borderline intellectual functioning: Comparison with outpatients from regular mental health care and outpatients with mild intellectual disabilities

Jannelien Wieland
Annemarie van den Brink
Frans G. Zitman

Nordic Journal of Psychiatry 2015;69(8):599-604.

Abstract

Background There is little research on the subject of personality disorder (PD) in individuals with borderline intellectual functioning (BIF). Unlike in most countries, in the Netherlands, patients with BIF are eligible for specialized mental health care. This offers the unique possibility to examine the rates of PD in patients, who in other countries are treated relatively invisible in regular mental health care.

Aim To compare, in a naturalistic setting, the frequency PD diagnoses in outpatients with BIF to outpatients from regular mental health care and outpatients with mild ID.

Methods We compared the rates of all DSM-IV-TR axis II PD in outpatients with BIF (BIF group; n= 235) with rates of the same disorders in outpatients from regular mental health care (RMHC group; n= 1026) and outpatients with mild intellectual disability (ID) (mild ID group; n= 152) in a naturalistic cross-sectional anonymized medical chart review.

Results Over half of the patients with BIF (52.8%) were diagnosed with a PD, compared to one in five in the RMHC group (19.3%) and one in three of de mild ID group (33.6%). All PD diagnoses, except for cluster A PD and histrionic PD, were most frequently diagnosed in the BIF group. The majority of PD patients had one of more comorbid axis I disorder.

Conclusion There is a high frequency of PD diagnoses in BIF outpatients in daily clinical practise. In anticipation of further scientific research, results suggest that PD should not be overlooked in patients with BIF.

Background

Borderline intellectual functioning (BIF) is a complex clinical entity, which has barely been studied.[1] It is defined as a total intellectual quotient (TIQ) between 1 and 2 standard deviations below average (TIQ 70-85), but has no clear diagnostic code in either DSM-IV-TR, DSM-5 or ICD-10.[1–5] According to the normal IQ distribution 13.6% of the population has an IQ between 70 and 85; according to available studies the percentage lies between 12 and 18%.[6,7] In most countries people with BIF live unnoticed in the community. Because they are not considered part of the intellectual disability (ID) population (TIQ< 70), they are not eligible for specialist ID services. If they develop psychiatric disorders, they depend largely on regular mental health care, where they represent a relatively invisible patient group. In the Netherlands patients with BIF are focused on as a separate group and they are eligible to the same specialised mental health care services as patients with ID. Because of well-established referral pathways, referral of patients with BIF and psychiatric disorders to specialized mental health care has become the default procedure. This offers the unique opportunity to examine, in a naturalistic setting, the psychiatric co-morbidity of this otherwise largely hidden population. We previously showed that the rates of axis I psychiatric disorders of patients with BIF differ from both patients from regular mental health care (RMHC) and patients with mild intellectual disabilities (ID).[2] In this paper we discuss whether this also hold true for axis II personality disorders (PD).

Hassiotis et al.[8] -using data from a UK-wide cross-sectional survey of 8450 people - showed 37.4% of people screened as having borderline intelligence, were diagnosed as having a PD using the structured clinical interview for DSM-IV axis II PD (SCID-II). In comparison, in the normal intellectual functioning group this was 27% . We are not aware of published studies on PD specifically focusing on patients with BIF in mental health care, nor do we know of any studies comparing rates of PD among patients with either normal intelligence, BIF or mild ID.

Aim

The Dutch regional mental health care provider Rivierduinen has over 10 years experience with 2 outpatient mental health care centres specialized in psychiatry and ID (CPID; Centres for Psychiatry and Intellectual Disability), mainly for patients with BIF and mild ID, apart from outpatient clinics for people without ID. Using data from these two CPID and from a general outpatient clinic of Rivierduinen operating in the same region, the aim of the present study was to compare, in a naturalistic setting, the frequency of PD diagnoses in patients with BIF to outpatients from regular mental health care and outpatients with mild ID. In this study we focus on official DSM-IV-TR diagnoses because treatment plans and therefore extent, nature and content of treatment are based on these diagnoses.

