AN ANALYSIS OF THE RELATIONSHIP BETWEEN THE PRODUCTIVITY AND THE NON-COMMUNICABLE DISEASES

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Abstract

This study aims to assess the impacts of the non-communicable diseases of bank employees on the productivities in the selected banks in Colombo district, Sri Lanka by using mixed method viz. qualitative and quantitative method. The data have been collected by using well-structured questionnaire during the period in 2017. The tools used in this study so as to achieve the objective of this study are the descriptive statistics and regression models. As per the descriptive statistics, the nature of the non-communicable diseases among the employees of the banks has been identified elaborately. According to the analysis of the regression model 01 and model 02, the productivity is found as the dependent variable and in the regression model 01 and model 02, Attitude and Diagnosis are found as independent variables respectively. The productivity of the employee is considered as the sole dependent variable. It is found that the Attitude and Diagnosis are inversely related with the productivity at considerable significant level. It is concluded that the Diagnosis is the most influencing factor on the impact of the productivity of the employees.

Keywords: Non- communicable disease, diabetes Mellitus. Bank staff, productivity, and lifestyle

01. Introduction

Non-communicable diseases (NCDs) are the leading cause of death globally killing more people each year. The world health organization WHO (2010) stated that ―some of most formidable enemies of health are joining forces with allies of poverty to impose a double burden of disease, disability and premature death in many million people. This is what is happening in south Asia which has one quarter of global population, but where about half of the population lives below the poverty level and has limited sources to health care. Although infectious diseases remain a challenging enemy the populations of aging and non-communicable diseases are rising. Almost half of the adult disease burden in South Asia is attributable to NCDS (WHO, 2010).

After the independence, the country of Sri Lanka has been travelling a long way since focusing on the combat of communicable diseases, especially in the improvement of maternal and child health, and essentially in the elimination of vaccine preventable diseases. Presently, the chronic non-communicable diseases (NCDs) are surpassing the communicable diseases as the leading health issue and are now causing the mortality, disability, and morbidity. As a result, an increase in the use of health resources is recorded. Aging of the population, urbanization and the changes in lifestyle are found as the key factors due to the epidemiological transition (MHN, 2009).

In Sri Lanka NCDS are on the increase due to a rapid transition in lifestyle. Cardiovascular diseases solely contribute 18% deaths at the government health institutions compared to 8% deaths due to all communicable diseases. (National non-communicable disease risk factor survey report August 2008, Ministry of Health). A significant reduction in births fertility and mortality rates with a considerable increase of life expectancy had led to growth of elderly population. In the aged population all major NCD are more visible and prevalence is higher. When analyzing the risk factors, the trends are in upward direction in Sri Lanka. These include increased consumption of energy – dense, nutrient-poor are high in fat, sugar and salt. All these unhealthy eating patterns are in existence within the context of inactive life (MHN, 2009).

The productivity of employee (at times, it is referred to as the productivity of workforce) is a measure of the efficiency of a worker or group of workers being used in the process of production. The productivity of employee in any business entity or in any production activity can be assessed on the basis of the output of an employee in a particular period of time. Accordingly, the productivity is connected with the number of employees and the output produced by those employees or the number of labour hours used in the production process. As usual, the productivity of a particular employee is measured in terms of the relative average output for employees who are engaging in the same work. As the success and efficiency of any business entity is based upon the productivity of its employees, the productivity of employee is one of the instrumental considerations for the business entity (OECD, 2001).

According to estimates 40% of all NCD deaths were premature and befell those under the age of 70 years and a disproportionately higher number of such deaths occurred among the LMICs (World Health Organization, 2015). The leading causes of NCD deaths in 2015 were cardiovascular diseases (17.7 million deaths, or 45% of all NCD deaths), cancers (8.8 million, or 22% of all NCD deaths), and respiratory diseases, including asthma and chronic obstructive pulmonary disease (3.9 million) diabetes caused another 1.6 million deaths The age- standardized death rates for NCDs for the men and women in developing countries were much higher when compared with the rates for the men and women in high-income countries (Abegunde, *et al.* 2007).

02. Objective

To assess the impacts of the non-communicable diseases of bank employees on the productivities in the selected banks in Colombo district, Sri Lanka.

03. Literature Review

Research has shown that NCDs have been present among the rich, affluent societies of the ancient civilizations as evident by the presence of Atherosclerosis on the preserved mummified bodies of ancient Egyptian kings and princes (Allam *et al.,* 2011).

