Torres-Soto, Juan F.; Iborra-Giner, Pedro; Giner-Alegría, César A.; Moya-Faz, Francisco J.
Results of a Day-Hospital Program for Personality Disorders.
Application of the PID-5 and DSM-5 Dimensional Model

Clínica y Salud

Results of a Day-Hospital Program for Personality Disorders. Application of the PID-5 and DSM-5 Dimensional Model

Juan F. Torres-Soto[a], Pedro Iborra-Giner[a], César A. Giner-Alegría[b], and Francisco J. Moya-Faz[b]

[a]Hospital de Día de TP, Hospital de San Juan, Alicante, Spain; [b]Universidad Católica San Antonio de Murcia-UCAM, Spain

A B S T R A C T

DSM-5 dimensional-hybrid model and PID-5 Personality Inventory might be particularly useful in a day hospital treatment program for personality disorders, while the need for treatment for mixed personality disorder and unspecified personality disorder is such as frequent as for borderline personality disorder. Effective treatment programs in the public health system are required. The study shows the results from the day hospital treatment program for personality disorders implemented at San Juan Hospital in Alicante. The treatment involves an intensive and interdisciplinary program that applies the DSM-5 dimensional model and the PID-5 personality inventory to identify therapeutic needs, with both individual and group therapies with a cognitive-behavioural therapeutic approach. Results support the relevance of therapeutic components regarding this program. Moreover, its effectiveness has been demonstrated in achieving significant changes in symptoms, traits, comorbidity, and psychosocial functioning. It also appears to be efficient not only in reducing the number of visits to the emergency and hospital admissions, but also in ensuring continuity and therapeutic compliance, thus reducing public health costs.

Los resultados de un programa de hospital de día en los trastornos de la personalidad. La aplicación del modelo PID-5 y del DSM-5

R E S U M E N

El modelo híbrido dimensional del DSM-5 y el Inventario de Personalidad PID-5 pueden ser particularmente útiles en un programa de tratamiento de hospital de día para trastornos de la personalidad, cuando la demanda de tratamiento para el trastorno mixto de la personalidad y el trastorno de personalidad no especificado es tan frecuente como para el trastorno límite de la personalidad. Estos trastornos requieren programas de tratamiento eficaces en el sistema de salud pública. Nuestro estudio muestra los resultados del programa de hospital de día para trastornos de la personalidad implementado en el Hospital San Juan de Alicante. Se trata de un programa intensivo e interdisciplinario, que parte del modelo dimensional DSM-5 y el Inventario de Personalidad PID-5 para identificar las necesidades terapéuticas, aplicando terapias individuales y grupales basadas en un enfoque terapéutico cognitivo-conductual. Los resultados apoyan la pertinencia de los componentes terapéuticos del programa. Ha demostrado efectividad para lograr cambios significativos en síntomas, rasgos, comorbilidad y en el funcionamiento psicosocial. También parece ser eficiente no sólo por reducir el número de visitas a servicios de urgencias y estancias hospitalarias, sino también por garantizar la continuidad y el cumplimiento terapéutico, reduciendo así los costes en salud pública.

According to the American Association of Psychiatry (APA, 2014), Personality Disorders (PD), particularly the Borderline Personality Disorder (BPD), are highly prevalent and have high comorbidity with other pathologies. They are also associated with having increased psychosocial problems and entail a high socio-health cost (Fórum de Salud Mental & AIAQS, 2011).

To be able to appropriately address these disorders, reliable and valid diagnostic models are required, adequate treatments need to be offered, and a network of care facilities for this specific population must be readily available.

Regarding diagnosis of these disorders, the Diagnostic and Statistical Manual of Mental Disorders (DSM-5; APA, 2014), suggests the Dimensional-Hybrid Model (Section III) as a complement and/or alternative to the Classical Categorical Model (Section II). This model is based on empirical research and meta-analysis and improves comprehensiveness, reliability, and validity of diagnoses (Widiger & Trull, 2007).

This model argues that maladaptive variations of personality traits are mixed with normality and can also be found with others all at once. This approach responds to a frequent observation in clinical

Table 1. Social Demographic and Clinic Profile

	Diagnosis				Comorbidity				
	BDP	PD-NOS/MP	Depression	Anxiety	Adjustment	OCD[3]	SRD[4]	Bipolar	Other
$N^1 = 100$	48	50	14	19	7	7	8	3	6
$n^2 = 50$	24	26	12	7	4	6	2	3	6
	Gender		Age				Living situation		
	Men	Women	19-29	30-9	40-49	50-54	Alone	Family	Couple
$N^1 = 100$	27	73	34	39	20	7	18	60	22
$n^2 = 50$	9	41	13	19	16	2	11	32	7

Note. [1]N = subjects who enter the program; [2]n = subjects who completed the program; [3]obsessive-compulsive disorder; [4]substance-related disorders.

practice, which is the prevalence of patients diagnosed with Other Specified Personality Disorder with Mixed Personality characteristics (MP) and/or Personality Disorder Not Otherwise Specified (PD-NOS). The Personality Disorder Specified by Traits considered by the dimensional model includes both of these disorders and facilitates the identification of patients' therapeutic needs.

