The Prevalence and Impact of Depression in Self-Referred Clients Attending an Employee Assistance Program

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Objective: To determine the prevalence and characteristics of clients with depression attending an employee assistance program (EAP).

Methods: Anonymized data were obtained from 10,794 consecutive clients, including 9105 employees, self-referred to PPC Canada, a large, external EAP. Assessment measures included the self-rated nine-item Patient Health Questionnaire (PHQ-9). Clinical characteristics of depressed clients (PHQ-9 score ≥ 10) were compared with those of nondepressed clients.

Results: Thirty-seven percent of the employee sample met PHQ-9 criteria for clinically significant depression. Compared with clients without depression, they had significantly higher rates of anxiety, psychotic symp
tom scale and to determine the impact of depression on client functioning. The individualized and confidential nature of EAP encounters is valued by employees who might prefer self-referral to mental health services over participation in more visible health campaigns in the workplace.

Over time, EAPs have gained greater recognition as a front
tline mental health service and are often the first contact point between workers with MDD and mental health professionals. Nevertheless, there is still little information about the impact of clinical depression on clients attending EAPs. In our previous study examining records of clients (n = 1411) in an external EAP, mental health clinicians identified depression as a problem in 27% of the sample. Compared with those without depression, the depressed clients had significantly greater impairment in work and social functioning. Nevertheless, that study was limited by the fact that the mental health clinicians did not use a standardized definition of depression and were not expected to make formal diagnoses. The objectives of the current study were to examine the prevalence of clinically significant depressive symptoms in EAP clients by using a validated depression symptom scale and to determine the impact of depression on client presentations.

METHODS

Study Setting
PPC Canada (www.ca.ppcworldwide.com), formerly known as Interlock, is a large, external EAP that provides contracted services to more than 350 organizations across Canada. This EAP employs a multidisciplinary counseling team consisting of registered psychologists, registered social workers, registered clinical counselors, and addictions specialists.

Participants
Data were obtained from consecutive client records from the PPC Canada database. All data were made anonymous by PPC Canada before transfer to researchers for analysis. The use of anonymized clinical information from PPC Canada was approved by the Behavioural Research Ethics Board at the University of British Columbia.

Assessment Procedure
Clients self-refer to the EAP and are initially assessed by a counselor using the PPC Canada standard intake and service plan.
Each client was asked to identify two specific problems that had prompted self-referral to PPC Canada and to identify other issues of potential clinical relevance. At intake, various assessments of social and occupational impairments were captured, including self-report measures of global problems with functioning, work absence, work impairment, and job satisfaction. In addition, clients completed the nine-item Patient Health Questionnaire (PHQ-9), a validated, self-rated questionnaire used to assess depressive symptoms and severity. Clients were defined as having clinically significant depression (“with depression”) if they had a PHQ-9 score of 10 or more, indicating at least moderate severity of depressive symptoms; this threshold score has a sensitivity and specificity of 86% for the Diagnostic and Statistical Manual, Fourth Edition, diagnosis of MDD. Clients also were queried on their use of prescribed medications for depression, anxiety, or sleep. Problems with alcohol and drug use were assessed with three of the four questions from the CAGE questionnaire, modified to include both alcohol and drug use: Cutting down on alcohol or drug use; Annoyance at others’ concern about alcohol or drug use; Feeling Guilty about alcohol or drug use. Because of the modification to include drug use, the “Eye-opener” question from the CAGE, which applies primarily to alcohol use, was not included.

Analysis
Anonymized data were tabulated and analyzed using SPSS statistical software (SPSS, Inc, Chicago, IL). Parametric tests (paired and unpaired t tests), nonparametric tests (chi-square test, Fisher exact test, odds ratios), and Pearson correlations were conducted as appropriate for the type of data. All results are expressed as mean ± SD or 95% confidence intervals.

