AWARENESS REGARDING PREVENTIVE MEASURES OF COMMON NON-COMMUNICABLE DISEASES AMONG LOCAL POPULATION.

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Abstract

Aim of study: To evaluate awareness regarding preventive measures of common non-communicable diseases among local population.

Materials & methods: A cross-sectional study was conducted among patients attending community dental outreach programs organized by the Dental Teaching Hospital over a period of 1 month.A total of 106 subjects were selected for the study who were above 18 years of age.The structured questionnaire on the awareness regarding preventive measures of common non-communicable diseases distributed among selected sample subjects. Data were collected and analyzed statistically.

Results: Majority of participants knew smoking can affect their health (91.5%), compared to (1.9%) who don't know. Majority of participants knew little about high blood pressure (67.9%), compared to (9.4%) who knew appropriate about high blood pressure. Majority of participants were aware of importance of checking blood pressure regularly (54.7%), and (47.2%) knew blood pressure should be checked more than once a month. 88.7% of the participants knew that unhealthy diets can cause heart diseases while fried foods, refined grains, high salted and sugar foods are most mentioned foods that can cause heart diseases.

Conclusion: This study revealed that, the general awareness about non-communicable diseases and its preventive measures in this local population is moderate.Therefore, there is increased need in the management of non-communicable diseases through different strategies like health awareness building, screening and lifestyle interventions, developing policies to address and combat non-communicable diseases and generating evidence-based research on non-communicable diseases among local population.

Keywords: Communicable diseases, awareness, population, blood pressure.

Introduction

Nowadays non-communicable diseases are global burden and threat constituting a major public health challenge that undermines social and economic development throughout the world.1Non-communicable diseases (NCDs) account for approximately 41 million deaths each year; 17 million of these deaths are considered premature (before the age of 70 years) and 86% are estimated to occur in low- and middle-income countries.[2]Cardiovascular diseases such as stroke and heart attacks, cancers, chronic respiratory diseases, and diabetes are the main types of non-communicable diseases.[2] Cardiovascular diseases account for most non-communicable disease deaths, or 17.9 million people annually, followed by cancers (9.3 million), chronic respiratory diseases (4.1 million), and diabetes (2.0 million including kidney disease deaths caused by diabetes)2Non-communicable diseases share five common risk factors which are tobacco use,physical inactivity, harmful use of alcohol, unhealthy diets and air pollution hence making the socioeconomic costs for preventing and controlling these diseases a major development obstacle in this 21st century.[2]

Rapid economic growth and subsequent development has resulted in a shift from the dominance of communicable (infectious) diseases to a rising burden of non-communicable diseases.[3]

According to WHO's projections, the total annual number of deaths fromnoncommunicable diseases will increase to 55 million by 2030 if "business as usual" continues.[1]

India is experiencing a rapid health transition with a rising burden of Non-Communicable Diseases (NCD) surpassing the burden of Communicable diseases like -borne or vector-borne diseases, TB, HIV, etc. The Non-Communicable Diseases like Cardiovascular diseases, Cancer, Chronic Respiratory Diseases, Diabetes and other NCDs are estimated to account for 63% of all deaths, thus making them the leading causes of death.[4] The four leading chronic diseases in India, as measured by their prevalence, are in descending order: cardiovascular diseases (CVDs), diabetes mellitus, chronic obstructive pulmonary disease (COPD) and cancer.[5] The incidence of non-communicable diseases (NCDs) and their associated risk factors is increasing in all parts of India as a consequence of the epidemiological transition over the last three decades.[3] Industrialization, socio-economic development, urbanization, changing age structure, changing lifestyles has placed India at a position where it is facing a growing burden of non-communicable diseases.[5]

Non-communicable diseases (NCDs) are defined as diseases of long duration, non-infectious conditions that cannot be transmitted to other individuals and are generally slow in progression.[6] NCDs are now replacing communicable diseases, maternal and child health as well as malnutrition as the leading cause of death. Some NCDs progress slowly or cause chronic symptoms requiring long term care and control while others progress rap-

idly.6,7NCDs affect people of all age groups, specifically people in their productive age of life hence causing premature deaths, that is death occurring before the average life expectancy.6The role of infectious agents in the pathogenesis of non-communicable diseases, either on their own or in combination with genetic and environmental factors, has been increasingly recognized in recent years. Many non-communicable diseases including cardiovascular disease and chronic respiratory disease are linked to communicable diseases in either etiology or susceptibility to severe outcomes. Increasingly cancers, including some with global impact such as cancer of the cervix, liver, oral cavity and stomach, have been shown to have an infectious etiology .1

The transition from infectious diseases to non-communicable diseases in low and middle income countries has been driven by a number of factors, often indicative of economic development: a move from traditional foods to processed foods high in fat, salt and sugar, a decrease in physical activity with sedentary lifestyles, and changed cultural norms such as increasing numbers of women using tobacco.1Non-communicable diseases (NCDs)—mainly cardiovascular diseases, cancers, chronic respiratory diseases and diabetes—are the world's biggest killers.