Materials and methods

Participants

Our study was a naturalistic anonymized cross-sectional medical chart review. All diagnoses were the official DSM-IV-TR axis II diagnoses as registered in the electronic patient file. Treatment plans are based on these diagnoses and therefore are highly relevant. All participants were patients from the Dutch regional mental health care provider Rivierduinen. We compared data of patients from two CPID, regional secondary care adult outpatient departments (Kristal Centre for Psychiatry and ID in the Leiden and Gouda locations; BIF and mild ID groups) with anonymized data of patients from a regular secondary care outpatient department (RMHC group). The BIF and mild ID groups came from complete catchment area of Rivierduinen and the RMHC group came from one particular region within this area (Katwijk, Zuid Holland, the Netherlands). Both groups consisted of outpatients registered on January 1, 2011.
In the RMHC group diagnoses were formulated using the DSM-IV-TR. In the BIF and mild ID groups DSM-IV-TR diagnoses were formulated using the DM-ID.[9] Where necessary the DM-ID offers supplements and adaptations for DSM-IV-TR diagnostic criteria and provides guidelines for making accurate psychiatric diagnoses in patients with various levels of ID. For people with mild ID the DM-ID offers some special diagnostic considerations. Primary consideration is the developmental delay. Another consideration is to always take into account the context. The DM-ID strongly recommends greater use of behavioural observation and informant information in making a diagnosis of PD. The DM-ID offers specific adaptations for diagnosing PD mainly for the age criterion. Because of the developmental delay in ID the DM-ID states that a diagnosis of PD should only be considered provisionally before the individual is 21 years old. For individuals with BIF, diagnoses were formulated using the DSM-IV-TR but keeping in mind the same considerations concerning the developmental perspective and context as for patients with mild ID.
For inclusion and exclusion, see figures 1 and 2. Within our organization, patients with average or above average intellectual functioning with Pervasive Developmental Disorder (PDD) are referred to a special centre for autism spectrum disorders, while patients with a PDD and ID are referred to Kristal, Centre for Psychiatry and ID. Because patients with PDD were underrepresented in the RMHC group, leading to a possible bias when comparing the rates of PD, patients with PDD were excluded from our analyses. In the excluded PDD group there were only 12 patients with a comorbid PD. The vast majority of these patients (75%) had a PD Not Otherwise Specified (NOS). The final groups consisted of 235 patients with BIF (BIF group), 1026 patients from RMHC (RMHC group), and 152 patients with mild ID (mild ID group).

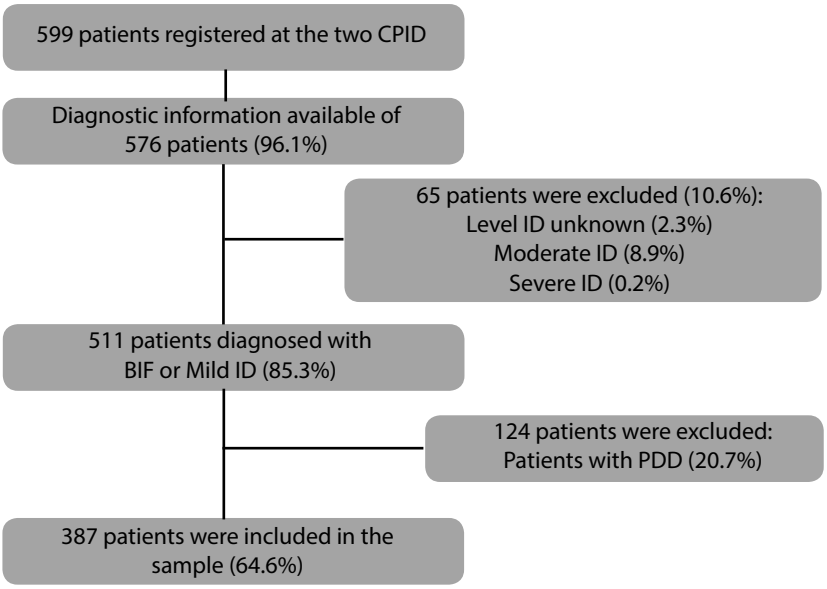

Figure 1. Inclusion flowchart CPID.