RESULTS

Prevalence of Depression

Records were obtained from 10,794 clients (68% women; mean age, 41.2 years) who self-referred to PPC Canada between January 1, 2005, and June 12, 2007. Of the total sample, 9105 (84%) were employees of organizations served by PPC Canada (designated the “employee-only” sample), whereas the remainder were family members (typically spouses) of those employees. A number of records (158, or 1.5%) were not identified as belonging to either employees or family members or had missing data and were excluded from analyses. In the total employee-client sample (n = 9105), the mean PHQ-9 score was 8.6 ± 6.3. No significant correlation was observed between age and PHQ-9 score. The proportion of the sample with PHQ-9–defined depression (PHQ-9 score ≥10) was 37% (n = 3369). There were no significant differences between clients with and without depression in age (42.3 ± 10.6 years vs 42.1 ± 10.1 years, respectively) or proportion of women (67.8% vs 69.1%, respectively). Of the clients with depression, 49% (n = 1651) scored in the “moderately” depressed range (PHQ-9 score, 10 to 14), 31% (n = 1044) in the “moderately severe” range (15 to 19), and 20% (n = 674) in the “severe” range (20 to 27).

Reasons for Self-Referral

At the intake assessment, clients identified two problems that were the primary reasons for referral. The employees with depression (n = 3393) were more likely than those without depression (n = 5712) to cite personal/emotional difficulties and depression/anxiety as presenting problems (Table 1). In contrast, marital/partner conflict (13.1%) and family problems (8.4%) were more frequently cited as problems in clients without depression. There were no differences between groups in frequency of work stress as a presenting problem.

Anxiety

Clients with depression were more likely to report significant problems with anxiety, including panic attacks (Table 1). Of employees with depression, 55.5% reported that they had experienced at least one anxiety or panic attack within the 4 weeks before intake, compared with 23.2% of employees without depression over the same time period.

Psychotropic Medication and Problem Substance Use

Many clients reported that they used medications for depression, anxiety, stress, and sleep problems, with some prescribed multiple medications. Employees with depression more frequently reported use of psychotropic medications compared with employees without depression (44.1% vs 19.5%; chi-square: 604.9; df: 1; P < 0.0001). In regard to problem alcohol and drug use, those with depression had almost twice the odds of having this threshold score on the three modified CAGE questions (odds ratio, 1.89; 95% confidence interval, 1.70–2.10; chi-square, 115.5; df: 1; P < 0.0001). This likely represents a conservative estimate of problem alcohol and drug use, but it should be noted that a limitation for interpretation of this result is that the modified CAGE questions and threshold score have not been externally validated.

Global Functioning

To assess global problems with functioning, clients were asked, “If you have experienced any problems on this questionnaire, how difficult have they made it for you: (a) to take care of things at home; (b) to do your work; (c) to get along with other people?” with responses of “not difficult at all,” “somewhat difficult,” “very difficult,” and “extremely difficult.” Compared with those without depression, employee clients with depression were significantly more likely to respond “very difficult” or “extremely difficult” to the three problem domains (Table 1).

Workplace Functioning and Job Satisfaction

Employees with depression reported that they were absent from work (for any reason) 3.6 ± 13.8 days of the previous 4 weeks (Table 2) compared with 1.6 ± 14.1 days for nondepressed employees (t = 6.00; df = 5862.3; P < 0.0001). Although the overall frequency of employees on long-term disability was low, depressed clients were more likely to be on long-term disability than clients without depression (3.1% vs 1.1%).

Presenteeism was assessed with the question, “In the last 4 weeks at work, have you noticed: (a) making mistakes, (b) difficulty multitasking, (c) difficulty concentrating, (d) feeling fatigued,” with responses of “none of the time” (scored as 0), “occasionally” (1), “frequently” (2), or “all of the time” (3). Employees with depression responded “frequently” or “all of the time” on these items at rates between three and seven times higher than those of employees without depression (Table 2). The presenteeism score, calculated by summing the score from all four items, was significantly higher in depressed clients compared with nondepressed clients (t = 53.2; df = 5321.6; P < 0.0001).

