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A Household Survey To Assess Prevalence of Communicable and Non-Communicable Disease and Standard of Living Patterns among Rural Peoples Residing in Rural Area of Kheda District, Gujarat

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Key words

Communicable disease, Non-communicable disease, Household, Survey, Village.

Abstract

Background of Study: Communicable and non-communicable diseases are two major categories of health conditions that affect individuals and populations globally. Communicable diseases are caused by pathogens such as bacteria, viruses, fungi, and parasites, and can spread from one person to another through various means such as direct or indirect contact, droplets, or contaminated food and water. Examples of communicable diseases include tuberculosis, malaria, HIV/AIDS, influenza, and COVID-19.

On the other hand, non-communicable diseases are not caused by infectious agents but rather by factors such as genetic predisposition, lifestyle choices, and environmental factors. Examples of non-communicable diseases include cardiovascular diseases, cancer, diabetes, and respiratory diseases.

Understanding the prevalence of both communicable and non-communicable diseases is essential for effective health planning and policy-making. A household survey is a useful tool for assessing the prevalence of these diseases in a population. Such surveys typically involve collecting information on the health status of individuals in a household, as well as demographic and socioeconomic information.

The data collected from a household survey can be used to estimate the prevalence of various diseases in a population, identify risk factors associated with the diseases, and evaluate the effectiveness of health interventions. This information can then be used to

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inform the development of health policies and programs aimed at reducing the burden of disease and improving health outcomes.

Overall, a household survey to assess the prevalence of communicable and non-communicable diseases is an important research tool that can help to inform public health strategies and interventions aimed at reducing the burden of disease in a population.

Objectives: 1. To conduct household survey. 2. To estimate the prevalence rate of Communicable and Non-communicable diseases. 3. To assess the standard of living patterns among rural population.

Methodology: The Descriptive survey approach cross sectional study research design carried out for the study, (Community-based cross sectional survey approach) Sampling method was Non Probability sampling technique Convenience sampling method was used to draw the samples for the study. Study population were all the peoples who are residing at Nani Khadol Village Gujarat State. Total sample size was 1044 peoples.

Results: Regarding morbidity rate of the village peoples, 25(2.4%) of the people in community are suffering from diabetes mellitus, 40(3.8%) of the people are suffering from hypertension, 5(0.5%) of the people are suffering from heart disease, 5 (0.5%) of people are suffering from asthma, 7 (0.7%) of people are suffering from tuberculosis, 10 (1.0%) of people are suffering with diarrhea, 21(2.0%) of children's are suffering from malnutrition, 2 (0.2%) are suffering from hemorrhoids, 4(0.4%) are suffering with cancer, 6 (0.6%) are suffering with fever and 42 (4.0%) are suffering from vision problem, 32 (3.1%) peoples suffering with underweight, 45 (4.3%) peoples suffering with Obesity and 12 (1.1%) others health problems.

Conclusion: The prevalence of daily smoked tobacco was 23.0% for males and 3.2% among females. Daily smokeless tobacco use was 34.5% and 3.8% for males and females respectively. The study revealed comparatively higher use of tobacco and alcohol among males while overweight and hypertension was somewhat higher among females. The findings of study emphasize the need of community-based IEC (Information Education Communication) intervention along with the provision of comprehensive package health services so as to reduce the risk of NCDs. The population at risk of NCDs must be involved at all level of prevention through full community participation. The standard of living of the peoples was good, 89% having Pucca house and 99% having own house. The surrounding areas of the village was average and cleaned.

1. Introduction

Communicable and non-communicable diseases are two types of health conditions that affect individuals worldwide. Communicable diseases are caused by infectious agents such as bacteria, viruses, and parasites, and can be spread from one person to another through various means such as direct contact, air, or contaminated food or water. Non-communicable diseases, on the other hand, are caused by a combination of

genetic, environmental, and lifestyle factors, and are not contagious [1,2].

The prevalence of communicable and non-communicable diseases varies across different populations and geographical regions. Understanding the prevalence of these diseases is important for developing effective prevention and treatment strategies [2].

A household survey can be a useful tool for assessing the prevalence of communicable and non-communicable diseases in a population. By

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conducting a survey in households, data can be collected on the health status of individuals living in the community, as well as factors that may contribute to the development of disease [3].

The purpose of this research is to conduct a household survey to assess the prevalence of communicable and non-communicable diseases in a selected population. The survey will also gather information on various risk factors that may be associated with the development of these diseases [4,6].

