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BRIEF REPORT

Predictors of dropout in a controlled clinical trial of psychotherapy for moderate depression



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Abstract A significant number of psychotherapy clients remain untreated, and dropping out is one of the main reasons. Still, the literature around this subject is incoherent. The present study explores potential pre-treatment predictors of dropout in a sample of clients who took part in a clinical trial designed to test the efficacy of narrative therapy for major depressive disorder compared to cognitive-behavioral therapy. Logistic regression analysis showed that: (1) treatment assignment did not predict dropout, (2) clients taking psychiatric medication at intake were 80% less likely to drop out from therapy, compared to clients who were not taking medication, and (3) clients presenting anxious comorbidity at intake were 82% less likely to dropout compared to those clients not presenting anxious comorbidity. Results suggest that clinicians should pay attention to depressed clients who are not taking psychiatric medication or have no comorbid anxiety. More research is needed in order to understand this relationship. © 2014 Asociación Española de Psicología Conductual. Published by Elsevier España, S.L.U. All rights reserved.

PALABRAS CLAVE

Abandono;
tratamiento
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terapia narrativa;
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estudio
cuasi-experimental

Predictores de abandono en un ensayo clínico controlado de psicoterapia para depresión moderada

Resumen Un número significativo de clientes de psicoterapia no recibe tratamiento adecuado y el abandono del mismo es una de las principales razones. La literatura existente al respecto es contradictoria. Este estudio explora potenciales predictores del abandono en una muestra de clientes que participaron de un ensayo clínico diseñado para demostrar la eficacia de la terapia narrativa en el trastorno depresivo mayor en comparación con la terapia cognitivo-conductual. Los resultados muestran que (1) la asignación del tratamiento no predecía el abandono, (2) los clientes que al comenzar el tratamiento estaban medicados tuvieron un 80% menos de probabilidad de abandonar la psicoterapia, comparado con los clientes no medicados y (3)

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los clientes que padecían de comorbilidad ansiosa tuvieron un 82% menos de probabilidad de abandonar la psicoterapia comparado con los clientes sin comorbilidad. Los clínicos deberían prestar especial atención a los clientes sin medicación o que no padezcan de comorbilidad ansiosa. Se requiere más investigación para comprender esta relación.

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A high number of psychotherapy clients remain untreated and dropout is one of the main reasons, since rates are high (approx. 20%, up to 74%; [Swift & Greenberg, 2012](#)). Few predictors of dropout have emerged recurrently in research, such as low socio-economic status ([Reis & Brown, 1999](#)), being married or living with a partner, previous experience with psychotherapy ([Werner-Wilson & Winter, 2010](#)), low education ([Swift & Greenberg, 2012](#)), older age ([Pomp, Fleig, Schwarzer, & Lippke, 2013](#)), being African-American ([Lester, Artz, Resick, & Young-Xu, 2010](#)), being female ([Shamir, Szor, & Melamed, 2010](#)), suffering from low levels of anxiety and/or depression ([Baekeland & Lundwall, 1975](#)), less clinical experience of therapists ([Roos & Werbart, 2013](#); [Swift & Greenberg, 2012](#)) and weaker alliance ([Sharf, Primavera, & Diener, 2010](#)). Still, most researchers who have investigated psychotherapy dropout agree that there is no clear evidence for a pattern of dropout predictors ([Baekeland & Lundwall, 1975](#); [Casares-López et al., 2011](#); [Swift & Greenberg, 2012](#)). The aim of this study is to explore the attrition data of a psychotherapy clinical trial by assessing potential pre-treatment predictors for dropping out of treatment.

Method

Participants, therapists, procedures and treatment conditions are described in more details in the original report of the study ([Lopes et al., 2014](#)).

Participants

Sixty-three clients diagnosed with moderate Major Depressive Disorder (MDD) according to the DSM-IV ([American Psychiatric Association, 2000](#)) were assigned to either narrative therapy (NT, $n=34$) or cognitive-behavioral therapy (CBT, $n=29$). No significant treatment group differences were found [i.e., 81% female, mean age of 35.44 years old ($SD=11.51$), 79.4% had comorbid anxiety and 60.3% entered treatment taking psychiatric medication]. Ten therapists, all psychologists, with an average of 1.9 years of clinical experience ($SD=2.13$) met clients individually.

Dropout rate was 36.50% [NT = 41%, CBT = 31%; $\chi^2_{(1)}=0.32$, $p=.568$]. Dropout was defined as the unilateral termination by the client without the therapist's approval or knowledge ([Jung, Serralta, Nunes, & Eizirik, 2013](#)).

