

A STUDY ON SOCIAL COST BENEFIT ANALYSIS RELATED TO NON COMMUNICABLE DISEASES FOR GOVERNMENT HEALTH SCHEMES, WITH REFERENCE TO GANDHINAGAR DISTRICT OF GUJARAT STATE

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ABSTRACT : The technique of Social cost Benefit Analysis also termed as economic analysis which was original developed in 1960 is defined as a systemic and cohesive economic tool for comparing and calculating benefit and costs of government policy or investment projects. The Non Communicable Diseases are largely held responsible for 36 million deaths in 2008. For purpose of inspection of physical activities , alcohol and tobacco consumption, blood sugar and blood pressure examination under concerned schemes was narrowed to 30 years of age and more. Stagey adopted for research was primary data in which with reference to public awareness programme closed ended questions was used to collect data from the chosen forget beneficiaries randomly sources of secondary data were authentic publication. In sample frame approach beneficiates of district programmes protected under various schemes in Gandhinagar district of Gujarat state. The size of sample was 204 respondents at Gandhinagar in Gujarat . The collection of data was done with assistance of sample survey of beneficiaries in Gandhinagar district of Gujarat state. Hence, this study is concerned to alternation in the life of beneficiaries after suffering form NCD's.

Key word : Social cost befit Analysis , Non Communicable Diseases

1. Introduction:

Hard attempts are being put by states and central government for the purpose of restraining NCD's such as diabetes , cancer Cardiovascular and stroke . Technical and financial aid is offered by the central government though National Program for Prevention and Control of Cancer, Diabetes, Cardiovascular Disease and Stroke (NPCDCS). In 2005 flagship programme named as the National Rural Health Mission(NRHM) with the aim to spread out more widely and more thinly the way of approach to quality health care to villages was stated possessing crucial strategies such as strengthening of outreach services by considering ASHA(village health worker) along with , the integration of family welfare registering Rogi Kalyan Samities (RKS) for the betterment of hospital management to strengthen the unit management of the district level through the indication of professional and straggle for communization of services by way of terming health and sanitation committee at rural , district and block level.

SR. NO.	SUBJECT	GANDHINAGAR	DEHGAM	KALOL	MANSA	TOTAL
1.	Community Health Center	2	2	2	2	8
2.	Primary Health Center	8	6	6	5	25
3.	Sub Center	60	40	39	32	171
4.	District Hospital	-	-	-	-	1
TOTAL						205

1st May, 2013, National Urban Health Mission (NUHM) was launched as a sub – mission of NHM (National Health Mission). Integration of NCD inventions in the National Rural Health Mission (NRHM) framework for the sake of the optimization of resources , those are not enough in number to the end of NPCDCS and purpose for which the NCD cell came into existence is that it would ensure the super vision and implementation of the programe activities connected to health promotion , cure and referral and early diagnosis at district level. Additionally to would put efforts to make huge knowledge base in the community for effective referrals

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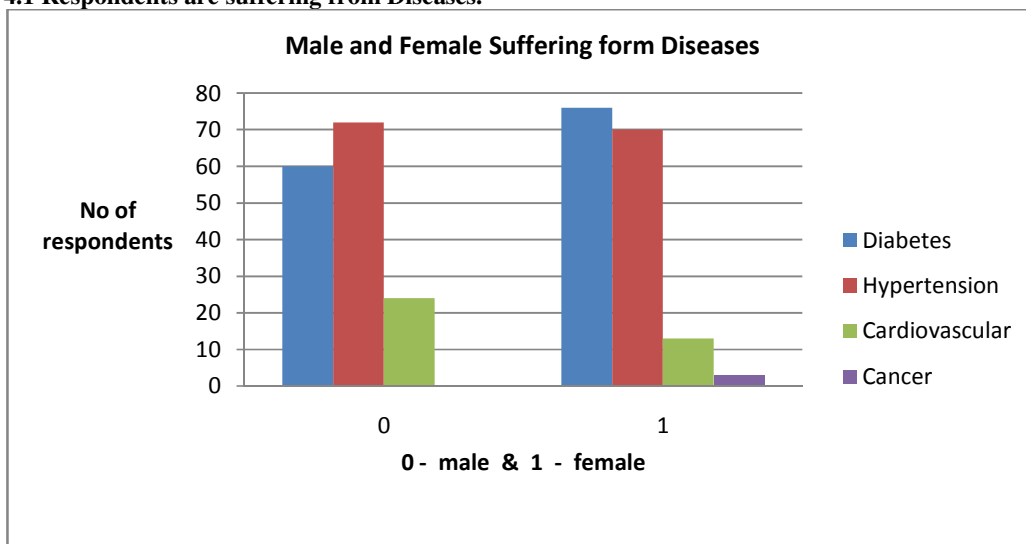
detection prevention and treatment strategies. Role of District Non Communication Disease Cell, Gandhinagar as per 2011 population data collection census the aggregate population of Gandhinagar the capital of Gujarat was 13.91 lacs consisting 7.2 lacs and 6.67 lacs males and females. Total villages in Gandhinagar is 252 , where rural population was 7.91 comprising 4.08 lacs and 3.92 lacs respectively men and women urban population was 6.00 lacs having 3.15 lacs and 2.85 lacs males and females according. In Gandhinagar number of Community Health Center (CHC), Primary Health Center (PHC), Sub Center and District Hospital are displayed below.

