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Int J Drug Policy. Author manuscript; available in PMC 2020 September 01.

Published in final edited form as:

Int J Drug Policy. 2019 September ; 71: 103–112. doi:10.1016/j.drugpo.2019.03.002.

The epidemiology of drug use disorders cross-nationally: Findings from the WHO's World Mental Health Surveys

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Abstract

Background: Illicit drug use and associated disease burden are estimated to have increased over the past few decades, but large gaps remain in our knowledge of the extent of use of these drugs,

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and especially the extent of problem or dependent use, hampering confident cross-national comparisons. The World Mental Health (WMH) Surveys Initiative involves a standardised method for assessing mental and substance use disorders via structured diagnostic interviews in representative community samples of adults. We conducted cross-national comparisons of the prevalence and correlates of drug use disorders (DUDs) in countries of varied economic, social and cultural nature.

Methods and Findings: DSM-IV DUDs were assessed in 27 WMH surveys in 25 countries. Across surveys, the prevalence of lifetime DUD was 3.5%, 0.7% in the past year. Lifetime DUD prevalence increased with country income: 0.9% in low/lower-middle income countries, 2.5% in upper-middle income countries, 4.8% in high-income countries. Significant differences in 12-month prevalence of DUDs were found across country in income groups in the entire cohort, but not when limited to users. DUDs were more common among men than women and younger than older respondents. Among those with a DUD and at least one other mental disorder, onset of the DUD was usually preceded by the 'other' mental disorder.

Conclusions: Substantial cross-national differences in DUD prevalence were found, reflecting myriad social, environmental, legal and other influences. Nonetheless, patterns of course and correlates of DUDs were strikingly consistent. These findings provide foundational data on country-level comparisons of DUDs.

Keywords

drugs; abuse; dependence; World Mental Health Surveys; epidemiology

Introduction

Illicit drug use and associated disease burden are estimated to have increased over the past few decades, and drug use has been identified in almost every country globally, but large gaps exist in our knowledge of the extent of use of these drugs, and especially the extent of problem or dependent use[1]. The World Drug Report (WDR), which is produced annually by the United Nations Office on Drugs and Crime (UNODC)[2], reports on drug use in the past year, and makes estimates at a global level of an indicator they define as "problem drug use". The WDR relies on each member state submitting an annual questionnaire, but there are large gaps in reporting, particularly in Africa, Asia and Oceania, and the data reported by member states are often provided without any details on methodology, making it difficult to be confident about cross-national comparisons of estimates. The Global Burden of Disease study models the prevalence of drug dependence (e.g.[3]), but both these imputed estimates, and the uncertainty around them, necessarily depend on the extent and quality of available data to inform them.

The World Mental Health (WMH) Surveys Initiative involves a standardised methodology for undertaking and assessing mental and substance use disorders via structured diagnostic interviews in representative community samples of adults. Drug use disorder (DUD) diagnoses were derived according to the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV), which distinguishes between abuse (DRA), defined as "a maladaptive pattern of use manifested by recurrent and

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significant adverse consequences related to the repeated use of substances", and dependence (DRD), "a cluster of cognitive, behavioral and physiological symptoms indicating that the individual continues use of the substance despite significant substance-related problems"[4]. The DSM-IV hierarchy rule was followed so respondents who met criteria for both DUD disorders were only diagnosed as DRD.

There is a unique opportunity to conduct cross-national comparisons of the prevalence and correlates of DUDs in 25 countries of varied economic, social and cultural nature. Here, we conduct such an assessment, examining:

1. Lifetime and past-year prevalence of drug use, DRA, DRD, and DUD, across surveys, survey income groupings, and World Health Organization (WHO) regions;
2. Prevalence of DRA, DRD and DUD among people who have used drugs ("conditional prevalence") across surveys, survey income groupings, and WHO regions;
3. Demographic and social correlates of use disorders.

Methods

Sample

Data come from 25 countries participating in the WMH Surveys between 2001 and 2015 (n=27 surveys; see Appendix Table 1). These included six countries classified by the World Bank at time of data collection as low or lower-middle income, six as upper-middle income and 14 as high income. Eighteen surveys were based on nationally representative household samples; three were representative of urban areas; two were representative of selected regions; and four were representative of selected Metropolitan Areas.

Drug use and DUDs, as well as a range of other mental disorders (see Appendix Table 3), were assessed using the WHO WMH Survey's Composite International Diagnostic Interview (WMH-CIDI) Version 3.0, a fully-structured diagnostic interview that produces validated diagnoses of DSM-IV disorders. Trained lay-interviewers administered the interview face-to-face in the homes of participants after obtaining informed consent. Ethics committees of the organisations coordinating the surveys approved the procedures for informed consent and protecting human subjects. Full details of the methodology are available elsewhere[5].

To reduce respondent burden, the WMH-CIDI interview was generally administered in two parts. Part I includes all core disorders. Disorders of secondary interest and information about correlates and service use were assessed in Part II. All respondents who met criteria for any Part I core mental disorder or screens for Part II disorders were administered Part II of the interview, as were a probability subsample of Part I respondents who did not meet criteria for any disorder. DUDs were assessed in Part I of the interview in Brazil (São Paulo), Colombia, Mexico, New Zealand and Peru. Argentina, Belgium, Bulgaria, China, Colombia (Medellin), France, Germany, Italy, Japan, Lebanon, Nigeria, Northern Ireland, Poland, Spain, The Netherlands, The United States and Ukraine administered the full assessment for

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DUDs in Part II of the interview. The entire interview, and therefore the drug module, was administered to all respondents in Australia, Iraq, Israel, and South Africa.

Country-specific or regional adaptions of the source instrument meant there is some variation in the type of drugs assessed between WMH surveys. A selection of drugs was assessed universally, including cannabis, cocaine and illicitly-used prescription drugs. The category of prescription drugs relates to either a singular broad category or as a combination of questions relating to the extra-medical use of sedatives/tranquilizers, stimulants and analgesics/painkillers, which was defined as having used without the recommendation of a health professional or for any reason other than a health professional said they should be used. Drug use is defined as having ever used at least one of the drug grouping categories except in Australia where respondents had to have used the drug more than five times. Questions relating to DUDs were asked of all respondents that met criteria for drug use. Argentina, Australia and Poland asked diagnosis questions at the drug-specific level, while all other surveys assessed DRA and DRD at the general illicit drug level. To increase cross-national comparison, DUDs were assigned here if the appropriate criteria were met either for a specific drug or a combination of drugs.

The DSM-IV hierarchy rule was followed so that respondents who met criteria for DRA and DRD were only diagnosed as DRD. Past-year DRA or DRD was defined as respondents having reported symptoms of the specific DUD in the 12 months prior to the interview. For respondents diagnosed with both DUD and for whom the hierarchy rule was employed, only symptoms of the hierarchical disorder, DRD, were considered in determining 12-month prevalence. A short discussion pertaining to the use of DSM-IV rather than DSM-5 diagnostic criteria in the current study is provided in the discussion.

A skip existed in the initial WMH surveys (Colombia, Peru, Ukraine, Mexico, South Africa, Israel, New Zealand and the United States) whereby those who did not endorse any symptoms of abuse of a substance were not assessed for dependence. We imputed data for these countries using data from nine more recently- completed surveys without the skip pattern. Full details of this process are described elsewhere[6].

Combining across all 27 surveys, 137,853 respondents completed Part I and 74,926 completed Part II. The current analysis is based on 90,093 respondents who have information on DUDs, most assessed in Part II but in some countries in Part I. Not all these 90,093 respondents were assessed for all the correlates discussed here, as some correlates were assessed in Part II (see Appendix Table 1 for survey characteristics and sample sizes of Parts I and II).

