# Impact of Comorbid Personality Disorders on Depression Treatment in Routine Outpatient Care

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# Impact of Comorbid Personality Disorders on Depression Treatment in Routine Outpatient Care

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**Objective:** The impact of personality disorder on treatment effectiveness for depression has been debated, and study results have been inconsistent. However, studies that report a negative impact of personality disorders on depression treatment outcomes are often characterized by uncontrolled treatment designs. Within such contexts, individuals with depression and personality disorders are at risk to receive suboptimal treatment. The aim of this retrospective observational study was to investigate whether and to what extent comorbid personality disorders were associated with the type and amount of depression treatment received in routine outpatient care.

**Methods:** Retrospectively extracted data from electronic records of 1,455 outpatients treated for depression at several sites of a nationwide mental health provider in the Netherlands were included. The type and number of treatment sessions and visits were analyzed by using regression models.

**Results:** Individuals with depression and comorbid personality disorders received more psychotherapy sessions than individuals without personality disorders, irrespective of depression severity. The number of pharmacotherapy sessions and supportive and crisis visits did not differ between individuals with and without comorbid personality disorders.

**Conclusions:** Individuals with depression and personality disorders received more intensive treatment than individuals without comorbid personality disorders. These results conflict with treatment guidelines and recommendations from high-quality studies and may be indicative of overtreatment among this large group of patients.

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Despite the many available and effective treatment options for depression (1, 2), a substantial number of individuals do not achieve remission (3, 4). Because individual treatment responses vary and are highly unpredictable, identifying risk factors associated with treatment outcome may help to personalize treatment selection and subsequently improve remission rates (5, 6). In addition to known risk factors for treatment resistance, including high depression severity and chronicity of the index episode (7, 8), the presence of comorbid personality disorder is often considered (9, 10). Its relevance is potentially large because personality disorders are a common comorbid condition of outpatients with depression (11, 12).

Two frequently cited meta-analyses (13, 14) have reported that personality disorders negatively affect acute-phase treatment outcomes in depression, concluding that the presence of these disorders is important in the prognosis of depression. In contrast, a review by Mulder (15), which focused solely on controlled studies, found no negative effects of personality disorders. According to Mulder, this difference in findings could be explained by patients with

these comorbid conditions receiving less optimal treatment in uncontrolled studies, because such studies are likely biased by clinicians who regard a personality disorder as a relevant factor in treatment selection. Three meta-analyses have contributed to Mulder's hypothesis, indicating no significant differences in outcomes between individuals with and without personality disorders in controlled trials of pharmacotherapy (16, 17) and cognitive-behavioral therapy

**HIGHLIGHTS**

- Individuals with personality disorders received more sessions of psychotherapy for depression than individuals without these disorders.

- Personality disorders did not affect the number of pharmacotherapy visits nor crisis visits for depression.

- The challenging treatment of patients with depression and a comorbid personality disorder requires focused depression therapy to reduce the risk of both under- and overtreatment.

(18) for depression. Their findings have been replicated and extended by a recent meta-analysis (19) that focused on treatment outcomes in only well-designed controlled trials of pharmacotherapy and psychotherapy for depression. Results showed no significant differences between individuals with and without comorbid personality disorders in terms of average depression severity change and rates of response and remission (19). Because individuals with personality disorders appear to have better treatment outcomes in studies with controlled treatment selection, the less satisfactory outcomes of naturalistic designs may be incorrectly attributed to the comorbid condition, instead of to insufficiently provided depression treatment. On the basis of these meta-analyses (16–19), one could hypothesize that with care as usual, treatment provision may be less optimal for individuals with personality disorders. However, only a few older studies (20, 21) have reported on this issue, indicating that individuals with comorbid personality disorders receive less pharmacotherapy and electroconvulsive therapy (ECT) for depression, compared with counterparts without comorbid personality disorders. Recent studies addressing this research question are lacking.

The aim of the current study was to examine whether, and to what extent, the presence of comorbid personality disorders was associated with the type and number of treatment sessions received in the context of naturalistic outpatient depression care. First, we examined whether individuals with comorbid personality disorders received different types and intensities of depression treatments than those recommended by international and national evidence-based guidelines (i.e., psychotherapy, pharmacotherapy, a combination of both, or ECT [22–24]). We hypothesized, on the basis of the limited evidence available on the receipt of less pharmacotherapy and ECT among individuals with depression and comorbid personality disorders, that these individuals would receive less optimal treatment (i.e., fewer therapy sessions, particularly for pharmacotherapy) than individuals with depression and no comorbid personality disorders, irrespective of the level of depression severity. Second, we investigated whether comorbid personality disorders affected the number of other types of care received. We hypothesized that individuals with depression and comorbid personality disorders would be more likely to receive a greater number of supportive and crisis visits than individuals without comorbid personality disorders.