At the beginning of the 20th century, mankind faced the demographic, nutritional and the epidemiologic transitions concomitantly. With the demographic transition the population was ageing fast, in LMIC countries increased ageing was not matched with the improved socio- economic status, as in the developed countries. There was persistent poverty, poor nutrition and living conditions and inequity in access to health services. With ageing, naturally, NCDs increased. This lead to the high disease burdens in chronic diseases such as IHD, stroke, other diseases of the circulatory system, cancers, chronic lung diseases and diabetes in LMIC countries. Furthermore, Globalization and urbanization introduced unhealthy lifestyles. Due to these factors the chronic diseases onset at earlier ages, affecting the younger work force in LMIC countries (M. M. Engelgau, 2011).

NCDs were responsible for more than 50% of the disease burden in the LMIC countries, while the disease burden due to communicable diseases were also present, this has been called the "double burden of disease". Developed countries underwent a similar pattern in epidemiological transition, but fortunately for them it was spread out around 200 years, while the LMIC countries have undergone this shift within about half a century (Engelgau, 2011).

04. Methodology

Data will be collected by two ways in this research, such as primary data and secondary data. Primary data will collect from banking sector employees. Secondary data for the study will collect from the published and unpublished sources, annual reports, previous researches, journals, government and non-governmental reports, article, magazines related to human resource, work life balance, and various related website.

According to section 2 of the Banking Act (1998), a bank is an institution carrying on the business of accepting deposits and investing such monies. For the purpose of this study a banker is defined as an employee in the private bank who engages in the above banking business to generate profits for the bank. A study unit was defined as a of the selected licensed commercial bank in the private sector (hereafter known as "private banks")

Initially considering the logistics, the ease of obtaining authorization from the selected banks, feasibility and time factor, four private banks with larger branching networks were selected. The heads of human resources in the head offices of each selected bank was approached and authorization was obtained to carry out the study. Details regarding the branching network and the work force were obtained from Human Resource Department and 2015 annual reports of the banks. The private banks will be called as A, B, C, and D. The total number of permanent employees in Bank A was 2947. It had 40 bank branches situated in the Colombo District. The total number of permanent employees in bank B was 4000, with 61 branches situated in Colombo District. The total number of permanent employees in Bank C was 4800. It had 78 bank branches situated in the Colombo District. The total number of permanent employees in Bank D was 1427. It had 27 bank branches situated in the Colombo district.

This analysis is carried out using two simple regression models. In first model, Productivity is used as the dependent variable and the Attitude is used as the independent variable. Accordingly, the following regression model is estimated:

Productivity = f (Attitude)…………………(1)
$$PDY = \alpha_0 + \alpha_1 ATT + \varepsilon ....(2)$$

Where:
PDY = Productivity
ATT = Attitudes
α_0, α_1 = Coefficients
ε - Error term

In the second model, Productivity is used as the dependent variable and the Diagnosis is used as the independent variable. Accordingly, the following regression model is estimated:

Productivity = f (Diagnosis)…………………(1)
$$PDY = \alpha_0 + \alpha_1 DIG + \varepsilon ....(2)$$
Where:
PDY = Productivity
DIG = Diagnosis
α_0, α_1 = Coefficients
ε - Error term