Analyses

All analyses were based on weighted data and account for stratification and clustering, to ensure samples were representative of target populations in terms of socio-demographic and geographic characteristics. Standard errors were estimated using Taylor series linearization as implemented in Statistical Analysis System (SAS) Version 9.4. SAS PROC LIFETEST was used to produce life-table estimates of the age-of-onset distributions of DUDs and are reported as weighted prevalence. Conditional prevalence estimates, representing the

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weighted prevalence among a subset of the cohort where inclusion is conditional on having met a certain level of drug use involvement, are also reported.

The associations of basic socio-demographic variables with lifetime DUD were assessed using bivariate discrete-time logistic regression analyses with person-year the unit of analysis. Variables investigated included sex, age cohort at time of interview (18-29, 30-44, 45-49 and 60+ years), employment status (employed, student, homemaker, retired and other), education level (no education, some primary, finished primary, some secondary, finished secondary, some college and finished college), marital status (never married, currently married and divorced/separated/widowed) and household income (low, low/average, high/average, high). Similar analyses using standard logistic regression were used to investigate correlates of past year DUD among lifetime cases, herein defined as disorder persistence. Tests of significance were evaluated using F or Wald χ^2 tests based on design-corrected coefficient variance-covariance matrices with statistical significance defined at the 2-tailed 0.05 level.

Results

Lifetime Prevalence

Table 1 shows prevalence of lifetime drug use, DRA, DRD and DUDs for each of the 27 WMH surveys, all countries combined, the countries grouped by World Bank income levels and WHO regions. There are significant differences in base rates of lifetime drug use, DRA, DRD and DUD prevalence across countries, income levels and regions, as well as when analyses are restricted to lifetime illicit drug users.

The average lifetime prevalence of illicit drug use in all countries combined is 24.8%, ranging from 1.3% in Iraq to 66.8% in Italy. The average lifetime prevalence of DSM-IV diagnoses in all countries combined is 2.2% for DRA and 1.2% for DRD, and overall 3.5% for DUDs. Conditioning on lifetime drug use, the average prevalence for all countries is 9.1% for DRA, 5.0% for DRD and 14.0% for DUD.

Unconditional lifetime prevalence of DUDs has a clear trend for higher prevalence in higher income countries, increasing from 0.9% for DUDs in low/lower-middle income countries to 2.5% in upper-middle income countries and 4.8% in high-income countries. When only lifetime users are considered, the upper-middle income group exceeds the high-income group in conditional DRA and DUD prevalence.

At the survey-level, the United States has the highest prevalence estimates for all diagnoses at 4.9% for DRA, 3.5% for DRD and 8.4% for DUD. However, when limited to lifetime users, Australia emerges with the highest conditional prevalence estimates of DRA (21.6%), DRD (13.5%) and DUD (35.1%).

Comparing WHO regions, the lowest DRA, DRD and DUD prevalence in the entire population is in the Eastern European and Eastern Mediterranean regions. Lowest conditional prevalence (i.e., among lifetime users) of DRA and DRD is in the Western

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European regions. Highest DUD prevalence (overall and conditional on lifetime use) is in the Western Pacific Region, in large part attributable to Australia and New Zealand.

Past-Year Prevalence

Table 2 shows prevalence of past-year drug use, DRA, DRD and DUDs, as well as past-year diagnoses conditional on past-year use. There are significant differences in unconditional past-year drug use, DRA, DRD and DUD prevalence across countries, income levels and regions.

The average 12-month prevalence of drug use for all countries is 7.0%, ranging from 0.6% in Iraq to 17.2% in Argentina. The average 12-month prevalence of DSM-IV diagnoses in all countries combined is 0.4% for DRA, 0.3% for DRD and overall 0.7% for DUD. Conditioning on past-year drug use, the average prevalence for all countries is 5.1% for DRA, 4.7% for DRD and 9.7% for DUD.

As observed for lifetime disorders, unconditional past-year DUD prevalence is significantly higher among higher income countries, increasing from 0.3% for low/lower-middle income countries to 0.9% among high-income countries; trends are consistent within genders for both time periods (lifetime and 12-month, see Appendix Table 2). The trend of higher prevalence with higher country income groups is not observed among the conditional past-year DUD rates.

At the survey-level, 12-month DRA prevalence ranged from less than 0.1% in Peru, Bulgaria, Lebanon, Japan and Spain (Murcia), to 1.3% in South Africa. The highest prevalence of 12-month DRD was from New Zealand (0.8%). Significant differences are observed between countries for past-year conditional DRA, DRD and DUD, with the highest levels of DRA (11.0%), DRD (12.0%) and DUD (23.0%) in Ukraine.

Consistent with lifetime prevalence estimates, past-year DUD prevalence among WHO regions is highest in the Western Pacific Region at 1.2%, and lowest in the Eastern Mediterranean and Eastern European regions at 0.2%. When conditioning on past year use, Western Pacific region maintains significantly higher rates of conditional past-year DRD (6.1%) and DUD (11.0%) compared to other WHO regions.

Disorder persistence

Indirect measures of disorder persistence were calculated as the proportion of lifetime cases of DRA, DRD and DUD that met criteria for the same diagnosis in the past 12-months. These estimates are presented in Table 3, where significant cross-national differences can be seen across individual surveys, country income groups, and WHO regions. Overall, one-fifth of respondents who have ever had a DUD showed symptoms of the disorder in the past year.

As would be expected with a more severe disorder, DRD (27.4%) persistence was greater than DRA (18.2%) for all countries combined. These estimates were significantly different across countries, with persistence rates greater than 65% in Iraq for DRA, and in Lebanon, Germany and Poland for DRD. Interestingly, the unconditional lifetime prevalence of the

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associated diagnosis (see Table 1) for these four surveys is 0.5% or less, indicating a relatively low prevalence but high chronicity of the disorder.

Rates of persistence are significantly different across income survey groups for DRA with the lowest level in high-income countries (16.1%) and highest in upper-middle income countries (26.5%). Significant differences are also observed across survey income groups for DRA with the highest conditional rates attributable to the African region. There was no significant difference in the estimates for DRD across income survey groups or WHO regions however the small numbers of cases involved limited power to detect differences.

Socio-demographic correlates of DUDs

Table 4 shows bivariate associations of sociodemographic correlates with lifetime DUDs and persistent DUDs. Men are significantly more likely than women to have a lifetime DUD ($\chi^2_1 = 367.1$, $p<0.001$), such that the odds of lifetime DUDs for men are more than twice the odds of that for women. Age at interview (age-cohort) was significantly associated with lifetime history of reporting DUD ($\chi^2_3 = 984.6$, $p<0.001$) where the odds of having a lifetime DUD is 69.3 times for those aged between 18-29 years compared to those aged 60 or more. Neither gender or age at interview are associated with persistent DUDs.

Employment status is significantly associated with lifetime DUDs ($\chi^2_4 = 81.2$, $p<0.001$), with those unemployed or disabled (the ‘other’ category of employment status) at time of interview reporting elevated odds of lifetime DUDs in comparison to those who were employed. Marital status was also significantly associated with DUDs ($\chi^2_2 = 143.4$, $p<0.001$); compared to those who were married at the time of interview, there were increased odds of lifetime DUDs among those who were either divorced, separated or widowed, and increased odds of lifetime and persistent DUDs among those who had never been married. Having completed a higher level of education, specifically having finished college, was associated with decreased odds of lifetime ($\chi^2_6 = 86.4$, $p<0.001$) and persistent DUDs ($\chi^2_6 = 13.2$, $p=0.022$). Lastly, household income is negatively associated with DUDs ($\chi^2_3 = 59.0$, $p<0.001$), such that the odds of lifetime or persistent DUDs among those living in the lowest income households is 1.6 times the odds of those living in the wealthiest households.