## METHODS

### Design and Participants

This naturalistic cohort study was conducted at PsyQ, a nationwide organization in the Netherlands that provides outpatient secondary mental health care. The patients whose data were studied were referred to several PsyQ outpatient departments for specialized treatment for depression. Anonymized data were retrospectively extracted from the electronic patient record (EPR) of individuals who completed a diagnostic workup between June 2014 and June 2016. Data from adults (ages ≥18 years) who met the *DSM-IV-TR* criteria for major depressive disorder or dysthymic disorder according to their EPR were selected for inclusion in the study. Information on treatments received was extracted for a maximum of 2 years after the diagnostic workup. The Medical Research Ethics Committee of the Leiden University Medical Centre waived formal informed consent requirements because only routinely collected information was used for the study (25). Data from individuals who had objected to the use of their information for scientific purposes were not included. Exclusion criteria were a primary diagnosis of bipolar disorder, psychotic disorder, or substance dependence (except for nicotine). All patients whose data were analyzed had received treatments by trained professionals (psychiatrists, psychologists, and psychiatric nurses) according to the Dutch national evidence-based guideline for depression treatment (24).

### Measures

*Outcomes.* The primary outcome of this study was the type and number of face-to-face treatment sessions received in accordance with international and national evidence-based guidelines for depression treatment (e.g., pharmacotherapy, psychotherapy, a combination of both, and ECT). To further examine the other types of care received by individuals with depression, with or without a comorbid personality disorder, the number of supportive visits and crisis visits were examined as secondary outcomes. Supportive visits were defined as planned face-to-face appointments with social workers or nurses focusing on psychosocial problems. Crisis visits were unplanned face-to-face appointments regarding an acute situation (e.g., suicidality) and were provided by various health care professionals, including psychiatrists and psychologists. Primary and secondary outcomes were extracted from the EPR, which used a coding system to represent the type and number of treatment sessions received.

*Comorbid personality disorder.* The presence of a comorbid personality disorder was based on a patient's score on the Standardized Assessment of Personality–Abbreviated Scale (SAPAS), which was an element of the routine diagnostic workup and was available to the therapists. The SAPAS is a clinician-rated eight-item questionnaire that is used to screen for the presence of personality disorders in routine clinical care (26–28). It includes descriptive statements about the person that can be scored as 0 (not present) or 1 (present). A score of ≥3 has been found to correctly identify 73.1% of comorbid personality disorders among an outpatient sample of individuals with depression (26) and is used as a cutoff score to indicate the presence of a personality disorder. For readability purposes, we will refer to having this score as having a "comorbid personality disorder." Individuals missing a SAPAS score according to their EPR were excluded from the analyses.

**FIGURE 1. Flowchart of the sample studied[a]**
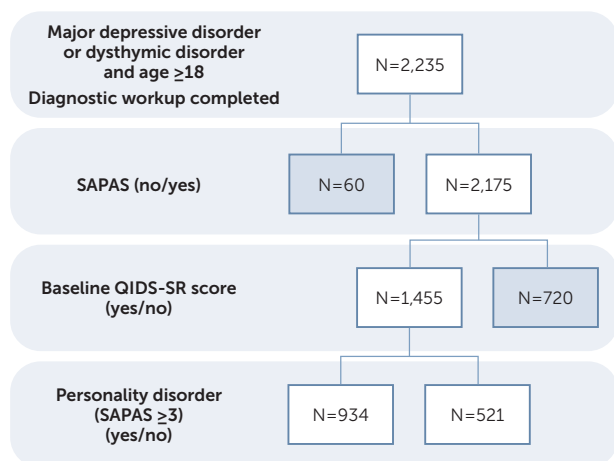


[a] There were no significant differences in clinical and demographic parameters between analyzed electronic patient records (N=1,455) and records missing a completed baseline Quick Inventory of Depressive Symptomatology–Self Report (QIDS-SR) or Standardized Assessment of Personality–Abbreviated Scale (SAPAS) score (N=780), except for previously undergone inpatient or day treatment. However, portions were small in both groups (2.5% [N=37] versus 4.2% [N=33], $\chi^2$=4.77, p=0.03). Blue boxes indicate the number of individuals missing a complete assessment.