In order to assess these disorders, it is necessary to have access to instruments that are consistent with the model adopted. Validity and reliability properties should be offered, which provide guidance in areas that require intervention and are sensitive to changes produced as a result of the treatment. In this regard, the DSM-5 presents the PID-5 personality inventory (Krueger et al., 2014).

Regarding effective treatment for PDs, scientific output in Spain in recent years has been fundamentally related to BPD. For this disorder, psychotherapy is the gold standard treatment. Amongst different approaches, Dialectic Behavioural Therapy (DBT) by Linehan (2003) is recommended, followed by schema therapy (Young, 1990), Mentalisation-based Treatment (Bateman & Fonagy, 2004), and Transference-focused Therapy (TFT) (Foelsch & Kernberg, 1998; see also Burgal & Pérez, 2017; Cristea et al. 2017; Fórum de Salud Mental & AIAQS, 2011; Lana & Fernández-San Martín, 2013).

Other personality disorder treatments are still in the experimental phase, including Cognitive Behavioural Therapy (CBT) (Pérez-Álvarez et al., 2009), even though behavioural therapy has been shown to be "probably efficient" in BPD, as well as in avoidant personality disorder. Moreover, good results are being obtained with CBT or programs that are based on CBT in cluster B, cluster C, and mixed personality disorders (Bateman et al., 2016; Cuevas & López, 2012). One example is Systems Training for Emotional Predictability and Problem Solving (STEPPS; Black et al., 2004), which was initially orientated towards BPD (Chiesa et al., 2006; Gratz et al., 2016).

Amongst other treatment plans, the "clinical practice guideline on BPD" (Fórum de Salud Mental & AIAQS, 2011), makes a recommendation with C level in relation to treatment at the day hospital (DH). They suggest that in order to attempt to reduce hospital admissions and suicide attempts, improve stabilisation, and symptomatic severity, patients should be seen for a period of more than 6 months. For PD-NOS, cluster C, and BPD, the efficacy of treatment in the day hospital was observed (Horn et al., 2015). A review of Spanish day hospital programs can be found in García et al. (2010).

Research Objectives

This research assesses the results obtained from the treatment program for personality disorders of groups B and C, which is conducted at San Juan Mental Health Day Hospital, Alicante (Spain).

The objective is to analyse the impact of the treatment program in terms of: a) the pertinence of the program, b) its effectiveness in terms of achieving the objectives presented in the intervention of the program in a real context, and c) efficient in terms of cost reduction.

This study establishes whether the program can be considered appropriate for people with BPD as well as for people diagnosed with MP and/or PD-NOS.

Method

Design

A study was conducted between June 2015 and December 2018, differentiating two stages. In the first stage, a transversal, descriptive, and correlational study was proposed, with comparisons between clinical groups, whose results were previously published (Torres-Soto et al., 2019). The main focus of this article was on the second stage. The research design is longitudinal, pre- and post-treatment and quasi-experimental, since there was no randomisation of subjects. In this case, intra-group comparisons were conducted.

Sample: Clinical and Sociodemographic Profile

A total of 166 patients were referred to the San Juan Hospital Mental Health Day-care Unit, from several mental health units. All subjects belonged to health areas 17 and 19 in Alicante. Out of the 166 subjects, 53 dismissed the application and 13 did not meet the criteria to enter the program. As a result, 100 subjects entered the therapeutic program.

Regarding the social demographic and clinic profile of these 100 users, 73 were women and 27 were men. The age of the group ranged from 18 to 54 years of age; 48 subjects were diagnosed by the Mental Health Unit with BPD, 28 with PD-NOS, 22 with MP, and only 2 with other specified personality disorders. If PD-NOS and MP groups are joined, they made up 50 % of the derived cases, a similar percentage to the BDP group. In addition, for every 67 cases there was at least one comorbid diagnosis in the referral protocol, basically anxiety disorders, depression or dysthymia (Table 1).

In December 2018, 14 of the 100 subjects remained in the DH program and 36 had not completed the program for various reasons: voluntary discharge (4), abandonment (5), therapeutic noncompliance (23), and other reasons such as starting studies or looking for a job (4). For the 50 that completed the entire program, the average stay was around 6 months ($M = 6$), ranging from 3 months to a year. Therefore, the subsample which will be used to analyse the pre-post results, presented hereafter, will be taken from those 50 subjects.

In relation to the social demographic and clinic profile of these 50 subjects, 41 were women. The age of the group ranged from 19 to 54 years of age, the largest groups being 30-39 years of age (19) and 40-49 (16). When considering their living situation, 32 lived at the family home and 11 lived alone. Regarding the employment situation, 26 were unemployed, 10 had a temporary occupational disability or were on sick leave, and 4 were students; 26 subjects were diagnosed with PD-NOS or MP and 24 with BPD. Moreover, 40 of them had a comorbid diagnosis, depressive disorders (12), anxiety disorders

(7), OCD (6), and less frequently other disorders such as substance-related, adjustment, bipolar or schizoaffective disorders (Table 1).

Evaluation Design and Instruments. PID-5

Data was collected between June 2015 and December 2018 by performing an assessment during the first and last month of treatment (pre and post). Prior to collecting data, patient consent was obtained, confidentiality of personal information was ensured, and subjects were informed about it. This section describes the instruments used for the following study and the variables considered.