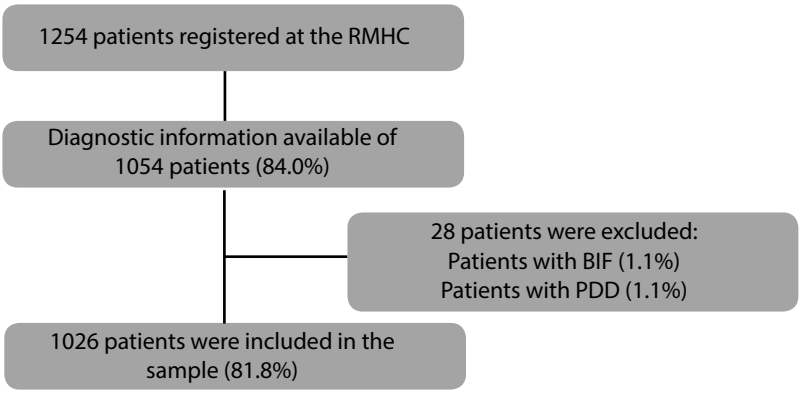

Figure 2. Inclusion flowchart RMHC.

Measures

Demographic variables and diagnostic categories

The following variables were collected for each patient from the electronic patient file: age, sex, level of ID, and DSM-IV-TR axis II diagnoses. DSM-IV-TR axis I and II diagnoses recorded in the official registration system of the electronic patient file were recorded. For analyses, the DSM-IV-TR diagnoses were categorized as follows: Cluster A PD (the "odd, eccentric" cluster, subdivided into paranoid, schizoid and schizotypal PD), Cluster B PD (the "dramatic, emotional erratic" cluster, subdivided into antisocial, borderline, histrionic and narcissistic PD), cluster C PD (the "anxious, fearful" cluster, subdivided into avoidant, dependent and obsessive–compulsive PD) and PD not otherwise specified (NOS).

Intelligence

In the BIF and mild ID groups, level of ID was based on IQ testing, using the WAIS-III,[10–12] in combination with multidisciplinary assessment of present adaptive functioning. Patients were divided into 2 groups according to DSM-IV-TR criteria based on TIQ and adaptive functioning: BIF (TIQ 70-85) and mild ID (TIQ 50-70). There was no IQ testing in the RMHC group.

Statistical analyses

Demographic and clinical variables were compared among the BIF group and the RMHC and mild ID groups, using analysis of variance (ANOVA) for age and a Chi-square test for gender. All axis II were expressed in number and percentage. Differences in axis II were compared using binary logistic regression. Odds ratios (OR) were calculated adjusted for sex and age. Within the BIF group we used a Chi-square and T-tests to analyse the association between gender and age and PD. All analyses were performed using SPSS version 19.0 (SPSS Inc, Chicago, IL).

Table 1. Demographic characteristics among the BIF, RMHC and mild ID groups.

	BIF (n= 235)	RMHC (n=1026)	Mild ID (n=152)	p-value
Gender				
Male (%)	78 (33.2)	423 (41.2)	56 (36.8)	0.06
Female (%)	157 (66.8)	603 (58.8)	96 (63.2)	
Age (SD)	33.4 (12.5)	44.3 (16.6)	37.2 (13.6)	<0.001

Results

As shown in table 1. the RMHC group consisted of 1026 participants. A total of 235 individuals was diagnosed with borderline intellectual functioning and 152 individuals were diagnosed with mild ID. The percentage of females differed from 66.8% in the BIF group, 63.2% in the mild ID group and 58.8% in the RMHC group (χ^2= 5.65, p= 0.06). Age difference was significant among the three groups with the mean age in the BIF group being 33.4, in the mild ID group 37.2 en in the RMHC group 44.3 (p< 0.001). Because of the differences among the groups in gender and age, ORs are adjusted for gender and age. Details of the results are presented in Table 2. Summarized, 52% (n= 124) of the patients with BIF were diagnosed with a PD. PD NOS was the most frequently diagnosed PD (28.1%) in BIF followed by borderline PD (15.3%). Patients with BIF were more likely to be diagnosed with a PD than both the RHMC group (OR= 4.3, 95% CI 3.2-5.9) and the mild ID group (OR= 2.2, 95% CI 1.5-3.4). Compared to the RMHC group all rates of PD diagnoses, except for cluster A PD, were increased in the BIF group. This increase was significant for cluster B PD (OR= 2.44, 95% CI 1.56-3.81), especially borderline PD (OR= 2.3, 95% CI 1.43-3.73), cluster C PD (OR= 2.45, 95% CI 1.34-4.49) and PD NOS (OR= 3.6, 95% CI 2.45-5.21). Compared to the mild ID group, rates of all PD diagnoses expect for cluster A PD and histrionic PD were increased in the BIF group. This increase was significant for cluster C PD (OR= 3.54, 95% CI 1.2-10.7).

