



Epidemiology of alcohol use in the general population of Togo[☆]



K. Agoudavi^a, F. Dalmay^b, S. Legleye^c, K. Kumako^a, P.M. Preux^b, J.P. Clément^b, B. Falissard^c, P. Nubukpo^{b,d,*}

^a Direction des maladies non transmissibles (MNT), PNSM, Ministère de la Santé, Lomé, Togo

^b UMR, INSERM 1094, Faculté de médecine, 2 rue du Dr Marcland, 87025 Limoges, France

^c UMR, INSERM 669, Faculté de médecine, Paris, France

^d Pôle d'Addictologie en Limousin, Centre Hospitalier Esquirol, 87025 Limoges, France

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ABSTRACT

Introduction: Alcohol use is responsible for a high level of mortality and morbidity throughout the world. The WHO global strategy recommends that the detrimental effects of alcohol use be reduced.

Aims: The objective of this paper was to investigate, using data from the 2010 Togo STEPS survey, alcohol use and other health-related factors in the general population of Togo.

Methods: This epidemiological investigation using the STEPwise approach was undertaken from December 1st, 2010, to January 23rd, 2011, throughout the five regions of Togo. Togo is a low-income country (World Bank) located in West Africa. The study involved 4800 people aged 15 to 64 who were representative of the population of Togo and who were selected using the one-stage cluster sampling method.

Results: The sample was young and predominantly male. Approximately one-third of the respondents were alcohol abstainers, with the majority of these being women. Approximately the same proportion of current drinkers (daily consumption) by gender was observed. The reported daily average consumption of alcohol was 13 g of pure alcohol for men and 9 g for women. The mean number of heavy drinking days over the previous 30 days was higher for men (3 days), and this included 37.5% of the men who drink.

Conclusion: We suggest a comparative analysis of the prevalence of harmful alcohol use in Togo and the WHO African region.

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1. Introduction

According to the WHO (World Health Organization), alcohol use represents the third strongest risk factor for morbidity and mortality in the world. The damage due to harmful or hazardous alcohol use is plentiful. Alcohol is a major determinant of non-communicable diseases and neuropsychiatric disorders (Adeyiga, Udofia, & Yawson, 2014;

Hoertel, Crochard, Rouillon, & Limosin, 2014; Pierucci-Lagha & Derouesné, 2003; WHO, 2014). Every year, alcohol use is likely to cause 2.5 million deaths, including direct mortality caused by automobile accidents and hetero-aggressive and auto-aggressive behavior (suicide) as well as deferred mortality (e.g., cancers, cardiovascular diseases, and hepatic diseases). Excessive alcohol use constitutes the primary cause of cognitive impairment among people younger than 60 (Menecier, Affi, Menecier-Ossia, et al., 2006) with alcohol dependency being a widespread disorder whose lifetime prevalence is estimated to be 7–12.5% in the majority of Western countries (Pirkola, Poikolainen, & Lönnqvist, 2006). Based on the global status report on alcohol and health, alcohol use is trending downward in the WHO African region (AFR), though the alcohol-attributable mortality in this region is not among the lowest globally (WHO, 2010, 2014). To reduce the burden of alcohol use worldwide, the WHO developed an overarching strategy which includes epidemiologic surveillance of alcohol use (WHO, 2010). Thus, Togo conducted a national survey on risk factors for non-communicable diseases in 2010 using the WHO STEPwise approach (WHO STEP, 2005).

The goal of this paper is to investigate using the 2010 Togo STEPS research data alcohol use and other health-related factors in the general population of Togo.

[☆] The authors' contributions can be described as follows: Dr Nubukpo, the last author, wrote the paper after elaboration from the database where the hypothesis was focused on, indicated the statistical analysis frame, and collaborated to analysis and summary of data. He supervised Dr Agoudavi, the local focal investigator and first author who coordinated all the implementation processes of the STEPS survey including training of data collectors and supervisors and training of data managers and data analysis. For this article, he updated the methodology, data analysis and results. M Dalmay did the statistical analysis. M Legleye contributes to statistical analysis. PR Fallissard had read the paper and made major suggestions for its improvement. Pr Preux supervised the statistical analysis. Dr Kumako worked on the results part and has contributed in the data collection process.

* Corresponding author at: UMR, INSERM 1094, NET, Faculté de médecine, IENT, 2 rue du Dr Marcland, 87025 Limoges, France. Tel.: +33 555431321; fax: +33 555431246.

E-mail addresses: k_agoudavi@yahoo.fr (K. Agoudavi), francois.dalmay@unilim.fr (F. Dalmay), stephane.legleye@ined.fr (S. Legleye), preux@unilim.fr (P.M. Preux), jean-pierre.clement@numericable.com (J.P. Clément), bruno.falissard@gmail.com (B. Falissard), philippe.nubukpo@inserm.fr, philippe.nubukpo@9online.fr (P. Nubukpo).

