SCREENING FOR PSYCHIATRIC COMORBIDITY AMONG FEMALE ALCOHOLICS: THE USE OF A QUESTIONNAIRE (SCL-90) AMONG WOMEN EARLY IN THEIR TREATMENT PROGRAMME

BRIT HAVER*

Karolinska Institute, Department of Clinical Neuroscience, Clinical Alcohol and Drug Research Section, Stockholm, Sweden

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Abstract — The use of a questionnaire, Symptom Check List-90 (SCL-90), as a screening instrument for psychiatric disorders was studied in 60 women attending their first treatment for alcohol abuse in Stockholm, Sweden. A global SCL-90 index, the General Symptomatic Index (GSI), measuring the total level of recent self-reported psychological distress, showed a high efficacy in distinguishing 'psychiatric cases' from 'non-cases' in the present sample. Psychiatric cases were defined as subjects satisfying the criteria for any current DSM-III-R disorder other than substance abuse. The psychiatric diagnoses were obtained independently by use of the Structured Clinical Interview for DSM-III-R (SCID-I). Psychiatric disorders, especially depression and anxiety disorders, frequently antecede or develop secondary to alcohol abuse among women. The use of structured interviews to diagnose these disorders is, however, time-consuming. Findings from the present study indicate that SCL-90 can be used to detect psychiatric comorbidity among female alcoholics, thus enabling clinicians to be aware of concomitant psychiatric disorders among a subgroup of patients.

INTRODUCTION

Prevalence rates for psychiatric comorbidity of between 56–92% have been reported among female substance abusers at the start of treatment (Halikas et al., 1981; Hesselbrock et al., 1985; Vaglum and Vaglum, 1985; Ross et al., 1988; Roy et al., 1991). In a previous report, Haver and Dahlgren (1995) found that 60% of women attending their first treatment at an alcohol unit in Sweden had at least one definite lifetime psychiatric disorder in addition to their alcohol dependence — and 23% also had a personality disorder. About 50% had sought treatment at psychiatric institutions previously.

Within alcohol treatment units the main focus is usually the problem of drinking, and psychiatric comorbidity may be underestimated both diagnostically and therapeutically. A structured clinical interview is normally used to distinguish psychiatric disorders from symptoms related to substance abuse. Structured interviews are, however, time-consuming, and in the majority of clinical settings adequate training for interviewers is not available, thus confining such diagnostic procedures to research settings. Interviewers and raters also need substantial training to obtain reliable psychiatric diagnoses (Skre et al., 1991; Williams et al., 1992), since the reliability of findings for mood and for psychotic disorders was lower among current substance abusers (Bryant et al., 1992).

Questionnaires, on the other hand, are filled in by the patient and easily administered and scored. However, their efficacy and validity as screening instruments for psychiatric disorders among groups of alcoholics is relatively unknown. Using the Symptom Check List-90 Revised (SCL-90-R) (Derogatis et al., 1973; Derogatis, 1983). Mercier et al. (1992) found that alcoholics had a symptom profile which was two to five times the severity of the US general population, and that female alcoholics scored more pathological on somatization, depression, anxiety and phobic anxiety compared to their male counterparts. The validity of these data compared to

*Present address and address for correspondence: Department of Psychiatry, Section Sandviken Hospital, University of Bergen, 5035 Bergen-Sandviken, Norway.

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clinically derived psychiatric diagnoses was not, however, tested.

The patterns of psychiatric disorders among 60 female alcoholics early in their treatment programme have been published previously (Haver and Dahlgren, 1995). The present article compares the data obtained from a questionnaire with those derived from a structured clinical interview within the same sample.

MATERIALS AND METHODS

Subjects and general procedures

Dahlgren and collaborators have developed a treatment programme specifically adapted to attract female problem drinkers early in their treatment and drinking history (Early Treatment of Women with Alcohol Addiction, EWA, Dahlgren and Willander, 1989; Dahlgren, 1990; Haver and Franck, 1997). The study group (n = 60) participated in a comprehensive research programme involving questionnaires, a psychodynamic interview, two structured clinical interviews: SCID-I and SCID-II (Spitzer et al., 1988, 1989), and finally projective tests. A control group of women from the same treatment programme (n = 60) filled in the questionnaires alone, this group is not included in the following presentation.

After a minimum of 10 days of sobriety — and when withdrawal symptoms had waned — the women filled in the SCL-90. Forty subjects were in-patients at intake and during testing, whereas 20 were out-patients. Sobriety was monitored for the out-patients by use of frequent appointments (three times per week) and disulfiram (Antabuse) taken on a voluntary basis. The interviewer (B.H.) was blind to the results of the questionnaires when performing the structured clinical interviews. The study did not include test–retest reliability nor inter-rater reliability data for the SCID interviews, as the time frame and total resources available did not allow for training of independent raters in the use of the SCID. However, the rater (B.H.) obtained 100% agreement with the consensus scorings of seven taped SCID-I and SCID-II interviews made by the Biometrics Research Department, New York (Spitzer et al., 1988), thus confirming the ability to rate clinical material according to the manual. A detailed description of the study, the treatment programme, and the results of the descriptive psychiatric diagnoses and the psychodynamic assessment have been published (Haver and Dahlgren, 1995; Haver et al., 1995; Haver and Franck, 1997).

