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## EMPIRICAL PAPER

# Patient demographics and psychological functioning as predictors of unilateral termination of psychodynamic therapy

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### Abstract

Approximately one in five patients drops out of treatment before its completion. Little is known about consistent predictors of dropout, and most studies focus on patients' demographic characteristics. A mass of information is collected daily at intake in clinical practice. Based on psychodynamic theoretical conceptualizations and accumulative clinical experience, this information may help predict dropout, and thereby expand the empirically based predictors of dropout. **Objective:** The present study aims at bridging between scientific research and clinical practice by investigating potential predictors of unilateral termination collected at intake, before therapy, in addition to predictors already identified in the literature. **Method:** The study was based on data from 413 patients from a university consulting center. Each patient completed a pre-intake questionnaire collecting demographic information, and underwent an interview conducted by a professional intaker. **Results:** Results indicate that the consistent predictors described in the literature, education, and age, were related to unilateral termination rates. Additionally, lower intrapsychic functionality, as evaluated by the intakers, was also found to contribute uniquely to higher unilateral termination rates. **Conclusion:** This finding attests to the unique value of professional evaluations of patients' intrapsychic functionality, frequently conducted in clinical practice, to detect patients at risk of unilateral termination of treatment.

**Keywords:** unilateral termination; dropout; psychodynamic treatment; intrapsychic functionality; dropout predictors

In the last decades, there has been growing evidence of the efficacy and effectiveness of psychotherapy for mental health disorders (e.g., Cuijpers et al., 2013; Lambert, 2013), but it is impossible to ignore the extremely high dropout rate. A recent meta-analysis indicates that the average dropout rate from therapy stands at 19.7% (Swift & Greenberg, 2012). Patients who drop out from psychotherapy have poorer outcomes (Cahill et al., 2003; Klein, Stone, Hicks, & Pritchard, 2003; Lampropoulos, 2010; Pekarik, 1992) and are likely to be dissatisfied with their treatment (Björk, Björck, Clinton, Sohlberg, & Norring, 2009; Kokotovic & Tracey, 1987; Lebow, 1982). Given the high dropout rate and its potential effect on treatment failure, identifying predictors of dropout from therapy is of critical importance.

In their meta-analysis, Swift and Greenberg (2012) found a high degree of dropout rate variability among studies (ranging between 0% and 74.23%;  $I^2 =$

93.32), suggesting that the rate may be affected by diverse factors. A promising path for understanding predictors of dropout is to focus on patient characteristics (Bohart & Wade, 2013). The empirical literature on dropout suggests that low socio-economic status (Baekeland & Lundwall, 1975; Marmot, 2004; McCabe, 2002), belonging to a minority group (Arnou et al., 2007; Austin & Wagner, 2010), male gender (Khazaie, Rezaie, & de Jong, 2013), young age (Reis & Brown, 1999), and divorce (Khazaie et al., 2013) are associated with higher dropout rates. Studies also found other patient characteristics to be associated with high dropout rates, including a diagnosis of personality disorder (Crawford et al., 2009), schizophrenia (Hamilton, Moore, Crane, & Payne, 2011), less severe depression (Simon & Ludman, 2010), major depression without taking psychiatric medication at intake (Lopes, Gonçalves, Sinai, & Machado, 2015), greater pre-

treatment cognitive dysfunctionality (McKellar, Kelly, Harris, & Moos, 2006), a temperament with higher levels of anger (Fassino, Abbate-Daga, Piero, Leombruni, & Rovera, 2003), greater externalizing problems (Baruch, Gerber, & Fearon, 1998), and low interpersonal distress (Dinger, Zilcha-Mano, McCarthy, Barrett, & Barber, 2013; Thormahlen et al., 2003). In addition to the direct support found in previous research for the contribution of patient characteristics to dropout rate (Bohart & Wade, 2013), some indirect support is available as well. For example, pre-treatment patient characteristics were found to significantly predict the alliance with the therapist (e.g., Zilcha-Mano, McCarthy, Dinger, & Barber, 2014), and alliance in turn was found to significantly predict dropout (Sharf, Primavera, & Diener, 2010). Poorer alliance expectations were also found to significantly predict greater rates of dropout from psychotherapy (Zilcha-Mano et al., in press). Therefore, there are indications of both direct and indirect association between pre-treatment patient characteristics and dropout.

Many of the studies mentioned above were conducted with very small or highly homogenous samples (e.g., same diagnosis, same therapy, or same therapy setting). Therefore, it was important to examine which predictors of dropout are consistent across studies, in a meta-analysis based on heterogeneous populations. Recently, such a meta-analysis based on 669 independent samples was conducted (Swift & Greenberg, 2012). Despite the large number of studies summarized in this meta-analysis, only a few consistent predictors were found, and their average effect sizes were relatively small ( $0.01 < d < 0.29$ ; Swift & Greenberg, 2012). These predictors were young age, low education, diagnosis of an eating disorder, personality disorder, not being in a committed relationship, and male gender. Thus, it is necessary to expand the number of dropout predictors examined to allow for a more accurate prediction of future dropout from therapy.