Most of these premature deaths from NCDs are largely preventable by enabling health systems to respond more effectively and equitably to the health-care needs of people with NCDs, and influencing public policies in sectors outside health that tackle shared risk factors—namely tobacco use, unhealthy diet, physical inactivity, and the harmful use of alcohol.1

The most important wayof preventing and controlling non-communicable diseases is by firstly avoiding the risk factors that lead to their development including reducing the use of tobacco and cigarrete smoking, excessive use of alcohol, consuming unhealthy diet, inability to maintain an active lifestyle as well as unimproved air quality. Apart from avoiding risk factors, earlydetection, screening and early treatment of these diseases are crucial in their management.2

So Non-communicable diseases can be prevented and their impacts significantly reduced, with millions of lives saved and untold suffering avoided. Promoting the development and initiate the implementation, as appropriate, of cost-effective interventions to reduce salt, sugar and saturated fats and eliminate industrially produced trans-fats in foods, including through discouraging the production and marketing of foods that contribute to unhealthy diet, while taking into account existing legislation and policies.1

Methodology

Study design and population - A cross-sectional study was conducted among patients attending community dental outreach programs organized by the Dental Teaching Hospital over a period of 1 month. The protocol of the study was reviewed and approved by the Institutional Ethical Committee. The written informed consent was obtained from the study subjects after explaining them the purpose and methodology of the study.

The study was conducted in Mandi Gobindgarh, which is located in the eastern part of Punjab, India. A total of 106 subjects were selected for the study along the basis of convenient judgment sampling. The patients who were above 18 years of age for better comprehension and understanding were included. Ethical approval was received from the institutional review board, and informed consent was obtained from all the study.

Questionnaire-The structured questionnaire on the awareness regarding preventive measures of common non-communicable diseases among local population was developed focusing on the knowledge, attitude and practices written in English but translated to the local language (Punjabi) during interview.The questionnaire was constructed by two-step approach. The first part included the subject's demographic data and the second part included the subject's knowledge, attitude and practices questions. A 23-item questionnaire was self-administered by the interviewers whom one was translating from English to Punjabi language. It had 4 demographic questions,10 practice questions,6 knowledge questions and 3 attitude questions.

The responses to the questions on the subject's awareness about common non-communicable diseases were recorded on a point scale ranging from positive to negative answers.

Data collection-The monthly and weekly dental camps were organized in the nearby cities like Khanna, Amloh, MandiGobindgarh and villages which fall in a 7km and 3km distance from Dental Teaching Hospital. All the subjects who attended these camps (who attended and those who got treatment) were administered the pretested structured questionnaire with the assistance of bachelor of dental surgery interns who were translating.

Statistical analysis- Collected data were analyzed using SPSS 22.0 and some descriptive and analytical tests including Mean, Standard Deviation (SD), and Chi square tests were used. P value was set at 0.05.

Age in years	
18 - 22	26 (24.5%)
23 - 27	12 (11.3%)
28 - 32	15 (14.2%)
33 – 37	12 (11.3%)
38 >	41 (38.7%)
Gender	
Male	63 (49.4%)
Female	43 (40.6%)
Educational level	
Illiterate	10 (9.4%)
Primary	8 (7.5%)
Middle school	34 (32.1%)

High school	15 (14.2%)
College	39 (36.8%)
Occupation	
Unemployed	63 (59%)
Unskilled worker	6 (5.7%)
Semiskilled worker	7 (6.6%)
Skilled worker	12 (11.3%)
Shop/Farm	9 (8.5%)
Semi profession	6 (5.7%)
Professional	3 (2.8%)

Table No. 1: Demographic Data

Table -1 above, shows that majority of the participants (38.7%) are above 38 years, while Males participated more (49.1%) compared to Females (40.6%). Majority of the participants have reached a college level (36.8%) compared to primary level (7.5%), and are mostly unemployed (59%).