The vast majority of PD patients had one of more comorbid axis I disorder. There was no significant difference in rates of comorbid axis I disorders in the BIF group compared to RMHC (OR= 0.52, CI 0.23-1.15) or compared to the mild ID group (OR= 1.34 CI 0.57-3.16). Most prevalent axis I disorders in all three groups were Mood, Anxiety and Somatoform (MAS) disorders.

Within the BIF group, there was no association found between gender and PD (χ^2= 2.92, p= 0.09) or between age and PD (p= 0.49, 95% CI -4.4 – 2.1).

Table 2. Comparison of the rates of personality disorders (PD) among the borderline intellectual functioning (BIF), regular mental health care (RMHC) and mild intellectual disability (Mild ID) groups using logistic regression corrected for sex and age.

Personality Disorder	BIF (n=235)	RMHC (n=1026)	Adjusted OR* compared to RMHC	95% CI	Mild ID (n=152)	Adjusted OR* compared to mild ID	95% CI
PD, all (%)	124 (52.8)	198 (19.3)	4.3	3.2-5.9**	51 (33.6)	2.2	1.5-3.4**
Cluster A (%)	0 (0)	2 (0.2)	-	-	0 (0)	-	-
Paranoid PD	0 (0)	2 (0.2)	-	-	0 (0)	-	-
Schizoid PD	0 (0)	0 (0)	-	-	0 (0)	-	-
Schizotypal PD	0 (0)	0 (0)	-	-	0 (0)	-	-
Cluster B (%)	41 (17.4)	63 (6.1)	2.44	1.56-3.81**	14 (9.2)	1.86	0.96-3.6
Antisocial PD	4 (1.7)	5 (0.5)	3.97	0.97-16.2	0 (0.0)	-	-
Borderline PD	36 (15.3)	53 (5.2)	2.3	1.43-3.73**	12 (7.9)	1.9	0.92-3.8
Histrionic PD	0 (0)	2 (0.2)	-	-	1 (0.7)	-	-
Narcissistic PD	3 (1.3)	3 (0.3)	5.79	1.04-32.3**	1 (0.7)	-	-
Cluster C (%)	19 (8.1)	38 (3.7)	2.45	1.34-4.49**	4 (2.6)	3.54	1.2-10.7**
Avoidant PD	6 (2.6)	21 (2.0)	1.09	0.42-2.83	2 (2.0)	1.3	0.32-5.38
Dependent PD	11 (4.7)	13 (1.3)	4.78	1.96-11.65**	1 (0.7	7.96	1.0-62.9**
OC PD	3 (1.3)	5 (0.5)	3.33	0.71-15.58	0 (0)	-	-
PD NOS (%)	66 (28.1)	101 (9.8)	3.6	2.48-5.21**	33 (21.7)	1.5	0.92-2.4

Comorbid Axis I in patients with PD	BIF (n=124)	RMHC (n=198)	Adjusted OR* compared to RMHC	95% CI	Mild ID (n=51)	Adjusted OR* compared to mild ID	95% CI
Comorbid Axis I, all (%)	105 (84.7)	186 (93.9)	0.52	0.23-1.15	41 (80.4)	1.34	0.57-3.16

CI= Confidence Interval, BIF= borderline intellectual functioning, PD= Personality Disorder, ID= Intellectual Disability, NOS= Not Otherwise Specified

* Odds Ratios adjusted for sex and age, ** Value 1 not in confidence interval, -Number too small for analyses

Conclusion

The important finding of this study is the high frequency of PD diagnoses in BIF patients in daily clinical practice. Axis I and II DSM-IV-TR diagnoses of 235 outpatients with BIF were compared with 1026 outpatients from regular mental health care and 152 mild ID outpatients. We found that over half of the patients with BIF (52.8%) were diagnosed with a PD, compared to one in five in the RMHC group (19,3%) and one in three of de mild ID group (33.6%). All PD diagnoses, except for cluster A PD and histrionic PD, were most frequently diagnosed in the BIF group. PD NOS and borderline PD were the most frequently diagnosed PD in borderline intellectual functioning. The vast majority of PD patients in all three groups had one of more comorbid axis I disorder. MAS disorders were the most prevalent axis I disorders in all three groups. Within the BIF group no association was found between gender and age and PD.