Based on the two regression models used in this study, the following conceptual framework is constructed so as to portray the connectivity between the productivity and the non-communicable disease of the bank employees.
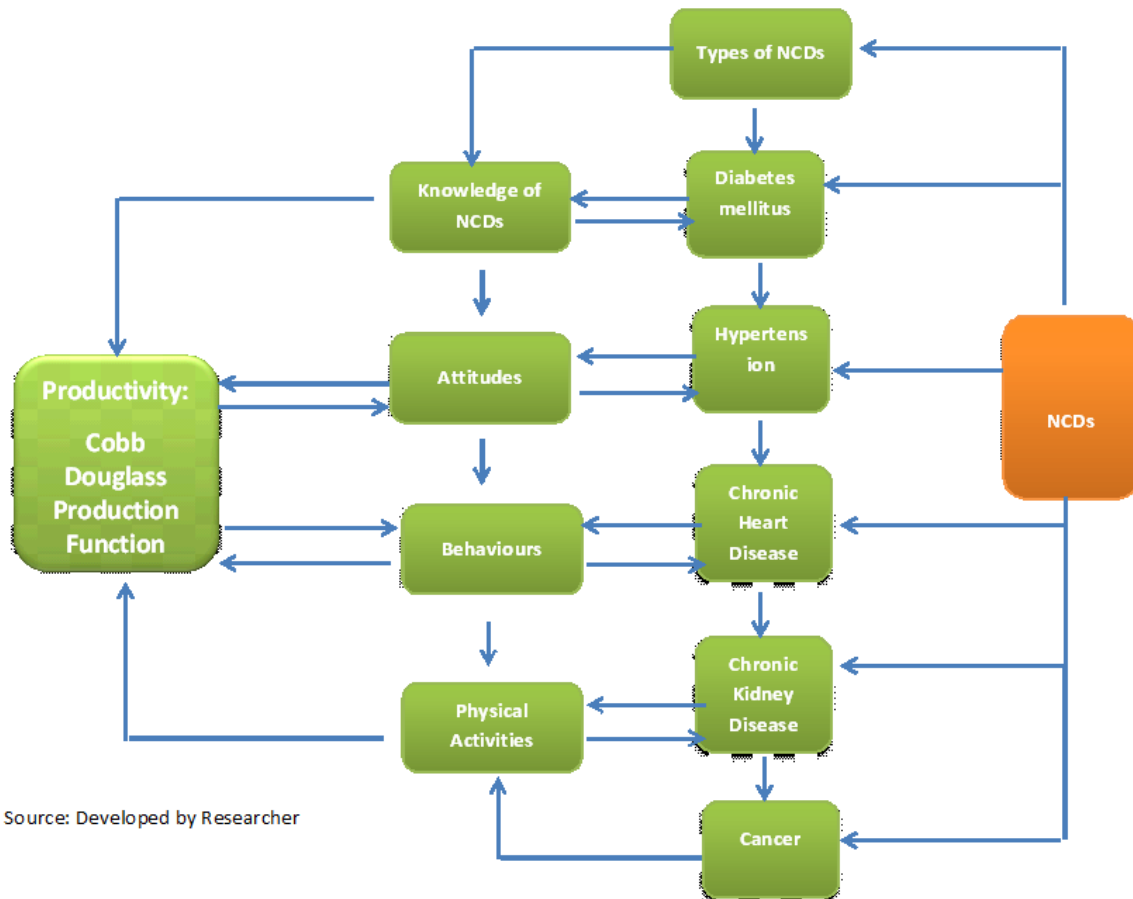
Source: Developed by Researcher

05. Data Analysis and Findings

05.1 Descriptive Statistics

The study included 160 bankers with a response rate of 80% (160/86200). The 40 non respondents comprised of those who refused to participate and those who did not return the filled questionnaires.

Table 5.1: Gender

Gender	Frequency	Percentage
Male	101	63.1
Female	59	36.9
Total	160	100.0

According to table and figure 5.1 total participants are 160 in the survey males are 101 females 59 and the percentage of male 63.1% the female 36.9 actually this is a male dominated institution.

Table 5.2: Age Group

Age Group	Frequency	Percentage
20-34	66	41.3
35-44	50	31.3
45-54	33	20.6
55-64``	11	6.9
Total	160	100.0

The age groups are divided into four. A majority (41.3%, 66) of the study participants were in the age group of 20 – 34 years. The second largest group participants were 35 – 44 groups (31.3% n-50), third participants of this group were 45- 54 (20.6% n 33) and last participants group were 55 – 64 (6.9%, n – 11).

Table 5.3: Marital Status

Marital Status	Frequency	Percentage
Currently married	115	71.9
Separated	12	7.5
Divorced	4	2.5
Widowed	3	1.9
Single	24	15.0
Other	2	1.3
Total	160	100.0

Nearly three fourth (71.9%, n=115) were married at the time of data collection, the single participants in this group were (15% n 24), in the study group 28.1%, n- 45 participants were without family life such as separated -12, Divorced -4, widows – 3, and unmarried – 24 this is not good signal for the healthy life, family life is so important to develop whole body.

Table 5.4: Ethnicity

Ethnicity	Frequency	Percentage
Sinhala	131	81.9
Tamil	13	8.1
Muslim	15	9.4
Other	1	.6
Total	160	100.0

Majority of the study, the participants were Sinhala people 81.9% n – 131, the Tamils and Muslims were 8.1, n-13, and 9.4%, n- 15.

Table 5.5: Accommodation

Accommodation	Frequency	Percentage
Currently living with the family	147	91.9
Currently not living with the family	13	8.1
Total	160	100.0

The participants of this study are currently living with family 91.9%, n-147, but the others who are not living with the family 8.1% n-13. It leads to various non- communicable diseases and other bad behaviour it could result to loss of productivity of above banks.