The SCL-90

We chose the SCL-90 (Derogatis et al., 1973), since it is widely used in Scandinavia to monitor psychological distress both before and after treatment (Haver, 1986; Barth et al., 1988; Mehlum et al., 1991). Additionally, the SCL-90 has been tested in a sample from the general Norwegian population (Vassend et al., 1992). The SCL-90 comprises 90 items organized within nine symptom dimensions or scales: Somatization; Obsessive–Compulsive; Interpersonal Sensitivity; Depression; Anxiety; Hostility; Phobic Anxiety; Paranoid Ideation; and Psychoticism. A tenth category contains a variety of symptoms related to sleep and appetite and is called Additional. Subject responses provide information on the presence of each of the symptoms (items) and intensity of any symptom, on a five-point scale where 0 represents the absence of the symptom and 4 is the maximum intensity score for the symptom, for the days prior to the completion of the questionnaire. Three global indices are calculated: the Global Symptom Index (GSI) is the sum of item scores divided by 90; the Positive Symptom Distress Index (PSDI) measures average intensity of the symptoms reported; and the Positive Symptom Total (PST) is the number of items with positive scores (above 0). SCL-90 is one of the most widely used instruments for monitoring change during psychotherapy, as it is easy to complete (about 15 min) and sensitive for subjectively experienced improvement or relapse of symptoms (Barth et al., 1988; Dolan et al., 1992). Only minor revisions have taken place (SCL-90-R) since SCL-90 was first published. However, Scandinavian studies traditionally use the original translated version, and comparisons between results obtained from the two versions is possible since only three items were changed (Vassend et al., 1992). The SCL-90 data from the present sample (n = 60 and n = 120 respectively) were significantly different (P < 0.001) from those of women from the general population on all individual and global scales, except for Hostility (P < 0.01). Our study group, however, had significantly lower scores on most scales,
Table 1. Sociodemographic data and frequency of psychiatric disorders among the study group of EWA women

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>44 (range 23–63)</td>
</tr>
<tr>
<td>Married</td>
<td>43</td>
</tr>
<tr>
<td>Living with partner</td>
<td>48</td>
</tr>
<tr>
<td>Gainfully employed</td>
<td>77</td>
</tr>
<tr>
<td>Current anxiety disorders</td>
<td>28 [37]</td>
</tr>
<tr>
<td>Lifetime anxiety disorders</td>
<td>38 [43]</td>
</tr>
<tr>
<td>Current mood disorders</td>
<td>28 [35]</td>
</tr>
<tr>
<td>Lifetime mood disorders</td>
<td>48 [53]</td>
</tr>
<tr>
<td>Current DSM-III-R disorder</td>
<td>42 [55]</td>
</tr>
<tr>
<td>Lifetime DSM-III-R disorder</td>
<td>60 [70]</td>
</tr>
</tbody>
</table>

Values are given as percentages (n = 60). Percentage subclinical disorders are given in square brackets.

compared to the group of women alcoholics studied by Mercier et al. (1992).

Statistics

The SPSS (Statistical Package for Social Sciences) for Windows, release 6.0 was used for statistical analyses, \( P < 0.05 \) was set as the limit for statistically significant differences. Parametric methods were used, since parametric and non-parametric correlations were only marginally different. Correlation analysis was performed between individual SCL-90 scale scores and the number of positive criteria for the corresponding DSM-III-R current psychiatric disorders based on structured interviews. Since prevalence rates were low for obsessive-compulsive, somatoform and individual anxiety and depressive disorders as well as for anorexia/bulimia in the present sample, correlations are only reported for the compound groups of disorders, i.e. mood disorders and anxiety disorders. A cut-off point of GSI \( \geq 0.75 \) was chosen based upon the findings of Peveler and Fairburn (1990) that this threshold gave optimal sensitivity and specificity for detecting 'caseness' among a group of bulimic patients. Misclassification rate (MCR) was defined as the sum of the false-positive and false-negative cases.

RESULTS

The sociodemographic data for the present study group and the frequency of mood and anxiety disorders obtained from SCID-I interviews are shown in Table 1.

Table 2 shows the sensitivity, specificity, and MCR of the SCL-90 when used as a 'case-finding' instrument for corresponding DSM-III-R psychiatric disorders other than substance use. A GSI threshold above 0.75 shows high sensitivity (82%) and specificity (92%) compared with the presence of any interview-based psychiatric disorder. A PSDI threshold of 1.1 or 1.2 also classifies the cases with a high level of sensitivity (100 and 97% respectively), while specificity is lower (59 and 65% respectively). Therefore, the PSDI misclassifies cases, since it identifies a substantial number of false-positive cases. Table 2 also shows that a combination of SCL-90 thresholds (GSI \( \geq 0.75 \) and PSDI \( \geq 1.1 \)) results in the lowest MCR, e.g. 100% sensitivity as well as high specificity (92%).