Treatment conditions

The CBT ([Beck, Rush, Shaw, & Emery, 1979](#)) and NT ([White, 2007](#)) treatment manuals consisted of 20 sessions and made similar requirements on the clients (e.g., completion of forms, in- and out-of-session assignments).

Measures

- Structured Clinical Interview for DSM-IV ([First, Spitzer, Gibbons, & Williams, 2002](#)) was used to gather clients' demographic (i.e., age, gender, relationship status, professional status and education) and clinical information (i.e., global assessment of functioning [GAF], presence of anxious co-morbidity, medication at intake, previous hospitalizations, previous suicide attempts and previous psychotherapy).
- Graffar Index ([Graffar, 1956](#)) was used to measure socio-economic status (SES).
- Beck Depression Inventory-II (BDI-II; [Beck, Steer, & Brown, 1996](#)) was used to measure baseline severity of depressive symptoms.
- Outcome Questionnaire (OQ45.2; [Lambert et al., 1996](#)) and its subscales were used to measure general psychological distress, interpersonal problems and social role.
- Working Alliance Inventory (WAI-C; [Horvath & Greenberg, 1989](#)) was used at session four to assess the quality of working alliance from the perspective of 40 completers and 15 dropout clients.

Results

Attrition along treatment

Of the 23 clients who eventually dropped out, 48% did so by the end of the fourth session, and 91% left treatment before the 11th session. Mean length of stay in treatment for the dropout group was 6.4 ($SD=4.4$).

Prediction of dropout

As shown on [Table 1](#), t tests and chi-square tests were used to compare dropouts and completers on general characteristics (age, gender, years of education, socioeconomic status, marital status, and employment status), clinical characteristics at intake (GAF, anxious comorbidity, being medicated, previous hospitalization, previous suicide attempt, previous

Table 1 Comparison of completers and dropouts according to continuous and discrete pre-treatment variables.

	Completers <i>M (SD)</i>	Dropouts <i>M (SD)</i>	<i>t</i> ₍₆₁₎	<i>p</i>
Age of Client	36.2 (11.6)	34.1 (11.6)	0.68	.497
Education of client (in years)	13.1 (5.3)	13.7 (3.6)	−0.48	.632
Social Economic Status (Graffar ¹)	12.7 (3.4)	11.7 (2.6)	1.11	.273
GAF at the time of the intake	59.1 (11.5)	61.1 (8.4)	−0.71	.478
Total Score BDI-II Session 01	31.5 (10.2)	31.0 (11.7)	0.17	.867
Total Score OQ-45 Session 01	95.9 (20.1)	91.9 (17.2)	0.80	.430
Score OQ-45.2 Distress Subscale Session 01	57.8 (12.8)	54.6 (11.5)	−0.99	.325
Score OQ-45.2 Social Role Subscale Session 01	16.7 (4.9)	16.9 (3.5)	0.15	.885
Score OQ-45.2 Interpersonal problems Session 01	21.4 (5.7)	20.4 (5.7)	−0.62	.535
Score WAI-C at session 04	50.9 (5.3)	51.0 (5.0)	−0.07	.944
	<i>n (%)</i>	<i>n (%)</i>	$\chi^2_{(1,3)}$	<i>p</i>
<i>Treatment assignment</i>				
Narrative Therapy	14 (41.2%)	20 (50%)	0.70	0.404
Cognitive Behavioural Therapy	9 (31%)	20 (50%)		
<i>Level of therapist experience</i>				
Novice	12 (30.0%)	4 (17.4%)	1.31	.520
Apprentice	1 (2.5%)	1 (4.3%)		
Graduate	27 (67.5%)	18 (78.3%)		
<i>Gender of the client</i>				
Female	33 (82.5%)	18 (78.3%)	0.17	.680
Male	7 (17.5%)	5 (21.7%)		
<i>Relationship status</i>				
Married	15 (37.5%)	6 (26.1%)	3.41	.333
Single	17 (42.5%)	10 (43.5%)		
Divorced	6 (15.0%)	7 (30.4%)		
Widowed	2 (5.0%)	0 (0.0%)		
<i>Professional status</i>				
Employed	18 (45.0%)	14 (60.9%)	3.94	.268
Unemployed	12 (30.0%)	2 (8.7%)		
Student	9 (22.5%)	6 (26.1%)		
Retired	1 (2.5%)	1 (4.3%)		
<i>Previous psychotherapy</i>				
No	35 (87.5%)	20 (87.0%)	0.00	.950
Yes	5 (12.5%)	3 (13.0%)		
<i>Previous suicide attempts</i>				
No	35 (87.5%)	18 (78.3%)	0.93	.334
Yes	5 (12.5%)	5 (21.7%)		
<i>Previous hospitalizations</i>				
No	36 (90.0%)	20 (87.0%)	$\chi^2_{(1)} = .14$	.711
Yes	4 (10.0%)	3 (13.0%)		
<i>Psychiatric medication at intake</i>				
No	11 (27.5%)	14 (60.9%)	$\chi^2_{(1)} = 6.79$	.009
Yes	29 (72.5%)	9 (39.1%)		
<i>Anxious comorbidity at intake</i>				
No	29 (72.5%)	21 (91.3%)	$\chi^2_{(1)} = 3.15$	.076
Yes	11 (27.5%)	2 (8.7%)		

¹ Graffar is an international classification for socioeconomic status (SES; Graffar, 1956). The higher is the score, the lower the SES. This sample means indicate high SES.