Cumulative age of onset distributions for DUDs by country income group and by country are shown in Appendix Figures 1 and 2, respectively. The greatest increase in onset was most often observed from mid-teen years through to mid-twenties. Prevalence of other mental disorders, and their temporal ordering in relation to DUD, among respondents with a lifetime DUD are shown in Appendix Table 3. Among those with a comorbid mental disorder, the DUD was often preceded by the other mental disorder.

Discussion

Although previous studies have examined the epidemiology of drug use disorders in the general population (e.g.[7–10]), to our knowledge this is the largest and most detailed cross-national examination of the prevalence and correlates of drug use disorders using standardised methodologies and general population samples. Prevalence of DUDs varied

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widely: the US, Australia and New Zealand had the highest levels of DUDs, whereas much lower levels were observed in countries in Africa, Latin America, the Middle East, and Asia. Lifetime DUD prevalence across all countries was 3.5%, ranging from 0.2% in Iraq and Bulgaria, to 8.4% in the United States. This wide range is consistent with other data on variations in the prevalence of illicit drug use and problems[11–14].

There were greater levels of DUDs among younger than older adults, suggesting that drug use problems have and may continue to change over historical time. An additional possibility is that of survival bias, whereby lower prevalence among older adults reflects increased mortality among individuals with DUDs in that age group. It is unlikely that this possibility explains all age-related differences, however, given the magnitude of the difference in prevalence, and the fact that the most commonly used illicit drug in most countries was cannabis, which has limited evidence of strongly elevated mortality[15]. It remains to be seen whether there will be changes in the future in levels of DUDs in countries that had lower levels at the time of conduct of the WMH surveys, especially if use among younger generations increases significantly. As noted previously, data suggest that levels have increased globally over past decades[12].

The period of risk for onset of DUDs began in the mid-teen years, extending into adulthood, with about half of cases beginning by age 20, but incidence continuing into middle-age (see Appendix Figures 1 and 2). There continues to be a window of risk of developing problems that persists well beyond the most commonly targeted ages when prevention interventions are delivered. Higher odds of lifetime DUDs were associated with those who, at the time of interview, were less educated, earn a low income (relative to others in that country), were unemployed, and not married. In line with a large body of evidence[16], gender was strongly related to lifetime DUDs, with men more likely than women to have experienced a DUD.

Of note were contrasting findings related to income. High income countries had significantly higher prevalence of illicit drug use and DUD than lower income countries. Within countries, however, people with the lowest household income had the highest DUD rates; this finding has also been reported for alcohol[17]. This contrasts with our previous findings about use of illicit drugs, which followed the opposite pattern whereby those with higher incomes had higher rates of lifetime drug use[18]. Differences between the correlates of drug use and correlates of DUD suggests different factors are either causes or consequences of these different levels of involvement with drug use.

It was also striking that the differences observed across countries in levels of drug use were quite different from the pattern of differences across countries in the conditional prevalence of DUD. This suggests that the types of people using drugs, and the types of drugs being used (which differ in their abuse liability) may differ across countries. It may also be that there are differences across countries in the nature of risk and pattern of exposure to risk factors that increase the likelihood of transition from drug use to DUD. These possibilities are deserving of more detailed investigation in future work. These findings are important for effective planning of prevention of drug use and DUD (at all levels – primary, secondary and tertiary).

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There are two concerns related to cross-national comparisons of DUDs. The first relates to the psychiatric significance and consistency of the symptoms across countries, particularly for DRA, whose criteria focus in large part upon consequences of substance use that are affected by social, legal and societal responses to substance use rather than being an inherent consequence of use [19–21]. In the context of the WMH surveys, variations in prevalence across countries could reflect variations in responses to use.

The second issue is that environmental and social factors that increase (or decrease) risks for drug use may vary across countries, affecting the prevalence of DUDs. These include drug availability, cost, social tolerance and social consequences for drug use, legal sanctions and enforcement, and the contexts of drug use and ways in which drugs are taken that may affect risk of developing problematic use (e.g. via injection versus smoked). It is likely that these factors account for some of the cross-national variation in prevalence of DUDs, but it is difficult to know which, if any, might have affected the development and prevalence of DUDs. They also do not discount the importance of the condition once it has developed within an individual.

The findings of this paper carry importance for policy and planning around service delivery and scale for DUDs. Although estimates of the prevalence of DUDs from representative general populations are typically considered to be conservative estimates of the actual prevalence of these disorders[22] (see limitations section below), our findings about the extended period for the age of onset of these disorders, and correlates of these disorders including comorbid mental health problems, carry importance for planning of the configuration of services with respect to the demographic and clinical profile of people who may be in need of such services. We have previously shown that drug treatment coverage is low across countries in the WMHS, and particularly in lower income countries[23].

Limitations

The WMH surveys have several important limitations. Given that 27 countries or country regions participated in the WMH surveys assessing DUDs, there is not full representation of all regions, country income levels and other country characteristics. There was variation in response rates across countries, the year in which the studies were administered, and possibly cross-national differences in willingness to disclose personal information about drug use and problems. Respondent information is subject to the limitations of recall inherent in retrospective reporting, leading to potential underestimates in lifetime prevalence. Survival bias may also contribute to downward bias in lifetime estimates.

In addition to these general limitations, there are some limitations specific to the assessment of DUDs. The WMH surveys are household surveys, which have limitations when used to assess less common and more stigmatised behaviors. Illicit drug use can be a rare occurrence and geographically concentrated, and surveys such as the WMH surveys that rely on stratified sampling methods are poorly suited to capturing concentrated geographic ‘pockets’ of drug use. Furthermore, the use of households as the primary sampling unit will not capture marginalised groups who do not live in traditional household contexts (e.g. homeless, prison, hospital, or other non-household accommodation). These factors mean

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that prevalence rates presented here should be considered lower-bound estimates; “true” lifetime prevalence of DUDs may be substantially higher. For this reason, caution needs to be taken in interpretation of the sociodemographic correlates in Table 4 given that it is likely that people with greater social disadvantage are less likely to have been included in the survey, so the characteristics of people with DUDs in our study may differ from those people. However, we do not have any reason to suspect a substantial gender or age bias in inclusion in the surveys so, at least to that end, these might be considered useful.

There might also be differential social, religious and legal contexts across countries that affect willingness to report substance use and this could be correlated with the income level of the country (for example, social desirability bias is higher among collectivist countries, and collectivism is related to (lower) country income[24]). Several strategies were used to maximise the likelihood of honest reporting. First, pilot testing was carried out to determine the best way to describe the study to increase willingness to respond honestly and accurately. Second, in countries that do not have a tradition of public research, and where concepts of anonymity and confidentiality are less familiar, community leaders were contacted to explain the study and obtain formal endorsement; these leaders announced the study and encouraged participation. Third, interviewers were centrally trained in use of non-directive probing, which is designed to encourage thoughtful, honest responding. These strategies were probably not effective in removing all cross-national differences in willingness to report, and remaining differences that could have contributed to reporting biases should be borne in mind. Nonetheless, the cross-national variations we found are consistent with other global and country-level reports[2].

Response rates in the WMHS varied widely. We attempted to control for differential response through post-stratification adjustments, but it remains possible that survey response was related to the presence and severity of substance use disorders or treatment in ways that were not corrected.