*Additional pretreatment variables.* Demographic variables (age and gender) were extracted from the EPRs. Baseline depression severity was measured with the Quick Inventory of Depressive Symptomatology–Self Report (QIDS-SR) (29), a 16-item self-report depression symptom severity scale. The QIDS-SR score (not included in the diagnostic workup but filled out separately online by the patients) was considered a baseline measure when it was obtained 45 days before or after the diagnostic workup. Individuals with missing baseline QIDS-SR scores according to their EPR were excluded from the analyses. Information on episode duration and severity, comorbid anxiety, previous treatment failures, functional impairment, and psychosocial stressors was obtained by using the Dutch Measure for Quantification of Treatment Resistance in Depression (25) during the diagnostic workup. Additionally, childhood adversity was assessed by the clinician during the diagnostic workup by asking the question, "Have you had to deal with severe affective neglect, (repeated) sexual abuse, or psychological or physical threats during your youth (before the age of 16 years)?" Information on the *DSM* diagnosis (major depressive disorder or dysthymic disorder) and the duration of treatment in days was also extracted from the EPRs.

## Statistical Analyses

First, pretreatment characteristics of individuals who were missing baseline QIDS-SR and/or SAPAS scores (N=780) and of individuals included in the analyses (N=1,455) were compared by using t tests (with Cohen's d effect sizes) and chi-square tests where appropriate. Second, pretreatment variables of individuals with and without

comorbid personality disorders were examined using t tests (with Cohen's d effect sizes) and chi-square tests. Third, the association between the amount of depression treatment received in accordance with international and national evidence-based guidelines and the presence of a comorbid personality disorder was tested. For this analysis, two separate negative binomial regression models were applied. The numbers of psychotherapy and pharmacotherapy sessions were the dependent variables in the first and second models, respectively. For both models, the presence of a comorbid personality disorder was included as an independent variable. To examine the moderating impact of baseline depression severity on the association between number of sessions and the presence of comorbid personality disorders, QIDS-SR baseline score and a QIDS-SR baseline score × comorbid personality disorder status interaction were added to the models as independent variables. After that, two negative binomial regression models were applied with the secondary outcomes (the numbers of supportive and crisis visits) as dependent variables and comorbid personality disorder status, QIDS-SR baseline score, and QIDS-SR baseline score × comorbid personality disorder status interaction as independent variables. For all analyses, the independent variables were centered to prevent errors in statistical inference (30).

## RESULTS

### Pretreatment Comparisons Between Individuals With and Without Missing Baseline QIDS-SR and SAPAS Scores

As illustrated in Figure 1, 1,455 of 2,235 individuals completed baseline QIDS-SR and SAPAS assessments, according to their EPRs, and were therefore included in our analyses. Individuals with and individuals without a completed baseline QIDS-SR and/or SAPAS assessment did not significantly differ in terms of age; gender; baseline depression severity; previous treatment failures, including pharmacotherapy, psychotherapy, or ECT; functional impairment; comorbid anxiety; psychosocial stressors; or childhood adversity. Individuals with missing baseline QIDS-SR and/or SAPAS scores had significantly more failures of intensified treatment (i.e., inpatient and day treatment) than those with complete QIDS-SR and/or SAPAS scores; however, the proportion of individuals who underwent these intensified treatments was low in both groups (4.2% [N=33] versus 2.5% [N=37], $\chi^2$=4.77, p=0.03).

### Pretreatment Comparisons Between Individuals With and Without Comorbid Personality Disorders

Table 1 shows the differences in pretreatment characteristics between individuals with and without comorbid personality disorders. Individuals without comorbid personality disorders were significantly older compared with individuals with personality disorders (t=2.99, df=1,453, p=0.003), although the effect size of this difference was small (Cohen's d=0.16). Comorbid personality disorders were associated

with higher average QIDS-SR baseline scores (t=3.80, df=1,453, p<0.001), although the effect size of the difference between individuals with and without personality disorders was small (Cohen's d=0.21). The index episode of depression was significantly longer for individuals with comorbid personality disorders ($\chi^2$=24.9, p<0.001). In addition, higher levels of comorbid anxiety, psychosocial stressors, and childhood adversity were found among individuals with comorbid personality disorders compared to those without personality disorders ($\chi^2$=27.1, p<0.001; $\chi^2$=4.6, p=0.03; $\chi^2$=46.7, p<0.001), although the effect sizes of these differences were small ($\Phi$=0.14, $\Phi$=0.06, and $\Phi$=0.18, respectively). Finally, comorbid personality disorders were associated with a higher proportion of dysthymia diagnoses ($\chi^2$=7.5, p=0.006) and a higher average treatment length in days (t=−2.18, df=1,453, p=0.03).

