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Review of Health Status among the Rural Population of Jammu District of the State Jammu & Kashmir, India

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Abstract:
Non communicable diseases are rises everywhere in the world. According to National Family Health Survey (NFHS) 2005-06, the prevalence of anaemia was 70% in children age 6 to 59 months, 55% in females aged 15 to 49 and 24% in male aged 15 to 49 of years. Although the prevalence of anaemia was higher in rural area, there is scantiness of data about the epidemiology of anaemia in rural settings. Hypertension affects more than quarter of the worlds adult population. Diabetes also rises rapidly among the adult population. Hypertension can hasten the impediment of the diabetes. The diabetic patient with hypertension is particularly challenging to treat because many of the agents used to lower blood pressure can affect glucose metabolism adversely. The present study determined the health status of the population in rural area of Jammu district. Cross sectional and stepwise methodology use for to accomplish this study. For this purposed a stratified cluster random sampling technique were used for data collection. Study found that out of total surveyed population 20.7% were unhealthy. And anaemia & hypertension were highest among the disease.

1. Introduction

In present scenario the changing life style in urban as well as rural area also changes the disease pattern among the population. Anaemia, Hypertension and Diabetes are the disease among them. Anaemia is the major health problem in India. Although nearly three quarters of Indian population live in rural areas, the epidemiology of anaemia in rural setting is not well known[1]

According to World Health Organisation (WHO), there are two billion people with anaemia in world and half of the anaemia is due to iron deficiency. Anaemia is a late indicator of iron deficiency, so it is estimated that the prevalence of iron deficiency is 205 times that of anaemia. The estimated prevalence of anaemia in developing countries is 39% in children <5 years, 48% in children 5 to 14 years, 42% in women 15 to 59 years, 30% in men 15 to 59 years and 45% in adults >60 years of age[2].

According to World Health Organisation hypertension as one of the most important causes of premature death worldwide[3]. Hypertension affects more than quarter of the worlds adult population and it is projected in 2025 to increase by 24% in developed countries and 80% in developing countries[4]. In India, it is directly responsible for 57% of all stroke deaths and 24% of all coronary heart disease deaths[5]. In an analysis of worldwide data for the burden of hypertension, 20.6% of Men and 20.9% of female in India

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were suffering from hypertension in 2005[6]. Recent studies from India have shown the prevalence of hypertension to be 25% in urban and 10% in rural population[7, 8,9].

In our country, hypertension is the leading Non Communicable Disease risk and estimated for nearly 10% of all deaths[10]. Adult hypertension prevalence has risen dramatically over the past three decades from 5% to between 20-40 % in urban areas and 12-17 % in rural area[11,12]. The number of hypertensive individuals is anticipating to nearly double from 118 million in 2000 to 213 million by 2025[13]. The rising burden of hypertension, associated CVD and NCDs in India needs to be addressed as a public health priority[14]

However, in case of worldwide prevalence of Diabetes Mellitus (DM) has risen over the past two decades. Likewise, prevalence rates of Impaired Fasting Glucose (IFG) are also increasing. Although the prevalence of Type-1 & Type-2 is increasing worldwide, Type-2 DM is expected to rise more in future rapidly because of increasing obesity and reduce activity levels. DM increases with ageing. In 2000 the prevalence of DM was estimated to be 0.19% in people <20 years old and 8.6% in people >20 years old. Individuals >65 years the prevalence of DM was 20.1%. The prevalence is similar in men and women throughout most age ranges but it slightly greater than in men >65 years[15].

Resent study shows that it affects a staggering 10-16% of urban and 5-8% of rural population of India[1617]. According to the World Health Organisation report, India today heads the world with over 32 million diabetic patients and this number is projected to increase to 79.4 million by year 2030[18]. There is very little data on the level of awareness and prevalence about diabetes in developing countries like India[19].

Hypertension can accelerate the complication of the diabetes, particularly cardiovascular disease and nephropathy. The diabetic patient with hypertension is particularly challenging to treat because many of the agents used to lower blood pressure can affect glucose metabolism adversely[20].

Estimates of prevalence of anaemia in patient with Chronic Heart Failure (CHF) and low ejection fraction range widely from 4% to 61% (median 18%)[21]-[22].