Even though there is growing evidence that low IQ is associated with increased risk of and severity of mental disorders including PD,[8,13–16] our evidence based knowledge concerning PD in BIF is rudimentary. Up until now, in most countries BIF is scarcely even recognized in outpatients in mental health care. This, in spite of the fact that evidence increasingly shows that many people with BIF face major difficulties across their life courses including several risk factors for the development of mental health problems.[7,17] People with BIF are more likely to experience child hood trauma, have more psychosocial problems and are less likely to have adequate support systems,[2,7,18–20] all risk factors for the development of a PD.

Having a PD with concurrent BIF is likely to influence treatment and prognosis. At this time, in most places, adults with BIF and concurrent mental health problems are less likely to receive treatment of any kind.[8] If they do receive treatment they are more likely to receive psychopharmacological treatment and less likely to receive counselling or psychological interventions.[8] This is in contrast with all the evidence based treatments available for patients with PD and average intelligence, like Dialectical Behaviour Therapy (DBT)[21–23] and Mentalisation Based Therapy (MBT).[24–26] It is also in contrast with the growing evidence on treatments for patients with PD and ID, like DBT.[27,28]

There are several strengths in the present study. First, this study examines a large sample of patients with borderline intellectual functioning, which is a hidden population in mental health care in most countries. Second, the label of BIF was always carefully applied and recently established, based on formal IQ testing using the standardized Wechsler Adult Intelligence Scale (WAIS-III). This holds also true for the label of mild ID. Third, PD diagnoses were the diagnoses as recorded in the official registration system of the electronic patient file, making this study a reflection of actual daily clinical practice. Patients with BIF and mild ID were assessed multidisciplinary, according to a strict protocol based and PD diagnoses were made following DM-ID guide-

lines.[9] Fourth, the fact that the findings are based on large samples from a naturalistic outpatient setting makes them generalizable to the clinical field of interest.
However, the results should also be interpreted in the light of some limitations. First, issues of referral may have introduced bias. Even though referral pathways are well established, not all patients with BIF receive specialised outpatient psychiatric treatment. There might be individuals with unidentified BIF in regular psychiatric services. Second, in both the BIF and mild ID groups there were many patients diagnosed with PDD because of a special referral policy. They were excluded from analysis, which means that part of the initial sample was not included. However, most patients diagnosed with PDD were not diagnosed with any co-morbid PD, so the extent of the introduced bias probably is small. A third limitation is that results apply only to outpatients and cannot be generalized to more severely ill in-patients. Fourth, there was no IQ testing in the RMHC group. Fifth, demographic information was limited and information on treatment was not available.
In conclusion, there is a high frequency of PD diagnoses in BIF outpatients in daily clinical practice. In anticipation of further scientific research, results suggest that PD should not be overlooked in patients with BIF.