3 Research Methodology:

Descriptive Research for primary data Collection Study used questionnaire to collect data, with reference to public awareness programme. The questionnaires were used to collect the data from the selected target beneficiaries, randomly for questionnaire were close ended. Secondary data was be obtained from the authentic Publications of the District Non Communicable Diseases Cell, Statistical data published in various government publications, websites of Non Communicable Diseases Cell articles from Internet and Newspapers. Beneficiaries of Different Programmes, covered, under different Schemes, in Gandhinagar district of Gujarat State. Samples size was 204 respondent for Community Health Center (CHC), Primary Health Center (PHC), Sub Center & District hospital 204 Respondents from citizens. The data was collected with help of sample survey of the beneficiaries, the project officers, field workers and elected representative of the District NCD Gandhinagar. The researcher was selected Gandhinagar District as a sample for the study,

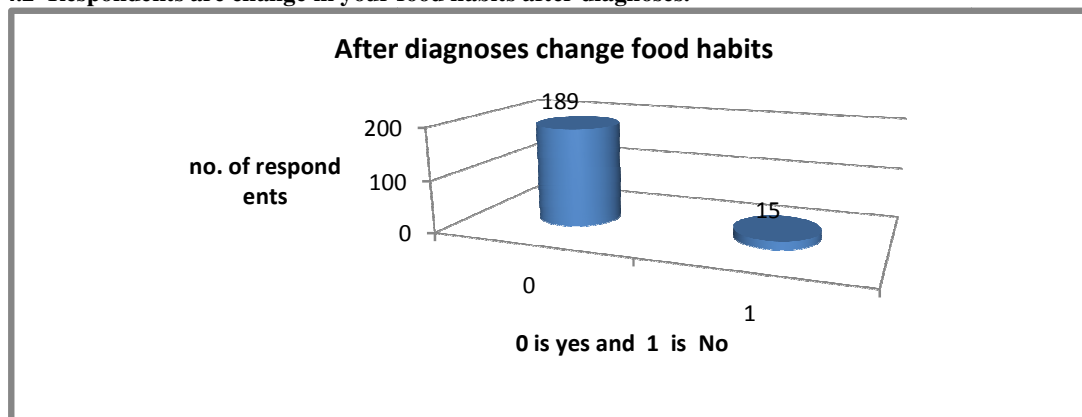
4. Data Analysis :

4.1 Respondents are suffering from Diseases.



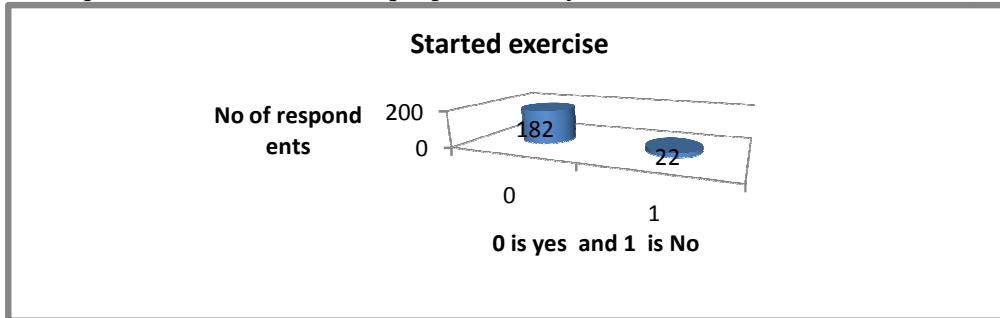
As seen from the **Graph**, 136 respondents are suffering from Diabetes, 142 respondents are suffering from Hypertension (High B.P.), 167 respondents are suffering from Cardiovascular (Heart Disease), 3 respondents are suffering from Cancer.