In assessing DUDs, except for countries such as Australia where abuse and dependence were assessed for specific substances (cannabis, sedatives and stimulants), there was assessment of abuse and dependence symptoms without specification of the substance thought to have induced the symptom. This means that for people who had used multiple drugs, it is not clear which specific drug(s) was considered by the respondent to have caused the symptom. Since the levels of use of specific drugs varies across countries in the WMHS[25], to the extent that there is differentiation in risk for abuse and dependence upon different kinds of drugs, differences in DUDs may reflect differences in risk of different substances.

Another issue concerns the diagnostic system used in the WMH surveys. The conceptualisation of and diagnostic criteria for DUDs were significantly revised in the DSM-5[26]. The distinction between abuse and dependence was removed, reframing DUD as a single disorder. The legal problems symptom criterion was removed and a craving criterion added. DSM-5 uses numbers of symptom criteria to distinguish three levels of DUD severity. We compared DSM-IV and DSM-5 diagnoses of alcohol use disorders (AUDs) in the WMH surveys, and found that although the lifetime prevalence of AUD were similar when using the two systems, a large number of people were not consistently identified by

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both classifications[27]. It seems reasonable to assume that the same issues would apply for DUDs, as was found in an analysis of Australian data examining cannabis use disorder[28]. This has significant implications if DSM-5 were to be used to plan treatment programme scale-up or treatment coverage. Future research will be important in further exploring these nosological issues.

Conclusions

There are substantial differences in the extent of DUDs across countries, which reflect myriad social, environmental, legal and other factors. Nonetheless, we have documented consistencies across these varied countries in terms of the onset and course of these disorders, and a number of consistent correlates. These findings provide foundational data on country-level comparisons of DUDs, but there are important diagnostic issues requiring resolution and methodological challenges to be overcome in future cross-national epidemiological research on drug use disorders.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

Acknowledgments

Role of funding source

The surveys discussed in this article were carried out in conjunction with the World Health Organization World Mental Health (WMH) Survey Initiative. We thank the WMH staff for assistance with instrumentation, fieldwork, and data analysis. These activities were supported by the US National Institute of Mental Health (R01 MH070884), the MacArthur Foundation, the Pfizer Foundation, the US Public Health Service (R13-MH066849, R01-MH069864 and R01 DA016558), the Fogarty International Center (R03-TW006481), the Pan American Health Organization, Eli Lilly and Company, Ortho-McNeil Pharmaceutical Inc., GlaxoSmithKline, Bristol-Myers Squibb, and Shire. This work was supported by an Australian National Health and Medical Research Council (NHMRC) project grant (no. 1081984). Dr. Degenhardt is supported by a NHMRC Senior Principal Research Fellowship (no. 1135991) and NIDA NIH grant R01 DA044170-02. Dr. Stein is supported by the Medical Research Council of South Africa (MRC).

The views expressed in this report are those of the authors and should not be construed to represent the views or policies of the WHO, other sponsoring organisations, agencies, or governments, and do not necessarily represent the views, official policy, or position of the US. Department of Health and Human Services or any of its affiliated institutions or agencies. Dr. Glantz's role on this study is through his involvement as a Science Officer on U01-MH60220. He had no involvement in the other cited grants.

The 2007 Australian National Survey of Mental Health and Wellbeing is funded by the Australian Government Department of Health and Ageing. The Argentina survey -- Estudio Argentino de Epidemiología en Salud Mental (EASM) -- was supported by a grant from the Argentinian Ministry of Health (Ministerio de Salud de la Nación). The São Paulo Megacity Mental Health Survey is supported by the State of São Paulo Research Foundation (FAPESP) Thematic Project Grant 03/00204-3. The Bulgarian Epidemiological Study of common mental disorders EPIBUL is supported by the Ministry of Health and the National Center for Public Health Protection. The Chinese World Mental Health Survey Initiative is supported by the Pfizer Foundation. The Colombian National Study of Mental Health (NSMH) is supported by the Ministry of Social Protection. The Mental Health Study Medellín – Colombia was carried out and supported jointly by the Center for Excellence on Research in Mental Health (CES University) and the Secretary of Health of Medellín. The ESEMeD project is funded by the European Commission (Contracts QLG5-1999-01042; SANCO 2004123, and EAHC 20081308), (the Piedmont Region (Italy)), Fondo de Investigación Sanitaria, Instituto de Salud Carlos III, Spain (FIS 00/0028), Ministerio de Ciencia y Tecnología, Spain (SAF 2000-158-CE), Departament de Salut, Generalitat de Catalunya, Spain, Instituto de Salud Carlos III (CIBER CB06/02/0046, RETICS RD06/0011 REM-TAP), and other local agencies and by an unrestricted educational grant from GlaxoSmithKline. Implementation of the Iraq Mental Health Survey (IMHS) and data entry were carried out by the staff of the Iraqi MOH and MOP with direct support from the Iraqi IMHS team with funding from both the Japanese and European Funds through United Nations Development Group Iraq Trust Fund

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(UNDG ITF). The Israel National Health Survey is funded by the Ministry of Health with support from the Israel National Institute for Health Policy and Health Services Research and the National Insurance Institute of Israel. The World Mental Health Japan (WMHJ) Survey is supported by the Grant for Research on Psychiatric and Neurological Diseases and Mental Health (H13-SHOGAI-023, H14-TOKUBETSU-026, H16-KOKORO-013, H25-SEISHIN-IPPAN-006) from the Japan Ministry of Health, Labour and Welfare. The Lebanese Evaluation of the Burden of Ailments and Needs Of the Nation (L.E.B.A.N.O.N.) is supported by the Lebanese Ministry of Public Health, the WHO (Lebanon), National Institute of Health / Fogarty International Center (R03 TW006481-01), anonymous private donations to IDRAAC, Lebanon, and unrestricted grants from, Algorithm, AstraZeneca, Benta, Bella Pharma, Eli Lilly, Glaxo Smith Kline, Lundbeck, Novartis, OmniPharma, Pfizer, Phenicia, Servier, UPO. The Mexican National Comorbidity Survey (MNCS) is supported by The National Institute of Psychiatry Ramon de la Fuente (INPRFMDIES 4280) and by the National Council on Science and Technology (CONACyT-G30544- H), with supplemental support from the Pan American Health Organization (PAHO). Te Rau Hinengaro: The New Zealand Mental Health Survey (NZMHS) is supported by the New Zealand Ministry of Health, Alcohol Advisory Council, and the Health Research Council. The Nigerian Survey of Mental Health and Wellbeing (NSMHW) is supported by the WHO (Geneva), the WHO (Nigeria), and the Federal Ministry of Health, Abuja, Nigeria. The Northern Ireland Study of Mental Health was funded by the Health & Social Care Research & Development Division of the Public Health Agency. The Peruvian World Mental Health Study was funded by the National Institute of Health of the Ministry of Health of Peru. The Polish project Epidemiology of Mental Health and Access to Care –EZOP Project (PL 0256) was supported by Iceland, Liechtenstein and Norway through funding from the EEA Financial Mechanism and the Norwegian Financial Mechanism. EZOP project was co-financed by the Polish Ministry of Health. The South Africa Stress and Health Study (SASH) is supported by the US National Institute of Mental Health (R01-MH059575) and National Institute of Drug Abuse with supplemental funding from the South African Department of Health and the University of Michigan. The Psychiatric Enquiry to General Population in Southeast Spain – Murcia (PEGASUS-Murcia) Project has been financed by the Regional Health Authorities of Murcia (Servicio Murciano de Salud and Consejería de Sanidad y Política Social) and Fundación para la Formación e Investigación Sanitarias (FFIS) of Murcia. The Ukraine Comorbid Mental Disorders during Periods of Social Disruption (CMDPSD) study is funded by the US National Institute of Mental Health (RO1-MH61905). The US National Comorbidity Survey Replication (NCS-R) is supported by the National Institute of Mental Health (NIMH; U01-MH60220) with supplemental support from the National Institute of Drug Abuse (NIDA), the Substance Abuse and Mental Health Services Administration (SAMHSA), the Robert Wood Johnson Foundation (RWJF; Grant 044708), and the John W. Alden Trust. The sponsors had no role in study design; in the collection, analysis and interpretation of data; in the writing of the report; and in the decision to submit the paper for publication.