Initial assessment: semi-structured interview and referral sheets. Socio-demographic and clinical data was extracted from interviews and referral sheets, along with data related to admissions to the Psychiatry Hospitalization Unit and visits to the emergency unit in the last year.

Personality inventory: DSM-5, PID-5-adults (Krueger et al., 2014). The DSM-5 suggests the DSM-5 personality inventory for the evaluation of pathological features. The adult full version was used. It is a 220 item self-rated assessment scale that evaluates 25 pathological trait facets, found in criteria B for the diagnosis of PD using the dimensional-hybrid model of the DSM-5 (section III) (APA, 2014).

Certain triplets of trait facets can be combined to assess the five trait domains. The score taken from domains and facets is an average that ranges from 0 to 4, higher scores indicating greater "dysfunction", and lower scores pointing towards an adaptive personality.

The following section describes the five domains and lists of facets they are made up of. Facets found in various domains are highlighted with an asterisk (*). For a detailed description of facets, the DSM-5 can be consulted (APA, 2014, pp. 779-781).

- Negative affectivity domain (versus emotional stability) implies having frequent and intense episodes of high levels of varied negative emotions, along with behavioural and interpersonal manifestations. Facets included in this domain are: emotional lability, anxiety, separation insecurity, submissiveness, perseveration, hostility*, depression*, suspiciousness*, and restricted affectivity*.
- Detachment domain (versus extraversion), implies avoiding socio-emotional situations. This includes avoiding both interpersonal interactions and social situations. Patients also show restricted affective expression. Encompassing facets are: avoidance or withdrawal, avoidance of intimacy, anhedonia, restricted affectivity*, suspiciousness*, and depression*.
- Antagonism domain (vs. agreeableness), implies behaviours that potentially place an individual in conflictive situations with others. This includes manipulativeness, deceitfulness, grandiosity, attention seeking, callousness, and hostility*.
- Disinhibition domain (vs. conscientiousness), implies an inclination toward immediate satisfaction. This involves subjects acting impulsively, without taking into account past learnings or considering possible consequences. It includes the following facets: irresponsibility, impulsivity, distractibility, risk taking, and rigid perfectionism (low).
- Psychoticism domain (vs. lucidity). This implies exhibiting a wide range of inconsistent, strange, and eccentric or culturally unusual behaviours and cognitions. It includes the following facets: cognitive and perceptual dysregulation, unusual beliefs and perceptual experiences, and eccentricity.

The instrument has shown good reliability and validity qualities. Facets in the Spanish validation have shown good internal consistency (α = .86 and .79) and discriminant validity (Gutiérrez et al., 2017).

Borderline Evaluation of Severity Over Time (BEST; Pfohl et al., 2009). This was developed by the authors of the STEPPS treatment program (Black et al., 2004) and is included in the day hospital program. It is a self-rated scale to measure severity and change over time in persons with BPD. It is composed of 15 items evaluated on a Likert type scale (1 to 5), which are grouped into three sub-scales. Both A, thoughts and feelings (items 1 to 8), and B, negative behaviour (items 9 to 12) sub-scales, correspond to the DSM-IV-TR criteria for BPD. Each item is rated from 1 (*none/slight*) to 5 (*extreme*) in a selected time interval (30 days, 7 days, other). Sub-scale C evaluates positive behaviours (items 13 to 15) on a scale of 5 (*almost always*) to 1 (*almost never*). The total scale can be achieved by applying the following formula: sub-scales A + B - C + 15.

The instrument has shown moderate test-retest reliability, high internal consistency (Cronbach's α = .90, -.92), discriminant validity, correlation with the severity of the symptoms of BPD, and sensitivity to assess severity and clinical change (Pfohl et al., 2009).

Statistical Analysis

Statistical analysis was performed with the SPSS package v15., using the Excel spread sheet as a supplement. In order to analyse the characteristics of the sample, descriptive statistics for variables such as age, gender, marital status, living situation, level of studies, employment status, diagnosis, comorbidity, and use of health resources were computed.

The study was interested in analysing changes that occurred in posttreatment in the 5 domains and the 25 facets of pathological features of the PID-5. Moreover, a global severity indicator (GSI) and an average of all the facets included in the PID-5 were calculated. This was based on the hypothesis that this average could indicate the "level of personality functioning", criteria A of the DSM-5 hybrid-dimensional model.

For the analysis, the direct scores of the three sub-scales (A, B, and C), were converted into a mean score. All oscillated between 1 and 5, making them comparable to each other and also between items separately. Mean score was taken from the first four weeks and the last four weeks of treatment. Given that the total scale is a conversion of the previous ones, it has not been taken into account in this analysis.

In order to compare the scores before and after treatment in both instruments, Student's *t*-test of comparison of means for paired samples (intra-group comparisons) was used. To check if the equality of variances is assumed, Levene's test for equality of variances was applied in each comparison of means. The effect size for each pair of comparisons between groups was obtained using Cohen's (1988) δ, following the interpretation proposed by Cohen (1988), where δ between .50 and .79 would indicate a moderate effect and δ above .80 would be considered a large effect.

Intervention Design. Day Hospital Treatment Program

The Day Hospital for Personality Disorders at San Juan Hospital (Alicante), a sanitary device of partial hospitalisation, is included within the Mental Health Network of the Department of Health of the Valencian Community.