4.2 Respondents are change in your food habits after diagnoses.



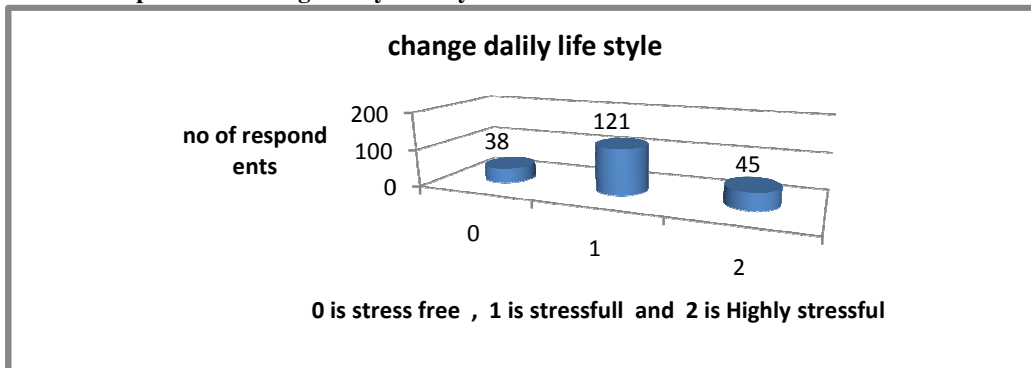
As seen from the Graph majority of the respondents are satisfied by change in food habits after diagnoses (189 out of 204) and 15 respondent are not satisfied by change in food habits after diagnoses.

4.3 Respondents started exercise as per prescribed by doctor.



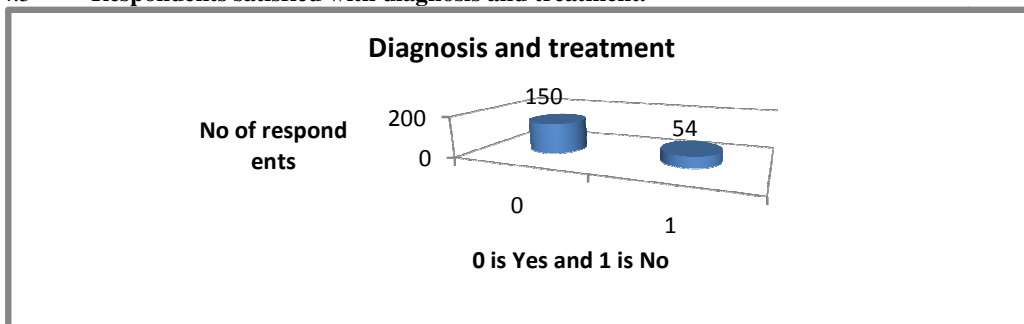
As seen from the Graph majority of the respondents started doing exercise as prescribed by doctor (182 out of 204) and 22 respondents did not start exercise as prescribed by doctor.

4.4 Respondents change daily life style.



As seen from the Graph majority of the respondents live stressful 121, 45 responded live highly stressful and 38 respondents did not change daily life style.

4.5 Respondents satisfied with diagnosis and treatment.



As seen from the Graph majority of the respondents Satisfied with diagnosis and treatment prescribed by doctor (150 out of 204) and 54 respondent are not satisfied.

4.6 Hypothesis of Gender and satisfied with diagnosis and treatment level.

H₀ : There is not much significant difference in the proportion of male and female who are satisfied or dissatisfied with diagnosis and treatment.

H₁ : There is much significant difference in the proportion of male and female who are satisfied or dissatisfied with diagnosis and treatment.

Chi-Square Test

Test Statistics

	Gender	Q12
Chi-Square	.706 ^a	45.176 ^a
df	1	1
Asymp. Sig.	.401	.000

Chi square calculated to 45.176^a and significant level is 0.0000 as it is less than 0.05 (5% confidence Interval) H_1 (calculate hypothesis) is accepted.

Hence, There is much significant difference in the proportion of male and female who are satisfied or dissatisfied with diagnosis and treatment.

4.7 Hypothesis of residence and started doing exercise as prescribed by doctor.

H_0 : There is not much significant difference in the residence (urban and rural) proportion of who have satisfied doing exercise as prescribed by doctor.