The findings from this research will provide valuable insights into the health status of the population, and can be used to inform public health policies and interventions aimed at reducing the burden of communicable and non-communicable diseases [5,7].

The study attempted to identify the prevalence and distribution of risk factors of Communicable and non-communicable diseases and standard of living among rural population in Gujarat, India. India is a diverse country, and many states in India are passing through an epidemiological health transition with high rates of urbanization. Urbanization has led to economic improvement, the consequences of which is increased food consumption, tobacco-use, and decreased physical activity. One of the effects of this economic transition is a shift in the disease spectrum from communicable to non-communicable diseases (NCDs) [8]. NCDs, especially cardiovascular disease, diabetes mellitus, and stroke, have emerged as a major public-health problem in India. The morbidity and mortality in most productive phase of life is posing serious challenges to Indian society and economy [9].

The huge burden of cardiovascular diseases in the Indian Subcontinent is the consequence of the large population and the high prevalence of CVD risk factors [10]. NCDs have common risk factors, such as tobacco-use, unhealthy diet, physical inactivity, and excess adiposity. Policies and programmes focusing on reducing

the burden of these common risk factors are likely to make a substantial impact on mitigating the mortality and morbidity due to NCDs [11]. Establishment of surveillance systems for non-communicable diseases and their risk factors is essential for developing prevention strategies and monitoring the impact of control programmes [12,13].

2. Objectives of the Study

This study aims to describe the prevalence of Communicable (CDs) and non-communicable disease (NCDs) and standard of living among rural population.

1. To conduct household door to door survey of the rural peoples
2. To estimate the prevalence rate of Communicable and Non-communicable diseases
3. To assess the standard of living patterns among rural peoples.

3. Research Methodology

Research Approach:- Community-based cross sectional survey approach

Research Design:- Cross sectional study

Sampling method:- Non Probability sampling technique **Convenience sampling method**

Study population:- All the peoples who are residing at Nani Khadol Village Gujarat.

Study Setting: Nani Khadol village, Kheda Gujarat

Study Size:- 1044 population

Assumptions

1. Rural area peoples may have high prevalence rate of communicable disease and low prevalence rate of non-communicable diseases.
2. Rural peoples may have Poor standard of living.
3. Rural community peoples may have lack of knowledge about health and disease conditions.

Research Variables

- 1) **Dependant variables:** Communicable diseases, Non-communicable diseases and Standard of living.
- 2) **Demographic variables:** demographic variables of Nani Khadol Village peoples such as Age,

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Gender, education, income of the family, religion, house condition, environmental condition, facilities available at home, health status.

TOOL FOR DATA COLLECTION

Section-1: Contain demographic variables of village peoples

Section-2: Research has prepared diseases prevalence survey form to estimate the communicable and non communicable diseases prevalence rate.

Section 3: Research has prepared survey form to assess the standard of living

4. Results

Finding related to distribution of sample according to age sample 8 (1%) belong age group of 0-2 years, sample 21 (2%) belong age group of 1-3 years, sample 106 (10 %) belong age group of 4-12 years, sample 56 (5%) belong age group of 13-17 years, sample 294 (28 %) belong age group of 18-30 years, sample 455 (44 %) belong age group of 31-60 years, sample 104 (10 %) belong age group of Above 60 years. Regarding the Gender out of 1044 samples, 529 (51 %) were Male and 515 (49 %) were Female. Regarding Marital status out of 1044 samples, 370 (35 %) were unmarried, 650 (62%) Married, 21 (2%) Widows and 3 (0.28%) Widower.

Regarding the Education out of 1044 samples, 87 (8 %) was illiterate, 30 (3 %) were pre schooling going ,272 (26%) were school going, 412 (40%) were Higher secondary, 92 (19%) were graduated and 42 (4%) have post graduation degree.

regarding family monthly income 32 (9%) were belong to below 5000 rupees, 224 (60%) had 5000-10000 rupees, 73(19%) had 11000-20000 rupees, 38 (10%) had 21000-30000 rupees and 9 (2%) had above 300000 rupees income.

Regarding religious 836 (80%) of the population belongs to Hindu, 197(19%) of them belongs to Muslim and 11(1%) of them belongs to Christian.

Regarding the type of family 385 (37%) were belong to nuclear family, 628 (60%) belong to joint family, 13 (1%) belong to extended family and 18 (2%) living single.

Regarding environmental status and condition of house 931(89%) of houses were pucca and 113(11%) of the houses were kuccha and regarding the house ownership 1034 (99%) of them have own house and 10 (10%) of them were living in rented house.