Table 5.6: Approximate Number of years spent in banking sector

Number of years spent in banking	Frequency	Percentage
0-5	38	23.8
6-10	32	20.0

11-15	31	19.4
16-20	33	20.6
21-25	14	8.8
26-30	8	5.0
above 31	4	2.5
Total	160	100.0

Majority of the study population have been working in the banking sector for 05 years or less (23.8%, n=38) they are newly recruited staff but the long hours working staff are for 16 – 20 Years (20.6%, n – 33) they have been working constantly without any physical activities with less mobility, it leads to many non- communicable diseases.

Table 5.7: Designation in bank

Designation in bank	Frequency	Percentage
Executive Officer	58	36.3
Non-Executive officer	102	63.8
Total	160	100.0

The number of executives in the study population (36.3%, n=58) was nearly half to the non-executives, the non- executives are dominated in the banks (63.8% n 102).

Table 5.8: Average number of hours spent at work on routine weekday

Number of hours spent at work on weekday	Frequency	Percentage
Less than 8 hours	1	.6
8-9 hours	133	83.1
9-10 hours	25	15.6
more than 10 hours	1	.6
Total	160	100.0

A majority of the study population have been working in the banking sector for 8- 9 hours (83.1% n =133) and are working more than 9 to 10 hours daily (15.6%, n=25), It is very pathetic situation for bank staff it could bring various illness such as diabetic mellitus, stress and mental disorder.

Table 5.9: Do you work on weekends

Work on weekends	Frequency	Percentage
Saturdays	118	73.8
Sundays	38	23.8
No work both days	4	2.5
Total	160	100.0

Nearly four third (73.8%, n=118) are working during the Saturday it is also not good for personnel healthy life and also family structure. Most of the participants in this study work even Sunday 23.8% n= 38. They are working without any rest; it leads to any non- communicable diseases or family complications.

Table 5.10: Working status during the weekend

Saturdays/ Sundays per month	Frequency	Percentage
One per month	117	73.1

2 per Month	2 per Month 31 19.4	2 per Month 31 19.4
3 per Month	2	1.3
4 per month	3	1.9
No work Saturdays and Sundays	7	4.4
Total	160	100.0

Working status during the weekend in the private banks is very restless situation to the staff it should be reformed and take an amicable solution.

Table 5.11: What is your average monthly salary

Monthly salary	Frequency	Percentage
Less than 15000 rupees	2	1.3
15000 to 30000 rupees	11	6.9
30000 to 50000 rupees	57	35.6
More than 50000 rupees	90	56.3
Total	160	100.0

The bankers receive very good remuneration package for their daily expenses even they receive overtime payments but it is not suitable for proper family movement.

Table 5.12: Have you ever diagnosed by a doctor for any of the following diseases

Diagnosed by a doctor the following diseases	Frequency	Percentage
Diabetes Mellitus	46	28.8
Hypertension	23	14.4
Chronic Heart diseases	5	3.1
Chronic Kidney diseases	1	.6
Cancer	1	.6
Asthma	12	7.5
Others	72	45.0
Total	160	100.0

The Diabetes Mellitus are very important non – communicable diseases in south Asian countries, most of the people die in India because of the Diabetes Mellitus, as well as Sri Lankan also face various hardships due to diabetes mellitus, the study population in the banking sector vast number of private banking staff are affected by diabetes mellitus (28.8% n=46). The working patterns and attitudes of bank staff are the sole reason for the above diseases.

Table 5.13: The risk of developing high blood sugar is similar in a person of normal weight as well as in a individual who is overweight

The risk of developing high blood sugar	Frequency	Percentage
Yes	131	81.9
No	26	16.3
I do not know	3	1.9
Total	160	100.0

In the study population know well about overweight people easily could develop blood sugar than normal weight (81.9% n= 131) therefore, the bankers should control their BMI.

Table 5.14: The risk of developing heart disease is same in a person who maintains a normal weight as well as in a person who is overweight

The risk of developing heart disease	Frequency	Percentage
Yes	106	66.3
No	50	31.3
I do not know	4	2.5
Total	160	100.0

More than two third of the study population did not identify increased body weight as a risk factor for developing heart diseases (66.3%, n=106). So, they should be vigilant about this.

Table 5.15: Healthy adults are advised to limit added salt to 1 teaspoon (5 grams) or less per person per day.

Answers	Frequency	Percentage
Yes	117	73.1
No	27	16.9
I do not know	16	10.0
Total	160	100.0

Only about four third of the study population identified the need to limit added salt to five grams or less a day (73.1%, n=117), only almost 25% of study group do not know what is added salt limit. The salt could increase the hypertension.