Employees with depression were less likely to report high job satisfaction and more likely to report low job satisfaction than nondepressed employees (Table 2). Similarly, PHQ-9 scores were negatively correlated with level of job satisfaction (r = −0.27; P < 0.01).
TABLE 1. Clinical Characteristics of Employee Clients (N = 9,105) With and Without Depression

<table>
<thead>
<tr>
<th>Reason for self-referral (top 5)</th>
<th>Evaluable Sample (N = 9,105)</th>
<th>Clients With Depression (n = 3,393)</th>
<th>Clients Without Depression (n = 5,712)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal/emotional difficulties</td>
<td>9,105</td>
<td>17.8%</td>
<td>11.8%</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Marital/partner conflict</td>
<td>9,105</td>
<td>13.1%</td>
<td>17.7%</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Depression/anxiety</td>
<td>9,105</td>
<td>12.7%</td>
<td>7.0%</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Work stress</td>
<td>9,105</td>
<td>12.6%</td>
<td>13.9%</td>
<td>NS</td>
</tr>
<tr>
<td>Family problems</td>
<td>9,105</td>
<td>8.4%</td>
<td>13.6%</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>At least one anxiety/panic attack in the last 4 weeks</td>
<td>9,007</td>
<td>55.5%</td>
<td>23.2%</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Use of psychotropic medication</td>
<td>8,750</td>
<td>44.1%</td>
<td>19.5%</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>CAGE questions</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Cut down” on alcohol/drug use</td>
<td>8,303</td>
<td>26.4%</td>
<td>16.1%</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>“Annoyance” at others’ criticisms of alcohol/drug use</td>
<td>8,347</td>
<td>9.6%</td>
<td>5.4%</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>“Guilt” about alcohol/drug use</td>
<td>8,314</td>
<td>19.4%</td>
<td>10.5%</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Score ≥2</td>
<td>8,350</td>
<td>18.4%</td>
<td>10.2%</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Global problems, “very difficult” or “extremely difficult”</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Take care of things at home</td>
<td>8,077</td>
<td>32.4%</td>
<td>5.0%</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Do your work</td>
<td>7,974</td>
<td>40.4%</td>
<td>7.7%</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Get along with others</td>
<td>8,078</td>
<td>20.2%</td>
<td>3.1%</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

P calculated from chi-square tests.
NS, not significant.

TABLE 2. Workplace Functioning in Employee Clients (N = 9,105) With and Without Depression

<table>
<thead>
<tr>
<th>Reason for workplace functioning</th>
<th>Evaluable Sample (N = 9,105)</th>
<th>Clients With Depression (n = 3,393)</th>
<th>Clients Without Depression (n = 5,712)</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Long-term disability leave</td>
<td>8,910</td>
<td>3.1%</td>
<td>1.1%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Days of work missed in the last 4 weeks, mean ± SD</td>
<td>7,413</td>
<td>3.6 ± 13.8</td>
<td>1.6 ± 14.1</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Problems at work, “frequently” or “all of the time”</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Making mistakes</td>
<td>8,164</td>
<td>18.6%</td>
<td>2.6%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Difficulty multitasking</td>
<td>8,207</td>
<td>35.9%</td>
<td>8.0%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Difficulty concentrating</td>
<td>8,246</td>
<td>54.9%</td>
<td>12.4%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Feeling fatigued</td>
<td>8,220</td>
<td>72.0%</td>
<td>22.7%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Presenteeism score,* mean ± SD</td>
<td>8,004</td>
<td>5.7 ± 2.5</td>
<td>2.8 ± 2.1</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Level of job satisfaction</td>
<td>8,221</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>2,953</td>
<td>25.6%</td>
<td>41.8%</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Medium</td>
<td>3,626</td>
<td>43.3%</td>
<td>44.6%</td>
<td>NS</td>
</tr>
<tr>
<td>Low</td>
<td>1,642</td>
<td>31.1%</td>
<td>13.6%</td>
<td>&lt;0.0001</td>
</tr>
</tbody>
</table>

P calculated from unpaired t tests and chi-square tests, as appropriate.
*Sum of scores from the four “Problems at work” items.
NS, not significant.