The program is aimed at patients with serious personality disorders cluster B and C (DSM-5), whose condition has neither improved nor stabilised following outpatient treatment and/or patients who exhibit excessive use of emergency services and psychiatric admission. Patients must be older than 18 and live within a specific geographic reference area (in this case, health departments 17 and 19).

A multidisciplinary team (psychiatrist, psychologist, nurse, and social worker) is working at the centre and provides the patient with a specific and intensive, treatment program. The program encompasses individual and group interventions and includes the family in the therapeutic process.

Table 2. PRE/POST Changes in the PID-5. Student's *t*-test for Paired Samples

	PRE M (SD)	POST M (SD)	Student's t	df	p	95% CI LLCI	95% CI ULCI	δ[1]
Domains								
Negative affectivity	1.90 (0.55)	1.73 (0.62)	2.518	49	.015*	.033	.302	.28
Detachment	1.41 (0.54)	1.27 (0.62)	2.338	49	.024*	.020	.269	.24
Antagonism	0.56 (0.48)	0.49 (0.46)	1.191	49	.240	- .043	.171	.13
Disinhibition	1.50 (0.60)	1.28 (0.66)	2.851	49	.006**	.064	.374	.34
Psychoticism	1.08 (0.59)	0.91 (0.68)	2.539	49	.014*	.034	.300	.26
FACETS								
Anhedonia	1.90 (0.64)	1.64 (0.86)	2.563	49	.014*	.056	.466	.34
Anxiety	2.16 (0.59)	1.98 (0.72)	2.141	49	.037*	.010	.347	.27
Attention seeking	0.67 (0.66)	0.62 (0.69)	0.825	49	.414	- .068	.164	
Callousness	0.37 (0.32)	0.38 (0.37)	-0.359	49	.721	- .111	.077	
Deceitfulness	0.67 (0.60)	0.59 (0.61)	1.390	49	.171	- .039	.215	
Depression	1.97 (0.74)	1.58 (0.86)	4.041	49	.000**	.196	.584	.48
Distractibility	1.69 (0.70)	1.55 (0.81)	1.261	49	.213	- .083	.363	
Eccentricity	1.55 (0.83)	1.28 (0.88)	2.586	49	.013*	.059	.473	.32
Lability	2.16 (0.65)	1.96 (0.69)	2.916	49	.005**	.060	.328	.29
Grandiosity	0.46 (0.52)	0.39 (0.38)	1.190	49	.240	- .047	.185	
Hostility	1.35 (0.66)	1.26 (0.73)	1.315	49	.195	- .045	.218	
Impulsivity	1.64 (0.88)	1.42 (0.85)	2.211	49	.032*	.019	.415	.25
Intimacy avoidance	0.90 (0.80)	0.89 (0.79)	0.144	49	.886	- .179	.207	
Irresponsibility	1.18 (0.63)	0.88 (0.65)	3.853	49	.000**	.144	.459	.47
Manipulativeness	0.54 (0.61)	0.50 (0.61)	0.430	49	.669	- .126	.195	
Perceptual dysregulation	0.92 (0.51)	0.79 (0.63)	2.123	49	.039*	.006	.259	.23
Perseveration	1.52 (0.57)	1.36 (0.64)	2.041	49	.047*	.002	.307	.26
Restricted affectivity	0.94 (0.60)	0.79 (0.51)	1.811	49	.077	- .015	.303	
Perfectionism	1.41 (0.65)	1.22 (0.69)	2.360	49	.022*	.027	.349	.28
Risk taking	1.10 (0.71)	1.11 (0.69)	-0.211	49	.834	- .126	.102	
Separation insecurity	1.38 (0.86)	1.25 (0.85)	1.440	49	.157	- .052	.314	
Submissiveness	1.32 (0.86)	0.98 (0.77)	3.157	49	.003**	.124	.559	.42
Suspiciousness	1.42 (0.68)	1.36 (0.64)	0.632	49	.531	- .113	.217	
Unusual beliefs/exper.	0.78 (0.65)	0.67 (0.70)	1.547	49	.129	- .031	.237	
Withdrawal	1.44 (0.77)	1.28 (0.73)	2.188	49	.034*	.012	.306	.21
Global Severity Indicator (GSI)								
Total group (*n* = 50)	1.26 (0.38)	1.11 (.42)	3.170	49	.003**	.053	.240	.36
BDP (*n* = 24)	1.39 (0.35)	1.28 (.41)	2.114	23	.046*	.002	.220	.29
PD-NOS/MP (*n* = 26)	1.13 (0.38)	0.95 (.38)	2.376	25	.026*	.023	.340	.47

Note. [1]Cohen's delta effect size.
* *p* < .05, ** *p* < 0.1.

It is a multicomponent program which follows the dimensional model, the PID-5 for evaluation, and a behavioural-cognitive approach. The choice of the different components of the program is based on recommendations from international clinical guidelines, results from cognitive behavioural approaches (STEPPS), and similar day hospital programs designed to treat cluster B, C, and borderline personality disorders.

The overall objective of the program is to achieve the containment of the most serious symptoms and attain sufficient symptomatic and psychosocial stabilisation in order for patients to be able to continue treatment in an adult mental healthcare centre. In acute crises, when possible, it also can act as an alternative to admission to the psychiatry unit. In certain cases, when requested, it can provide diagnostic guidance and a therapeutic approach on the case.