The present study only focused on to find out the health status of the population in rural area of Jammu district.

2. Aim of the Study
Statement of the study is to review the health status of the rural population of Jammu district.

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3. Objectives for the Study
1. To find out the distribution of Healthy & Unhealthy rural population from total surveyed population.
2. To find out disease wise distribution of unhealthy population.
3. To find out gender wise distribution of unhealthy population.

4. Sources of Data
Qualitative as well as Quantitative data was collected and used for this study.

4.1. Primary Data
- Field survey
- Face to face interview
- Questioner

4.2. Secondary Data
- Hospital data
- Previous research
- Official statistics
- Government reports
- Web information

5. Methodology
This is the large and probability sampling study having focused on to review the health status of selected rural population nearby Jammu district of the state Jammu & Kashmir.

5.1. Study Population
The study population was randomly selected from the rural area of Jammu district namely Nardani, Bajwan, Raipur, Kot & Thathar of block Bajwan, Raipur & Keran. Total 3627 number of population were studied and interviewed during the field visit.

5.2. Sampling
For the above proposed study, a stratified cluster random sampling technique was used for data collection. Here, stratification was based on age, gender, region and the specific indicator selected for the study. Age is distributed in five groups with ten years of interval.

5.2.1. Inclusion Criteria
Willing to provide consent, alert, conscious & not suffering from any mental disorders population only were selected for the study. This eligibility condition was included to prevent the adverse effects of such transient mental states on participant's performance which in turn would tarnish the study results.

5.3. Data Collection

5.3.1. Tool Used
Stepwise approach was used for data collection which includes questionnaire, face to face interview, physical and digital measurement for haemoglobin hypertension & diabetes. Questionnaire included basic socioeconomic data on hypertension and diabetes.

5.3.2. Team Specification
Structure of team contains Head of the team, Medical Officer, Interns, Drivers, Data entry operators and supportive staff.

5.3.3. Data Collectors
Field data was collected by five teams which contain one Medical Officer usually a team leader, one male intern and one female intern, one supportive staff and one driver. Back end staff was data entry operator.

5.3.4. Training & Orientation for Data Collectors
All members who were part of the team and involved in data collection attended a comprehensive training workshop that included interview techniques, data tools, practical application of digital hemoglobinometer and field guidelines.

5.4. Data entry and Sorting
Data collected through questioner were reviewed and submitted to the back end office. In back end office data were sorted properly and entered in the register according to the format.

5.5. Data Management and Analysis
After data entry, sorting and cleaning done in Microsoft Excel. the analysis was conducted in SPSS Statistics 17.0 software.

5.6. Ethical Clearance & Confidentiality
Written official permission was taken for the data used from the concerned institution. The protocol and the instruments for the surveillance were provided by the hospital. Oral Informed consent of all subjects was obtained. Confidentiality of data was assured and that will be used only for the stated purpose of the survey.

5.7. Limitations
Unwillingness to interact by the studied population is the main limitation faced during the study.

6. Major findings and Discussions

6.1. Distribution of Healthy & Unhealthy Rural Population from Total Surveyed Population
Descriptive statistics prevalence of health status among rural population shows that
79.3% of the surveyed population found to be healthy and 20.7% of the population found to be unhealthy. As the focus of this study was only unhealthy population it was found that out of 750 unhealthy populations 16.7% were male and 25% were female. This shows that unhealthy status is more prevalent among female than that of male.
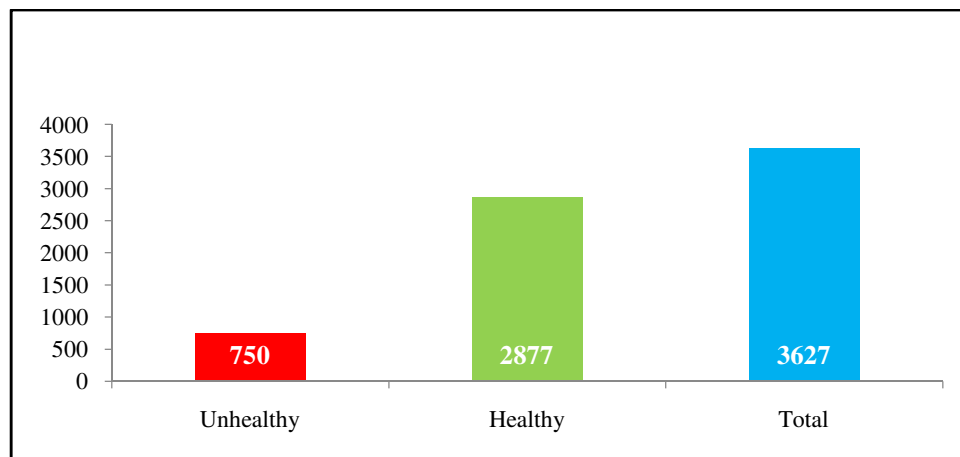

