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Benzodiazepines and Z-drugs Prescriptions Trends over time among the Aberdeen Children of the 1950s and Associated Characteristics with Chronic prescriptions.

Hadah Alkhaldi[1], Professor Gareth Jones[2], Professor Catriona Matheson[3], and Professor James Mclay[1]

[1]Applied Health Sciences, University of Aberdeen, UK.

[2]Epidemiology, University of Aberdeen, UK.

[3]Substance Use, University of Stirling, UK.

Background

There are ongoing concerns worldwide about prescribing benzodiazepines and Z-drugs (BZDs) due to the risks associated with these medicines. Despite guidance to limit their prescribing, in Scotland, the sustained level of prescribing over the last decade suggests chronic prescribing of BZDs. Although prescribing decisions is a complex process that is influenced by patient-related factors, little is known about the characteristics of those who are on chronic BZDs prescriptions, including childhood and adulthood characteristics. Therefore, this study aims to describe the trend of BZDs prescriptions over seven years and to characterise those who were on chronic/recurrent BZDs prescriptions.

Methods

This is a prospective longitudinal cohort study using data linkage technique, in which a birth cohort was linked to the Prescribing Information System, the Scottish Morbidity Database. Simple descriptive analysis was used to describe the incidence trends. To characterise individuals with chronic/recurrent prescriptions, multivariable Poisson regression models were constructed using a stepwise regression, the calculated risk ratios were reported with a 95% confidence interval.

Findings

The incidence of BZDs prescription declined from 3.4% [3.0-3.7] in 2010 to 2.0% [1.7%-2.3%] in 2015. While, within those receiving any prescriptions, the incidence of chronic/recurrent prescriptions was relatively constant around 7%.

The study showed that those who had a history of behavioural disturbance in childhood were at increased risk of chronic/recurrent BZDs prescriptions compared with those who had not (risk ratio: 1.18 [95%CI: 1.03-1.35]). Similarly, those who had an IQ score < 100 were also more likely to be on chronic/recurrent BZDs prescriptions than those >100 (1.09 [0.99-1.21]).

Chronic/recurrent BZDs prescriptions were more common among individuals in receipt of psychotropic prescriptions (1.77 [1.55-2.02]) or who had been hospitalised with depression/schizophrenia (1.28 [1.13-1.46]). Multimorbidity was also important: a dose-risk relationship was evident, such that, compared to participants reporting no morbidity, those reporting one, or five or more morbidities, experienced a 116% and 451% increase in risk (2.16 [1.47-3.18] and 5.51 [3.98-7.62], respectively).

Finally, those who had taken early retirement (1.65 [1.36-1.99]) and those looking after family (1.35 [1.11-1.65]) were more likely to receive chronic/recurrent BZDs, compared to employed individuals.

Conclusions

Chronic/recurrent BZDs prescriptions are common. Careful interpretation for the decline in incidence as this is a close cohort where incidence might be diluted after a long follow-up.

The need for these drugs might be an indication of an impaired coping system. Childhood is a sensitive age period for individuals' development. And behavioural disturbance and/or lower IQ score might be a manifestation of a disadvantaged childhood which, in turn, might affect individuals' ability to cope with life in adulthood. Also, the accumulation of trajectory events such as impact physical and mental health or lacking socioeconomic opportunity could impact individuals' ability to cope, although, for factors in adulthood, one must be wary of reverse causation.

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