Specific objectives to be achieved include: establishing a therapeutic relationship that creates a bond with the centre, reducing harmful behaviour, addressing acute exacerbations, adjusting medication, increasing motivation for change, acquiring healthy habits, coping with comorbid pathology, dealing with dysfunctional traits, improving self-care skills, improving personal, interpersonal, and social functioning, and promoting access to and a bond with the Mental Health Unit (MHU).

The program considers the following components of intervention:
- Group interventions/workshops: psycho-education, self-esteem, social abilities, self-care, health education, STEPPS program (Black et al., 2004), iconic therapy (Santiago, 2013), cognitive therapy (Beck et al., et al., 2005), and iconic therapy for families.
- Individual interventions: psychopharmacological treatment, psychopathological monitoring, crisis intervention, therapeutic intervention for dysfunctional traits, self-care, social intervention, and interviews with family members.

Results

Withdrawal, Adherence, and Use of Health Resources

Of the 100 subjects who entered the program, 36 did not complete it due to several reasons: voluntary discharge, abandonment or therapeutic noncompliance, or other reasons (starting studies,

Table 3. PRE-POST Changes in the Subscales and BEST Items

	PRE M(SD)	POST M(SD)	t^2	df	p	95% CI LLCI	ULCI	δ^3
ITEMS[1]								
1 Worry of abandonment	2.76 (1.07)	2.21 (1.31)	3.674	49	.001**	.24	.84	.459
2 Change perception of others	2.64 (1.18)	2.37 (1.14)	2.080	49	.043*	.01	.53	.232
3 Change self- perception	2.95 (1.18)	2.58 (1.30)	3.105	49	.003**	.13	.62	.298
4 Changes in emotions	3.45 (1.05)	2.89 (1.32)	4.843	49	.000**	.33	.80	.469
5 Feeling paranoid	1.95 (1.04)	1.76 1.05)	1.743	49	.088*	-.02	.39	.181
6 Feeling angry	2.94 (1.01)	2.56 (1.05)	2.987	49	.004**	.12	.63	.368
7 Feeling of emptiness.	3.36 (1.29)	2.66 (1.53)	4.883	49	.000**	.41	.99	.494
8 Feelings suicidal	2.52 (1.43)	1.98 (1.24)	3.807	49	.000**	.25	.82	.403
9 Avoid abandonment	1.74 (0.88)	1.76 (1.19)	-0.193	49	.848	-.29	.24	
10 Self-harm/suicide attempts	1.78 (1.12)	1.47 (0.74)	2.692	49	.010*	.08	.55	.326
11 Impuslvie behaviours	2.67 (1.26)	2.47 (1.30)	1.472	49	.147	-.07	.48	
12 Bad anger management	2.29 (1.19)	1.91 (1.10)	3.049	49	.004**	.13	.63	.331
13 Distracting activities	2.55 (1.04)	3.18 (1.29)	-4.486	49	.000**	-.92	-.35	-.537
14 Anticipate/avoid problems	2.55 (0.97)	3.13 (1.26)	-3.643	49	.001**	-.88	-.25	-.515
15 Follow recommendations	3.94 (0.99)	3.92 (0.99)	0.186	49	.853	-.23	.28	
SUBSCALES								
A Thoughts and feelings (Items 1-8)	2.82 (0.92)	2.36 (1.05)	5.012	49	.000**	.27	.64	.466
B Behaviours (negative) (Items 9-12)	2.12 (0.89)	1.91 (0.90)	2.368	49	.022*	.03	.39	.235
C Behaviours (positive) (Items 13-15)	3.01 (0.83)	3.39 (1.08)	-3.112	49	.003**	-.63	-.13	-.394

Note. [1]Item contents correspond to the evaluated concept, not the original text; [2]*Student's t* for paired samples; [3]Cohen's delta effect size.
*$p < .05$, **$p < .01$.

looking for a job). The average age of those who did not complete the program (M = 31.38) was somewhat lower than average age of those who did finish (M = 35.94). Regarding diagnosis, 19 were diagnosed with BPD and 17 with PD-NOS or MP.

Of the 50 subjects who completed the program, 41 were women and 9 were men. In relation to the diagnosis, 24 were diagnosed with BPD and 26 with PD-NOS and MP. The year prior to admission to the Day Hospital, 9 patients were admitted to the Psychiatric Hospitalization Unit, with 13 hospital admissions in total. During the stay in the program, only 2 patients were admitted to the psychiatric unit with 2 hospital admissions in total (a 84.62% reduction). Furthermore, 23 patients had visited the emergency room prior to their admission at the Day Hospital, with 46 visits in total. During the stay in the program, only 5 patients went to emergency, with 7 visits (a 84.78 % reduction).

In relation to the continuity of treatment, the 50 patients who finished their treatment programs kept their follow-up appointments in the Mental Health Unit or in the Addictive Behavior Unit during the time of stay in the Day Hospital, also ensuring a follow up appointment upon discharge; 25 of the patients were referred to the STAIRWAYS program. In cases where it was possible, patients were referred to other community centres.