H_1 : There is much significant difference in the residence (urban and rural) proportion of who have satisfied doing exercise as prescribed by doctor.

Chi-Square Test

Test Statistics

	Residence	Q10
Chi-Square	.314 ^a	1.255E2 ^a
df	1	1
Asymp. Sig.	.575	.000

Chi square calculated to 125.5E2 and significant level is 0.0000 as it is less than 0.05(5% confidence Interval) H_1 (calculate hypothesis) is accepted.

Hence, There is much significant difference in the residence (urban and rural) proportion of who have satisfied doing exercise as prescribed by doctor.

4.8 Hypothesis of gender and paid any money to hospital /doctor / Nurse.

H_0 : There is not much significant difference in the proportion of male and female who have paid any money to hospital /doctor / nurse.

H_1 : There is much significant difference in the proportion of male and female who have paid any money to hospital /doctor / nurse.

Chi-Square Test

Test Statistics

	Q5	Gender
Chi-Square	1.588E2 ^a	.706 ^a
df	1	1
Asymp. Sig.	.000	.401

Chi square calculated is 1.588E2^a as it is more than 0.005 level of confidence H_0 (calculate hypothesis) is accepted.

Hence, There is not much significant difference in the proportion of male and female who have paid any money to hospital /doctor / nurse.

4.9 Hypothesis of education and change in food habits after diagnoses.

H_0 : There is not much significant difference in the education proportion of who have change in food habits after diagnoses.

H₁ :There is much significant difference in the education proportion of who have change in food habits after diagnoses.

Chi-Square Test

Test Statistics

	Education	Q9
Chi-Square	21.931 ^a	1.484E2 ^b
df	4	1
Asymp. Sig.	.000	.000

Chi square calculated to 21.931a and significant level is 0.0000 as it is less than 0.05 (5% confidence Interval) H₀(calculate hypothesis) is accepted.

Hence, There is not much significant difference in the education proportion of who have change in food habits after diagnoses.

4.10 Hypothesis of income and change in food habits after diagnoses.

H₀. There is not much significant difference in the income proportion of who have change in food habits after diagnoses.

H₁ : There is much significant difference in the income proportion of who have change in food habits after diagnoses.

Chi-Square Test

Test Statistics

	Q9	Income
Chi-Square	1.484E2 ^a	58.696 ^b
df	1	4
Asymp. Sig.	.000	.000

Chi square calculated to 1.484E2^a and significant level is 0.0000 as it is less than 0.05 (5% confidence Interval) H₀(calculate hypothesis) is accepted.

Hence, There is not much significant difference in the income proportion of who have change in food habits after diagnoses.

5. Finding based on suffering form various diseases.

5.1 Survey Analysis for diabetes :

Both 23 males and 28 females age group 40-49 years are suffering from diabetes. 51 females having no income and 17 males earning Rs. 30000 above are suffering from diabetes . Minority 19 men doing service and 36 household women are suffering from diabetes. Maximum , 25 females possessing primary education and 15 secondary pass and postgraduate male have diabetes. 46 and 64 Hindu males and females respectively are suffering from diabetes. Majority 35 and 42 males and females respectively are living in urban area are suffering from diabetes. Maximum 4 males agreed and 74 females disagreed that they have paid any money to hospital for the treatment of diabetes. 13,47,16 females and 9,40 and 10 males live steers free , stressful and highly stressful life.

5.2 Survey Analysis from hypertension.

Both 26 males and 26 females age group 40-49 years are suffering from hypertension. 45 females having no income and 21 males earning Rs. 30000 above are suffering from hypertension. Majority 23 men doing service and 38 household women are suffering from hypertension . Maximum , 25 females possessing primary education and 25 primary pass male have hypertension . 56 and 60 Hindu males and females respectively are suffering from hypertension. Majority 38 and 34 males and females respectively are living in urban area are suffering from hypertension. Maximum 6 males agreed and 66 females disagreed that they have paid any money to hospital for the treatment of hypertension. 12,43,18 females and 11,43,18 males live steers free , stressful and highly stressful life.