There is a mass of information being collected in clinical practice, at consulting centers, as well as in inpatient and outpatient departments. Based on theoretical conceptualizations and accumulative clinical experience, this information is expected to contribute to the ability to predict dropout and expand the available empirically based predictors. Extensive time and money are invested in intake sessions. The information obtained at intake is often used in clinical practice to estimate the patient's ability to tolerate treatment. The main patient characteristics typically collected during intake, especially from a psychodynamic perspective, include psychological distress, global functionality, and intrapsychic functionality. Many intake processes worldwide focus

on these factors because of their importance for case formulation in psychodynamic psychotherapy (Guimón, 2014). The importance of assessing these patient characteristics is stressed in the Psychodynamic Diagnostic Manual: "A clinically useful classification of mental health disorders must begin with an understanding of healthy mental processes... It involves a person's overall mental functioning, including relationships; emotional depth; range and regulation; coping capacities; and self-observing abilities" (PDM Task Force, 2006, p. 2).

Psychological distress has been defined as "the unique discomforting, emotional state experienced by an individual in response to a specific stressor or demand that results in harm, either temporary or permanent" (Ridner, 2004, p. 539). Global functionality has been defined as "conveniently covering an extensive continuum from rosy, robust psychological health to the nadir of psychological sickness" (Luborsky et al., 1993, p. 542). Global functionality refers to the adjustment, the ability to cope with urges and distress (ego strength), the harmonious organization of the personality (personality integration), emotional stability, psychiatric severity, adequacy of personality functioning, and the mental health of the person (Luborsky et al., 1993).

The theoretical origins of patient psychological distress and global functionality, and their relation to dropout from psychotherapy originate in Freud's writings (1905, 1913, 1916). Since Freud, efforts have been invested in identifying which patients are "analyzable," that is, which patients are suitable for psychoanalysis. There is an assumption in Freud's writings that for a successful analysis the patient must be able to maintain mature ego attributes in the analytic situation despite the anxieties arising from the analytic process. To cope with this distress, the patient must be able to experience and manage stress, and to have basic ego functioning, so that the distress of therapy does not overload the patient and result in dropping out from therapy (Guttman, 1960). Many authors followed Freud's lead and stressed that the level of distress the patient experiences has an important effect on the risk of dropout. If patients experience too severe distress, they are not able to focus on the therapeutic process, and therapy becomes difficult for them to handle (Rueve & Correll, 2006). Stone (1985), who followed Freud's notion of patient suitability for treatment, argued that a high level of distress can be an important risk factor for dropout from psychodynamically oriented treatment as well.

Intrapsychic functionality refers to a subcomponent of psychodynamic functioning (Hagtvet & Høglend, 2008), and it has been found to develop as a result of good attunement with caregivers early

in life (Lamagna, 2011). Caregivers who reflect the infants' needs and emotions facilitate the development of intrapsychic functionality in the infant, consisting of different abilities, such as reading the mental state of the self and the processing of difficult experiences. Reading the mental state of the self is closely related to the concept of mentalization, which is the ability to represent behavior as mental states, or to have "a theory of mind," and it is a key determinant of self-organization. The acquisition of such abilities enables individuals to respond not only to other people's behavior but also to their conception of beliefs, feelings, hopes, plans, etc. Individuals with high abilities in this respect can make the connection between the external behaviors of the self (as well as of others) and the internal factors that prompt these behaviors (Fonagy & Target, 1997). Without the ability of a person to refer to the mental state of the self and also to that of another, interpersonal communication is limited. The better individuals can identify different mental states within themselves and others, the better their chances are to be involved in intimate, productive, continuous emotional relationships, and the better they are able to experience their own state of mind as different from those of others (Fonagy, Gergely, Jurist, & Target, 2002). The ability to apprehend one's own theory of mind and that of others contributes to the understanding that individuals hold about their own role in interpersonal relationships (Luborsky, 1984; Strupp & Binder, 1984).

Another aspect of intrapsychic functionality is one's ability to process difficult experiences. This ability is also related to the ability to read the mental state of the self, which is also rooted developmentally in infancy. According to object relation theories, the dyadic interactions between the caregiver and the infant in early life affect the infant's ability to process difficult experiences in the future. Dyads in which the caregiver is soothing and processes difficult experiences for the infant can help the child internalize objects that will later assist in soothing and processing difficult experiences independently (Greenberg & Mitchell, 1983).

It has been theoretically argued that the abilities described above, which can be conceptualized together as intrapsychic functionality, have a direct relation to psychotherapy and have the potential to assist the processes of therapy (e.g., Fonagy et al., 2002; Gross & John, 2003). For example, patients who have low intrapsychic functionality may show low levels of insight at the start of treatment, and feel frustrated, which may cause them to drop out (Waska, 2002). Such patients may also have difficulty forming a sustained relationship with their therapist (Harris, 2004), which may become another reason

for dropping out (Sharf et al., 2010). Low intrapsychic functionality may also lead patients to express their mental states and problems by acting them out, which may result in dropping out from treatment when they are disappointed with their therapist (Waska, 2002). In recent years, several characteristics of intrapsychic functionality have been identified empirically (Høglend et al., 2000): (i) Tolerance for affect—the ability to distinguish, express, and experience affect; (ii) Insight—the capacity to understand the dynamics of one's inner world, recognize mental components like wishes and defenses, and relate them to past experiences and to present problems; and (iii) Adaptive capacity—the ability to confront difficult situations and to assert oneself without avoidance or inadequate coping strategies (Hersoug, Høglend, Havik, von der Lippe, & Monsen, 2009).

