

Sigma's 29th International Nursing Research Congress

Factors Associated With the Length of Benzodiazepine Hypnotics Use Among Patients With Anxiety/Depressive Disorders

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Introduction: Benzodiazepine (BZD) drugs have been widely used to treat anxiety and insomnia, however the risk of adverse health effect caused by long term use is high. Previous studies have supported the impacts of long-term use on change of cognitive function, memory impairment, risk of fall and traffic accident, and dependence on BZD. In spite of recommendations of limited time for BZD prescription from health department in many countries, problematic use of BZD still remains and needs to be concerned. Patients who suffered from anxiety or depressive disorders were specially the potential population for long term use of BZD. A certain part of these patients kept on using BZD as hypnotics for better sleep when they remitted from depression or anxiety symptom, and resulted in a much longer time use of BZD.

Purpose: This study is to examine factors associated with length of BZD hypnotics use from multiple dimensions among people with anxiety and/or depressive disorders.

Methods: A cross-sectional study was conducted from patients who have been prescribed for BZD as hypnotics (including benzodiazepine receptor agonists) only by psychiatrists. The participants were recruited from the psychiatric outpatients department in a medical center. Collected data included Length of time taking BZD, knowledge of and beliefs about BZD use, anxiety and depression state, severity of BZD dependence, sleep-related variables, health-related behaviors, and sociodemographic characteristics.

Results: A total of 195 patients were included in this study, with 69% female, 49% aged 60 or more, and almost 90% living with their spouse/children/parents. Nearly 94% patients had been taking BZD more than 6 months, 73% taking for 2 years or longer, and the mean length of BZD use was 5.37 years. Over 60% patients slept less than 7 hours in average at night; and almost 60% failed to fall asleep within 30 minutes (sleep latency) and more than half experienced midnight or early morning wake up 3 times or more per week. The average score of BAI and BDI were 7.5 and 9.9, indicates minimal anxiety and depression state. Results from univariate analysis showed patients characteristics significantly related to longer time of BZD use were age over than 60 years ($P=.01$), with education level of primary school or under ($P=.01$), having a job ($P=.006$), suffering from sleep latency 30 minutes or longer ($P=.04$), less aware of alternative treatment besides BZD ($P=.008$), and higher severity of BZD dependence ($P=.005$). Other characteristics that increased the time of BZD use with borderline significance includes not living with parents/spouse/children ($P=.06$), exercising less ($P=.06$), and feeling necessity about BZD ($P=.09$). Stepwise linear regression analysis with $\alpha=.05$ for both entry level and stay level was performed to select variables that best fit, and all variables with P -value less than .20 were included. Results showed patients who were more aware of the alternative treatment besides BZD ($\beta=-1.74$, $P=.003$), had a job ($\beta=1.74$, $P=.02$), and exercised 3-7 times per week ($\beta=-1.70$, $P=.003$) were less likely to take BZD longer. Patients with higher dependence on BZD ($\beta=0.51$, $P=.0003$), and were comorbid with physical diseases ($\beta=1.66$, $P=.03$) were more likely to take BZD longer.

Conclusion: The high prevalence of BZD use longer than 6 months (94%) in our study indicates that patients with anxiety or depressive disorders might be identified as a high risk group of BZD long-term use, the prevalence is even higher compared with the prevalence of 60% from previous study. In our study, the anxiety and depression state among these patients were relatively stable, and they took BZD hypnotics only to improve their sleep. Insomnia has been found as one common reason of continuously using BZD for patients remitted from anxiety or depression. Our study showed patients who suffered from prolonged sleep latency (≥ 30 minutes) took BZD longer. This finding reveals this specific symptom of

insomnia that need to be taken into consideration for adjunctive therapy besides medicine. Our study found the awareness of alternative treatment is negatively correlated with the length of BZD use. Providing non-medical sleep remedies or related information is suggested to decrease patients' dependence on BZD. Keeping a healthy and productive life style, such as maintaining proper amount of exercise and engaging to work might also be useful for future intervention when patients is suggested to gradually discontinue the use of BZD by their physician. Finally, patients who comorbid with physical diseases took BZD for a longer time reveals the importance of considering their health problem when dealing with their insomnia or providing psychoeducation about BZD long term use. Further study of longitudinal design is suggested to confirm causal relationships.

Title:

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Keywords:

benzodiazepines, hypnotics and long term use

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Abstract Summary:

We expect the find draw attendees' attention on the high prevalence of Benzodiazepine long term use among this population, and the importance of providing information about alternative treatment besides Benzodiazepine. Students are also expected to apply the results when designing adjunctive treatment in improving insomnia.

Content Outline:

I. Introduction and Objectives.

- A. Adverse effect of BZD long term use
- B. High prevalence of BZD long term use
- C. Patterns of BZD use in patients with anxiety /depressive disorders
- D. Purpose of this study

II. Methods.

- A. Study design: cross-sectional study
- B. Participants: patients with anxiety and /or depressive disorders who have been prescribed for BZD as hypnotics (including benzodiazepine receptor agonists) was recruited.
- C. Place of recruitment: psychiatric outpatient department from a medical Center
- D. Measurement:
 - 1. Length of BZD use the latest time and defined daily dose
 - 2. Knowledge of BZD use: self-developed scale
 - 3. Beliefs about BZD use: Beliefs of Medicine Questionnaire-Specific (BMQs)
 - 4. Anxiety and depression state: Beck Anxiety Inventory (BAI) and Beck Depression Inventory (BDI)
 - 5. Severity of BZD dependence: Severity of Dependence Scale (SDS)
 - 6. sleep-related variables: sleeping time at night, sleep latency, midnight or early morning wake up
 - 7. health-related behaviors: current smoking and drinking state

III. Results.

- A. Distribution of socio-demographic characteristics from 195 participants
- B. Prevalence of BZD long term use: Nearly 94% patients had been taking BZD more than 6 months, 73% taking for 2 years or longer, and the mean length of BZD use was 5.37 years.
- C. Comparison of length of BZD use among different socio-demographic characteristics and clinical indicators

- D. Correlations among length of BZD use, severity of BZD dependence, knowledge and beliefs about BZD use
- E. Determinants of Length of BZD use: more aware of the alternative treatment besides BZD, had a job, exercised 3-7 times per week, lower level of dependence on BZD, and not comorbid with physical diseases

IV. Conclusion.

- A. Patients with anxiety or depressive disorders is identified as a high risk group of BZD long-term use.
- B. Insomnia has been found as one common reason of continuously using BDZ for patients remitted from anxiety or depression. Dealing with prolonged sleep latency (≥ 30 minutes) need to be taken into consideration for adjunctive therapy besides medicine.
- C. Providing non-medical sleep remedies or related information is suggested to decrease patients' dependence on BZD.
- D. Keeping a healthy and productive life style, such as maintaining proper amount of exercise and engaging to work is recommended for future intervention when patients is suggested to gradually discontinue the use of BZD by their physician.
- E. Considering the comorbidity of physical diseases is suggested when dealing with patients' insomnia or providing psycho-education about BZD long term use.

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Author Summary: Specialty in Psychiatric Nursing, past research work on secondhand tobacco control, current research on Benzodiazepine long term use among patients with anxiety or depressive disorders