A general population survey on patterns of benzodiazepine use and dependence in Lebanon

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A general population survey on patterns of benzodiazepine use and dependence in Lebanon

Naja WJ, Pelissolo A, Haddad RS, Baddoura R, Baddoura C. A general population survey on patterns of benzodiazepine use and dependence in Lebanon.


Objective: In Lebanon, benzodiazepines are often available without medical prescription. We aimed to carry out the first community-based pharmaco-epidemiological study on benzodiazepine consumption in the Middle East Area.

Method: The prevalence of past-month benzodiazepine use was assessed in a 1000-subject randomized sample from the Lebanese community, and risk factors were studied in a group of 496 current users.

Results: Benzodiazepine use during the past month was found in 9.6% of subjects. Four variables were significantly associated with use: age higher than 45 years, female sex, cigarette smoking and the existence of a recent life event. Benzodiazepine dependence was found in 50.2% of users.

Conclusion: Benzodiazepine use in Lebanon is particularly high, and can be related to well-known factors such as female sex and age, but other potent specific variables, such as war stress or the lack of control on drug access, can be hypothesized.

Introduction

The use and misuse of benzodiazepines (BZD), as well as their risk for dependence, were and still are major health issues leading to numerous pharmaco-epidemiological surveys (1–5). To our knowledge no pharmaco-epidemiological study on BZD consumption has ever been carried out in Lebanon or in the Middle East Area. In addition, despite state laws, purchasing BZD from drugstores in Lebanon is possible without a medical prescription.

We conducted this national community survey with two main objectives: to determine the prevalence of BZD consumption in Lebanon, and to explore the risk factors for BZD use and dependence.

Material and methods

A two-stage process has been used to obtain two samples of community subjects. A randomized sample of 1000 subjects (sample 1) of the Lebanese population aged 18 years and above was drawn randomly at different degrees, stratified by area and proportional to the known structure in age and sex from the population of each area.

Sample 2 was constituted with 96 current BZD users (at least one intake in the past month) from sample 1, and by another sample of 400 subjects (drawn randomly from the Lebanese population following the same steps as for the first sample, and retained on the basis of a past-month use of BZD).

We have estimated the prevalence rate of BZD consumption using the first sample of 1000 subjects, whereas sample 2 was used to study risk factors for past-month BZD consumption and BZD dependence. Odds ratios (OR) were calculated by comparison with the 904 subjects from sample 1 who were not BZD recent users.

A 54-item questionnaire was elaborated for the study and performed through direct interview by trained students, assessing BZD use and dependence, various sociodemographic variables and life events.
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Statistical analysis included univariate analysis of BZD use and dependence, and then a logistic regression for the multivariate analysis taking into account various sociodemographic and clinical variables, computing OR. The programs used were EPI–INFO version 6 and STATA.

Results

Benzodiazepine consumption

Subjects in sample 1 were 480 males and 520 females, with a mean age 39.6 years (SD = 16.4; range: 18–95). The prevalence rate for BZD consumption during the month that preceded the survey was 9.6% (6.8% in males, and 12.1% in females). Approximately one-third (30%) took BZD for more than 12 months. Physicians (other than psychiatrists) accounted for 78% of the prescriptions, psychiatrists 11%, pharmacists, relative’s or friend’s advice and personal medication 11%.

Risk factors were analysed in sample 2, including 496 subjects (141 males and 355 females) with a BZD consumption during the past month. Numerous variables appeared to be associated with BZD consumption (Table 1), but only four variables remained significant risk factors in a multivariate analysis: age higher than 45 (OR = 2.43; 95% CI = 1.53–3.34; P < 0.0001), female sex (OR = 2.46; 95% CI = 1.56–3.83; P < 0.0001), cigarette smoking (OR = 1.56; 95% CI = 1.26–2.05; P < 0.0001) and the existence of a negative life event (OR = 1.59; 95% CI = 1.25–2.03; P < 0.0001).

Dependence

In sample 2, the prevalence rate for BZD dependence (based on DSM-IV definition except the criteria on withdrawal symptoms) was 50.2% (50.3% in males and 50.1% in females). A persistent desire to stop or an unsuccessful stopping of the medication was found in 75.8% of the subjects (n = 376). The prevalence of dependence was highest in the 45–64-year age group (56.7%). In the multivariate analysis, only two variables had a significant impact on BZD dependence: use of other psychotropic agents (OR = 3.18; 95% CI = 1.85–5.49; P < 0.0001), and existence of a life event (OR = 1.98; 95% CI = 1.32–2.98; P = 0.001).

Discussion

The past-month prevalence rate for BZD consumption in Lebanon was 9.6%, close to that reported for other countries (1, 2, 6) and even higher than the prevalence rate in other studies (3, 4). We are comparing our national results to those of countries or major cities in western Europe, where access to medical services is easier and the social security system is more functional than in Lebanon. Hence, such a prevalence rate is extremely high for our country, where prevalence rates for anxiety disorders do not seem to be higher than in other populations (7).

Significant risk factors for BZD consumption in this study were female sex, age, cigarette smoking and life events. Age and sex are well-known associated factors in other surveys (1, 8), but the two other factors are more unusual and might be linked to social stress of the war or of the post-war period, or to other culturally bound factors.

Benzodiazepine dependence rate was 50.2% in past-month users, and this rate is relatively high when compared to other studies (9).

Table 1. Sociodemographic and other risk factors for past-month BZD use (univariate analysis)

<table>
<thead>
<tr>
<th>Frequency in users (n = 496)</th>
<th>Comparison with non-users (n = 904)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
</tr>
<tr>
<td>Age ≥45</td>
<td>268</td>
</tr>
<tr>
<td>Female sex</td>
<td>355</td>
</tr>
<tr>
<td>Married</td>
<td>321</td>
</tr>
<tr>
<td>Living alone</td>
<td>19</td>
</tr>
<tr>
<td>Educational level ≤ Bac</td>
<td>415</td>
</tr>
<tr>
<td>Absence of physical exercise</td>
<td>325</td>
</tr>
<tr>
<td>Cigarette smoking</td>
<td>225</td>
</tr>
<tr>
<td>≥20 cigarettes/day</td>
<td>156</td>
</tr>
<tr>
<td>Income ≤ 1000 USD</td>
<td>315</td>
</tr>
<tr>
<td>Use of BZDs before 1991</td>
<td>247</td>
</tr>
<tr>
<td>Alcohol consumption</td>
<td>105</td>
</tr>
<tr>
<td>Diminishing alcohol on physician’s advice</td>
<td>25</td>
</tr>
<tr>
<td>Morning alcohol consumption</td>
<td>8</td>
</tr>
<tr>
<td>Existence of a negative life event*</td>
<td>161</td>
</tr>
</tbody>
</table>

* Loss of a relative, friend, divorce, financial problem, major physical disability.
The existence of high levels of BZD consumption (9.6%) and dependence (one-half of current users) can be concluded from this national community survey. A better application of state laws concerning the delivery of BZD and a state regulation of the prescription are necessary but not sufficient. The education of physicians and mainly non-psychiatrists to avoid misdiagnosing mood disorders and to be aware of the risk factor profile of dependence is essential. Furthermore, public awareness campaign may also help reduce consumption without medical advice.

References