Changes in the PID-5 Pre/Posttreatment

This study was interested in finding out about changes that occurred in pathological traits for the 50 patients who finished their programs. Therefore, the scores obtained using the PID-5 at the beginning (pre-treatment) and at the end of the program (post-treatment) were compared. Means and standard deviations, along with the results of the Student's *t*-test for paired samples and the effect size for Cohen's delta are shown in Table 2.

When considering the pre-profile for these 50 patients, the most prominent domain was negative affectivity, as well as the following facets: emotional lability, anxiety, and depression. The PID-5 pointed to the need for action in the negative affectivity domain, specifically focusing on these facets.

When comparing the pre- and the post-profile in the PID-5, a general decrease in mean scores in all the domains and facets were found. In post-profile no facets reached an average score higher than 2.

Significant differences in four of the five domains were found: $p <$ .01, in disinhibition (Cohen's δ = .34), $p <$ .05, in negative affectivity, detachment, and psychoticism. Cohen's delta effect size is small for the four domains (Cohen's $\delta < .50$) (Table 2).

Regarding facets, there were significant differences between the pre- and post-statistical measures in 12 of the 25 facets, including those that stood out most at the beginning of the program. These include a $p <.01$, for depression, emotional lability, irresponsibility, and submissiveness and a significant difference $p < .05$ for anhedonia, anxiety, eccentricity, impulsivity, cognitive and perceptual dysregulation, perseveration, perfectionism, and withdrawal. Although the effect size of Cohen's delta is small for all of these facets (Cohen's $\delta < .50$), it is close to a moderate effect size in irresponsibility (Cohen's δ = .47), and depression (Cohen's δ = .48).

The mean of the 25 facets included in the PID-5 was calculated as, according to the hypothesis, this mean could be a global severity indicator (GSI) of personality functioning level. The difference between pre- and post-treatment was found to be significant, with a small effect size, $t_{(49)}$ = 3.170, p = .003, 95 % CI [.053, .240], Cohen's δ = .35.

When the GSI is calculated for each of the two diagnostic groups, the difference in the GSI between pre- and post-treatment in the BPD subgroup was significant and had a small effect size, $t_{(23)}$ = 2.114, p = .046, 95 % IC [.002, .220], Cohen's δ = .29. For the PD-NOS/MP subgroup, the difference was also significant, with a close to moderate effect size, $t_{(25)}$ = 2.376, p =. 026, 95 % IC [.023, .340], Cohen's δ = .47. Therefore, the study found that the effect size is greater for the PD-NOS/MP subgroup than for the BPD subgroup.

Changes in BEST Pre- Post-treatment

The study was also interested in finding out what changes occurred in "the severity" of the specific symptoms of BPD. Mean scores obtained in BEST in the first 4 weeks and the last 4 weeks of the treatment were used. A Student's *t*-test was carried out for paired samples, the results being obtained from Table 3.

Significant differences were observed in all three sub-scales. In subscale A, which obtains information on thoughts and emotions that are characteristic of BPD, subscale B, which compiles characteristic behaviours, and subscale C, which evaluates positive coping behaviours. In all three, the effect size was small (Cohen's δ < .50).

Regarding symptoms, significant differences were found in items 1, 3, 4, 6, 7, 8, and 12, all having a *p* < .01 probability. In items 2, 5, and 10, there is a significant difference, *p* < .05. The effect size is small for most of all these differences (Cohen's δ < .50), although it is close to medium for item 7 (Cohen's δ = .49).

That is, the program produced a significant reduction in symptoms, such as worry about being abandoned, extreme changes in emotions, how a subject sees himself/herself and others, feeling paranoid and angry, chronic feelings of emptiness, having suicidal feelings, having harmful behaviour or attempted suicide, as well as anger management.

On the other hand, items 13 (Cohen's δ = .54) and 14 (Cohen's δ = .52), significantly increased (*p* < .01), with a moderate effect size. This means that there was a significant increase in subjects using strategies to manage symptoms and discomfort, specifically with respect to carrying out distracting activities instead of carrying out a self-destructive act. In addition, there is an improvement in the ability to recognise and avoid situations that may cause problems. There was no change to the extent with which they followed the therapeutic recommendations, since this was the item that scored the highest on sub-scale C since the beginning.

Discussion

Characteristics of the Sample

Out of the 100 subjects that attended the San Juan Hospital Day-care Unit between June 2015 and December 2018, 73 were women and 73 were under 40 years of age. Many lived in a family home, had a basic or intermediate level of education, were unemployed, had no income of their own and up to 26 had an acknowledged disability.

Forty-eight of the admitted patients were diagnosed with borderline personality disorder and 50 with PD-NOS or MP. In addition, 64 had at least one comorbid disorder, mainly anxiety disorders and depressive disorders.

This clinical profile points towards the difficulty of diagnosing and treating these patients, who require multidisciplinary and multicomponent approaches that contemplate all of the associated symptoms and social problems.

Adherence. Adequate use of Resources and Continuity of Treatment

Out of the 100 subjects who were treated, 36 did not manage to finish their treatment. The number of withdrawals is somewhat lower than in other programs that last a similar amount of time; up to 47 % of patients withdraw in 6-month DBT, and up to 54 % in the STEPPS outpatient program (Black et al., 2009; Lana & Fernández-SanMartín, 2013).