2. Methods

2.1. Modality of investigation

This is an epidemiological study using the STEPS framework for the screening and supervision of risk factors for non-communicable diseases (NCD) as advised by the WHO (WHO STEP, 2005). It was conducted between December 1, 2010, and January 23, 2011, and included an approximately representative sample of Togo's population. Togo is a low-income country (GDP per capita: US\$1400). It is located in West Africa and has an area of 56,000 km² and a population of approximately 6,306,000 inhabitants. The majority of the people are older than 15 (58%) and live in rural areas (57%).

2.2. Selection criteria

The investigation was conducted nationally with 4800 adults of both genders. The tested subjects lived in urban and rural areas within the sampled area for at least 6 months and were between 15 and 64 years of age at the time of the investigation. They were recruited after they gave their informed consent to participate in the study. Individuals who could not answer the recruitment questions were not included.

2.3. Sampling

Four hundred thirty-two people per age group and sex were chosen, following the Schwartz formula (Schwartz, 1993) and the recommendations outlined in the STEPS manual in part 2, Section 2. Taking into consideration our target sample of people between 15 and 64 years of age, it was found that the number required per age group and per sex was 10. This gave a provisional size of 4320 people (2160 men and 2160 women) as the minimum number of individuals necessary for the study. This population specification was used for weighting. Taking into consideration previous investigations in the field of health in Togo (with an estimated non-response rate of 10%), the definitive size of the retained sample was 4800 individuals.

Three hundred clusters were drawn randomly in a systematic draw with a probability proportional to the size of the cluster (number of households) on the basis of the survey by the *Direction Générale de la Statistique*. Sixteen households per cluster were selected at random in the second step of the survey. In each selected household, an individual was chosen as the participant in the survey by following the pattern of Kish's method (Berthier, Caron, & Neros, 1998). Kish's method can be used to select individuals within households regardless of the chosen method of sampling to select these households. A household was defined as a group of people who regularly share their main meal with one another (regardless of their parental relationships). In cases where the selected person was absent or was not well when the data collectors were present, they had to actively look for him/her later or would arrange an alternate meeting at an agreed time. Based on Kish's method, no household was replaced because of the eligible person's rejection or because of two fruitless visits. For the 55–64 year age range, an additional sampling was conducted. This is because it proved difficult to satisfy the quota for this age range in the original sampling.

2.4. Data collection

The data collection device was the WHO STEPS version 2.1 for the control of risk factors for chronic diseases. It includes 104 questions that are divided into four parts: introduction, step 1, step 2 and step 3. The introduction section includes 10 questions that introduce the survey, achieve anonymity, and obtain informed consent. Step 1 (questions 11 to 79) includes socio-demographic data and behavioral measures (alcohol and tobacco use, diet, physical exercise, history of high blood pressure, and history of diabetes). Step 2 (questions 80 to 95) collects clinical variables. Step 3 (questions 96 to 104) collects biological

variables. The 2010 Togo STEPS survey data were directly collected in PDAs (Personal Digital Assistants) provided by the STEPS team in the WHO office in Geneva.

The data were collected by a team of 22 pairs of trained interviewers using the STEPS device under the supervision of 12 supervisors. Each pair included one interviewer with a minimum of a high school degree and one health worker (nurse/medical assistant/medical school student/laboratory assistant). The data collectors were trained for 5 days in the STEPS approach and the use of the data collection tools. They participated in a one-day pilot test before the beginning of the data collection. The data collection was conducted in the selected households in line with the STEPS recommendations. The data from steps 1 and 2 were collected on the first day; data from step 3 were collected the following day.

2.5. Data processing and analysis

The collected data stored in the PDAs were transferred to computer-based Excel files using the WHO STEPS data management software. The transferred data were later exported to the software SAS 9.1.3 (SAS Institute, Cary, USA) for statistical analyses. The definitions that were used in the data analyses were those of the WHO.

2.5.1. Alcohol

The alcohol use under consideration was the alcohol use over the previous 30 days preceding the survey. Classifications were established (see Table 1).

2.5.2. Tobacco

The categories used were current smoker, and current daily smoker.

2.5.3. Employment

For this survey, participants who did not earn salaries (students, men and women who stay at home assisting their family in the management of an enterprise without expecting remuneration, the retired, and the jobless) were included in the category 'unpaid'. The category 'independent' refers to participants who owned their own business (small, medium-sized or large) or commercial enterprise.

2.5.4. Hypertension

A participant with a systolic blood pressure (BP) ≥ 140 mm Hg and/or a diastolic blood pressure (BP) ≥ 90 mm Hg or who was undergoing an antihypertensive treatment was considered to have high blood pressure.

2.5.5. Diabetes

A participant with a capillary blood sugar level ≥ 110 mg/dl (6.1 mmol/l) was classified in the category of diabetic hyperglycemia.

2.5.6. Cholesterol

Total hypercholesterolemia was defined as a capillary cholesterol level of ≥ 190 mg/dl.

Table 1

WHO alcohol consumption and associated risk level.
Source: WHO (2010).

	Total alcohol consumption (TAC) (g/day)	
	Men	Women
Category I – low risk	1–40	1–20
Category II – moderate risk	>40–60	>20–40
Category III – high risk	>60–100	>40–60
Category IV – very high risk	>100	>60

Heavy drinking days (HDDs) are days when alcohol use is more than 60 g/day for men or more than 40 g/day for women.

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