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Table 1:

Prevalence of lifetime drug use, drug abuse and drug dependence in the World Mental Health Surveys

Country	N	Lifetime drug use		Lifetime DSM-IV drug abuse		Lifetime DSM-IV drug dependence		Lifetime DSM-IV drug use disorder		Lifetime DSM-IV drug abuse among lifetime users		Lifetime DSM-IV drug dependence among lifetime users		Lifetime DSM-IV drug use disorder among lifetime users	
		%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Low-Lower middle income countries	**18,179**	**10.0**	**0.3**	**0.6**	**0.1**	**0.3**	**<0.1**	**0.9**	**0.1**	**6.1**	**0.6**	**3.2**	**0.5**	**9.3**	**0.9**
Colombia	4,426	12.7	0.7	0.9	0.2	0.8	0.2	1.7	0.3	6.8	1.3	6.4	1.3	13.2	2.1
Iraq	4,332	1.3	0.2	0.1	0.1	<0.1	<0.1	0.2	0.1	11.4	7.6	0.9	0.9	12.3	7.6
Nigeria	2,143	20.4	1.3	1.0	0.2	<0.1	<0.1	1.0	0.2	5.0	1.1	0.1	0.1	5.1	1.1
Peru	3,930	13.3	0.5	0.8	0.1	0.3	0.1	1.1	0.1	5.8	0.8	2.1	0.8	8.0	1.2
PRC	1,628	5.9	0.9	0.4	0.2	<0.1	<0.1	0.5	0.2	7.5	3.2	0.2	0.2	7.7	3.2
Ukraine	1,720	8.4	1.2	0.4	0.2	0.6	0.2	1.0	0.3	5.0	2.5	6.7	1.9	11.7	2.6
Upper-middle income countries	**20,071**	**16.2**	**0.5**	**1.7**	**0.1**	**0.8**	**0.1**	**2.5**	**0.1**	**10.4**	**0.7**	**4.9**	**0.6**	**15.3**	**0.9**
Brazil	5,037	17.6	0.7	1.5	0.2	1.4	0.3	2.9	0.4	8.6	1.0	7.9	1.6	16.5	1.8
Bulgaria	2,233	7.3	0.8	0.2	0.1	-	-	0.2	0.1	2.3	1.2	-	-	2.3	1.2
Colombia (Medellin)	1,673	22.7	1.9	3.4	0.5	1.9	0.4	5.2	0.7	14.9	2.2	8.2	1.7	23.1	2.8
Lebanon	1,031	6.2	1.1	0.3	0.3	0.1	0.1	0.5	0.2	5.6	4.6	2.3	1.5	7.8	3.8
Mexico	5,782	10.1	0.5	0.9	0.2	0.5	0.1	1.4	0.2	9.1	1.5	4.9	1.1	14.0	1.6
South Africa	4,315	27.2	1.7	3.4	0.3	0.6	0.2	4.0	0.4	12.3	1.4	2.3	0.6	14.6	1.8
High income countries	**51,843**	**33.3**	**0.3**	**3.0**	**0.1**	**1.7**	**0.1**	**4.8**	**0.1**	**9.1**	**0.3**	**5.2**	**0.2**	**14.3**	**0.3**
Argentina	2,116	26.2	1.3	3.0	0.5	1.2	0.3	4.2	0.5	11.5	1.7	4.5	1.1	16.0	1.9
Australia	8,463	21.4	0.6	4.6	0.2	2.9	0.3	7.5	0.4	21.6	1.2	13.5	1.4	35.1	1.7
Belgium	1,043	47.6	2.8	3.4	0.7	1.1	0.6	4.5	0.9	7.1	1.4	2.3	1.3	9.4	1.8
France	1,436	52.7	1.7	2.6	0.3	0.9	0.3	3.5	0.4	5.0	0.5	1.7	0.5	6.6	0.9
Germany	1,323	66.4	2.5	2.4	0.5	0.5	0.3	2.9	0.5	3.6	0.7	0.7	0.4	4.4	0.8
Israel	4,859	12.8	0.5	1.4	0.2	0.3	0.1	1.7	0.2	10.8	1.3	2.3	0.6	13.1	1.4
Italy	1,779	66.8	2.0	2.1	0.4	0.4	0.1	2.5	0.4	3.1	0.6	0.6	0.2	3.7	0.6
Japan	1,682	7.0	0.8	0.2	0.1	<0.1	<0.1	0.3	0.1	3.0	1.4	0.7	0.5	3.7	1.5
New Zealand	12,790	42.9	0.7	3.1	0.2	2.5	0.2	5.6	0.3	7.2	0.5	5.8	0.4	13.0	0.6
Northern Ireland	1,986	18.2	1.2	2.7	0.4	0.6	0.2	3.3	0.5	14.8	2.3	3.5	0.9	18.4	2.5
Poland	4,000	8.6	0.5	1.2	0.2	0.2	0.1	1.4	0.2	13.4	1.7	2.8	0.9	16.2	2.0
Spain	2,121	64.5	2.6	3.8	0.5	0.3	0.1	4.1	0.5	5.9	0.9	0.5	0.1	6.3	0.9
Spain (Murcia)	1,459	24.2	1.5	2.4	0.7	1.2	0.4	3.7	0.8	10.0	2.4	5.2	1.5	15.2	2.5