Figure 1: Frequency graph for prevalence of health status among the rural population

Status	Frequency	Percent (%)
Unhealthy	**750**	20.7
Healthy	2877	79.3
Total	**3627**	**100.0**

Table 1: Prevalence of health status among the rural population

6.2. Disease wise Distribution of Unhealthy Subjects
Out of 750 unhealthy subjects, an Anaemia was giving highest prevalence among all disease which was 34.0% followed by hypertension 14.5%. Prevalence of Acid Peptic Disorders (APD) was giving 10.7%. Prevalence of Musculo Skeletal Disorders was giving 8.7%. Fever Cough Could & Respiratory Tract Infection prevalence were 8.5%. Prevalence of Urinary & Reproductive Tract Infection along with Skin & Venereal Disease was giving 8.3%. Diabetes Mellitus was giving 7.9%. Prevalence of other diseases was giving 7.5%. As shown in Table-2 &Figure 2.

			Suspected Diseases								Total
			Anaemia	HTN	APD	MSD	FCC & RTI	UTI/RTI/SVD	DM	Other	
Gender	Male	*Count*	65	66	47	26	34	22	28	26	314
		% within Gender	20.7%	21.0%	15.0%	8.3%	10.8%	7.0%	8.9%	8.3%	41.9%
	Female	*Count*	190	43	33	39	30	40	31	30	436
		% within Gender	43.6%	9.9%	7.6%	8.9%	6.9%	9.2%	7.1%	6.9%	58.1%
Total		*Count*	**255**	**109**	**80**	**65**	**64**	**62**	**59**	**56**	**750**
		% within Gender	**34.0%**	**14.5%**	**10.7%**	**8.7%**	**8.5%**	**8.3%**	**7.9%**	**7.5%**	**100.0%**

Table 2: Gender wise Frequency & Percentage table showing distribution of suspected disease among unhealthy population
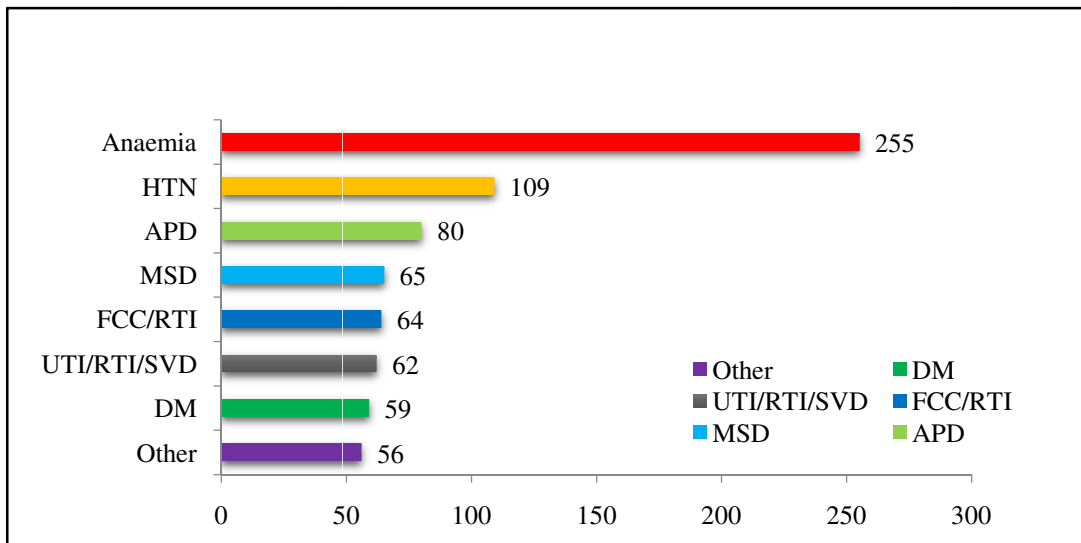* Cross tabulation