Note. M = Mean; SD = Standard Deviation; GAF = Global Assessment of Functioning of the DSM-IV (First et al., 2002); BDI-II = Beck Depression Inventory II; OQ-45.2 = Outcome Questionnaire 45.2; OQ-45.2 IR = Outcome Questionnaire 45.2 Interpersonal subscale; WAI-C = Working Alliance Inventory–client version.

psychotherapy and pre-treatment scores on the BDI-II, OQ-45.2 and its subscales), process related variables (treatment assignment and WAI-C score) and a therapist variable (clinical experience). Those at least marginally significant entered a logistic regression model predicting dropout. Only consumption of medication [$\chi^2_{(1)} = 6.79, p = .009$] and anxious comorbidity at intake [$\chi^2_{(1)} = 3.15, p = .076$] met that criterion. When entered in the logistic regression model, these variables showed independent effects on the odds of dropping out of treatment. Medicated clients were 80% less likely to drop out, compared to non-medicated clients [OR = 0.2 (95% CI = 0.063-0.639), $p = .007$]. Clients presenting anxious comorbidity were 82% less likely to drop out compared to those not presenting anxious comorbidity [OR = 0.182 (95% CI = 0.033-1.016), $p = .0520$].

Discussion

Variables that are usually found to predict dropping out in the literature (e.g., low SES, low education, being female and therapeutic alliance) were not corroborated by our results. Assignment to treatment not predicting dropout is in line with findings in the literature (Swift & Greenberg, 2012), although it conflicts with the findings showing higher dropout rates in CBT therapies when compared to other therapies (e.g., Peñate Castro et al., 2014). These negative findings should be read with caution due to the small variance, restricting its generalization.

Consumption of medication at intake reduced the odds of dropping out from psychotherapy. Although clinicians and researchers agree that "the alleviation of symptoms with medication would reduce the motivation for gaining the understanding or making lifestyle changes needed to bring about a sustainable 'cure'" (Thase & Jindal, 2004, p. 743), they also recognize that pharmacotherapy is "a way to hasten recovery and to help patients make better use of psychotherapy" (p. 744). It appears that the alleviation of acute negative symptoms promoted by medication may have helped the clients adhering to psychotherapy and completing treatment. Also, the fact that medicated clients were assisted simultaneously by a psychiatrist and a psychologist may have decreased the odds of dropout.

The other prominent predictor for treatment dropout was not having a comorbid anxiety disorder or symptoms at intake. It can be suggested that anxiety symptoms would increase activity level and enhance motivation to complete the intervention. Since negative symptoms such as lack of activity and anhedonia characterize MDD, it is possible that depressed clients with no comorbid anxiety would have less motivation for completing treatment.

Results suggest that clinicians should pay extra attention to the clients not taking medication or with no comorbid anxiety, especially on the early stages of psychotherapy, when dropout is most likely to occur.