Table 5.16: Adults who have normal sugar levels in their blood do not need to limit their sugar consumption

Answers	Frequency	Percentage
Yes	114	71.3
No	44	27.5
I do not know	2	1.3
Total	160	100.0

Nearly three fourth of the study population do not knew healthy adults should limit added sugar in the diet (71.3%, n=114),

Table 5.17: Excessive consumption of added sugar has no effect on the lipid/ fat levels in blood

Answers	Frequency	Percentage
Yes	110	68.8
No	40	25.0
I do not know	10	6.3
Total	160	100.0

Only about two third do not knew that excess sugar consumption could lead to dyslipidemia (68.8%, n=110).

Table 5.18: Adults should engage in 30 minutes of moderate physical activities
(like a brisk walk, cycling, swimming, aerobics) for at least 5 days a week to
maintain their health

Answers	Frequency	Percentage
Yes	140	87.5
No	16	10.0
I do not know	4	2.5
Total	160	100.0

30 minutes The physical exercises are at least 5 days in a week to maintain the health. The Participants do know about it more than three forth 87.5 n=140.

Table 5.19: 400 grams of fruits and vegetables should be eaten daily by an adult

Answers	Frequency	Percentage
Yes	139	86.9
No	13	8.1
I do not Know	8	5.0
Total	160	100.0

A majority knew that 400g of fruit and vegetable consumption was recommended for an adult daily (86.9%, n=139).

Table 5.20: Eating fruits and vegetables help to reduce the risk of many non-
communicable diseases including certain cancers.

Answers	Frequency	Percentage
Yes	144	90.0
No	8	5.0
I do not Know	8	5.0
Total	160	100.0

The majority of participants knew that fruit and vegetable consumption could protect against NCDs including certain cancers (90% n= 144).

Table: 5.21: Do you know what is trans-fat?

Answers	Frequency	Percentage
Yes	129	80.6
No	9	5.6
I do not know	22	13.8
Total	160	100.0.

More than two third of the study population are correct or know what is a trans-fat? 80.6 n=129.

Table 5.22: Trans fats are found in commercially baked or fried foods

Answers	Frequency	Percentage
Yes	140	87.5
No	2	1.3
I do not know	18	11.3
Total	160	100.0

The Trans fats are found in commercially baked or certain fried foods such as biscuits, sandwich, popcorn, crackers and cakes the participants of this study do know well 87.5% n= 140.

Table 5.23: Trans fats increase the LDL cholesterol (bad cholesterol) in blood

Answers	Frequency	Percentage
Yes	137	85.6
No	5	3.1
I do not know	18	11.3
Total	160	100.0

A similar number of participants have the knowledge that trans fats could increase LDL cholesterol in blood (85.6% n=137), same time certain participants do not have knowledge 14.4% n=23.

Table 5.24: Trans fats decrease the HDL cholesterol in blood

Answers	Frequency	Percentage
Yes	135	84.4
No	9	5.6
I do not know	16	10.0
Total	160	100.0

Nearly nine out of ten participants were correct or know that trans fats could decrease HDL cholesterol in blood (84.4%, n=135).

Table 5.25: Any amount of smoking even occasional smoking damages the heart and blood vessels.

Answers	Frequency	Percentage
Yes	148	92.5
No	8	5.0
I do not know	4	2.5
Total	160	100.0

Nearly nine out of ten participants in the study knew that even an occasional smoke could damage the heart and blood vessels (92.5%, n=148).

Table 5.26: The risk of heart attacks can be lowered by 50% by quitting smoking

Answers	Frequency	Percentage
Yes	152	95.0
No	6	3.8
I do not know	2	1.3
Total	160	100.0

Nearly 95% of the study population do know that stopping smoking protected against CVD (95%, n=152).

Table 5.27: Alcohol is a risk factor for developing high blood sugar levels.

Answers	Frequency	Percentage
Yes	143	89.4
No	11	6.9.3

I do not know	6	3.8
Total	160	100.0

A similar number of participant knew that alcohol made persons prone to develop diabetes (89.4%, n=143).

Table 5.28: Are you smoker

Answers	Frequency	Percentage
Yes	65	40.6
No	95	59.4
Total	160	100.0

A similar amount of participants is smoker 40.6% n=65 and almost two third of participants of this study are non-smoker 59.4% n= 95.

Table 5.29: On average, how many tobacco products, (such as cigarettes, cigars or (pipes) do you smoke each day?

Answers	Frequency	Percentage
One to four	53	33.1
Five to ten	11	6.9
No smoke	96	60.0
Total	160	100.0

Certain amounts of participants are smokers (40% n= 64) this is not good attitude for healthy life they smoke more than one cigar per day.

