BORDERLINE PERSONALITY DISORDER AND FUNCTIONING IN THE LONG TERM:
A META-ANALYSIS OF PROSPECTIVE STUDIES

Irene Alvarez-Tomas $^a$, Arturo Bados $^a$, José Ruiz $^a$, Georgina Guilera $^b$

$^a$ Department of Clinical Psychology and Psychobiology, Faculty of Psychology, University of Barcelona.

$^b$ Department of Social Psychology and Quantitative Psychology, Division of Quantitative Psychology, Faculty of Psychology, University of Barcelona.

Contact: irene.alvareztomas@gmail.com
LONG-TERM FUNCTIONING IN BPD

- **MSAD & CLPS studies**: (Biskin, 2015; Zanarini, 2012)
  - Modest improvement in psychosocial functioning from baseline to follow-up.
  - BPD patients maintain low levels of functioning in the long term.
    (MSAD: only 33% with GAF>60 at 6 years; CLPS: only 21% with GAF>70 at 10 years)

- Main prospective studies carried out in US population.
- Recent studies in other countries provided data for generalization of findings.

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QUESTIONS

- WHAT IS THE LONG-TERM COURSE OF FUNCTIONING IN BPD ADULTS?

- IS LONG-TERM FUNCTIONING RELATED TO AGE, GENDER, TIME OF FOLLOW-UP OR INITIAL TREATMENT RECEIVED?
BIBLIOGRAPHIC SEARCHING & INCLUSION CRITERIA

- MEDLINE, PSYCINFO, PSYCARTICLES, PUBMED AND SCOPUS
- BETWEEN 1990 AND 2015

INCLUSION CRITERIA:

1. ADULT BPD SAMPLE, DIAGNOSED BY SEMI-STRUCTURED INTERVIEW (e.g. DIB-R, SCID-II)
2. OUTCOME MEASURES AT BASELINE AND AT LEAST AT ONE FOLLOW-UP ASSESSMENT
3. 5 YEARS OR MORE OF FOLLOW-UP
Records identified through database searching (n = 1408)

Records screened (after duplicated removed) (n = 667)

Full-text articles assessed for eligibility (n = 222)

Studies included in qualitative synthesis (n = 10)

Studies included in meta-analysis (n = 4)

Additional records identified through other sources (n = 37)

Records excluded (n = 445)
- No prospective studies (n = 306)
- No adult sample (n = 39)
- No BPD sample (n = 100)

Full-text articles excluded (n = 146)
- No diagnostic interview (n = 4)
- No repeated functional or clinical outcome measures (n = 50)
- < 5 years of follow-up (n = 92)

Studies excluded due to not reporting comparable measures of functioning (n = 6)
SELECTION OF STUDIES

FUNCTIONING:

• SOCIAL & OCCUPATIONAL ADJUSTMENT AND GLOBAL FUNCTIONING:
  • Scales rated by clinicians: GAF / SOFAS
  • Self-report questionnaires: SFQ / WSAS / SASS
  • MSAD, CLPS & Bateman (2008), excluded due to reporting specific indexes or partial results.

NO PUBLICATION BIAS

EGGER’S TEST:

\[ t = 1.99, df = 4, p = .12 \]
### DESCRIPTION OF STUDIES INCLUDED IN META-ANALYSIS ON FUNCTIONING

<table>
<thead>
<tr>
<th>Study</th>
<th>Country</th>
<th>Time</th>
<th>% Retention</th>
<th>Treatment Groups</th>
<th>N at FU</th>
<th>Mean Age</th>
<th>% Women</th>
<th>Length Treat. (months)</th>
<th>Hours of Formal Therapy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boscot Trial (CBT-PD) Davidson (2010)</td>
<td>UK</td>
<td>6y</td>
<td>72</td>
<td>Specialized Therapy</td>
<td>43</td>
<td>32</td>
<td>83</td>
<td>12</td>
<td>192</td>
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<td></td>
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<td></td>
<td>TAU</td>
<td>33</td>
<td>31</td>
<td>85</td>
<td>12</td>
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<td>TAU</td>
<td>15</td>
<td>24</td>
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</tr>
<tr>
<td>Vaanta Primary Care Depression Study Riithimäki (2014)</td>
<td>Finland</td>
<td>5y</td>
<td>83</td>
<td>No exp treatment</td>
<td>29</td>
<td>32</td>
<td>86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Barcelona Study Alvarez-Tomás (2016)</td>
<td>Spain</td>
<td>10y</td>
<td>64</td>
<td>No exp treatment</td>
<td>41</td>
<td>27</td>
<td>93</td>
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</tr>
</tbody>
</table>

**Total N= 180**

Hours of Formal Therapy = N. Therapy sessions/month * Hours/session * Length in months
**LONG-TERM FUNCTIONING**

**Large mean effect size:** 0.80, [0.50, 1.09] 95% IC, $p < .001$

**Moderate heterogeneity:** $Q = 16.2, p < .006$

$I^2 = 69\%$ ($< 75\%$)
**Natural moderators: Gender**

Mixed effects regression (unrestricted maximum likelihood)

**Effect size:** $g \leq .20$ Small; $g \leq .50$ Medium; $g \leq .80$ Large

**GENDER**

- % Women
- Functioning

$Q = 6.45, \ p = .01$
Natural moderators: Age & Time of Follow-up

NO IMPACT on FUNCTIONAL IMPROVEMENT:

• **AGE:** $Q = 0.16$ $p = .69$

• **TIME OF FOLLOW-UP:** $Q = 1.68$ $p = .19$

- Limited range of mean ages (27 to 32 years)
- Only 1 study at 10 years of follow-up
Treatment moderators: Experimental Treatment

Mean effect size (Hedge's g)

Heterogeneity between treatment groups:  \( Q = 6.66, \ p = .01 \)
Treatment moderators:
Specialized Therapy vs. TAU

Mean effect size (Hedge's g)

Heterogeneity between treatment groups: Q = 4.2, p = .04
NO IMPACT on FUNCTIONAL IMPROVEMENT:

• LENGTH TREATMENT: $Q = 0.38 \quad p = .54$

• HOURS OF FORMAL THERAPY: $Q = 0.92 \quad p = .34$
CONCLUSIONS: NATURAL LONG-TERM COURSE OF FUNCTIONING IN BPD

- Functioning in patients with BPD tend towards improvement in the long-term.

- Women seem to present less improvement in functioning than men. A gender perspective in psychosocial interventions is recommended.

- Age and time of follow-up appear not related to functional improvement after 5 years or more of illness.
CONCLUSIONS: EFFECTS OF TREATMENT IN LONG-TERM FUNCTIONING

- Specialized therapies appear associated to greater improvement in functioning in the long-term compared to treatment as usual or the natural course of the disorder.

- The intensity and length of therapy received appears not to be relevant to achieve a better outcome in functioning in the long term.
LIMITATIONS
& RESEARCH SUGGESTIONS

- Limited number of studies and small size of BPD samples might affect statistical significance and the study of moderators.

- Further research focused on the long-term outcome of treatment interventions is hardly recommended.