Total Sample Analyses

The same analyses were conducted for the total sample (n = 10,974), which included family members (mostly spouses) covered by employee health benefits. There were no significant differences between the employee-only and total samples in any analyses (data not shown).

DISCUSSION

This study has several strengths including the large database and the use of a standardized and well-validated self-rating scale for depressive symptoms. The limitations of the data include the use of self-report for clinical and work productivity problems, which potentially may be biased by negative cognitions of depressed employees. Nevertheless, other workplace studies have shown that there is adequate correlation of self-report and external validators of absenteeism and productivity.

Notwithstanding these limitations, we found that there is a high prevalence of clinically significant depressive symptoms in clients attending an external EAP, with 37% of the employee-client sample meeting PHQ-9 criterion of 10 or more for clinical depression. For comparison, a large community survey (n = 198,678) using the PHQ-8 (the PHQ-9 without the suicidal thoughts item) criterion of 10 or more found that the rate of clinical depression was 8.6%. Notably, almost 20% of EAP clients with depression were rated as severely depressed by PHQ-9 criteria (score ≥20).
Not surprisingly, the presence of depression in EAP clients was associated with higher rates of anxiety, alcohol/drug use problems, and use of prescribed psychotropic medications. Compared with clients without depression, they also reported greater number of days absent from work over the previous month (approximately 2.5 days more per month) and were more likely to be taking longer-term disability leave. In addition, those employee clients with depression at work also reported greater frequency of problems with “presenteeism”—frequent fatigue (72%), difficulty concentrating (55%), difficulty multitasking (36%), and making mistakes (19%)—and had significantly higher presenteeism scores (sum of the presenteeism items) than the nondepressed clients. The presence of depression also was strongly associated with low job satisfaction. These results confirm those of our previous study in which EAP clients identified depression/anxiety as one of their two primary presenting complaints at initial assessment, although “personal/emotional difficulties” was listed by another 18%. There may be several possible reasons why depressed clients were not seeking help from the EAP specifically for their depression. Some clients may not have recognized that depression was a problem, or they may not have known that an EAP could help with depression, or their depression may have caused or exacerbated other issues (such as marital conflict) that led to EAP contact. Alternatively, they may have been receiving mental health treatment from other providers and were accessing EAP services for other issues. Further research is needed to clarify the reasons for self-referral to EAPs by workers with depression.

These results clearly show that depression is a significant issue among clients attending EAPs. An unanswered question is whether the outcomes of EAP intervention, which primarily include short-term and solution-oriented counseling, are different in clients with and without depression. Previous research has shown that EAP intervention is beneficial for workers with MDD, with one study estimating the return on investment to employers at 142% because of a reduction of lost productive time. Our previous study determined a significant interaction effect of depression on outcomes after EAP intervention. Work and social functioning measures improved from in-take to after intervention, with the depressed clients showing greater improvement than the nondepressed group. Despite the greater improvement, however, after intervention, the clients with depression continued to have more work impairment and lower scores on social functioning than those without depression. This suggests that EAPs may want to ensure or improve referrals for further psychiatric evaluation or longer-term follow-up services for these clients. In addition, EAPs may wish to consider adding specific and novel services targeting depressive symptoms, such as telephone-administered cognitive behavior therapy to optimize outcomes for depressed clients.

CONCLUSION

The results from this large client database show that more than one third of EAP clients have clinically important depressive symptoms that are associated with a significant burden on personal and occupational functioning. Because clients may not identify depression as a presenting problem, EAP providers can improve detection by routinely using a validated depression screening tool. Further research should be conducted to examine the clinical and work outcomes of EAP intervention for depressed clients and how EAPs can best manage clinical depression within the parameters of their business models.

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