Table 5.30: In the past have you ever attempted to quit/reduce smoking

Answers	Frequency	Percentage
Yes	37	23.1
No	123	76.9
Total	160	100.0

In the past, number of participants tried to reduce or stop the smoking 23.1% n=37 this is very big quantity that has used cigars before.

Table - 5.31: Have you ever asked for advise/ help from a doctor or health care worker to quit or reduce smoking

Answers	Frequency	Percentage
Yes	35	21.9
No	125	78.1
Total	160	100.0

Almost one fifth of the sample had smoked at one time but had quit by now (21.9%, n=35) they have asked help from doctors or other healthcare workers to reduce or stop the smoking.

Table 5.32: Is there anyone in your home smoking

Answers	Frequency	Percentage
Yes	83	51.9
No	34	21.3

Not sure	43	26.9
Total	160	100.0

In the study population 83participants' (51.9%), homes are smokers it will affect to others.

Table 5.33: Do you consume alcohol

Answers	Frequency	Percentage
Yes	79	49.4
No	81	50.6
Total	160	100.0

Nearly half of the study population consumed alcohol (49.4%, n= 79), half of the participants are 'Current Drinkers' they have the habit of using alcohol.

Table 5.34: In the past have you ever attempted to cut down/ stop consumption of alcoholic beverages

Answers	Frequency	Percentage
Yes	69	43.1
No	91	56.9
Total	160	100.0

69 participants (43.1%) have actively attempted to stop the alcohol in the past.

Table 5.35: Have you ever asked advise/help from a healthcare worker to cut down or stop alcohol consumption

Answers	Frequency	Percentage
Yes	54	33.8
No	106	66.2
Total	160	100.0

54 participants (33.8%) have actively sought advice and/or help from a doctor or healthcare workers to stop the alcohol.

Table 5.36: In a typical week how many days do you eat fruit

Answers	Frequency	Percentage
I do not eat fruits usually	8	5.0
1 days a week	8	5.0
2 days a week	12	7.5
3 days a week	50	31.3
4 days a week	76	47.5
5 days a week	6	3.8
Total	160	100.0

In the study population, 5% (n=8), have not consumed any fruits during a typical week, half of the participant (47.5%, n=76) of the population have consumed fruits four days a week and eat the fruits three and two days also (31.3% n=50) (7.5% n=12)

Table 5.37: in a typical week how many days do you eat vegetables

Answers	Frequency	Percentage
I don't eat vegetables usually	1	6
1 day a week	1	6
2 days a week	3	1.9
3 days a week	63	39.4
4 days a week	56	35.0
5 days a week	34	21.3
others	2	1.3
Total	160	100.0

More than one third of the study population have eaten vegetables 3days a week (39.4%, n=63). Most of the participants have eaten the vegetables 4 days a week (35% n 56) and 5 days (21.3% n=34 Only 1 participant (.6%) have not consumed any vegetables during the week.

Table 5.38: Have you measured your bodyweight within last three month

Answers	Frequency	Percentage
Yes	140	87.5
No	20	12.5
Total	160	100.0

Out of the study population 87.5% (n=140) of participants have attempted to measure or maintain their body weight during the past 3 months.

Table 5.39: Please express your body weight in kilogram (KG)

Answers	Frequency	Percentage
30 to 50	7	4.4
51 to 70	101	63.1
71 above	52	32.5
Total	160	100.0

Most of the participants' body weight are normal 51 to 70 kg (63.1% n=101). 52 participants (32.5%) are overweight they should consider to reduce their weight.

Table 5.40: Have a health care worker advice you to reduce your weight

Answers	Frequency	Percentage
Yes	66	41.3
No	94	58.8
Total	160	100.0

In the study population 41.3 %(n=66) have asked advise and/or help from healthcare worker during the past 12 months to reduce weight. Or instruct the healthcare worker to maintain the body.

Table 5.41: Have you ever tried to reduce weight

Answers	Frequency	Percentage
Yes	63	39.4

No	97	60.6
Total	160	100.0

Out of the study population 39.4% (n=63) of participants have attempted to reduce their body weight during the past 12 months.

Table 5.42: Have you ever asked advise/help from a doctor or healthcare worker to help reduce weight

Answers	Frequency	Percentage
Yes	52	32.5
No	108	67.5
Total	160	100.0

In the study population 32.5 %(n=52 have asked advise and/or help from a doctor or healthcare worker during the past 12 months to reduce weight.