**TABLE 1. Pretreatment characteristics of individuals with depression with and without comorbid personality disorder (PD)[a]**

| Characteristic | Individuals without PD (N=521) | | Individuals with PD (N=934) | |
|---|---|---|---|---|
| | N | % | N | % |
| Age (M±SD years)** | 41.3±13.2 | | 39.2±12.4 | |
| Female | 353 | 67.8 | 611 | 65.4 |
| QIDS-SR score (M±SD)** | 16.3±4.9 | | 17.2±4.4 | |
| Episode duration** | | | | |
| ≤12 months | 286 | 54.9 | 410 | 43.9 |
| 13–24 months | 117 | 22.5 | 199 | 21.3 |
| >24 months | 118 | 22.6 | 325 | 34.8 |
| Treatment failures | | | | |
| Antidepressants | 215 | 41.3 | 380 | 40.7 |
| Psychotherapy | 213 | 40.9 | 397 | 42.5 |
| Electroconvulsive therapy | 4 | .8 | 4 | .4 |
| Intensified treatment[b] | 13 | 2.5 | 24 | 2.6 |
| Functional impairment | | | | |
| No impairment (GAF 90–100) | 2 | .4 | 4 | 0.4 |
| Mild (GAF 60–90) | 84 | 16.1 | 104 | 11.1 |
| Moderate (GAF 30–60) | 427 | 82.0 | 808 | 86.5 |
| Severe (GAF 0–30) | 8 | 1.5 | 18 | 1.9 |
| Comorbid anxiety* | | | | |
| Not present | 254 | 48.8 | 330 | 35.3 |
| Present, but not fulfilling *DSM-IV* criteria | 188 | 36.1 | 394 | 42.2 |
| Fulfilling *DSM-IV* criteria | 79 | 15.2 | 210 | 22.5 |
| Psychosocial stressors | 394 | 75.6 | 751 | 80.4 |
| Childhood adversity** | 125 | 24.0 | 391 | 41.9 |
| Dysthymia diagnosis**[c] | 31 | 6.0 | 95 | 10.2 |
| Treatment length (M±SD days)*[d] | 332.5±238.9 | | 361.4±245.5 | |

[a] GAF, Global Assessment of Functioning; QIDS-SR, Quick Inventory of Depressive Symptomatology–Self Report.
[b] Intensified treatment was defined as day-patient treatment or inpatient treatment.
[c] Proportion of individuals with a *DSM* diagnosis of dysthymia (and not major depressive disorder).
[d] Treatment length in days within a 2-year follow-up period, including all treatments (pharmacotherapy, psychotherapy, crisis contacts, and supportive visits).
* p<.05, **p<.01; significant difference between groups with and without PD.

## Received Depression Treatment in Accordance With Evidence-Based Guidelines

Table 2 provides the mean number of pharmacotherapy and psychotherapy sessions for individuals with and without comorbid personality disorders. Table 3 summarizes the results of the negative binominal regression models on the association between comorbid personality disorders and the number of pharmacotherapy and psychotherapy sessions. There was no significant association between the presence of comorbid personality disorders and the number of pharmacotherapy sessions received. Higher baseline depression severity was associated with a higher number of pharmacotherapy sessions, but there was no significant "depression severity × personality disorder status" interaction. Individuals with comorbid personality disorders received significantly more psychotherapy sessions than individuals without personality disorders. No significant effect of baseline severity or baseline depression severity × personality disorder status interaction on the number of received psychotherapy sessions was found. The number of ECT sessions was not analyzed as a separate outcome because only four individuals received ECT.