Figure 2: Frequency graph for distribution of diseases among unhealthy population

6.3. Gender wise Distribution of Diseases from Unhealthy Subjects
Out of 750 unhealthy subjects about 314 (41.9%) were male and 436 (58.1%) were female. Out of 255 subjects of Anaemia 43.6% were female and 20.7% were male. Prevalence of Hypertension was giving 109 subjects with 21.0% male and 9.9% female. Prevalence of Acid Peptic Disorders (APD) was giving 80 subjects with 15.0% male & 7.6% female. Prevalence of Musculo Skeletal Disorders was giving 65 subjects out of that 8.3% in male & 8.9% female. Fever Cough Could & Respiratory Tract Infection prevalence were found 10.8% in male & 6.9% in female. Prevalence of Urinary & Reproductive Tract Infection along with Skin & Venereal Disease was found 7.0% in male & 9.2% in female. Prevalence of Diabetes Mellitus was giving 59 subjects out of the 8.9% was male & 7.1% was female. Prevalence of other diseases was found 8.3% in male & 6.9% in female. As shown in Figure 3.
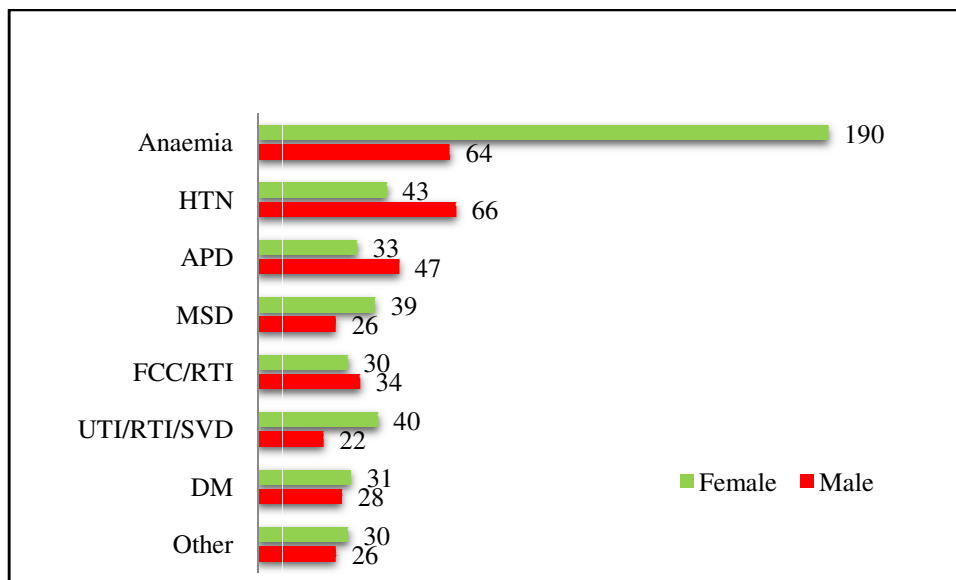

Figure 3: Frequency graph for gender wise distribution of disease among unhealthy population

7. Summary and Conclusion
Unhealthy statuses were more prevalent among female (58.1%) than that of the male. Health reviewed shows that the anaemia and hypertension were more prevalent among the population followed by acid peptic disorder, Musculo skeletal disease, Fever cough could and respiratory tract infection, skin and venereal disease, diabetes and other disease. Anaemia was prevalent among the female (43.6%) than that of the male (20.7%) population. Hypertension was more prevalent among male (21.0%) than that of the female (9.9%) population. And Diabetes mellitus was more prevalent among male (8.9%) than that of female (7.1%).
Health review explains that disease like Anaemia, hypertension and diabetes among the rural population were increase.

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