Table 5.43: what is your height in meter

Answers	Frequency	Percentage
1 to 2 meter	160	100.0

The study population 100% (n=160) of participant's body height are measured normal

Table 5.44: What is your waist circumference in CM

Answer	Frequency	Percentage
20cm to 30cm	23	14.4
30 cm to40 cm	136	85.0
41 to 50 cm	1	.6
Total	160	100.0

The study population 85% (n=136) of participants' waist circumferences are normal 30 to 40 cm and 23 participants (14.4%) are 20 to 30 cm.

Table 5.45: How many days a week would you be engaging in 30 minutes of moderate physical activities (like brisk walking, cycling, swimming, aerobics)

Answers	Frequency	Percentage
Do not do exercise	43	26.9
1 days a week	8	5.0
2 days a week	14	8.8
3days a week	19	11.9
4 days a week	53	33.1
5 days a week	15	9.4
6 days a week	6	3.8
7days a week	2	1.3
Total	160	100.0

In the study population, a vast majority (26.9%, n=43) were not engaged in the weekly recommended level of physical exercises at all, most of participants are not doing proper exercises on recommended basis.

Table 5.46: In the bank on a typical working day, on average how much time do you spend sitting or reclining

Answers	Frequency	Percentage
Less than 1 hours	4	2.5
1-2 hours	6	3.8
3-4 hours	42	26.3
4 -5 hours	72	45.0
5 -6 hours	27	16.9
more than 6 hours	9	5.6
Total	160	100.0

Nearly four third of the study population on average was spending more than four hours daily in sedentary behaviour in the work place or sitting in same place.

Table 5.47: Have you ever had your blood pressure measured by a doctor or other health worker

Answers	Frequency	Percentage
Yes	59	36.9
No	101	63.1
Total	160	100.0

In the study population nearly one third of the participants (36.9%, n=59) have been told that they have measured the blood pressure by doctors or other health worker

Table 5.48: Have you ever been told by a doctor or other health worker that you have raised blood pressure

Answers	Frequency
Yes	35
No	125
Total	160

In the study population 35 (21.9%) participants had been screened for hypertension, among participants who were screened.

Table 5.49: Do you get your blood pressure checked annually

Answers	Frequency	Percentage
Yes	43	26.9
No	117	73.1
Total	160	100.0

In the study population 43 (26.9%) participants have been screened for hypertension annually. But most of the participants did not check the blood pressure annually 73.1% n=117.

Table 5.50: Where did you get your blood pressure checked

Answers	Frequency	Percentage
General practitioner	27	16.9

Specialist/consultant	6	3.8
At a government hospital OPD /clinic	4	2.5
At a private hospital OPD / clinic	15	9.4
During a medical check up	13	8.1
Other	95	59.4
Total	160	100.0

Majority of the study population have their blood pressure checked by another source (59.4%, n=95)

Table 5.5: Do you ever check your blood pressure using an electronic blood pressure monitor at home

Answers	Frequency	Percentage
Yes	11	6.9
No	149	93.1
Total	160	100.0

In the study population 11(6.9%) of participants have checked their blood pressure at home, but most of the participants do not check the pressure at home there is no facility to buy a electronic blood pressure monitor.

Table 5.52: Have you ever had your blood sugar checked?

Answers	Frequency	Percentage
Yes	75	46.9
No	85	53.1
Total	160	100.0

Among the participants of the study 46.9% (n=75) have had their blood sugar level tested

Table 5.53: Have you ever been told by a doctor or healthcare worker that you have high blood sugar levels

Answers	Frequency	Percentage
Yes	49	30.6
No	111	69.4
Total	160	100.0

Among the participants of the study 30.6% (n=49) have told by a doctor that their blood sugar level is high.

Table 5.54: Who told you to get your blood sugar checked

Answers	Frequency	Percentage
I did it as I wanted	33	20.6
my friends/family said I should get it done	3	1.9
It was done as part of a routine medical check up	5	3.1
A general practitioner asked me to check it	8	5.0
A consultant/specialist asked me to check it	17	10.6
Medical officer in government hospital of OPD told me	4	2.5
Other	90	56.3
Total	160	100.0

20.6% (n=33) of the participants had screened for diabetes as they wanted it done, 3 (1.9%) had been encouraged by friends and family, 5(3.1%) participants had screened during a medical check-up and only 8 participants (5%) had screened on the advice of a general practitioner, 56.3% =90 participants use other sources.

