



The Significant Risk Factor for Chronic Disease in Benghazi, Libya

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Abstract

Chronic disease has been around as long as humans. But now, in most industrialized nations and in many developing countries, they predominate among the leading causes of death. For many years' public health practitioners have recognized the increasing burden of chronic illness. In general, the disease is defined as a pathological process, most often physical as in throat infection, or cancer of the bronchus, sometimes undetermined in origin, as in schizophrenia. The quality which identifies disease is some deviation from a biological norm. This study aims to describe—for the first time—the significant risk factor for chronic disease in Benghazi, Libya. A cross-sectional observational study was conducted, adopting the structured face to face interviewing survey technique. Over 220 patients visited one of the recruited polyclinics in Benghazi during the three-month study period, either to refill their prescribed medication(s) or follow up their chronic diseases. A study in Benghazi was conducted between June and August (2016) on sample population (220) comprising subjects mainly aged more than 60 years (45.5%), females (66.4%) and without level of education (41.4%), and mainly housewife (51.4%) of overweight and obesity was found to be 46.8%. Overweight was more prevalent in females than males. The prevalence with an increase in age up to 60 years, and diabetes was 62.7%, with regard to smoking percent, the smokers were 10.5% and hypertension was 70.5%. The current study shows that experiencing an increase in the prevalence of many risk factors for chronic diseases is in urgent need of interventions to reduce the prevalence of these risk factors and to deal with the chronic diseases to which they contribute.

Subject Areas

Pharmacy Practice

Keywords

Risk Factor, Chronic Disease, Diabetes Mellitus, Hypertension, Smoking

1. Introduction

Chronic disease has been around as long as humans. But now, in most industrialized nations and in many developing countries, they predominate among the leading causes of death. For many years, public health practitioners have recognized the increasing burden of chronic illness. In general, the disease is defined as a pathological process, most often physical as in throat infection, or cancer of the bronchus, sometimes undetermined in origin, as in schizophrenia. The quality which identifies disease is some deviation from a biological norm [1].

The disease classified as acute, chronic, and mental illness is adopted. Firstly, acute diseases also refer to self-limiting diseases, and they are mostly characterized by a rapid onset of symptoms. These symptoms may be very intense and resolved in a short period of time and, in some cases could be life-threatening. Some examples of acute diseases include influenza or the flu, bronchitis, tonsillitis, sore throat, appendicitis [2], ear aches, organ failure and breathing difficulties. The second type is a chronic disease or non-communicable disease (NCD) that refers to a disease that persists over a long period.

The symptoms of chronic disease are sometimes less severe than those of the acute phase of the same disease. Chronic disease may be progressive, result in complete or partial disability, or even lead to death.

Examples of chronic diseases include diabetes mellitus, emphysema, and arthritis [3]. Finally, a mental illness includes conditions that affect cognition, emotion, and behavior, e.g., schizophrenia, depression, and autism [4]. The risk factor is an environmental, behavioral, or biological factor confirmed by temporal sequence, usually in longitudinal studies, which if present directly increases the probability of a disease occurring, and if absent or removed reduces the probability [5]. The risk factor may include tobacco use, raised blood pressure, insufficient physical activity, harmful alcohol use, unhealthy diet (high fat food), overweight and obesity. Approximately more than 7 million of those deaths are the result of direct tobacco use while around 1.2 million are the result of non-smokers being exposed to second-hand smoke [6], also raised blood pressure is estimated to cause 7.5 million deaths (12.8%) of all deaths. Raised blood pressure is a major risk factor for coronary heart disease and ischemic as well as hemorrhagic stroke. Globally, the overall prevalence of raised blood pressure in those aged 25 and over was 40% in 2008. Treating systolic blood pressure and diastolic blood pressure to targets that are less than 140/90 is associated with a decrease in cardiovascular complications. As well as obesity is a major risk factor for cardiovascular disease and 2.8 million people die each year as a result of being overweight or obese [7].

This study aims to describe the significant risk factor for chronic disease in Benghazi, Libya.

2. Method and Procedures

A cross-sectional observational study was conducted in polyclinics located in Benghazi between June to August 2016. Polyclinics in-charge were given covering letters explaining the purpose of the study, and assuring the confidentiality of information. Once in stations, patients were asked to verbal consent to participate in the study. Patients were interviewed using pre-piloted questionnaire and their history of their morbidity and their lifestyle. The target sample of the study was 250 patients who visit one of the polyclinics (which are the most popular Clinic which spread in three regions of the city and their administration who agreed to participate in the research) in Benghazi to refill their prescribed medication or follow up their diseases for three months. **Inclusion and Exclusion Criteria:** the patient who allowed to participate in answer questions were been Libyan's people lived in Benghazi city and aged 18 years and over, had history of chronic diseases. The excluded participates from this study were any one taking medication by a prescription for minor aliment or from different nationality. **Statistical Analysis:** Responses to each question will be coded and analyzed using the Statistical Package for Social Sciences (SPSS) version 18 for windows (SPSS Inc., Chicago, Illinois). The analysis will include frequencies of discrete variables, Chi square (χ^2) and crosstab was used to test any significance between categorical variables. All P-values were two-sided and $P < 0.05$ was considered statistically significant.

3. Results

During the study period, a total of 250 patients were contacted. Twenty-six interviews were excluded because a customer refused to participate due to lack of time and has no interest to participate, also four questionnaires removed due to incomplete information, so the number of completed interviews was 220 patients. The response rate is 88%.