Regarding the type of water supply/ source of drinking water 1044 (100%) were using tap water supply, all the (100%) houses has adequate and protected water supply.

Regarding methods of disposal of waste and excreta 378 (36 %) of them dispose the waste through open dumping, 52(5%) of the them disposes the waste through burning, 425 (41%) of peoples disposes the waste through manure pit. 189 (18%) of them disposes the excreta other methods. All the 376 (100%) family has own toilet for human excreta.

About age of marriage 9(6%) of people got married at the age of less than 18 years, 27(19%) of people got married at the age of 19 – 22 years, 58(40%) of people got married at the age of 23 – 26 years and 50 (35%) of people got married at the age above 26 years.

Regarding morbidity rate of the village peoples, 25(2.4%) of the people in community are suffering from diabetes mellitus, 40(3.8%) of the people are suffering from hypertension, 5(0.5%) of the people are suffering from heart disease, 5 (0.5%) of people are suffering from asthma, 7 (0.7%) of people are suffering from tuberculosis, 10 (1.0%) of people are suffering with diarrhea, 21(2.0%) of children's are suffering from malnutrition, 2 (0.2%) are suffering from hemorrhoids, 4(0.4%) are suffering with cancer, 6 (0.6%) are suffering with fever and 42 (4.0%) are suffering from vision problem, 32 (3.1%) peoples suffering with underweight, 45 (4.3%) peoples suffering with Obesity and 12 (1.1%) others health problems.

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Table No.1 Distribution of Age in years

Sr. No.	Demographic Data	Number	Percentage
1	0-1 Years	8	01.00%
2	1-3 Years	21	02.00%
3	4-12 Years	106	10.00%
4	13-17 Years	56	05.00%
5	18-30 Years	294	28.00%
6	31-60 Years	455	44.00%
7	Above 60	104	10.00%
Total		1044	100%

Table No.2 Distribution according to sex ratio

S.No.	Demographic Data	Number	Percentage
1	Male	529	51.00%
2	Female	515	49.00%
Total		1044	100%

Table No.3 Distribution according to marital status

S. No.	Demographic Data	Number	Percentage
1	Unmarried	370	35.00%
2	Married	650	62.00%
3	Widows	21	02.00%
4	Widower	3	0.28%
Total		1044	100%

Table No.4 Distribution according to educational status

S. No.	Demographic Data	Number	Percentage
1	Illiterate	87	08.00%
2	Preschool going	30	03.00%
3	School Going	272	26.00%
4	Higher Secondary	412	40.00%
5	Graduated Degree	192	19.00%

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6	Postgraduate Degree	42	04.00%
Total		1035	100%

Table No.5 Distribution of occupational status

S. No.	Demographic Data	Number	Percentage
1	Student	242	23%
2	Farmers	178	17%
3	Driver	05	0.47%
4	Labour work	26	2%
5	Housewife/Unemployed	336	32%
6	Business	79	8%
7	Government Employee	178	17%
Total		1044	100%

Table No.6 Distribution according to Family Monthly Income in rupees

S .No.	Demographic Data	Number	Percentage
1	Below 5000/-	32	9%
2	Rs.5000-10,000/-	224	60%
3	Rs.11,000-20,000/-	73	19%
4	Rs.21,000-30,000/-	38	10%
5	Above 30,000	9	2%
Total		376	100 %

Table No.7 Distribution according to religion status of family:

S. No.	Demographic Data	Number	Percentage
1	Hindu	836	80%
2	Muslim	197	19%
3	Christian	11	1%
Total		1044	100%

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Table No.8 Distribution of Type of family

S.No.	Demographic Data	Number	Percentage
1	Nuclear	385	37%
2	Joint	628	60%
3	Extended	13	1%
4	Single	18	2%
Total		1044	100%

Table No.9 Distribution according to type of houses and Ownership of house

S. No.	Environmental Data	Number	Percentage
1	Type of House		
	Pucca	931	89.00%
	Kuccha	113	11.00%
2	Type of Ownership		
	Own	1034	99.00%
	Rented	10	01.00%

Table No.10 Distribution according to methods of disposal of waste and excreta:

S. No.	Environmental Data	Number	Percentage
1	Waste disposal		
	Open dumping	378	36.00%
	Burning	52	05.00%
	Manure pit	425	41.00%
	Other	189	18.00%
2	Human Excreta disposal a. Sanitary Latrine	376	100%