Table 3 shows the correlation between selected SCL-90 scales, Depression, Anxiety and Phobic Anxiety, and interview-based depressive and anxiety disorders. From the table, it can be seen that there are moderately significant correlations \( (P < 0.001) \) between the SCL-90 scale Depression and the DSM-III-R diagnosis Current Major
Table 3. Correlations between specific SCL-90 scales and the number of criteria for corresponding interview-based DSM-III-R diagnostic categories [Depression, Dysthymia, Panic Disorder, Social Phobia and Generalized Anxiety Disorder (GAD)] among EWA women

<table>
<thead>
<tr>
<th>SCL-90 scale</th>
<th>Depression</th>
<th>Dysthymia</th>
<th>Panic</th>
<th>Social Phobia</th>
<th>GAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>GSI</td>
<td>0.45**</td>
<td>0.22 NS</td>
<td>0.30*</td>
<td>0.38**</td>
<td>0.45***</td>
</tr>
<tr>
<td>Depression</td>
<td>0.47***</td>
<td>0.34*</td>
<td>0.23 NS</td>
<td>0.25 NS</td>
<td>0.32*</td>
</tr>
<tr>
<td>Anxiety</td>
<td>0.38**</td>
<td>0.24 NS</td>
<td>0.35**</td>
<td>0.39**</td>
<td>0.47***</td>
</tr>
<tr>
<td>Phobia Anxiety</td>
<td>0.22 NS</td>
<td>0.20 NS</td>
<td>0.48***</td>
<td>0.53***</td>
<td>0.41***</td>
</tr>
</tbody>
</table>

n = 60; *P < 0.05; **P < 0.01; ***P < 0.001; NS, denotes not significant.

Depression, whereas lower correlations were obtained between the SCL-90 scale and Dysthymia. The two SCL-90 scales measuring General Anxiety and Phobic Anxiety correlated significantly to the corresponding DSM-III-R diagnoses Generalized Anxiety Disorder (GAD), Panic Disorder and Social Phobia. Table 3 also shows some significant correlations between SCL-90 anxiety scales and depressive disorders and vice versa, although these correlations were generally lower. This is, however, an expected finding as symptoms of anxiety are usually involved in depressive disorders and vice versa.

DISCUSSION

The results of the present study support the assumption that independently derived clinical information, e.g. expert diagnoses based upon structured interviews and subjectively experienced discomfort reported by the patient, may show a high degree of concordance. This is most clearly demonstrated by the overlap between questionnaire data and interview data distinguishing 'cases' from 'non-cases'; i.e. substance abusers with or without current concomitant psychiatric disorders. By use of questionnaire data, the clinician’s attention will be directed towards the subgroup of patients where psychiatric disorders may occur; a more purpose-driven clinical interview can then follow, specifically addressing the delineation of any concomitant psychiatric disorder. The probability of detection of psychiatric disorders within samples of substance abusers will thus increase, and a more complete and effective treatment could result. However, since only moderate correlations were found between the questionnaire data and the specific clinical diagnoses, an interview is necessary to establish the specific diagnostic category.

The majority of the present group of female alcoholics with a current psychiatric disorder could be identified using the SCL-90. Using two SCL-90 indices, one measuring the mean level of symptom intensity (GSI ≥ 0.75) and the other (PSDI > 1.1) measuring the mean level of symptom intensity for specific symptoms, all real cases were identified, and a low frequency of false-positive cases was obtained. For comparison, a sensitivity of 86% and specificity of 73% were obtained by the use of a SCL-90-R GSI threshold of 0.75 in order to define 'psychiatric cases' among bulimic patients (Peveler and Fairburn, 1990). Also, all false-positive cases from the present study either satisfied criteria for previous psychiatric disorders or had a current subclinical psychiatric disorder, i.e. they fulfilled all the diagnostic criteria other than one. These subjects may represent 'potential clinical cases' with a higher than average chance of developing clinically relevant psychiatric disorders. Additionally, a subclinical psychiatric disorder as defined by research criteria may be clinically significant and justify specific treatment intervention.

However, 40% of the patients had no psychiatric diagnosis other than substance-use disorders using a structured clinical interview. These subjects could be identified by using the SCL-90, allowing the clinician to focus on other aspects of their substance-abuse disorder.

The importance of psychiatric comorbidity in the treatment and outcome for female alcoholics is little known; the few studies published in this area of research show conflicting results for the two sexes and specific psychiatric disorders (Rounsaville et al., 1987; Powell et al., 1992;
Fals-Stewart and Schafer, 1992). Ravndal and Vaglum (1991, 1994a, b) reported that psychopathology and patterns of relationship towards significant others were related to treatment compliance among female drug abusers. The duration of treatment compliance has already been shown to be an important variable predicting outcome among an earlier sample of EWA women: the subjects with the longest treatment compliance had the most favourable outcome 2 years following treatment (Dahlgren and Willander, 1989). Addressing psychiatric comorbidity among EWA women may further improve compliance rates and thus improve prognosis following treatment. Results from a 2-year follow-up of the present sample (n = 120) are in progress and may contribute to knowledge in this area of research.

REFERENCES