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Country	N	Lifetime drug use		Lifetime DSM-IV drug abuse		Lifetime DSM-IV drug dependence		Lifetime DSM-IV drug use disorder		Lifetime DSM-IV drug abuse among lifetime users		Lifetime DSM-IV drug dependence among lifetime users		Lifetime DSM-IV drug use disorder among lifetime users	
		%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
The Netherlands	1,094	35.9	2.4	1.0	0.3	1.1	0.6	2.1	0.7	2.9	0.9	3.0	1.7	5.8	1.8
The United States	5,692	44.2	1.1	4.9	0.3	3.5	0.2	8.4	0.4	11.1	0.7	7.8	0.5	18.9	0.9
All countries combined	**90,093**	**24.8**	**0.2**	**2.2**	**0.1**	**1.2**	**0.1**	**3.5**	**0.1**	**9.1**	**0.2**	**5.0**	**0.2**	**14.0**	**0.3**
WHO regions[a]															
Region of the Americas	28,656	20.9	0.4	2.1	0.1	1.4	0.1	3.5	0.1	10.0	0.4	6.6	0.4	16.6	0.6
African Region	6,458	25.0	1.2	2.6	0.2	0.4	0.1	3.0	0.3	10.3	1.0	1.7	0.5	12.0	1.3
Western Pacific Region	24,563	30.6	0.4	3.3	0.1	2.3	0.1	5.5	0.2	10.7	0.4	7.5	0.5	18.1	0.6
Eastern Mediterranean Region	10,222	7.3	0.3	0.8	0.1	0.2	<0.1	0.9	0.1	10.4	1.3	2.2	0.5	12.6	1.3
Western European Region	12,241	47.4	0.9	2.6	0.2	0.7	0.1	3.3	0.2	5.5	0.4	1.5	0.2	7.0	0.4
Eastern European Region	7,953	8.2	0.4	0.7	0.1	0.2	0.1	1.0	0.1	8.8	1.1	2.9	0.7	11.7	1.3
Comparison between countries[b]		**F(26,5273) = 183.4**		**F(26,5273) = 33.9**		**F(25,5242) = 21.9**		**F(26,5273) = 44.5**		**F(26,5273) = 15.0**		**F(25,5242) = 16.9**		**F(23,5273) = 22.5**	
		P<0.0001		**P<0.0001**		**P<0.0001**		**P<0.0001**		**P<0.0001**		**P<0.0001**		**P<0.0001**	
Comparison between low, middle and high income country groups[b]		**F(2,5297) = 1135.2**		**F(2,5297) = 229.0**		**F(2,5297) = 111.0**		**F(2,5297) =306.4**		**F(2,5297) = 11.7**		**F(2,5297) = 6.6**		**F(2,5297) = 14.8**	
		P<0.0001		**P<0.0001**		**P<0.0001**		**P<0.0001**		**P<0.0001**		**P=0.0013**		**P<0.0001**	
Comparison between WHO regions[b]		**F(5,5294) = 650.5**		**F(5,5294) = 71.1**		**F(5,5294) = 68.1**		**F(5,5294) = 125.3**		**F(5,5294) = 19.8**		**F(5,5294) = 44.1**		**F(5,5294) = 52.8**	
		P<0.0001		**P<0.0001**		**P<0.0001**		**P<0.0001**		**P<0.0001**		**P<0.0001**		**P<0.0001**	

A dash indicates zero cell count.

[a]**Region of the Americas** (Colombia, Mexico, Brazil, Peru, The United States, Medellin, Argentina);

African region (South Africa, Nigeria);

Western Pacific region (PRC (Beijing and Shanghai), Japan, Australia, New Zealand);

Eastern Mediterranean region (Israel, Iraq, Lebanon);

Western European region (Belgium, France, Germany, Italy, The Netherlands, Spain, Northern Ireland, Murcia);

Eastern European region (Poland, Bulgaria, Ukraine).

[b]Wald design-corrected F-tests were used to determine if there is variation in prevalence estimates across countries.

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Table 2:

Prevalence of past-year drug use, drug abuse and drug dependence in the World Mental Health Surveys

Country	N	Past-year drug use		Past-year DSM-IV drug abuse		Past-year DSM-IV drug dependence		Past-year DSM-IV drug use disorder		Past-year DSM-IV drug abuse among past-year users		Past-year DSM-IV drug dependence among past-year users		Past-year DSM-IV drug use disorder among past-year users	
		%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Low-Lower middle income countries	**18,179**	**2.6**	**0.2**	**0.1**	**<0.1**	**0.1**	**<0.1**	**0.3**	**<0.1**	**3.9**	**1.1**	**4.0**	**1.1**	**7.9**	**1.5**
Colombia	4,426	3.3	0.4	0.2	0.1	0.2	0.1	0.5	0.1	6.6	2.5	7.4	2.2	13.9	3.2
Iraq	4,332	0.6	0.2	0.1	0.1	-	-	0.1	0.1	-	-	-	-	-	-
Nigeria	2,143	5.1	0.6	0.2	0.1	-	-	0.2	0.1	3.0	1.7	-	-	3.0	1.7
Peru	3,930	3.6	0.3	<0.1	<0.1	0.1	0.1	0.2	0.1	1.3	1.0	3.7	2.4	5.0	2.5
PRC	1,628	1.8	0.4	0.1	<0.1	-	-	0.1	<0.1	3.2	2.2	-	-	3.2	2.2
Ukraine	1,720	1.5	0.5	0.2	0.2	0.2	0.1	0.4	0.2	11.0	10.3	12.0	4.0	23.0	9.8
Upper-middle income countries	**20,071**	**6.1**	**0.3**	**0.4**	**0.1**	**0.2**	**<0.1**	**0.7**	**0.1**	**5.5**	**0.8**	**3.7**	**0.7**	**9.3**	**1.0**
Brazil	5,037	5.5	0.5	0.3	0.1	0.5	0.1	0.8	0.2	4.0	1.5	8.7	2.1	12.7	2.6
Bulgaria	2,233	2.9	0.6	<0.1	<0.1	-	-	<0.1	<0.1	-	-	-	-	-	-
Colombia (Medellin)	1,673	5.9	0.8	0.5	0.2	0.5	0.2	1.0	0.2	9.2	2.9	8.4	2.8	17.5	4.0
Lebanon	1,031	2.0	0.7	<0.1	<0.1	0.1	0.1	0.2	0.1	1.1	1.2	5.0	3.9	6.2	4.2
Mexico	5,782	2.0	0.2	0.2	0.1	0.1	<0.1	0.3	0.1	7.6	3.1	5.5	2.3	13.2	3.1
South Africa	4,315	15.2	1.1	1.3	0.2	0.1	0.1	1.4	0.2	5.9	1.2	1.0	0.4	6.9	1.3
High income countries	**51,843**	**9.3**	**0.2**	**0.5**	**<0.1**	**0.5**	**<0.1**	**0.9**	**0.1**	**5.1**	**0.4**	**5.0**	**0.4**	**10.1**	**0.5**
Argentina	2,116	17.2	1.4	0.6	0.2	0.4	0.1	1.0	0.2	3.5	1.1	2.5	0.9	6.0	1.4
Australia	8,463	8.5	0.4	0.7	0.1	0.7	0.1	1.3	0.1	7.7	1.1	7.7	1.3	15.4	1.6
Belgium [a]	1,043			1.0	0.5	0.7	0.5	1.7	0.7						
France [a]	1,436			0.4	0.1	0.4	0.2	0.8	0.2						
Germany [a]	1,323			0.2	0.2	0.3	0.3	0.6	0.3						
Israel	4,859	3.9	0.3	0.3	0.1	0.1	<0.1	0.3	0.1	6.0	1.7	1.0	0.7	7.0	1.9