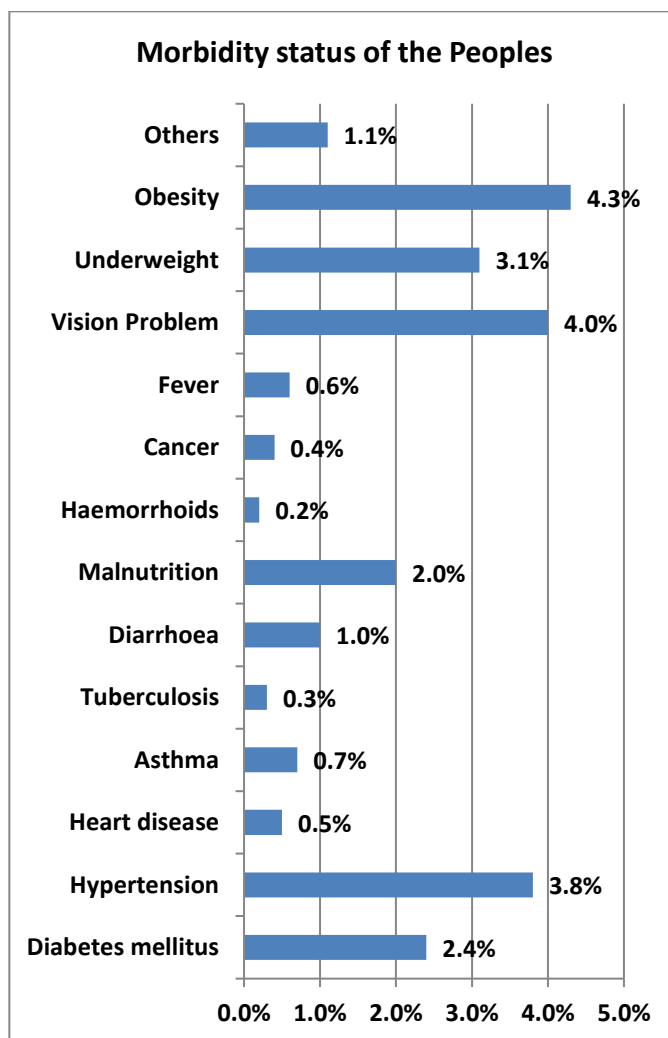
Table No.11 Distribution according to age of marriage

Age of marriage	Number	Percentage
18-23 Years	52	8%
22-26 Years	425	64%
Above 26 years	189	28%
Total	666	100%

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Table No.12 Distribution to prevalence rate of communicable and non-communicable diseases among participants

Disease name	Number	Percentage
Diabetes mellitus	25	2.4%
Hypertension	40	3.8%
Heart disease	5	0.5%
Asthma	7	0.7%
Tuberculosis	3	0.3%
Diarrhoea	10	1.0%
Malnutrition	21	2.0%
Haemorrhoids	2	0.2%
Cancer	4	0.4%
Fever	6	0.6%
Vision Problem	42	4.0%
Underweight	32	3.1%
Obesity	45	4.3%
Others	12	1.1%
Total (1044)	254	24.3%



5. Conclusion

The aim of the present study was to assess the various risk factors and Prevalence rate of Communicable and Non- Communicable diseases NCD's and to check the standard of living in a rural population of Nani Khadol Village Gujarat.

At the end of study we came to a conclusion that Nani Khadol village is a pleasant environmental place. We also came to know the disease conditions and how the health services are been provided and utilized.

By the co-operation of the people in Nani Khadol village and under the guidance of local peoples we concluded study report. The prevalence of daily smoked tobacco was 23.0% for males and 3.2% among females.

Daily smokeless tobacco use was 34.5% and 3.8% for males and females respectively.

The study revealed comparatively higher use of tobacco and alcohol among males while overweight and hypertension was somewhat higher among females.

The findings of study emphasize the need of community-based IEC (Information Education Communication) intervention along with the pro-vision of comprehensive package health services so as to reduce the risk of NCDs. The population at risk of NCDs must be involved at all level of prevention through full community participation.

The standard of living of the peoples was good, 89% having Pucca house and 99% having own house. The surrounding areas of the village was average and cleaned.

6. Major Findings And Recommendations Of The Study

At the end of this study, we identified following needs and problems among peoples residing at Nani Khadol Village, Gujarat.