Question	Yes (%)	No (%)	I don't know (%)	Mean ±SD
Can smoking affect your health?	97 (91.5%)	7 (6.6%)	2 (1.9%)	1.93 ±0.363

If YES, which diseases can be caused by smoking?		
Cardiovascular	3 (2.8%)	
Cancer	10 (9.4%)	
Respiratory illness	19 (17.9%)	
Cardiovascular, cancer, stroke, respiratory	22 (20.8%)	
Don't know	11 (10.4%)	
Cancer and respiratory illness	11 (10.4%)	
Cardiovascular, Cancer, Respiratory illness	27 (25.5%)	
Cardiovascular, Cancer	6 (5.7%)	5.84
Cancer, stroke, respiratory	4 (3.8%)	±2.582
Cardiovascular, Respiratory illness	1 (0.9%)	

How much do you know about high blood pressure?		
Nothing at all	24 (22.6%)	
Know little about it	72 (67.9%)	1.87
Appropriate about it	10 (9.4%)	±0.553

Is it important to check blood pressure regularly?		
Yes	58 (54.7%)	
No	16 (15.1%)	
Might be	18 (17%)	2.11
I don't know	14 (13.2%)	±1.115

If YES, how often should blood pressure be checked?		
Every two years	2 (1.9%)	
Every three years	2 (1.9%)	
Once a year	13 (12.3%)	
More than once a month	50 (47.2%)	
No need to check regularly	8 (7.5%)	3.97
Don't know	26(24.5%)	±2.311

Do you know that unhealthy diets can cause heart diseases?			
Yes (%)	No (%)	Don't know (%)	Mean
94(88.7%)	6(5.7%)	6(5.7%)	1.83 ±0.507

If YES, what type of unhealthy diets can cause heart disease? Mean		
Fried foods	13(12.3%)	
Refined grain/Maida	2(1.9%)	
High salted and sugar foods	9(8.5%)	
Fried foods, refined grains, high salted and sugar foods	48(45.2%)	
Fried foods and refined grains	7(6.6%)	
Fried foods, high salted and sugar foods	12(11.3%)	4.39
Refined grains, high salted and sugar foods.	2(1.9%)	±1.945
Don't know	13(12.3%)	

Table No. 2: Mean knowledge score

Table-2 above shows that, majority of participants know smoking can affect their health (91.5%), compared to (1.9%) who don't know, and among them, cancer and respiratory illness were most mentioned diseases which may be caused by smoking (25.5%). Majority of participants know little about high blood pressure (67.9%), compared to (9.4%) who know appropriate about high blood pressure. Majority of participants know it is important to check blood pressure regularly (54.7%), and (47.2%) know blood pressure should be checked more than once a month. (88.7%) of the participants know that unhealthy diets can cause heart diseases while fried foods, refined grains, high salted and sugar foods are most mentioned foods that can cause heart diseases.

Do you think high consumption of alcohol can cause non-communicable diseases?					
Strongly agree N (%)	Agree N (%)	Neither agree nor disagree N (%)	DisagreeN (%)	Strongly disagree N (%)	Mean ±SD
31 (29.2%)	58 (54.7%)	10 (9.4%)	4 (3.8%)	3 (2.8%)	4.04 ±0.894

Do you think daily physical activities can reduce the risk of getting non-communicable diseases?					
Strongly agree N (%)	Agree N (%)	Neither agree nor disagree N (%)	Disagree N (%)	Strongly disagree N (%)	Mean ±SD
31 (29.2%)	66 (62.3%)	6 (5.7%)	3 (2.8%)	0 (0%)	4.18 ±0.695

Do you think high consumption of fat foods can cause stroke?					
Strongly agree N (%)	Agree N (%)	Neither agree nor disagree N (%)	Disagree N (%)	Strongly disagree N (%)	Mean ±SD
27 (25.5%)	41 (38.7%)	31 (29.2%)	6 (5.7%)	1 (0.9%)	3.82 ±0.913

Table No.3: Mean attitude score
Table-3 above shows that, majority of participants agreed that high consumption of alcohol can cause non-communicable diseases (58%), while only (2.8%) were strongly disagree for the same. Also, majority of participants (62.3%) agree that daily physical activities can reduce the risk of getting non-communicable diseases, while (38.7%) agree that high consumption of fats foods can cause stroke.

Do you smoke?	
Yes	10 (9.4%)
No	96 (90.6%)
If YES, how many times per day?	
Once a day	3 (2.8%)
Twice a day	2 (1.9%)
Thrice a day	2 (1.9%)
More than thrice a day	3 (2.8%)
I don't know	0 (0%)
Do you drink alcohol?	
Yes	23 (21.7%)
No	83 (78.3%)
If YES, how frequently do you drink?	
Occasionally	16 (15.1%)
More often	7 (6.6%)
Highly addicted	2 (1.9%)
I don't know	0 (0%)
Are you indulged in any sort of physical exercises?	
Yes	72 (67.9%)
No	34 (32.1%)
Do you undergo any regular health check-ups?	
Yes	51(48.1%)
No	55(51.9%)

Table No. 4: Mean practice score:
Table -4 above shows majority of participants do not smoke (90.6%) and even (78.3%) do not drink alcohol compared with 67.9% participants were indulged in physical exercises. But majority of participants do not undergo any regular health check-up.

