



Prevalence of self-reported diabetes, hypertension and heart disease in individuals seeking State funding in Trinidad and Tobago, West Indies

Derek Chadee^a, Terence Seemungal^b, Lexley M. Pinto Pereira^{c,*},
Mary Chadee^a, Rohan Maharaj^c, Surujpal Teelucksingh^b

^a *Departments of Behavioural Sciences, The University of the West Indies, St. Augustine, Trinidad and Tobago*

^b *Clinical Medical Sciences, The University of the West Indies, St. Augustine, Trinidad and Tobago*

^c *Para Clinical Sciences, The University of the West Indies, St. Augustine, Trinidad and Tobago*

Received 9 October 2012; received in revised form 4 February 2013; accepted 6 February 2013
Available online 16 March 2013

KEYWORDS

Hypertension; Diabetes;
Heart disease; Gender
specificity; Age;
Education

Abstract Objective: Diabetes, hypertension and heart disease inflict a heavy health burden on the Caribbean Republic of Trinidad and Tobago. This study assessed the prevalence of self-reported diabetes, hypertension and heart disease in lower socioeconomically placed individuals accessing welfare grants.

Method: Data collected between July 2008 and June 2009 were analyzed from 14,793 responses. The survey sought information on education, average monthly income, health, housing, and household facilities.

Results: Self-reported disease prevalence was 19.5% (95% CI: 18.9–20.2) for diabetes mellitus; 30.2% (95% CI: 29.5–30.9) for hypertension; and 8.2% (95% CI: 7.7–8.6) for cardiac disease. Diabetes and cardiac disease had equivalent gender frequency; hypertension was more prevalent in women ($p < .001$). Disease prevalence was highest in Indo-Trinidadians, married and divorced subjects, non-Christians and increased with age. Those with primary education alone were at greatest risk.

Conclusion: Trinidad and Tobago have a high prevalence of hypertension, diabetes and heart disease. Hypertension showed gender specificity in women. Prevalence was highest in Indo-Trinidadians, increased with age, and primary education

* Corresponding author. Address: Faculty of Medical Sciences, The University of the West Indies, St. Augustine, Trinidad and Tobago. Tel./fax: +1 868 663 8613.

E-mail addresses: dachadee@yahoo.com (D. Chadee), tseemungal@aol.com (T. Seemungal), lexleyp@gmail.com (L.M. Pinto Pereira), mchadee@yahoo.com (M. Chadee), Rohan.Maharaj@sta.uwi.edu (R. Maharaj), pteelucksingh@gmail.com (S. Teelucksingh).

alone was a risk factor. Interventions to arrest the high prevalence of chronic non-communicable diseases to promote wellness are needed in Trinidad and Tobago.

© 2013 Ministry of Health, Saudi Arabia. Published by Elsevier Ltd. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

1. Introduction

Chronic non-communicable diseases (CNCDs) are viewed to be the leading causes of global death and disability in the not so far off 2030 and are predicted to cause three quarters of all deaths [1]. Cardiovascular disorders, chronic obstructive pulmonary disease, asthma, diabetes, obesity, some cancers and disabling mental illness are included under the umbrella of this acronym. CNCDs have dominated the global health burden in recent years, and poorer countries seem to have provided the model for this observation. Evidence clearly points to CNCDs as disproportionately affecting the poor [2]. In low- and middle-income countries, chronic disease is the current cause for an estimate of more than 80% of deaths [1,3]. Countries economically not on par with the developed nations bear the biggest brunt of these diseases, and Caribbean territories with less than enviable economies are significantly saddled with this health encumbrance. In 1990 non-communicable diseases surpassed maternal, peri-natal, communicable, and nutritional disorders in the Caribbean [4]. More than a decade later the health scenario suggests these diseases are still the leading causes of morbidity. The Caribbean has the highest prevalence of CNCDs in the region of the Americas [5]. In the twin-island republic of Trinidad and Tobago, the mortality rates from diabetes and cardiovascular disease are higher than in North America (United States and Canada) [5].

The epidemiologic transition to CNCDs has been well documented in Trinidad and Tobago [6,7]. The first survey of a stratified random sample of the entire population of Trinidad screened 24,069 persons in the 1960s and reported that 1.89% of the sample satisfied the criteria for diabetes [8], which was one of the highest reported prevalence for this disease in the region. In a second study conducted between 1977 and 1985 of 2491 persons in an urban setting, the incidence rates of hypertension in men were 37 per 1000 person-years and 29.5 per 1000 person-years in women. The incidence of diabetes (per 1000 person-years) in Indians was 23.5/1000 and was significantly higher than in Africans [9]. However, following these two early population-based epidemiologic studies, more recent data on the epidemic have been based on self-reporting of the CNCDs. Thus, the 2005 Survey of Living Condi-

tions reports that 10.4% of the poorest and 17.6% in the richest of 2086 community dwelling respondents had self-reported diabetes. In this survey no information was provided for hypertension [10]. These data provide an insight into the evolution of the diabetes epidemic in Trinidad and Tobago. The death rate from diabetes in the country is ten times higher than in the United States of America, and the age-adjusted, gender-specific mortality rates from heart disease and all cardiovascular diseases rank among the highest in the Caribbean [11].

Although population-based epidemiologic surveys are the gold standard, information derived from self-reporting of diabetes in a Taiwanese population has been found to be accurate in determining disease prevalence [12]. Further, in a USA study of 2037 persons self-reporting of diabetes when compared with a review of their medical records revealed a specificity of >90% but with lower (66%) sensitivity [13]. The self reported prevalence of diabetes, hypertension and heart disease in a large population of individuals from the lower socioeconomic group who applied for State-sponsored welfare grants was studied. The determined prevalence rates of these conditions, particularly diabetes and hypertension – the two most common chronic non-communicable diseases in Trinidad and Tobago – will contribute to the health care system planning over the next decade.

2. Materials and methods

2.1. Ethical permission

This is a retrospective database study. Data from patients were anonymized and permission was obtained from the Ministry of the People and Social Development for analysis of these data. It was not deemed necessary to obtain ethical permission from an Institutional Review Board as these data were entered on a database of the above-mentioned Ministry and were taken with the informed consent of respondents and were anonymously analyzed.

2.2. Population

Respondents came from a short-term financial assistance program which is offered to economically vulnerable persons and families within Trini-

Download English Version:

<https://daneshyari.com/en/article/3327472>

Download Persian Version:

<https://daneshyari.com/article/3327472>

[Daneshyari.com](https://daneshyari.com)