Empirical studies focusing on psychological distress, global functionality, and intrapsychic functionality in therapy have examined mostly their association with therapeutic alliance and treatment outcome. Findings suggest that higher patient psychological distress level (Raue, Castonguay, & Goldfried, 1993), lower global functionality (Hersoug, Monsen, Havik, & Høglend, 2002), and lower intrapsychic functionality (Hersoug et al., 2009) are related to lower working alliance in therapy. Lower psychological distress (Anderson & Lambert, 2001), lower global functionality (Lambert, Hansen, & Finch, 2001), and higher intrapsychic functionality (Talley, Strupp, & Morey, 1990) before treatment were found to predict better therapy outcomes. But only a few studies have examined these three mental health characteristics as potential predictors of dropout from therapy. The few available studies indicate an association between lower global functionality (Karterud et al., 2003), higher psychological distress (Ogrodniczuk et al., 2008), and lower intrapsychic functionality (Piper et al., 1999) on the one hand, and higher rates of dropout from therapy on the other hand. But the studies examining the ability of these three mental health characteristics to predict dropout are few, and they are based on the patients' self-reports (e.g., Karterud et al., 2003) or relate only to partial definitions of each concept: For example, by referring to the patient's self-exploration characteristic, without taking into account other intrapsychic characteristics (e.g., Piper et al., 1999). Therefore, currently most of the information about the association between these three patient characteristics collected at intake and dropout from therapy is based mainly on clinical experience (e.g., Harris, 2004; Waska, 2002), and has scarcely been investigated empirically.

The discrepancy between the great effort invested in practice to collect this information at intake and the available clinical experience to support it, and the lack of adequate research attention and empirical support points to the need for future studies to examine the extent to which patient characteristics collected at intake can predict dropout from therapy. This line of inquiry is especially important today, given the attempts to bridge the gap between scientific research and clinical practice (Chiesa, 2010).

The aim of the present study is to investigate patient characteristics that can significantly predict dropout from psychotherapy, focusing on both predictors that have been found to be consistently related to dropout in the literature and on psychodynamic-oriented information about patient characteristics frequently collected at intake in clinical practice. The variables used in the analyses were chosen based on a recent meta-analysis of predictors of dropout (Swift & Greenberg, 2012), which suggests six patient characteristics that consistently predict dropout: Young age, male gender, not being in a committed relationship, low education, the presence of an eating disorder, and the presence of a personality disorder. Five of these six variables (all except personality disorders) were available in the data used in the present study, and were therefore used. The patient characteristics identified by Swift and Greenberg (2012) as predictors of dropout were found to predict only a relatively low proportion of dropout variance. Therefore, to the variables suggested by Swift and Greenberg (2012) we added three more, which received theoretical support as potential predictors of dropout: Psychological distress level, intrapsychic functionality, and global functionality level. These variables are routinely collected in intake assessments, especially at clinics with a psychodynamic orientation. The present study used the data of a naturalistic sample from a university consulting center, which is based on a pre-intake self-report questionnaire and on the professional assessments of intakers.

Following Swift and Greenberg's (2012) meta-analysis, our first hypothesis is that younger age, male gender, not being in a committed relationship, lower education, and the existence of an eating disorder predict higher dropout rates from therapy. Our second hypothesis is that patient characteristics frequently collected at intake in clinical practice add a unique significant contribution to predicting dropout. Based on psychodynamic theoretical conceptualizations, as described above, on cumulative clinical experience (e.g., Harris, 2004; Waska, 2002), and on the few available empirical studies (Karterud et al., 2003; Ogrodniczuk et al., 2008;

Piper et al., 1999), we hypothesize that higher psychological distress levels, lower global functionality level, and lower intrapsychic functionality predict higher rates of dropout from therapy.

## Method

### Design

Data were collected over a 2-year period in 2012 and 2013, from a university consulting center in the north of Israel. The database of the consulting center consisted of records of 506 patients, of whom five (0.9%) had no pre-intake data and therefore were excluded from the study. Another 48 patients (9.4%) dropped out before the intake visit and were also excluded. Finally, 40 patients (7.9%) completed an intake session but no documentation about it could be found, and they were also excluded. The attrition from admission to participation in the study is presented in Figure 1.

### Participants

The final study sample included 413 participants who voluntarily applied to the university consulting center for treatment during the years of 2012 ( $n = 214$ ) and 2013 ( $n = 199$ ). Some of the patients dropped out immediately after the intake session ( $n = 68$ ), but most of them attended treatment ( $n = 345$ ). Among those who underwent intake, 310 were in a regular intake ( $n = 310$ ) and 103 in an emergency intake because of immediate concerns (high suicidal ideation, use of psychiatric medications, a history of psychiatric hospitalization, or reporting "feeling severe distress" in the pre-treatment questionnaire). Most patients were the university students<sup>1</sup> ( $n = 319$ ), but some were external students ( $n = 43$ ), employees of the university ( $n = 6$ ), or others ( $n = 45$ ). Patients' average age was 27.33 ( $SD = 5.93$ , range = 19–67); 74.0% were female. Of the final sample, 83.5% were born locally, 7.7% were immigrants from the former Soviet Union (FSU), 2.4% were immigrants from Ethiopia, and 6.3% indicated "elsewhere" in the pre-treatment questionnaire. Table I summarizes the patients' reasons for seeking consultation and their Axis I diagnosis by the Diagnostic and Statistical Manual of Mental Disorders (4th ed., text rev.; DSM-IV-TR; American Psychiatric Association, 2000).