## Total Care Received, Including Non–Evidence-Based Treatments

Table 2 shows the mean number of supportive and crisis visits for individuals with and without comorbid personality disorders. Table 3 summarizes the estimates of two negative binomial regression models for the secondary outcomes (the number of supportive and crisis visits). For both models, higher baseline depression severity was (borderline) significantly associated with more visits. The presence of comorbid

**TABLE 2. Amount and type of depression treatment received by individuals with and without comorbid personality disorder (PD)**

| Type of visit | Individuals without PD (N=521) | | Individuals with PD (N=934) | |
|---|---|---|---|---|
| | M | SD | M | SD |
| Pharmacotherapy | 3.90 | 5.64 | 3.91 | 5.09 |
| Psychotherapy | 15.90 | 19.76 | 22.08 | 28.37 |
| Supportive | 7.96 | 16.38 | 10.40 | 22.34 |
| Crisis | .80 | 6.72 | .60 | 4.05 |

TABLE 3. Effect of comorbid personality disorder (PD) on depression treatment received (negative binominal regression)

| Type of visit | B | SE | Wald | p | OR | 95% CI |
|---|---|---|---|---|---|---|
| Pharmacotherapy sessions | | | | | | |
| Intercept | 1.36 | .06 | 505.89 | <.001 | 3.91 | 3.47–4.40 |
| Depression severity | .50 | .01 | 16.64 | <.001 | 1.05 | 1.03–1.08 |
| Comorbid PD[a] | −.06 | .08 | .59 | .441 | .94 | .81–1.09 |
| Depression severity × comorbid PD | .02 | .02 | .84 | .361 | 1.01 | .98–1.05 |
| Psychotherapy sessions | | | | | | |
| Intercept | 2.77 | .06 | 2,083.60 | <.001 | 15.99 | 14.20–18.01 |
| Depression severity | .01 | .01 | .87 | .350 | 1.01 | .99–1.04 |
| Comorbid PD[a] | .31 | .08 | 16.30 | <.001 | 1.36 | 1.17–1.57 |
| Depression severity × comorbid PD | .02 | .02 | 1.14 | .285 | 1.02 | .99–1.05 |
| Supportive visits | | | | | | |
| Intercept | 2.07 | .09 | 557.67 | <.001 | 7.95 | 6.70–9.45 |
| Depression severity | .06 | .02 | 10.08 | .002 | 1.06 | 1.02–1.10 |
| Comorbid PD[a] | .19 | .11 | 2.86 | .091 | 1.20 | .97–1.49 |
| Depression severity × comorbid PD | .18 | .02 | .60 | .439 | 1.02 | .97–1.07 |
| Crisis visits | | | | | | |
| Intercept | −.39 | .42 | .85 | .356 | .68 | .30–1.54 |
| Depression severity | .15 | .08 | 3.59 | .058 | 1.16 | 1.00–1.35 |
| Comorbid PD[a] | −.17 | .52 | .11 | .746 | .84 | .30–2.35 |
| Depression severity × comorbid PD | −.08 | .12 | .43 | .511 | .92 | .73–1.17 |

[a] Reference groups: comorbid personality disorder, 0.5; no comorbid personality disorder, −0.5.

personality disorders was not associated with more (or fewer) supportive and crisis visits, and there were no significant baseline depression severity × personality disorder status interactions.

## DISCUSSION

The present retrospective observational study investigated whether, and to what extent, comorbid personality disorders were associated with the amount and type of treatment for depression received by 1,455 outpatients. Our main finding was that individuals with depression and comorbid personality disorders received more psychotherapy sessions and therefore more intensive treatment than individuals without comorbid personality disorders, irrespective of initial depression severity. In addition, there was no difference in the number of pharmacotherapy sessions, supportive visits, and crisis visits for depression between individuals with and without comorbid personality disorders.

The finding that individuals with depression and comorbid personality disorders received more psychotherapy sessions for depression was not in line with our hypothesis or with previous findings. Earlier studies (20, 21) have indicated that individuals with depression and comorbid personality disorders are less likely to receive evidence-based treatments, including ECT and antidepressant medication, than individuals without comorbid personality disorders. However, recent evidence addressing this issue is lacking. The results of our study also conflict with international and national evidence-based guidelines. These guidelines (22–24) demonstrate a consensus that treatment strategies for depression should not vary based on depression subtypes or individual characteristics, such as comorbid personality

disorders. One exception is depression severity: antidepressant medication (with or without psychotherapy) is considered to be the treatment of choice for individuals with severe depression, although the guidelines are not entirely consistent (31). In the present study, the total number of pharmacotherapy sessions was indeed related to baseline depression severity.

