Letter to the editor

Worldwide epidemiology of alcohol and drugs abuse

Although there is widespread perception that the burden of alcohol and drugs abuse is relatively common around the world [1], no recent epidemiologic information has been published in support of this assumption to the best of our knowledge. Therefore, in this concise report we present an update on worldwide epidemiology of alcohol and drug abuse disorders, based on official data of the World Health Organization (WHO) [2]. Information from the last update (year 2016) of the WHO database on burden of diseases, expressed as cause-specific disability-adjusted life year (DALYs) or mortality, is hence summarized in Table 1, along with the corresponding figures for the year 2000.

The amount of DALYs has notably increased between the years 2000–2016, both in absolute and in relative number. Cocaine and amphetamine use disorders exhibited the largest absolute increases (~36%), whist alcohol use disorders have only risen by ~8% in the past 15 years. The largest prevalence of DALYs for alcohol and drug abuse disorders is recorded in America (1.32% and 2.01%, respectively), whilst the lowest is in Africa (0.33% and 0.32% respectively). The prevalence is higher in men than in women, with a male/female ratio between 1.63 (opioids abuse disorders) and 2.44 (alcohol abuse disorders). As regards the age of the population, the highest DALYs value is seen between 15–29 years for all drug abuse disorders, and between 30–49 years for alcohol abuse disorders, respectively.

The number of deaths for all drug abuse disorders has dramatically increased between the years 2000–2016 (+47.2%), with the highest variations recorded for amphetamine-related (+160.1%) and cocaine-related (83.9%) mortality (Table 1). Unlike these figures, the overall mortality for alcohol abuse disorders has marginally declined, by 2.2%. A significant positive correlation can be observed between the gross national income per capita and mortality rate for both alcohol abuse (Pearson's correlation, $r = 0.942$) or drug abuse (Pearson's correlation, $r = 0.991$) disorders. According to the global mortality projection data of the WHO [3], the number of worldwide deaths for alcohol or drug abuse disorders is expected to further increase to 162.31 and 203.85 millions by the year 2060, thus displaying an 11.5% and 27.2% increase, respectively.

Disability and mortality for alcohol and drug abuse disorders can be efficiently prevented with a combination of social, psychological and medical interventions [1]. This epidemiologic update, based on official WHO statistics [2,3], shows that the global prevalence of alcohol and drug abuse disorders not only has significantly increased during the past 15 years but is expected to raise further in the next 40 years, is more prevalent in men than in women, as well as in the age range between 15–49 years, and that its burden seems to be positively associated with gross national income per capita. We hope that this updated epidemiologic information will provide a reasonable ground for establishing effective public health surveillance policies aimed at counteracting the diffusion of alcohol and drug abuse [1].

Table 1
Current epidemiology of alcohol and drug abuse disorders.

| Condition | YEAR 2016 DALYs[†] | | | Deaths[†] | | | YEAR 2000 DALYs[†] | | Deaths[†] | |
	Number	% of total	Variation from 2000	Number	% of total	Variation from 2000	Number	% of total	Number	% of total
Alcohol abuse disorders	18.45	0.69%	+8.1%	145.57	0.26%	-2.2%	17.07	0.61%	148.80	0.28%
Drug abuse disorders	21.89	0.82%	+26.7%	160.24	0.28%	47.4%	17.27	0.61%	108.72	0.21%
- Opioid	16.64	0.62%	+26.9%	118.62	0.21%	43.3%	13.11	0.47%	82.78	0.16%
- Cocaine	1.24	0.05%	+37.2%	9.43	0.02%	83.9%	0.90	0.03%	5.13	0.01%
- Amphetamine	1.00	0.04%	+36.2%	7.10	0.01%	160.1%	0.73	0.03%	2.73	0.01%
- Cannabis	0.65	0.02%	+10.0%	<0.01	0%	–	0.59	0.02%	<0.01	0%
- Other drugs	2.37	0.09%	+22.5%	25.08	0.04%	38.8%	1.93	0.07%	18.07	0.03%

[†] Millions

Declaration of Competing Interest

All authors have no actual or potential conflict of interest including any financial, personal or other relationships with other people or organizations within three years of beginning the submitted work that could inappropriately influence, or be perceived to influence, their work.

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References

[1] Papazisis G, Tsakiridis I, Siafis S. Nonmedical Use of Prescription Drugs among Medical Students and the Relationship With Illicit Drug, Tobacco, and Alcohol Use. Subst Abuse 2018;12. 1178221818802298.

[2] World Health Organization. Global Health Estimates 2016: Disease burden by Cause, Age, Sex, by Country and by Region, 2000-2016. Geneva. 2018. Available from: https://www.who.int/healthinfo/global_burden_disease/estimates/en/index1.html. LastAccessed: 12 July 2019.

[3] World Health Organization. Projections of mortality and causes of death, 2016 to 2060. Available from: https://www.who.int/healthinfo/global_burden_disease/projections/en/. LastAccessed: 12 July 2019.

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