### Measures

**Pre-intake questionnaire.** The pre-intake questionnaire consisted of the patient's demographic

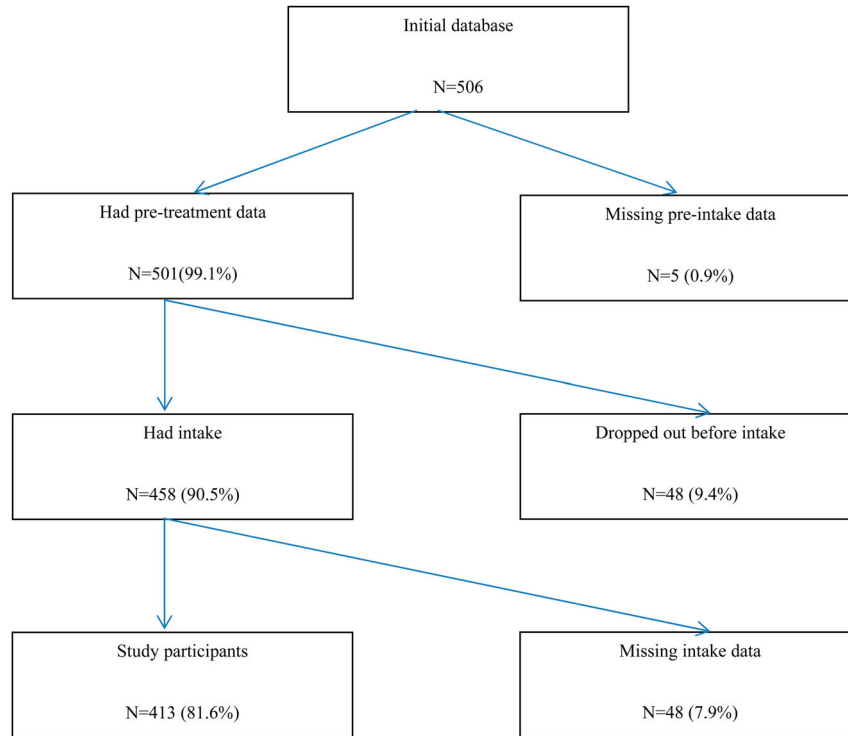


Figure 1. Flow-chart of attrition from admission to complete data collection.

details, including age, gender, marital status, and education (number of years). Participants also answered a one-item question on eating disorder.

**Assessment of a professional intaker.** Intakers conducted 1-hr, semi-structured interviews with each participant, which included evaluation of the patient's psychological functioning. The study focused on the following information: (i) Level of patient's psychological distress, as evaluated by one item scored on a 5-point Likert scale (1 = "not at all" to 5 = "very much"); (ii) Level of patient's intrapsychic functionality, as evaluated by three items: Ability to process difficult experiences, ability for self-understanding, and coherent self-description (each item was rated on a 5-point Likert scale from 1 = "not at all" to 5 = "very much"); Cronbach's alpha for the intrapsychic functionality was adequate ( $\alpha = .85$ ), therefore, one aggregated score based on the three items was used in all analyses; (iii) level of patient's global functioning, as evaluated by four items based on the following four areas of function: Study, social, employment, and the ability to adjust to a given setting; each item was assessed on a 5-point Likert scale (from 1 = "not at all" to 5 = "very much"); Cronbach's alpha for patient functioning was adequate ( $\alpha = .84$ ), therefore an aggregated score based on the four items was used in all analyses.

## Treatment

The data included in the present study concerns only the main treatment offered at the clinic, which is non-limited, long-term psychodynamic therapy once a week. Long-term psychodynamic treatment is commonly defined as lasting for at least 1 year or 50 sessions (Crits-Christoph & Barber, 2000; Leichsenring & Rabung, 2008). The first 2 or 3 months of treatment are part of the orientation and socialization of patients to the treatment (Orne & Wender, 1968), and therefore the treatment is not expected to be successfully completed in the first 2 or 3 months. At this clinic, the minimum expected treatment duration for successful completion is one academic year. This is consistent with other centers providing long-term psychodynamic treatment, in naturalistic settings and in randomized controlled trials (e.g., Høglend et al., 2006). Treatment at the consulting center was subsidized.

## Therapists

The sample included 52 therapists, 88.4% female, 65.3% of them licensed therapists (41.1% clinical social workers and 58.9% clinical psychologists), ranging in age from 38 to 65, with 5–25 years of experience in therapy. The remaining therapists (34.7%) were interns in clinical psychology, aged

Table I. Patients reasons for seeking consultation and their DSM-IV-TR Axis I diagnosis.

Variable		Sample ( <i>n</i> = 413)
Reasons for consultation**	Emotional problems	230 (55.6%)
	Problems with self-esteem	185 (44.8%)
	Problems engaging in romantic relationships	154 (37.3%)
	Trauma in the past	153 (37.1%)
	Family problems	137 (33.2%)
	Physical problems	130 (31.5%)
	Problem in romantic relationships	121 (29.3%)
	Problems in the academic area	120 (29.0%)
	Economic problems	105 (25.4%)
	Social problems	92 (22.3%)
	Employment problems	74 (17.9%)
Sexual problems	64 (15.5%)	
DSM-IV-TR Axis I diagnosis***	Anxiety disorders	48 (11.6%)
	Depression	44 (10.7%)
	Eating disorders	39 (9.4%)
	Attention deficit disorder	31 (7.5%)
	Obsessive-compulsive disorder	4 (1.0%)
	Bipolar disorder	4 (1.0%)
	Substance abuse	4 (1.0%)
	Schizophrenia	3 (0.7%)

\*Values shown as *n* (%).

\*\*According to patient self-report. More than one reason can be chosen.

\*\*\*Diagnosis made by intaker.