5.3 Survey Analysis Cardiovascular.

Both 11 males and 6 females age group 40-49 years are suffering from Cardiovascular. 8 females having no income and 8 males earning Rs. 30000 above are suffering from Cardiovascular. Majority 9 men doing service and 7 household women are suffering from Cardiovascular. Maximum , 4 females possessing primary education

and 7 secondary pass male have Cardiovascular. 18 and 11 Hindu males and females respectively are suffering from Cardiovascular. Majority 13 and 9 males and females respectively are living in urban and rural area are suffering from Cardiovascular. Maximum 19 males agreed and 11 females disagreed that they have paid any money to hospital for the treatment of Cardiovascular. 3,7,3 females and 4,12,8 males live stress free, stressful and highly stressful life.

5.4 Finding based on social cost benefit :

52 males 50 females from cities agreed and 3 men 8 women from villages disagreed for changes in food habit after diagnosis. 50 urban males and 47 rural females decreased their sugar consumption after diagnosis. 50 urban males and 48 rural and urban females agreed to exercise prescribed by doctor after diagnosis. Number of urban and rural men said yes for beneficiary exercise walking, swimming Yoga, cycling and outdoor games is between 3 and 45.

6. Conclusion :

To recapitulate huge success has been achieved by National programme for Prevention and control of Cancer, Diabetes, Cardiovascular Diseases & Stroke (NPCDCS) working to spread widely awareness among people about Non Communicable Diseases. As greater number of people from rural or urban areas have adopted beneficiary exercise, Yoga, Walking and have switched on to healthy lifestyle by declining their Sugar intake and fast food as well. what is more, great number of people have initiated to visit of hospital and take medicines properly as prescribed by the doctor.

7. References:

1. Directorate General of Health Services ministry of Health & Family welfare Government of India, National programme for Prevention and control of Cancer, Diabetes, Cardiovascular, Diseases & Stroke (NPCDCS), operational Guidelines (revised 2013-17), 2013.
2. Directorate General of Health Services ministry of Health & Family welfare Government of India, National Program for Health Care of Elderly (NPHCE), operational Guidelines, 2011.
3. Hyacinthe Tchewonpi Kankeu, Priyanka Saksena, Key Xu and David B Evans: The financial burden from non-communicable diseases in low- and middle-income countries: a literature review, Kankeu et al. Health Research Policy and Systems 2013, page no 11:31.
4. Ajay Mahal, Anup Karan, Michael Engelgau, the Economic Implications of Non-Communicable Disease for India, Health, Nutrition and Population (HNP) Discussion Paper January 2010.
5. The Global Economic Burden of Non-communicable Diseases, A report by the World Economic Forum and the Harvard School of Public Health, September 2011.
6. K Srinath Reddy, Prevention And Control Of Non-Communicable Diseases: Status And Strategies, Indian council for research on international economic relations, July, 2003, working paper no. 104.
7. Rachel Nugent, Benefits and Costs of the Non-Communicable Disease Targets for the Post-2015 Development Agenda, Rachel Nugent University of Washington, Working Paper as of 6 February, 2015.
8. Sudeep Chand, Silent Killer, Economic Opportunity: Rethinking Non-Communicable Disease, chatham house, Centre on Global Health Security, January 2012, GH BP 2012/01.
9. Addressing the Social Determinants of Non-communicable Diseases, Empowered lives, Resilient nations One United Nations Plaza, New York, NY 10017, USA, October 2013.
10. Peter Berman, Amitabh Chandra, Tarun Khanna, Jennifer Leaning, Ramnath Subbaraman, S.V. Subramanian, Economics of Non-Communicable Diseases in India Executive Summary, An executive summary of a report by the World Economic Forum and the Harvard School of Public Health, November 2014.
11. Joy Kumar Chakma, Sanjay Gupta, Lifestyle and Non-Communicable Diseases: A double edged sword for future India, Indian Journal Of Community Health / Vol 26 / Issue No 04 / Oct – Dec 2014.
12. Oyinlola Oyebode Utz J. Pape, Anthony A. Laverty, John T. Lee, Nandita Bhan, Christopher Millett, Rural, Urban and Migrant Differences in Non-Communicable Disease Risk-Factors in Middle Income Countries: A Cross-Sectional Study of WHO-SAGE Data, Plos One | Doi:10.1371/Journal.Pone.0122747 April 7, 2015.
13. Uma Iyer, Nitya Elayath, Pallavi Desai, comparative prevalence of non-communicable diseases in the adult population of Vadodara And Godhra In Gujarat and determinants of diabetes mellitus in the population, Internal journal of applied Biology and pharmaceutical technology, Volume: 2: Issue-1: Jan-Mar -2011.