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References

- American Psychiatric Association (2000). *DSM-IV-TR: Diagnostic and Statistical Manual of Mental Disorders* (4th Revised.). Washington: Author.
- Baekeland, F., & Lundwall, L. (1975). Dropping out of treatment: A critical review. *Psychological Bulletin*, 82, 738-783. <http://dx.doi.org/10.1037/h0077132>
- Beck, A. T., Rush, A. J., Shaw, B. F., & Emery, G. (1979). *Cognitive Therapy of Depression*. New York: Guilford Press.
- Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *Manual for the Beck Depression Inventory-II (BDI-II)*. San Antonio, TX: Psychological Corporation.
- Casares-López, M. J., Díaz-Mesa, E., García-Portilla, P., Bobes-Bascarán, M. T., Fonseca-Pedrero, E., Carreño, E., Marina, P., Bascarán, M. T., Cacciola, J., Alterman, A., & Bobes, J. (2011). Sixth version of the Addiction Severity Index: Assessing sensitivity to therapeutic change and retention predictors. *International Journal of Clinical and Health Psychology*, 11, 495-508.
- First, M. B., Spitzer, R., Gibbons, M., & Williams, J. (2002). *Structured Clinical Interview for DSM-IV-TR Axis I Disorders, Research version, Non-patient Edition (SCID-I/NP)*. New York, NY: Biometrics Research, New York State Psychiatric Institute.
- Graffar, M. (1956). Une méthode de classification sociale d'échantillons de population. *Courrier*, 6, 455-459.
- Horvath, A. O., & Greenberg, L. S. (1989). Development and validation of the Working Alliance Inventory. *Journal of Consulting and Clinical Psychology*, 36, 223-233. <http://dx.doi.org/10.1037/0022-0167.36.2.223>
- Jung, S. I., Serralta, F. B., Nunes, M. L. T., & Eizirik, C. L. (2013). Beginning and end of treatment of patients who dropped out of psychoanalytic psychotherapy. *Trends in Psychiatry and Psychotherapy*, 35, 181-190. <http://dx.doi.org/10.1590/S2237-60892013000300005>
- Lambert, M. J., Burlingame, G. M., Umphress, V., Hansen, N. B., Vermeersch, D. A., Clouse, G. C., & Yanchar, S. C. (1996). The reliability and validity of the Outcome Questionnaire. *Clinical Psychology & Psychotherapy*, 3, 249-258.
- Lester, K., Artz, C., Resick, P. A., & Young-Xu, Y. (2010). Impact of race on early treatment termination and outcomes in posttraumatic stress disorder treatment. *Journal of Consulting and Clinical Psychology*, 78, 480-489. <http://dx.doi.org/10.1037/a0019551>
- Lopes, R. T., Gonçalves, M. M., Machado, P. P. P., Sinai, D., Bento, T., & Salgado, J. (2014). Narrative Therapy vs. Cognitive-Behavioral Therapy for moderate depression: Empirical evidence from a controlled clinical trial. *Psychotherapy Research*, 0, 1-13. <http://dx.doi.org/10.1080/10503307.2013.874052>
- Peñate Castro, W., Roca Sánchez, M. J., Pitti González, C. T., Bethencourt, J. M., De la Fuente Portero, J. A., y Gracia Marco, R. (2014). Cognitive-behavioral treatment and antidepressants combined with virtual reality

- exposure for patients with chronic agoraphobia. *International Journal of Clinical and Health Psychology*, 14, 9–17. [http://dx.doi.org/10.1016/S1697-2600\(14\)70032-8](http://dx.doi.org/10.1016/S1697-2600(14)70032-8)
- Pomp, S., Fleig, L., Schwarzer, R., & Lippke, S. (2013). Effects of a self-regulation intervention on exercise are moderated by depressive symptoms: A quasi-experimental study. *International Journal of Clinical and Health Psychology*, 13, 1–8. [http://dx.doi.org/10.1016/S1697-2600\(13\)70001-2](http://dx.doi.org/10.1016/S1697-2600(13)70001-2)
- Reis, B. F., & Brown, L. G. (1999). Reducing psychotherapy dropouts: Maximizing perspective convergence in the psychotherapy dyad. *Psychotherapy: Theory, Research, Practice, Training*, 36, 123–136. <http://dx.doi.org/10.1037/h0087822>
- Roos, J., & Werbart, A. (2013). Therapist and relationship factors influencing dropout from individual psychotherapy: A literature review. *Psychotherapy Research*, 23, 394–418. <http://dx.doi.org/10.1080/10503307.2013.775528>
- Shamir, D., Szor, H., & Melamed, Y. (2010). Dropout, early termination and detachment from a public psychiatric clinic. *Psychiatria Danubina*, 22, 46–50.
- Sharf, J., Primavera, L. H., & Diener, M. J. (2010). Dropout and therapeutic alliance: A meta-analysis of adult individual psychotherapy. *Psychotherapy: Theory, Research, Practice, Training*, 47, 637–645. <http://dx.doi.org/10.1037/a0021175>
- Swift, J. K., & Greenberg, R. P. (2012). Premature discontinuation in adult psychotherapy: A meta-Analysis. *Journal of Consulting and Clinical Psychology*, 80, 547–559. <http://dx.doi.org/10.1037/a0028226>
- Thase, M. E., & Jindal, R. D. (2004). *Combining psychotherapy and psychopharmacology for treatment of mental Disorders*. In M. J. Lambert (Ed.), *Bergin and Garfield's Handbook of Psychotherapy and Behavior Change* (5th ed., pp. 743–766). New York: Wiley.
- Werner-Wilson, R. J., & Winter, A. (2010). What factors influence therapy drop out? *Contemporary Family Therapy*, 32, 375–382. <http://dx.doi.org/10.1007/s10591-010-9131-5>
- White, M. (2007). *Maps of narrative practice*. New York, NY: WW Norton & Company.