27–37, with 2–5 years of experience in therapy. Each intern received 3.5 hr of supervision weekly, divided as follows: One weekly individual supervision from each of their two supervisors, and one and a half weekly hours of group supervision. All therapists were identified as having a psychodynamic orientation. The mean case load for the entire therapist sample was 6.15 (*SD* = 4.29; range = 1–23).

### Intakers

The sample included 36 intakers, 86.1% female, all of whom have completed their academic studies in clinical psychology. Eighteen were interns in clinical psychology, and 18 were licensed clinical psychologists. The intern population of intakers ranged in age from 27 to 37, with 2–5 years of experience in therapy. The licensed clinical psychologists ranged in age from 34 to 54, with 6–20 years of experience in therapy. All had a psychodynamic orientation. The mean case load for the entire sample of intakers was 11.44 (*SD* = 7.64; range = 2–30). Intakers who were also interns participated in an intensive training

process. Before receiving their first intake case, they attended weekly individual training sessions for several weeks, where they acquired the skills needed to evaluate the patients' clinical status, including intrapsychic functionality. They also attended weekly theoretical seminars where they learned the meaning of each concept and its process of development. After receiving their first intake and in the course of their entire work, they received weekly individual supervision sessions, where they discussed their rating decisions with their supervisor. Intakers who were licensed therapists received this training when they were interns, and subsequently received weekly group supervision on their intake cases. In cases of emergency intakes, an expert intaker conducted the intake.

### Procedure

Patients were asked to complete the pre-treatment questionnaire before the intake session either by hand or on a computer. Next, patients were scheduled for an intake session. The time that elapsed between completion of the pre-intake questionnaire and the intake session ranged from 2 weeks to 1 month, or less than 2 weeks in case of an emergency intake (aside from the waiting time, there were no differences in setting between the regular and the emergency intake). During the 50-min intake session, the intaker completed the evaluation form described in the method section. After the intake, the patient was assigned to therapy. All patients were assigned to psychodynamic psychotherapy, regardless of the results of the evaluation process. Therapy began less than a month after the intake session. All patients agreed to participate in the study and signed an informed consent form. Anonymity was ensured and the study was approved by the relevant ethical review board.

### Overview of Data Analysis

We used the most common definition of dropout from non-limited therapy: All patients who dropped out from therapy before the completion of a minimum number of sessions (Swift & Greenberg, 2012), which we set at 10. Therefore, patients who dropped out at or before the 10th session of therapy, including those who dropped out immediately after the intake session, before therapy started, were defined as dropouts. The minimum number of sessions for long-term psychodynamic treatment was selected in such a way as to reduce the possibility that the dropout was caused by an improvement in symptoms (Aderka et al., 2011; Flückiger, 2015).

The definition of the 10th session as the cut-off point for dropout meets both objective criteria, because it is based on attendance duration (Baekeland & Lundwall, 1975), and clinical judgment, because all therapists evaluated these cases as unilateral termination (Van Denburg & Van Denburg, 1992). Therefore, the sample contains only patient-initiated dropouts. As noted above, according to the method followed at the clinic, the first 2 or 3 months of treatment are part of the orientation and socialization of the patients to the treatment (Orne & Wender, 1968), and therefore the treatment is not expected to be successfully completed in the first 2 or 3 months. Empirically, the 10th session cut-off point for dropout falls within the range of the mean and the median number of the session after which the dropout occurs in other studies (3–13; Reis & Brown, 1999).

The data were hierarchically nested, with patients nested within intakers and within therapists. To account for the correlation between observations of patients of the same intaker or of the same therapist, we added random intercepts of patients nested within intakers and of patients nested within therapists to the model using the SAS GLIMMIX procedure in SAS 9.4. To measure the amount of explained variance in unilateral termination due to the random effects of the intaker and the therapist, we used intra-class correlations (ICCs) based on Goldstein, Browne, and Rasbash (2002), which reflect the proportion of variance due to the random effects of the intaker and of the therapist. If significant random effects were found for intakers or therapists, analyses were conducted within a hierarchically nested model.

To identify significant predictors of unilateral termination, we used a two-step logistic regression (ORs and 95% CIs). We entered unilateral termination of therapy as a dichotomous dependent variable. In the first step, we introduced into the model the parameters that are already known from the literature to predict unilateral termination (age, gender, education, eating disorders, and marital status); in the second step, we added the variables that are usually collected in clinical practice at intake and are thought to predict unilateral termination (distress level, global functionality, and intrapsychic functionality). In all analyses, we controlled for intake type (regular or emergency). We chose an alpha level of .05 a priori. Table II presents the means and standard deviations or percentages (depending on the type of variable) of all predictors.

Almost 30% of the sample had at least one observation missing ( $n = 123$ ). To handle best the effect of missing data on the results (Armijo-Olivo, Warren, & Magee, 2009), we conducted the analyses

Table II. Means and standard deviations or percentages (depending on the type of variable) for all predictors.

Variable	Complete sample ( $n = 290$ )	Imputed data ( $n = 413$ )
Age, mean ( <i>SD</i> )	26.47 (4.57)	27.35 (0.29)
Eating disorder	10.70 (31)	10.00 (41.30)
Education, mean ( <i>SD</i> )	14.95 (1.59)	15.01 (0.09)
Psychological distress, mean ( <i>SD</i> )	3.78 (0.75)	3.84 (0.04)
Intrapsychic functionality, mean ( <i>SD</i> )	2.92 (0.67)	2.93 (0.03)
Global functionality level, mean ( <i>SD</i> )	3.31 (0.83)	3.21 (0.04)
Gender, female	75.50 (219)	73.82 (304.90)
Marital status, committed	14.50 (41)	15.91 (65.70)
Intake type, emergency	19.70 (57)	24.38 (100.7)

\*Values shown as % ( $n$ ) unless otherwise noted.