Figure 1 presents the number of genders with participants included in this study, where the percentage of female was 66% ($n = 146$) and male 34% ($n = 74$).

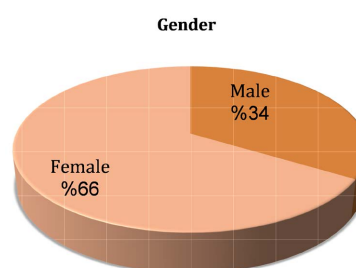


Figure 1. Gender of study participants ($n = 220$).

Figure 2 shows the age of the participants included in the study, where the youngest patients group was 18 - 29 years old 1% (n = 1) and the oldest one represented 46% (n = 100).

As shown in **Figure 3**, the majority of participants (n = 91) had no level of education with (41.4%).

Tables 1-5 show the percent of patients with different medical history. The percent of patients with diabetes was 62.7% (n = 138). The percent of patients with hypertension was high with 70.5% (n = 155). The percentages between participants were very close to body weight. The majority of participants was female that explain increasing the percent of non-smoker 89.5% (n = 197).

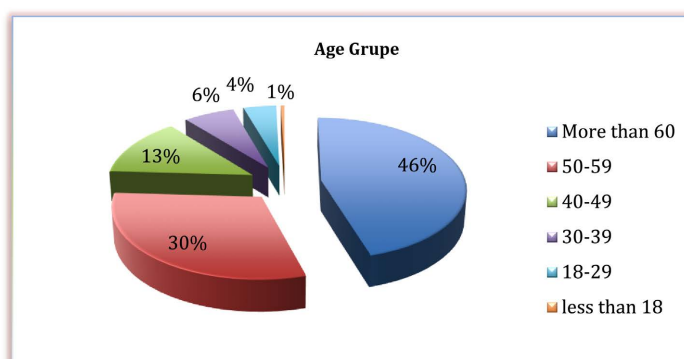


Figure 2. Age Group of study participants (n = 220).

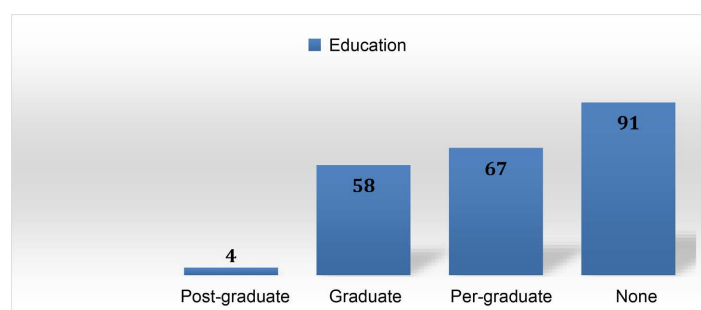


Figure 3. Education level of study participants.

Table 1. Patients with diabetic history.

State of Patients	Frequency	Percent
None-Diabetic	82	37.3
Diabetic	138	62.7
Total	220	100.0

Table 2. Patient with hypertension history.

State of Patients	Frequency	Percent
None-Hypertensive	65	29.5
Hypertensive	155	70.5
Total	220	100.0

Table 3. Patient without history of diabetes and hypertension.

State of Patients	Frequency	Percent
None	105	47.7
Other	115	52.3
Total	220	100.0

Table 4. Patient with history of obesity.

State of Patients	Frequency	Percent
None-obese	117	53.2
Obese	103	46.8
Total	220	100.0

Table 5. Patient with history of smoking.

State of Patients	Frequency	Percent
None-Smoker	197	89.5
Smoker	23	10.5
Total	220	100.0

4. Discussion

The development and impact of chronic diseases and their risk factors is largely a life-long process. Since the majority was in the oldest age group (50 - 59 years old) with 30.5% and more than 60 with 45.5%, this in accordance with another study in 2010, where most children (0 - 14 years) and young people (15 - 24 years) are in good health [8]. 26.4% of participant graduated from university, whereas 41.1% was non educated majority of them were female, so the patients had less knowledge about how can deal with disease. This study was estimated of 138 (62.7%) and non-diabetes 82 (37.3%), diabetes with other diseases 80 (58%). In Compare with other studies carried out in Saudi Arabia in 2014 percentage of patients with diabetes and accompanied diseases was 68.4% [9] and in London in 2009 estimated 75% increase in Type 2 diabetes in the capital over the last decade [10]. Cases of obesity and overweight are increasing in Libya as well as all over the world, where the genetic and environmental factors playing a contributory role. The percent of obese participant was (46.8%). There is a lack of knowledge about the life-threatening medical conditions that result from obesity [11]. Number of smokers in this study was only 23 participants from 220, because the majority of them were female that reject smoking habit in Libyan community. This result came in contrast to another one was conducted in India. A study was conducting to test the significance of diabetes as risk factor for chronic disease, the p-value was significant (0.020). In this study we also examined the relation between hypertension and other chronic disease and p-value was appeared highly significant (0.006).

5. Conclusion

The current study shows that experiencing an increase in the prevalence of many risk factors for chronic diseases is in urgent need of interventions to reduce the Prevalence of these risk factors and to deal with the chronic diseases to which they contribute.

Conflicts of Interest

The authors declare no conflicts of interest.

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