DISCUSSION:

NCDs are still emerging as an increased concern posing significant challenges to health care systems worldwide in the leading cause of disability, morbidity and mortality by sharing complex interaction between genetic, environmental, life style, socio-demographic and medical condition factors.8,9 Poverty is closely linked with non-communicable diseases. The rapid increase in non-communicable diseases impedes poverty reduction especially in low-income countries by rising household costs associated with health care.2
Low social class people get sicker and die sooner than people of higher social positions because they are at greater risk of being exposed to harmful products.10 Poor knowledge regarding these diseases may result in a bad attitude and poor practices and ig-

norance of a healthy lifestyle.11
The most effective preventive strategy is the one that leads to lifestyle changes with respect to diet, physical activities, cessation of smoking and harmful alcohol consumption, control of metabolic disorders and early screening and timely intervention.9
This study was conducted to determine level of knowledge, attitude, and practices towards common non-communicable diseases among the local population in Mandi Gobindgarh.

Basing on the present study results, majority of participants, 67.9% know little about high blood pressure, 9.4% know appropriate about high blood pressure, and 54.7% agreed it is important to check blood pressure regularly. This study is in agreement with the study done by Manoj M et al among rural women in

India, which shows that 50.8% of respondents knew about high blood pressure (BP) as a disease, and 87.9% agreed that routine checking of blood pressure was beneficial.12 This reveals that there is still low level of knowledge about high blood pressure which might be due to; it is asymptomatic until after onset of complications, lack of awareness about the condition's causes and preventive services.

The current study shows 91.5% of participants had knowledge that smoking can affect their health and 25.5% mentioned cancer and respiratory illness as diseases caused by smoking, which is higher than a study done by Manoj M et al 2019, among rural women in India with majority (younger, 81.7%; older, 72.3%) responded that smoking was harmful while nearly one half did not know diseases caused by smoking and a study done by Sogaewal et al in 2014 on higher secondary school students in India, where 22% of students had no knowledge about health concerns of cigarette smoking.12,18

Also in this study, 54.7% of participants agreed high consumption of alcohol can cause NCDs, which collaborates with 67.8% of the respondents who agreed excessive alcohol consumption can lead to development of hypertension in a study done by Adelowo A et al,2020 on bankers in Lagos.16In this study, 21.7% of participants drink alcohol and only 1.9% consume in excess which is homogeneous with 42.7% who drink alcohol while 27.1% consume in excess in a study done by Adelowo AB et al on bankers in Lagos.16

On the pattern of unhealthy diet, 8.5% of participants in this study, mentioned high salty and sugar diets can cause heart diseases, while majority 42.2% mentioned a combination of fried foods, refined grains, high salty and sugar diets, which is lower compared to studies done by Mwenda V et al, 2018 in Kenya where majority 87.7% and 91.3% mentioned high salty and sugar diets intake as health dangers and Grimes A et al, 2015 in Australia in which 77% of participants were aware of the relation between high salt intake with heart diseases.2o,21

In this study, 67.9% of participants were indulged in physical exercises, which is higher than 30% of participants who engaged in physical exercises, in a study done by Kazaura et al, 2020 on Dar es salaam university students and respectively 74.4% and 33.7% of students did not do adequate and moderate activities as reported in a study conducted by Jain et al, 2012 Mangalore, India. Also, in this study 62.3% agreed physical activities can reduce risk of NCDs which is contrary to 51.6% of participants who did not have knowledge physical activities can reduce chance of getting cancer in a study done by Sharon J,2023 Gishu Kenya.14

In this study, it was observed that majority of participants (51.9%) do not undergo any regular health checkup while (48.1%) undergo regularly. The results are slightly in agreement with the study done on the bankers in Lagos, 2020 which shows that almost 40% do not go for regular health checkup and only 28% had a checkup in the preceding twelve months. This could be due to reduced health promotion activities and health camps around local population, reduced access to health information on all forms of media, reduced health programs or low awareness about the benefits of regular health checkups.16

It has been observed that despite having good knowledge about negative health effects of smoking, excessive alcohol consumption, unhealthy diets and physical inactivity, majority of participants are unaware about high blood pressure and regular health check-up benefits.

CONCLUSION

Non-communicable diseases are still recognized as a major public health problem in India and worldwide, and they are strongly associated with several factors such as increased ageing of the global population, rapid unplanned urbanization and the globalization of unhealthy lifestyles. This study reveals that, the general awareness about non-communicable diseases and its preventive measures in this local population is moderate. Therefore, there is increased need in the management of non-communicable diseases throughdifferent strategies like health awareness building, screening and lifestyle interventions, developing policies to address and combat non-communicable diseases and generating evidence-based research on non-communicable diseases among local population.

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