- Regarding the age the majority of samples were belong younger generation 18-30 year 294 (28%), and 455 (44%) of them belong to 31-60 years age group.
- Regarding the gender 529 (51%) were males and 515 (49 %) were females.
- Regarding the marital status 370 (35%) people were Unmarried, 650 (62%) were married.
- Regarding the education approximately 87 (8%) of people have no-formal education (illiterate) so there is the need to organize the special formal education classes for the needy peoples and further can plan for spread awareness regarding basic need of education and its importance to achieve the goal of Indian government of 100 percentage primary education. Only 4% of peoples have secured postgraduate degree.
- Regarding occupation 178 (17%) are farmers, 26 (2%) belong to labour work, 336 (32%) of them belong to housewife and unemployed. So the majority of samples are unemployed.
- Regarding family monthly income the majority of peoples having very less income 224 (60%) had 5000-10000 rupees per month.
- Regarding religion status the majority of population belongs to Hindu 836 (80%) of the population belongs to Hindu.
- Regarding type of family 628 (60%) belong to joint family.
- Regarding condition of house 931(89%) of houses were pucca.
- Regarding the house ownership 1034 (99%) of them have own house .
- Regarding the water supply 1044 (100%) were using tap water supply.
- Regarding waste disposal management 378 (36 %) of them dispose the waste through open dumping, 52(5%) of the them disposes the waste

through burning, 425 (41%) of peoples disposes the waste through manure pit.

- We found that still few people are below poverty line due to unemployment and lack of education so there is the need for skill-based education in this community and provide them various opportunity.
- Majority of the houses are disposing the wastages in the open field area, so there is the need for raising awareness on proper disposal of waste.
- We found that among Muslim Religion eligible couples have not adopted any type of family planning methods, so proper health should be given to the eligible couples regarding the adoption of appropriate family planning methods.
- Since some children are not immunized according to immunization schedule, there is the need for providing proper education regarding immunization schedule among the mothers.
- We identified that there is lack of knowledge regarding healthy life style practices for the prevention and management of common communicable and non-communicable disease. So proper health education should be provided on maintaining hygiene, sanitation, following healthy diets, habits and exercises.

Conflict of Interest: Nil

Source of Funding: College Management

Ethical Clearance: The study was approved by the research committee, IEC – DPCN/2ndIEC/2020-21/04 and a formal written permission was gathered from the authority of village.

Statement of Informed consent: Informed consent was acquired from the participants

References

- [1] World Health Organization. Noncommunicable diseases. Available at: <https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases>. Accessed on March 21, 2023.
- [2] World Health Organization. WHO STEPS surveillance manual: the WHO STEPwise approach

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to chronic disease risk factor surveillance. Geneva: World Health Organization, 2005.

[3] Centers for Disease Control and Prevention. National Health and Nutrition Examination Survey (NHANES). Available at: <https://www.cdc.gov/nchs/nhanes/index.htm>.

Accessed on March 21, 2023.

[4] Demographic and Health Surveys. Available at: <https://dhsprogram.com/>. Accessed on March 21, 2023.

[5] Institute for Health Metrics and Evaluation. Global Burden of Disease Study 2019 (GBD 2019) Results. Available at: <http://www.healthdata.org/gbd>. Accessed on March 21, 2023.

[6] Szklo M, Nieto FJ. Epidemiology: Beyond the Basics. 3rd edition. Jones and Bartlett Publishers, 2013.

[7] Rothman KJ, Greenland S, Lash TL. Modern Epidemiology. 3rd edition. Lippincott Williams and Wilkins, 2008.

[8] Salomon JA, Vos T, Hogan DR, et al. Common values in assessing health outcomes from disease and injury: disability weights measurement study for the Global Burden of Disease Study 2010. *Lancet* 2012; 380:2129-43.

[9] Healthy lives and promote well-being for all at all ages. <http://www.un.org/sustainabledevelopment/health> (accessed 8 Sep 2016).

[10] Risnes KR, Vatten LJ, Baker JL, et al. Birth weight and mortality in adulthood: a systematic review and meta-analysis. *Int J Epidemiol* 2011;40:647-61.

[11] Whincup PH, Kaye SJ, Owen CG, et al. Birth weight and risk of type diabetes: a systematic review. *JAMA* 2008;300:2886-97.

[12] The World Bank. World development indicators. <http://databank.worldbank.org/data/reports.aspx?source=2&country=BGD> (accessed 8 Sep 2016).

[13] Khan JAM, Trujillo AJ, Ahmed S, et al. Distribution of chronic disease mortality and deterioration in household socioeconomic status in rural Bangladesh: an analysis over a 24-year period. *Int J Epidemiol* 2015;44:1917-26.

[14] WHO Chronic Diseases and Health Promotion Program. STEP wise approach to surveillance (STEPS). <http://www.who.int/chp/steps/en/> (accessed 8 Sep 2016).