References

1. Salvador-Carulla L, García-Gutiérrez JC, Ruiz Gutiérrez-Colosía M, et al. Borderline intellectual functioning: consensus and good practice guidelines. *Rev Psiquiatr y salud Ment*. 2013;6(3):109-120.
2. Wieland J, Haan SK, Zitman FG. Psychiatric Disorders in Outpatients With Borderline Intellectual Functioning : Comparison With Both Outpatients From Regular Mental Health Care and Outpatients With Mild Intellectual Disabilities. 2014;59(4):213-219.
3. American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders* (4th edn, Text Revision)(DSM-IV-TR). Washington D.C.;2000.
4. American Psychiatric Association (APA). *Diagnostic and statistical manual of mental disorders* (5th edn)(DSM-5). Washington, DC; 2013.
5. WHO. *International Statistical Classification of Diseases and Related Health Problems (International Classification of Diseases)(ICD 10th Revision - Version:2010)*. Geneva; 2010.
6. Hassiotis A, Ukoumunne OC, Byford S, et al. Intellectual functioning and outcome of patients with severe psychotic illness randomised to intensive case management. Report from the UK 700 trial. *Br J Psychiatry*. 2001;178:166-171.
7. Seltzer MM, Floyd F, Greenberg J, Lounds J, Lindstromm M, Hong J. Life course impacts of mild intellectual deficits. *Am J Ment Retard*. 2005;110(6):451-468.
8. Hassiotis A, Strydom A, Hall I. Psychiatric morbidity and social functioning among adults with borderline intelligence living in private households. *J Intellect Disabil Res*. 2008;52(2):95-106.
9. Fletcher R, Loschen E, Stavrakaki C. DM-ID: diagnostic manual-intellectual disability: a textbook of diagnosis of mental disorders in persons with intellectual disability. New York, NADD; 2007.
10. Wechsler D. WAIS-III. Administration and scoring manual. *Psychol Corp San Antonio, TX*. 1997.
11. Wechsler D. WAIS-III. Nederlandstalige Bewerking: Afname en Scoringshandleiding. Swets & Zeitlinger, Lisse; 2000.
12. Tellegen P. De betrouwbaarheid en validiteit van de WAIS-III NL. *De Psycholoog*. 2003;128-132.
13. Gigi K, Werbeloff N, Goldberg S, et al. Borderline intellectual functioning is associated with poor social functioning , increased rates of psychiatric diagnosis and drug use – A cross sectional population based study. *Eur Neuropsychopharmacol*. 2014;24(11):1793-1797.
14. Stratta P, Riccardi I. Premorbid intelligence of inpatients with different psychiatric diagnoses does not differ. *Neuropsychiatr Dis Treat*. 2008;4:1241-1244.
15. Urfer-Parnas a, Lykke Mortensen E, Saebye D, Parnas J. Pre-morbid IQ in mental disorders: a Danish draft-board study of 7486 psychiatric patients. *Psychol Med*. 2010;40(4):547-556.
16. Wieland J, Wardenaar KJ, Fontein E, Zitman FG. Utility of the Brief Symptom Inventory (BSI) in psychiatric outpatients with intellectual disabilities. *J Intellect Disabil Res*. 2012;56(9):843-853.
17. Peltopuro M, Ahonen T, Kaartinen J, Seppälä H, Närhi V. Borderline Intellectual Functioning: A Systematic Literature Review. *Intellect Dev Disabil*. 2014;52(6):419-443.
18. Johnson J, Cohen P. Childhood maltreatment increases risk for personality disorders during early adulthood. *Arch Gen Psych*. 1999;56:600-606.

19. Coid J. Epidemiology, public health and the problem of personality disorder. *Br J Psychiatry*. 2003;182:s3-s10.
20. Berlo W Van, Haas S De, Oosten N Van. Een onderzoek naar seksueel geweld bij mensen met een lichamelijke, zintuiglijke of verstandelijke beperking. *Rutgers WPF*. 2011.
21. Linehan M. Dialectical Behavior Therapy for borderline personality disorder: Theory and method. *Bull Menninger Clin*. 1987.
22. Soler J, Pascual J. Double-blind, placebo-controlled study of dialectical behavior therapy plus olanzapine for borderline personality disorder. *Am J Psychiatry*. 2005;162:1221-1224.
23. McMain S, Links P. A randomized trial of dialectical behavior therapy versus general psychiatric management for borderline personality disorder. *Am J Psychiatry*. 2009;166:1365-1674.
24. Allen J, Fonagy P. *The Handbook of Mentalization-Based Treatment*. John Wiley & Sons; 2006.
25. Bateman A, Fonagy P. 8-year follow-up of patients treated for borderline personality disorder: mentalization-based treatment versus treatment as usual. *Am J Psychiatry*. 2008;165:631-638.
26. Bateman A, Fonagy P. Randomized controlled trial of outpatient mentalization-based treatment versus structured clinical management for borderline personality disorder. *Am J Psychiatry*. 2009;166:1355-1366.
27. Lew M, Matta C, Tripp-Tebo C, Watts D. Dialectical behavior therapy (DBT) for individuals with intellectual disabilities: A program description. *Ment Heal Asp*. 2006;9:1-13.
28. Brown J, Brown M, Dibiasio P. Treating individuals with intellectual disabilities and challenging behaviors with adapted dialectical behavior therapy. *J Ment Heal*. 2013;6:280-303.