\*\*( $n$ ) in dichotomy variables in fully imputed data presented as means of the 20 datasets.

twice: Once on the complete observations (only patients who did not have any missing observations,  $n = 290$ ) and once on the full dataset, after imputation of missing observations ( $n = 413$ ). We repeated the analyses on the 20 imputed datasets (Graham, Olchowski, & Gilreath, 2007), conducting multiple imputations for the independent variables using the MCMC method, based on a linear regression model (Rubin, 1987). We implemented all the analytic steps on each imputed dataset, and averaged the results. We rejected the hypothesis that the observations were missing completely at random (Little's MCAR test:  $\chi^2 [36] = 90.361, p < .001$ ).

## Results

### Unilateral Termination Rates

The average number of sessions for each patient for the entire sample was 26.73 ( $SD = 27.17$ , range = 0–132). The average number of sessions for the patients who did not terminate unilaterally was 41.63 ( $SD = 24.61$ , range = 11–132). The percentage of patients who terminated the therapy unilaterally was 38% (20.9% immediately after the intake visit and 17.1% between sessions 1–10). The average number of sessions for the patients who terminated unilaterally was 2.63 ( $SD = 3.45$ , range = 0–10).

### Preliminary Analyses

To determine whether there were significant differences in the predictors of the study between those who terminated unilaterally immediately after the intake session and those who terminated unilaterally



after the beginning of therapy, we compared all the predictors between the two groups using independent sample *t*-tests (for the age, education, psychological distress, global functionality, and intrapsychic functionality variables) and chi-square tests (for the gender, marital status, and eating disorders variables). Because all the comparisons yielded non-significant results ( $.08 \leq p \leq .95$ ), we referred to these two subgroups as one group in all study analyses.

### Intaker's and Therapist's Random Effect

The estimated variance of intakers' and therapists' random effects in the model predicting unilateral termination was non-significant ( $\chi^2(1) = .06$ ,  $p = .40$  and  $\chi^2(1) = .66$ ,  $p = .20$ , respectively). The interclass correlation coefficient (ICC) for the intaker was 0.01% and for the therapist 0.07%. This finding indicates that no significant random effect was found for either therapists or intakers in predicting unilateral termination, suggesting the ratio of unexplained variance in unilateral termination because of differences between therapists and intakers<sup>2</sup> was not significantly different from zero. Therefore, we used classical logistic analysis, assuming the independence of the observations.

### Logistic Regression for Predicting Unilateral Termination

The results of the logistic regression analyses, based on both the complete observations and the fully imputed data in step two, are presented in Table III. In the analyses on the complete observation sample (only patients who had no missing observations,  $n = 290$ ), the model for predicting unilateral termination was significant ( $\chi^2(8) = 15.88$ ,  $p = .04$ ).

Two out of the seven variables showed a significant unique contribution to predicting unilateral termination in the second step: Patient education and intrapsychic functionality. This finding indicates that patients with higher education level and greater intrapsychic functionality were less likely to unilaterally terminate treatment. When repeating the same analyses using the multiple imputation data, two variables showed significant unique contribution in predicting unilateral termination in the second step: Patient age and intrapsychic functionality (Table III). This finding indicates that younger<sup>3</sup> patients and those with higher intrapsychic functionality levels were less likely to unilaterally terminate treatment.

We found that the first step predicted 3.8% (Nagelkerke  $R^2$ ) of unilateral termination rates in the complete sample, and 4.3% in the fully imputed data. With the addition of the second step, the complete model predicted 8.3% of unilateral termination rates in the complete sample, and 8.6% in the fully imputed data. These findings suggest that the variables collected at intake add considerably to the prediction of unilateral termination, beyond the parameters already known from the literature (4.5% in the complete sample and 4.3% in the fully imputed data).

We conducted a *post hoc* analysis to examine whether predictors of unilateral termination differ between those who never began treatment and those who started treatment and stopped. To this end, we created two datasets: The first contained patients who unilaterally terminated before treatment began and patients who did not terminate unilaterally; the second contained patients who unilaterally terminated between sessions 1–10 and patients who did not terminate unilaterally. In each dataset we tested the relationship between predictors of interest

Table III. Regression analysis based on the complete data (without missing observations) as well as imputed data to predict unilateral termination by age, gender, existence of eating disorders, education, psychological distress, global functionality, intrapsychic functionality, and marital status, controlling on intake type (step two).

Variable	Complete sample					Imputed data				
	<i>b</i>	<i>SD</i>	OR	95% CI	<i>p</i>	<i>b</i>	<i>SD</i>	OR	95% CI	<i>p</i>
Age	0.04	0.34	1.04	0.97–1.11	.250	0.05	0.02	1.05	1.00–1.09	.044
Eating disorder	0.06	0.20	1.06	0.71–1.59	.769	0.07	0.18	1.07	0.75–1.53	.696
Education	–0.21	0.09	0.81	0.68–0.98	.029	–0.13	0.08	0.88	0.74–1.03	.120
Psychological distress	0.32	0.20	1.37	0.92–2.05	.119	0.20	0.17	1.22	0.87–1.72	.240
Intrapsychic functionality	–0.54	0.21	0.58	0.38–0.88	.011	–0.42	0.17	0.65	0.46–0.92	.015
Global functionality level	0.05	0.18	1.05	0.74–1.50	.762	–0.14	0.15	0.87	0.65–1.16	.342
Gender	–0.40	0.32	0.67	0.36–1.25	.210	–0.12	0.25	0.88	0.54–1.46	.632
Marital status	0.56	0.39	1.76	0.81–3.81	.152	0.23	0.31	1.26	0.69–2.31	.452
Intake type	–0.07	0.33	0.92	0.48–1.78	.814	0.42	0.26	1.53	0.92–2.53	.098