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Country	N	Past-year drug use		Past-year DSM-IV drug abuse		Past-year DSM-IV drug dependence		Past-year DSM-IV drug use disorder		Past-year DSM-IV drug abuse among past-year users		Past-year DSM-IV drug dependence among past-year users		Past-year DSM-IV drug use disorder among past-year users	
		%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Italy [a]	1,779			0.2	0.1	0.1	0.1	0.4	0.1						
Japan	1,682	1.7	0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	1.1	1.1	1.1	1.1	2.2	1.6
New Zealand	12,790	13.5	0.5	0.6	0.1	0.8	0.1	1.4	0.1	3.9	0.6	5.5	0.7	9.4	0.8
Northern Ireland	1,986	5.4	0.6	0.3	0.2	0.2	0.1	0.6	0.2	6.3	2.8	4.2	2.1	10.5	3.6
Poland	4,000	4.0	0.3	0.1	0.1	0.2	0.1	0.3	0.1	2.3	1.2	4.2	1.9	6.5	2.2
Spain [a]	2,121			0.8	0.3	<0.1	<0.1	0.8	0.3						
Spain (Murcia)	1,459	6.2	1.2	<0.1	<0.1	0.1	0.1	0.1	0.1	0.3	0.3	1.5	1.2	1.8	1.4
The Netherlands [a]	1,094			0.1	0.1	0.1	<0.1	0.2	0.1						
The United States	5,692	11.0	0.5	0.8	0.1	0.5	0.1	1.3	0.1	7.4	1.1	4.2	0.8	11.6	1.2
All countries combined	**90,093**	**7.0**	**0.1**	**0.4**	**<0.1**	**0.3**	**<0.1**	**0.7**	**<0.1**	**5.1**	**0.3**	**4.7**	**0.3**	**9.7**	**0.5**
WHO regions [b]															
Region of the Americas	28,656	6.2	0.2	0.4	<0.1	0.3	<0.1	0.7	0.1	5.6	0.6	5.1	0.6	10.7	0.8
African Region	6,458	11.8	0.8	0.9	0.1	0.1	<0.1	1.0	0.1	5.5	1.1	0.8	0.4	6.3	1.1
Western Pacific Region	24,563	10.2	0.3	0.5	0.1	0.7	0.1	1.2	0.1	5.0	0.5	6.1	0.6	11.0	0.7
Eastern Mediterranean Region	10,222	2.3	0.2	0.2	0.1	<0.1	<0.1	0.2	0.1	5.0	1.4	1.3	0.7	6.2	1.6
Western European Region	12,241	5.7	0.6	0.4	0.1	0.2	0.1	0.6	0.1	3.6	1.6	3.0	1.3	6.5	2.2
Eastern European Region	7,953	3.1	0.2	0.1	<0.1	0.1	<0.1	0.2	0.1	2.6	1.4	3.9	1.3	6.6	1.9
Comparison between countries [c]		**F(20,5083) = 59.4**		**F(26,5273) = 9.5**		**F(22,5081) = 7.5**		**F(26,5273) = 15.1**		**F(18,4998) = 3.2**		**F(16,4891) = 4.6**		**F(18,4998) = 4.1**	
		P<0.0001		**P<0.0001**		**P<0.0001**		**P<0.0001**		**P<0.0001**		**P<0.0001**		**P<0.0001**	
Comparison between low, middle and high income country groups [c]		**F(2,5101) = 312.1**		**F(2,5297) = 23.5**		**F(2,5297) = 26.4**		**F(2,5297) = 48.8**		**F(2,5101) = 0.7**		**F(2,5101) = 1.5**		**F(2,5101) = 1.1**	
		P<0.0001		**P<0.0001**		**P<0.0001**		**P<0.0001**		**P=0.4890**		**P=0.2315**		**P=0.3495**	

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Country	N	Past-year drug use		Past-year DSM-IV drug abuse		Past-year DSM-IV drug dependence		Past-year DSM-IV drug use disorder		Past-year DSM-IV drug abuse among past-year users		Past-year DSM-IV drug dependence among past-year users		Past-year DSM-IV drug use disorder among past-year users	
		%	SE	%	SE	%	SE	%	SE	%	SE	%	SE	%	SE
Comparison between WHO regions[c]		**F(5,5098) = 133.1**		**F(5,5294) = 12.3**		**F(5,5294) = 21.7**		**F(5,5294) = 26.0**		**F(5,5098) = 1.0**		**F(5,5098) = 13.4**		**F(5,5098) = 4.4**	
		P<0.0001		**P<0.0001**		**P<0.0001**		**P<0.0001**		**P=0.4234**		**P<0.0001**		**P=0.0005**	

A dash indicates zero cell count.

[a]Past year drug use was not assessed in these countries.

[b]**Region of the Americas** (Colombia, Mexico, Brazil, Peru, The United States, Medellin, Argentina);

African region (South Africa, Nigeria);

Western Pacific region (PRC (Beijing and Shanghai), Japan, Australia, New Zealand);

Eastern Mediterranean region (Israel, Iraq, Lebanon);

Western European region (Belgium, France, Germany, Italy, The Netherlands, Spain, Northern Ireland, Murcia);

Eastern European region (Poland, Bulgaria, Ukraine).

[c]Wald design-corrected F-tests were used to determine if there is variation in prevalence estimates across countries.

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Table 3:

Prevalence of past-year drug use disorders among those with lifetime drug use disorders in the World Mental Health Surveys

Country	N	Past-year DSM-IV abuse among lifetime DSM-IV drug abuse cases		Past-year DSM-IV dependence among lifetime DSM-IV drug dependence cases		Past-year DSM-IV use disorder among lifetime DSM-IV drug use disorder cases	
		%	SE	%	SE	%	SE
Low-Lower middle income countries	**18,179**	**23.4**	**5.3**	**34.2**	**6.4**	**27.1**	**4.1**
Colombia	4,426	26.0	8.2	30.2	7.1	28.1	5.1
Iraq	4,332	85.0	16.3	-	-	78.7	18.2
Nigeria	2,143	23.4	9.4	-	-	23.0	9.2
Peru	3,930	6.1	5.3	51.4	19.7	18.2	8.4
PRC	1,628	12.6	9.4	-	-	12.3	9.1
Ukraine	1,720	40.4	27.4	32.9	12.9	36.1	13.7
Upper-middle income countries	**20,071**	**26.5**	**2.9**	**30.9**	**4.1**	**27.9**	**2.3**
Brazil	5,037	17.4	5.2	37.6	6.3	27.1	4.3
Bulgaria	2,233	2.9	3.2	-	-	2.9	3.2
Colombia (Medellin)	1,673	16.0	4.8	26.4	8.2	19.7	4.2
Lebanon	1,031	6.7	8.3	100.0	<0.1	33.7	29.7
Mexico	5,782	23.4	6.6	23.0	9.9	23.3	4.9
South Africa	4,315	37.5	5.1	23.1	8.4	35.3	4.5
High income countries	**51,843**	**16.1**	**1.1**	**26.3**	**2.0**	**19.8**	**1.0**
Argentina	2,116	20.1	5.3	36.1	8.5	24.6	4.9
Australia	8,463	14.1	1.8	23.1	4.0	17.6	1.8
Belgium	1,043	30.0	12.6	63.4	13.8	38.2	11.2
France	1,436	17.0	3.1	39.9	18.1	22.8	4.8
Germany	1,323	10.0	6.1	69.3	18.6	20.1	9.2
Israel	4,859	18.6	4.8	22.1	11.4	19.2	4.4
Italy	1,779	11.7	5.8	30.2	11.7	14.8	4.7
Japan	1,682	9.2	8.3	39.0	33.6	14.7	9.6
New Zealand	12,790	17.7	2.3	33.2	3.5	24.6	2.0
Northern Ireland	1,986	12.7	5.5	34.9	13.9	17.0	5.6
Poland	4,000	11.9	5.0	69.0	13.0	21.6	6.3
Spain	2,121	21.3	7.7	2.6	2.7	19.9	7.1
Spain (Murcia)	1,459	0.8	0.7	7.6	6.3	3.1	2.4
The Netherlands	1,094	10.9	7.6	5.7	4.2	8.3	4.6
The United States	5,692	16.6	1.9	14.8	2.6	15.8	1.4
All countries combined	**90,093**	**18.2**	**1.0**	**27.4**	**1.7**	**21.5**	**0.9**
WHO regions[a]							

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Country	N	Past-year DSM-IV abuse among lifetime DSM-IV drug abuse cases		Past-year DSM-IV dependence among lifetime DSM-IV drug dependence cases		Past-year DSM-IV use disorder among lifetime DSM-IV drug use disorder cases	
		%	SE	%	SE	%	SE
Region of the Americas	28,656	17.7	1.6	24.0	2.3	20.2	1.3
African Region	6,458	35.7	4.6	22.8	8.3	33.9	4.2
Western Pacific Region	24,563	15.9	1.5	28.8	2.7	21.2	1.3
Eastern Mediterranean Region	10,222	23.4	6.0	28.5	10.8	24.3	5.4
Western European Region	12,241	15.5	2.9	29.6	7.0	18.5	2.8
Eastern European Region	7,953	14.8	5.9	50.9	11.3	23.8	5.6
Comparison between countries[b]		F(26,5273) = 1.6		F(21,5053) = 2.2		F(26,5273) = 2.0	
		P=0.0291		P=0.0015		P=0.0016	
Comparison between low, middle and high income country groups[b]		F(2,5297) = 6.3		F(2,5297) = 1.0		F(2,5297) = 6.2	
		P=0.0018		P=0.3627		P=0.0021	
Comparison between WHO regions[b]		F(5,5294) = 3.5		F(5,5294) = 1.2		F(5,5294) = 2.3	
		P=0.0033		P=0.3151		P=0.0418	

A dash indicates zero cell count.