Table 5.55: Have you ever had your blood cholesterol levels checked

Answers	Frequency	Percentage
Yes	43	26.9
No	117	73.1
Total	160	100.0

In the study population 26.9% (n=43) of participants have checked their blood cholesterol/blood lipid levels.

Table 5.56: Have you ever been told by a doctor or healthcare worker that you have high blood cholesterol levels

Answers	Frequency	Percentage
Yes	30	18.8
No	130	81.3
Total	160	100.0

In the study population 18.8% (n=30) of participants, the doctor has emphasized that they have their blood cholesterol/blood lipid levels.

Table 5.57: Who told you to get your blood cholesterol level checked

Answers	Frequency	Percentage
I did it as I wanted	11	6.9
my friends/family said I should get it done	3	1.9
It was done as part of a routine medical check up	4	2.5
A general practitioner asked me to check it	5	3.1
Medical officer in private hospital of OPD told me	16	10.0
A consultant/specialist asked me to check it	5	3.1
Other	116	72.5
Total	160	100.0

In the study population 11(6.9%) of participants checked blood cholesterol/lipid levels as they wanted it, while 3 (1.9%), have been told by friends and family to do it. 2.5 % (4) have it done during a routine medical check-up while, 3.1%(n=5) and 16%(n=10) had screened on the advice of a general practitioner and medical consultant respectively. Vast numbers of participants use other relevant sources (72.5% n = 116).

06. Regression Result

06.1 Regression Model

In this simple regression model Productivity (PDY) is used as independent variable and DIG is used as dependent variable (diagnosed diseases). The simple regression model is resulted at PDY=36.115 - 0.276 DIG.

PDY=α_0 + α_1 GIG
Where;
PDY= productivity
DIG= diagnosed diseases

According to the above simple regression model, the value of coefficient of DIG is estimated at -0.276. It means there is a negative relationship between PDY and DIG and at the same time these two variables are inversely connected. Thus, if there is one unit of increase in DIG, the PDY - Productivity is decreased by the unit of -0.276. This independent variable is significant at 0.009 (p < 0.05). As a result, the null hypothesis of 'there is no significant relationship between these two variables' is rejected, rather the alternative hypothesis is confirmed.

Table 5.58: Regression result – model 01

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
01	(Constant)	36.115	.753		47.933	.000
	12. Have you ever diagnosed by a doctor for any of the following diseases	-.276	.105	-.205	-2.629	.009
a. Dependent Variable: PDY						

Source: Survey Data – 2017

06.2 Regression Model 02

In this simple regression model Productivity is used as dependent variable and Attitude is used as independent variable I this study following simple attitude is estimated.

PDY=α_0 + α_1 ATT
PDY= Productivity of Employees
ATT= attitudes of employees
When the above simple regression is estimated, the following results are estimated.
PDY= 36.042 – 0.191 ATT

As per the results of the simple regression model 02, the value of coefficient of attitude is estimated at -0.191. It indicates that there is a negative relationship between PDY and ATT. As one unit of ATT is increased, the PDY is decreased by -0.191 unit (inverse relationship). It means when one variable decreases another variable increases or vice versa.

Table 5.59: Regression result – model 02

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	**Std. Error**	**Beta**		
02	(Constant)	36.042	1.264		28.509	.000
	ATT	-.191	.146	-.103	-1.303	.195
a. Dependent Variable: PDY						

Source: Survey Data – 2017

07. Findings and Conclusion

According to the above simple regression model, the value of coefficient of DIG is estimated at -0.276. It means there is a negative relationship between PDY and DIG and at the same time these two variables are inversely connected. Thus, if there is one unit of increase in DIG, the PDY - Productivity is decreased by the unit of -0.276. This independent variable is significant at 0.009 ($p < 0.05$). As a result, the null hypothesis of 'there is no significant relationship between these two variables' is rejected, rather the alternative hypothesis is confirmed. As per the results of the simple regression model 02, the value of coefficient of attitude is estimated at -0.191. It indicates that there is a negative relationship between PDY and ATT. As one unit of ATT is increased, the PDY is decreased by -0.191 unit (inverse relationship). It can be concluded that the Diagnosis is the most influencing factor on the impact of the productivity of the employees.

08. Recommendations

The improvement of knowledge of the study population on risk factors and healthy behaviours in relation to Non-communicable diseases should be considered by the respective authorities. The reduction of sedentary life style should be promoted among the study population. The modifiable risk factors like BMI, waist circumference, dietary patterns, level of physical activity, and mental stress can be modified. Therefore, the risks of NCDs can be reduced. Special programmes, integrating promotive, preventive and curative care for bank employees are required urgently.

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