Fifty-five percent of patients who withdrew from the program had at least one comorbid condition and 9 of them had a substance-related disorder. There are no differences depending on the type of personality disorder. This information should help to find therapeutic alternatives which help to improve adherence of these patients, for

example specific programs for dual pathology. This is particularly important, because as adherence increases so do the therapeutic results (Black et al., 2009).

On the other hand, regarding patients who completed the program (*n* = 50), there was a 84.62 % reduction in admissions to the Psychiatric Hospitalization Unit, and a 84.78 % reduction in the frequency of visits to the emergency service, similar to therapeutic approaches with better outcomes, such as dialectic behavioural therapy or mentalisation-based treatment (Lana & Fernández-SanMartín , 2013). Moreover, the continuity of care highlighted by clinical guidelines is achieved (Fórum de Salud Mental & AIAQS, 2011).

Changes in Pathological Traits and Symptoms after Treatment

Considering the results observed in the PID-5 after treatment, first of all, it can be deduced that the program affects domains and facets on which the group scored higher at the beginning, amongst others. Secondly, it has an impact on characteristic features of BPD, according to criteria B of the dimensional model. Thirdly, there was an improvement in anxiety, depression, and anhedonia facets, meaning that the program has also a significant impact on comorbid pathology.

By using the global severity indicator (the average of all facets), a significant change was obtained in both total group and BPD and PD-NOS subgroups after treatment. This could be an indicator of the effect of the program on the level of "personality functioning", criteria A of the dimensional model. Thus, in a period of less than one year, the program manages to make changes in the intensity of traits that are relatively stable, according to studies carried out with the PID-5 after 18 months (Wright et al., 2015).

On the other hand, a statistically significant reduction in the severity of borderline personality disorder symptoms was achieved. Of particular relevance was the change regarding suicidal feelings and thoughts, self-harm behaviours, and attempted suicide. The study was able to verify BEST's responsiveness in detecting clinical changes, as suggested by authors (Pfohl et al., 2009).

Conclusions

Using "program evaluation" terminology (Pérez-Álvarez et al., 2009), the following conclusions can be drawn about the results of the program at the Day Hospital for Personality Disorders at San Juan Hospital, Alicante.

The program proves to be "pertinent" in addressing emotional regulation (negative affectivity, PID-5) and comorbid pathology. The STEPPS program and iconic therapy, based on CBT, meet this need.

On the other hand, the program applied in a real context has proved effective by achieving changes, some of them significant, in severe symptoms of BPD, in features highlighted at the beginning, in comorbid pathology, and in the level of personality functioning, both in the general group and in diagnostic subgroups, especially in PD-NOS/MP.

Finally it has proven to be "efficient", by reducing the number of visits and admissions to the emergency department. In addition, it ensures the need of continuity of care and compliance with treatment in an average time of 6 months. It also brings about a reduction in the associated socio-health costs.

Some limitations of this project must be highlighted. When applying the program in a real context, we find bias that could affect the results. Among them, sample size, heterogeneity of the group, and length of treatment make it difficult to extrapolate conclusions.

Our intention was to show our experience with a cognitive-behavioural program. It should be noted that a program such as the one described above can achieve significant results, both in BPD and

in PD-NOS/MP. Likewise, we have been able to verify the usefulness of the dimensional-hybrid model of DSM-5 and PID-5, both to identify their therapeutic needs and to evaluate the changes achieved.

Conflict of Interest

The authors of this article declare no conflict of interest.

Acknowledgement

References

American Psychiatric Association. (2014). *Diagnostic and statistical manual of mental disorders* (5ª ed.). Editorial Panamericana.

Bateman, A.W., & Fonagy, P. (2004). Mentalization-based treatment of BPD. *Journal of Personality Disorders, 18*(1), 36-51. https://doi.org/10.1521/pedi.18.1.36.32772

Bateman, A. W., Gunderson, J., & Mulder, R. (2016). Tratamiento del trastorno de la personalidad. *RET, Revista de Toxicomanías, 78,* 3-13.

Beck, A. T., Freeman, A., Davis, D. D., Pretzer, J., Fleming, B., Arntz, A., Butler, A., Fusco, G., Simon, K. M., Beck, J. S., Morrison, T., Padesky, C. A., & Renton, J. (2005). *Terapia cognitiva de los trastornos de personalidad* (2ª ed). Paidós.

Black, D.W., Allen, J., St. John, D., Pfohl, B., McCormick, B., & Blum N. (2009). Predictors of response to systems training for emotional predictability and problem solving (STEPPS) for borderline personality disorder: An exploratory study. *Acta Psychiatrica Scandinavica, 120*(1), 53-61. https://doi.org/10.1111/j.1600-0447.2008.01340.x

Black, D. W., Blum, N., Pfohl, B., & St John, D. (2004). The STEPPS group treatment program for outpatients with borderline personality disorder. *Journal of Contemporary Psychotherapy, 34*(3), 193-210. https://doi.org/10.1023/B:JOCP.0000036630.25741.83

Burgal, F., & Pérez, N. (2017). Eficacia de la psicoterapia para el tratamiento del TLP: una revisión. *Papeles del Psicólogo, 38*(2), 148-156. https://doi.org/10.23923/pap.psicol2017.2832

Chiesa, M., Fonagy, P., & Holmes, J. (2006). Six-year follow-up of three treatment programs to personality disorder. *Journal of Personality Disorders, 20*(5), 493-509. https://doi.org/10.1521/pedi.2006.20.5.493

Cohen, J. (1988). *Statistical Power Analysis for the Behavioral Sciences.* Routledge Academic.