[a]**Region of the Americas** (Colombia, Mexico, Brazil, Peru, The United States, Medellin, Argentina); **African region** (South Africa, Nigeria); **Western Pacific region** (PRC (Beijing and Shanghai), Japan, Australia, New Zealand); **Eastern Mediterranean region** (Israel, Iraq, Lebanon); **Western European region** (Belgium, France, Germany, Italy, The Netherlands, Spain, Northern Ireland, Murcia); **Eastern European region** (Poland, Bulgaria, Ukraine).

[b]Wald design-corrected F-tests were used to determine if there is variation in prevalence estimates across countries.

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Table 4:

Bivariate associations between sociodemographic correlates and DSM-IV drug use disorder

	Lifetime DSM-IV drug use disorder[a]			Past-year DSM-IV drug use disorder among lifetime cases[b]		
Prevalence of DUD according to…	**DUD prevalence % (SE)**	**Distribution of DUD % (SE)**	**OR (95% CI)**	**DUD prevalence % (SE)**	**Distribution of DUD % (SE)**	**OR (95% CI)**
Gender						
Male	5.0 (0.1)	69.3 (1.0)	2.4* (2.2-2.7)	21.6 (1.0)	69.6 (1.9)	1.1 (0.9-1.4)
Female	2.1 (0.1)	30.7 (1.0)	1	21.3 (1.3)	30.4 (1.9)	1
X^2_1 [p]			367.1** [<0.001]			1.4 [0.231]
Age-cohort						
18-29	5.2 (0.2)	41.7 (1.2)	69.3* (51.3-93.5)	29.9 (1.5)	58.1 (2.1)	1.4 (0.5-3.9)
30-44	4.4 (0.1)	39.6 (1.1)	29.2* (22.4-38.2)	17.4 (1.1)	32.0 (2.1)	1.3 (0.4-3.6)
45-59	2.4 (0.1)	16.3 (0.8)	8.9* (6.8-11.7)	11.7 (1.5)	8.9 (1.2)	1.3 (0.4-3.9)
60+	0.5 (0.1)	2.5 (0.3)	1	8.9 (3.6)	1.0 (0.4)	1
X^2_3 [p]			984.6** [<0.001]			1.3 [0.739]
Employment status						
Student	3.4 (0.4)	4.9 (0.6)	0.9 (0.7-1.1)	24.5 (3.8)	5.6 (1.0)	1.0 (0.6-1.6)
Homemaker	2.1 (0.1)	8.0 (0.5)	1.1 (1.0-1.4)	21.1 (2.4)	7.8 (0.9)	1.0 (0.7-1.5)
Retired	0.7 (0.1)	2.3 (0.3)	1.0 (0.7-1.4)	7.3 (3.3)	0.8 (0.4)	0.5 (0.2-1.5)
Other	5.4 (0.3)	15.8 (0.9)	1.9 (1.7-2.2)	27.6 (2.5)	20.3 (1.7)	1.3 (0.9-1.7)
Employed	4.0 (0.1)	69.0 (1.1)	1	20.4 (0.9)	65.5 (2.0)	1
X^2_4 [p]			81.2** [<0.001]			4.6 [0.327]
Marital status						
Never married	6.0 (0.2)	44.5 (1.1)	1.7* (1.5-1.9)	28.5 (1.3)	59.0 (2.2)	1.6* (1.2-2.0)
Divorced/ separated/widowed	3.3 (0.2)	11.3 (0.6)	1.9* (1.6-2.1)	16.3 (2.0)	8.6 (1.1)	1.4 (0.9-2.0)
Currently married	2.5 (0.1)	44.2 (1.1)	1	15.7 (1.2)	32.4 (2.1)	1
X^2_2 [p]			143.3** [<0.001]			13.2** [0.001]
Education level						
No education	0.7 (0.2)	0.6 (0.1)	1.5 (0.9-2.5)	45.8 (12.6)	1.3 (0.4)	6.2* (1.8-21.0)
Some primary	2.2 (0.2)	5.0 (0.5)	1.9* (1.5-2.4)	23.4 (4.1)	5.4 (1.0)	1.8 (1.0-3.3)
Finished primary	2.2 (0.2)	4.5 (0.4)	1.9* (1.5-2.4)	24.1 (3.4)	5.0 (0.7)	1.8* (1.0-3.2)
Some secondary	4.5 (0.2)	27.6 (1.0)	2.0* (1.7-2.3)	25.7 (1.6)	33.0 (2.0)	1.6* (1.1-2.4)
Finished secondary	3.4 (0.2)	27.5 (1.1)	1.4* (1.2-1.6)	22.5 (1.7)	28.8 (2.0)	1.4 (1.0-2.1)
Some college	4.4 (0.2)	21.5 (0.9)	1.3* (1.1-1.6)	17.2 (1.6)	17.2 (1.6)	1.2 (0.8-1.7)
Finished college	2.9 (0.2)	13.3 (0.9)	1	14.9 (1.9)	9.2 (1.2)	1

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	Lifetime DSM-IV drug use disorder[a]			Past-year DSM-IV drug use disorder among lifetime cases[b]		
Prevalence of DUD according to…	**DUD prevalence % (SE)**	**Distribution of DUD % (SE)**	**OR (95% CI)**	**DUD prevalence % (SE)**	**Distribution of DUD % (SE)**	**OR (95% CI)**
X^2_6 [p]			86.4** [<0.001]			14.8** [0.022]
Household income						
Low	4.3 (0.2)	30.5 (1.1)	1.6* (1.4-1.8)	25.0 (1.4)	35.3 (2.0)	1.6* (1.2-2.1)
Low-average	3.6 (0.2)	24.4 (1.1)	1.2* (1.1-1.4)	20.7 (1.9)	23.4 (2.0)	1.3 (0.9-1.8)
High-average	3.5 (0.2)	25.2 (1.0)	1.1 (1.0-1.3)	22.6 (1.7)	26.4 (2.0)	1.5* (1.1-2.1)
High	3.2 (0.2)	19.9 (0.9)	1	16.2 (1.4)	14.9 (1.3)	1
X^2_3 [p]			59.0** [<0.001]			11.4** [0.010]

*Significant at the .05 level, 2-sided test.

**Significant at the .05 level, 2-sided test.

[a]Estimates are based on discrete-time logistic regression analyses controlling for age-cohorts, gender, person-years and survey (results for latter two not shown).

[b]Estimates are based on logistic regression model adjusted for gender, time since drug use disorder onset and survey (results for latter two not shown).