Note. *SD* = standard deviation; OR = odds ratio; CI = confidence interval.

and the probability for unilateral termination. Finally, we used Fisher's Z transformation to check whether there was a difference between the two datasets in each parallel prediction slope (e.g., whether there was a difference between the prediction slope of the intrapsychic functionality in the first dataset and that in the second one). We found that none of the interactions were significant in the complete sample ( $.19 \leq p \leq .80$ ) or in the fully imputed data ( $.07 \leq p \leq .96$ ). This finding suggests that no significant differences exist in predictors of unilateral termination between the subset that never began treatment and the subset that started treatment and stopped.

### Discussion

Many researchers and clinicians have been concerned about the high rates of unilateral termination of therapy (Swift & Greenberg, 2012). But only few consistent predictors of unilateral termination have been identified so far in the literature. At the same time, a mass of information is being collected in clinical practice with the aim of identifying patients who will be able to remain in treatment and benefit from it. The aim of the present study was to contribute to bridging the gap between clinical practice and scientific research. The study examines whether some of the characteristics of the patient's psychological functioning, information about which is collected in clinical practice, especially at clinical centers with psychodynamic orientations, can expand the range of predictors of unilateral termination of therapy and join the predictors that have already been identified in the literature. We examined whether previously identified unilateral termination predictors and factors that are routinely being collected in practice in the form of clinicians' evaluations can together serve to predict unilateral termination.

Consistent with Swift and Greenberg's (2012) meta-analysis, we found that patients' education and age made a unique significant contribution to predicting unilateral termination. Our results validated previous findings, showing that lower patient education level predicts higher unilateral termination rates. Patient age was also found to predict unilateral termination, but in the present study it pointed in the opposite direction from that found in the literature: Older age predicted a higher unilateral termination rate. Male gender, marital status, and the presence of eating disorders were not found to significantly predict unilateral termination.

The inconsistency in the direction of the association between age and unilateral termination in the present study may be explained by our focus on a specific population. Because the study was based on

data collected at a university consulting center, most of the patients were students. It is possible, therefore, that the relation between age and unilateral termination is different in this population. Generally, older age is associated with lower unilateral termination rates (Swift & Greenberg, 2012), but in the case of a student population, which can be defined generally as a young, motivated, and functioning group, this may not be the case. Younger students may show greater ability to persevere in treatment than those who become students at a relatively older age and those who are not students. This *post hoc* hypothesis is consistent with a previous study documenting the same inverse relation between age and unilateral termination with a similar population of students at a university consulting center (Lampropoulos, Schneider, & Spengler, 2009).

In the present study, we also focused on the clinician's evaluation of parameters that are theoretically conceptualized as affecting unilateral termination and are routinely collected in clinical practice as potential predictors of unilateral termination. Findings suggest that intrapsychic functionality is a significant predictor for unilateral termination, with a unique contribution to predicting unilateral termination even when taking into account other variables that have been previously identified as consistent predictors of unilateral termination in the literature. The other two parameters collected in clinical practice examined in the present study, global functionality level and psychological distress, did not contribute any unique variance to the prediction of unilateral termination.

The ability of intrapsychic functionality to predict unilateral termination is consistent with the theoretical literature and with accumulated clinical experience. The theoretical importance of the patient's intrapsychic characteristics in psychotherapy has been recognized decades ago. Accumulating clinical experience suggests that low intrapsychic functionality is related to low emotional bond with the therapist (Harris, 2004), discomfort in the therapy situation, and with a tendency to act out the patient's problem with the therapist—elements that can, consecutively, result in the patient unilaterally terminating the therapy (Waska, 2002).

Although hardly any empirical data has been collected on the ability of intrapsychic functionality to predict unilateral termination, some findings in the literature support the general importance of intrapsychic functionality for understanding the process and outcome of psychotherapy. Higher intrapsychic functionality has been found to be related to higher working alliance in therapy (Hersoug et al., 2002, 2009), and to better therapy outcomes (Talley et al., 1990). Piper et al. (1999) focused on one

intrapsychic characteristic, the patient's self-exploration as evaluated by the therapist during treatment, and found that it was related to unilateral termination of therapy. The present study contributes to the literature by demonstrating that intrapsychic functionality, as evaluated by an external clinician before the beginning of treatment, can significantly and uniquely predict unilateral termination.

If replicated in future studies, the findings that patients who have low intrapsychic functionality are at greater risk of unilaterally terminating long-term psychodynamic psychotherapy have important clinical implications. Therapists should invest time in implementing strategies that minimize unilateral termination rates in this subgroup of patients. First, greater effort should be exerted in reaching out to this population at the intake stage and raising its motivation for treatment, using such methods as the motivational interview (Miller & Rollnick, 2013), and identifying obstacles that may prevent them from beginning treatment, to prevent unilateral termination before the first session. Second, with patients who arrive for the first session, it is recommended to use supportive techniques for building a strong alliance before interpretations are offered (Wachtel, 2015). Specific strategies for resolving ruptures should be implemented even in cases of slight ruptures (Safran & Muran, 2000). Third, other psychotherapies should also be offered, although no studies exist to support a claim that patients with low intrapsychic functionality are less likely to unilaterally terminate other types of treatment.