Cristea, I. A., Gentili, C., Cotet, C. D., Palomba, D., Barbui, C., & Cuijpers, P. (2017). Efficacy of psychotherapies for borderline personality disorder. *JAMA Psychiatry, 74*(4), 319-328. https://doi.org/10.1001/jamapsychiatry.2016.4287

Cuevas, C., & López, A. (2012). Intervenciones psicológicas eficaces para el tratamiento del trastorno límite de la personalidad. *International Journal of Psychology and Psychological Therapy, 12*(1), 97-114.

Foelsch, P.A. & Kernberg, O.F. (1998). Transference-focused psychotherapy for borderline personality disorders. *Psychotherapy in Practice 4*(2), 67-90. https://doi.org/10.1002/(SICI)1520-6572(199822)4:2<67::AID-SESS5>3.0.CO;2-5

Fórum de Salud Mental, & AIAQS (Coord.). (2011). *Guía de práctica clínica sobre trastorno límite de la personalidad* [Clinical practice guideline on borderline personality disorder]. Pla Director de Salut Mental i Addiccions. Departament de Salut. Generalitat de Catalunya. Barcelona.

García, M. T., Martín, M. F., & Otín, R. (2010). Tratamiento integral del trastorno límite de personalidad. *Revista de la Asociación Española de Neuropsiquiatría., 30*(2), 263-278. https://doi.org/10.4321/S0211-57352010000200005

Gratz, K. L., Moore, K. E., & Tull, M. T. (2016). The role of emotion dysregulation in the presence, associated difficulties, and treatment of borderline personality disorder. *Personality Disorders: Theory, Research, and Treatment, 7*(4), 344-353. https://doi.org/10.1037/per0000198

Gutiérrez, F., Aluja, A., Peri, J.M., Calvo, N., Ferrer, M., Baillés, E., & Krueger R.F. (2017). Psychometric properties of the Spanish PID-5 in a clinical and a community sample. *Assessment, 24*(3), 326-336. https://doi.org/10.1177/1073191115606518

Horn, E. K., Bartak, A., Meerman, A. M., Rossum, B. V., Ziegler, U. M., Thunnissen, M., Soons, M., Andrea, H., Hamers, E. F., Emmelkamp, P. M., Stijnen, T., Busschbach, J. J., & Verheul, R. (2015). Effectiveness of psychotherapy in personality disorders not otherwise specified: A comparison of different treatment modalities. *Clinical Psychology and Psychotherapy, 22*(5), 426-42. https://doi.org/10.1002/cpp.1904

Krueger, R. F., Derringer, J., Markon, K. E., Watson, D., & Skodol, A. E. (2014). *The Personality Inventory for DSM-5 (PID-5)—Adult.* American Psychiatric Association. Ed. Medicapanamericana.

Lana, F., & Fernández-SanMartín, M. I. (2013). ¿Hasta qué punto las psicoterapias específicas para el trastorno límite de la personalidad son eficaces? Una revisión sistemática de los estudios controlados aleatorizados publicados. *Actas Españolas de Psiquiatría, 41*(4), 242-52.

Linehan, M. M. (2003). *Manual de tratamiento de los trastornos de personalidad* límite (1ª ed.). Paidós.

Pérez-Álvarez, M., Fernández, J. R., Fernández, C., & Amigo, I. (Coord.). (2009). *Guía de tratamientos psicológicos eficaces I y II.* Pirámide.

Pfohl, B., Blum, N., St John, D., McCormick, B., Allen, J., & Black, D. W. (2009). Reliability and validity of the Borderline Evaluation of Severity Over Time (BEST): A self-rated scale to measure severity and change in persons with borderline personality disorder. *Journal Personality Disorders, 23*(3), 281-93. https://doi.org/10.1521/pedi.2009.23.3.281

Santiago, S. (2013). *Tratando la inestabilidad emocional. Terapia icónica* [Treating emotional instability. Iconic therapy] (3ªed.). Pirámide.

Torres-Soto, J. F., Moya-Faz, F. J., Giner-Alegría, C. A., & Oliveras-Valenzuela, M. A. (2019). Inventario PID-5, perfil dimensional del DSM-5 para orientar el diagnóstico y las necesidades terapéuticas en los trastornos de personalidad. *Anales de Psicología /Annals of Psychology, 35*(1), 47-57. https://doi.org/10.6018/analesps.35.1.333191

Widiger, T. A., & Trull, T. J. (2007). Plate tectonics in the classification of personality disorder. *American Psychologist, 62*(2), 71-83. https://doi.org/10.1037/0003-066X.62.2.71

Wright, A., William, R., Calabrese, M., Wern How Yam, Zelazny, K., Williams, T. F., Rotterman, J. H., & Simms., L. J. (2015). Stability of the DSM-5 Section III pathological personality traits and their longitudinal associations with psychosocial functioning in personality disordered individuals. *Journal of Abnormal Psychology, 124*(1), 199-207. https://doi.org/10.1037/abn0000018

Young J. (1990). *Cognitive therapy for personality disorders: A schema-focused approach.* Professional Resource Exchange.