The finding that individuals with comorbid personality disorders did not receive more supportive and crisis visits did not align with our secondary hypothesis. Because individuals with comorbid personality disorders can have more interpersonal problems (32), lower social functioning (33), and suicidality (34), we expected them to receive a greater number of supportive and crisis visits. However, one could speculate that these visits were prevented by or handled within the greater number of psychotherapy sessions.

A key question underlying our findings is whether the greater number of psychotherapy sessions is either a required solution for a complex clinical problem or an unnecessary intervention that adds to overtreatment of depression (35). The complexity of individuals with comorbid personality disorders in this sample was reflected by their initial clinical presentation with more depressive and anxiety symptoms, longer episode duration, and higher incidence of childhood trauma, which has been found in previous research (36–38) as well. One could speculate that therapists feel that extension of treatment increases the odds of a good outcome for patients with these complex conditions (39). This opinion is supported by a recent meta-analysis (18) that describes an association between adequate treatment duration (16–20 sessions) and treatment effects among individuals with comorbid personality disorders receiving cognitive-behavioral therapy for depression. Another possible explanation could be that the greater number of psychotherapy sessions was an indicator for the responsiveness of therapists to the comorbid personality disorder; possibly therapists were unconsciously focusing on personality disorder symptoms. In addition, the finding could also indicate that patients with comorbid personality disorders needed to receive more sessions for the process of ending the therapeutic relationship. However, despite the complex clinical problems, a significantly greater number of psychotherapy sessions could be a sign of overtreatment. First of all, the association between the number of psychotherapy sessions and a favorable outcome in depression is not significant and very small (2). In addition, although sufficient

treatment duration has been shown to be associated with better depression outcomes for individuals with comorbid personality disorders, a sufficient duration has been defined as 16–20 sessions (18). This range was exceeded in our study, which found the average length of psychotherapy to be 22 sessions. Moreover, findings from well-designed studies (16–19) with controlled treatment have not indicated that comorbid personality disorders negatively affect acute-phase depression outcomes; therefore the need for additional therapy remains questionable. Given the current problems in the timely availability of treatment in Dutch mental health care (40, 41), it is important not to unnecessarily extend therapy.

Although this study provided an interesting look at daily mental health care practice, there were some limitations. First, a substantial number of participants did not have a baseline QIDS-SR or SAPAS assessment and had to be excluded from the analyses. However, pretreatment comparisons indicated that these individuals did not significantly differ from those included in the analyses. Second, the presence of personality disorders was determined by a brief standardized clinical interview (i.e., SAPAS) (26, 27) and did not provide information on the different types of personality disorders. Validated methods, such as the Structured Clinical Interview for DSM-IV Axis II (SCID-II) (42), may be more appropriate for studying personality disorders. However, time and resources for the use of such instruments are typically not available in routine depression care. Considering this limitation, we think that the SAPAS is an appropriate compromise between the need for a validated instrument and the need for representativeness of diagnostic assessments in daily clinical practice. The third limitation concerns the lack of information on how treatment decisions were motivated; it is possible that the clinicians decided explicitly that more psychotherapy sessions were indicated because of the comorbid personality disorder status, but we cannot exclude other reasons for the positive association between the comorbidity and the number of psychotherapy sessions. The fourth limitation involves the information on the received depression treatment. Although reliable data on the type and number of depression treatment sessions were available, details were lacking, including information on the quality of the psychotherapy and pharmacotherapy and switches between different types of psychotherapy and pharmacotherapy. The fifth limitation concerns generalizability. Although our study sample came from several treatment sites within a nationwide organization in the Netherlands, these results may not be generalizable to all mental health care settings.

## CONCLUSIONS

To our knowledge, this was the first retrospective observational study investigating the impact of comorbid personality disorders on the type and the amount of depression treatment received in naturalistic outpatient care. Our findings could be indicative of overtreatment of individuals with depression and comorbid personality disorders. Further research is needed to study subgroups of patients diagnosed as having depression who are possibly undertreated or overtreated (35) and to identify indicators related to those subgroups. To achieve this goal, research should focus on the types and amounts of treatments received, as well as on the specific contents and quality of these treatments. If the goal is to effectively improve depression treatment strategies, we need to understand and evaluate our current clinical decision making more thoroughly. With this understanding, we could study and formulate suggestions on how to modify treatment decisions to allow for a more evidence-based practice.

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