To the best of our knowledge, this is the first study to demonstrate empirically that intrapsychic functionality, as assessed by an intaker, can predict rates of unilateral termination of therapy. This pioneering result should be considered with caution. If replicated, the results of this study can open the door for future research to investigate the relations between intrapsychic functionality and other predictors that are collected in practice with unilateral termination of therapy. Replication of these results would attest to the importance of intake sessions with a clinician who can evaluate the patient's intrapsychic functionality for the purpose of predicting future unilateral termination of therapy. Future studies should also address the possibility that at least some of the variance explained by intrapsychic functionality can also be explained by less costly self-report measures, such as attachment security, personality disorder symptoms, etc. Therefore, future studies examining the unique contribution of the intrapsychic functionality and of other variables collected at intake, beyond potential alternatives, should be evaluated before the merit of the intake variables in predicting unilateral termination can be completely acknowledged. Such

studies may also help elucidate the ability of patients to adequately report their capabilities on measures such as intrapsychic functionality (Beaulieu-Pelletier, Bouchard, & Philippe, 2013), and the ability of such self-report measures to predict unilateral termination rates.

Overall, we found that 38% of patients unilaterally terminated the therapy. This dropout rate falls within the extremely wide range reported in Swift and Greenberg's (2012) meta-analyses (0%–74%). The meta-analyses indicated higher dropout rates for clinics with similar characteristics to those of the present one, such as no limit on treatment time (average of 29%), no manualization (average of 28.3%), and university-based clinics (average of 30.4%). Moreover, the relatively high unilateral termination rates in the present study may be related to our inclusion as cases of unilateral termination of treatments that never began, following an intent-to-treat rationale, similarly to several other studies (for a review, see Swift & Greenberg, 2012).

When considering the implications of the present study, it is important to take into account its limitations. First, because the intakers' assessments in the study were based on practical clinical needs, and because these assessments did not receive adequate research attention before, their psychometric characteristics, including their validity and inter-rater reliability, require future systematic exploration. The fact that the level of the patients' psychological distress was assessed based on a single item may also cast doubt on its validity. The question concerning the psychometric characteristics of the measure is perhaps the most important limitation of the present study and of other studies aimed at bridging the gap between empirical investigations and clinical practice. Future studies should examine the intra-judge reliability of the assessments and their convergent validity, together with other related constructs that have been examined previously in the empirical literature (e.g., the Psychodynamic Functionality Scale; Hoglend et al., 2000, and the Self-Understanding of Interpersonal Patterns Scale-Revised; Gibbons et al., 2009). A second limitation has to do with the fact that the study was conducted at a university consulting center. Therefore, despite the range of diagnoses present, the fact that most patients were young university students with some level of higher education (ranging from 12 to 21 years of education), limits our ability to generalize the results to other populations. This limitation is especially important when considering the inverse age effect we found, which may be related to the specific population of the present study. The third limitation concerns the missing data of those who dropped out before the intake session. Because the present study was based

on factors that are collected during the intake process, it was not possible to draw conclusions from our results about a sample of patients who unilaterally terminated the therapy before the intake session. A fourth limitation stems from the fact that we combined the samples of patients who underwent regular and emergency intakes, although we controlled for type of intake in all analyses. Future studies with a sufficiently large sample size for intakes of each type should focus on potential differences between the two. Fifth, at the present university consulting center the information about Axis II diagnoses was not collected in a systematic way, and therefore could not be used. Sixth, no differences were found between therapists and intakers in unilateral termination rates. One *post hoc* explanation for the insignificant effect for therapists is that therapist experience had been taken into account when matching therapists with patients. Moreover, unfortunately, no data are available on the abilities and competences of individual therapists, such as level of empathy or ability to facilitate repair processes; therefore, these parameters could not be used as potential predictors of unilateral termination. We believe that this promising path for future research can help clarify the present finding of the insignificant effect for therapists.

The present study represents an important step in the effort to bridge the gap between clinical practice and scientific research aimed at decreasing the high rates of unilateral termination of therapy. The study demonstrates the importance of the patients' intrapsychic functionality, in addition to education and age, in predicting rates of unilateral termination of treatment. The study suggests adding to the known demographic predictors, previously identified in the literature, a new one, based on clinician evaluation. Better understanding of the predictors collected in clinical practice, particularly concerning the patient's intrapsychic functionality, can provide predictive information that is important for determining suitable interventions for those who are expected to unilaterally terminate their therapy.

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### Notes

<sup>1</sup> The majority of participants were evenly distributed between 13 and 17 years of education. Mean years of education was 14.9, with an *SD* of 1.59, a median of 15, and a skewness value of .65.

<sup>2</sup> We also conducted an exploratory analysis to examine the potential effect of gender match between intakers and patients. There were 277 (67.1%) matched gender cases between intaker and patients. In a logistic regression analysis, the effect of gender matching on unilateral termination was not found to be significant ( $B = 0.243$ ;  $SD = 0.220$ ;  $OR = 1.275$ ; 95%  $CI = 0.83-1.96$ ;  $p = .26$ ).

<sup>3</sup> Although the ability of age to predict unilateral termination was significant only in the fully imputed data and not in the complete sample, the *ORs* for age in predicting unilateral termination in the two data sets were the same (1.05), therefore the differences between the two samples can be attributed to sample size.

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