Research Paper Medical Science

Environment and Disease: Dynamics of Emerging Health Threats Among Inhabitants of Terai Region, Uttar Pradesh

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ABSTRACT

In recent years, there has been increased interest in the relationship between environment and health. Human ecology is the study of the interactions among humans, their biology, their cultures, and their physical environments that focuses on the notion of adaptation, whereby human populations have evolved and adapted to their ecological surroundings over time. This study is attempts to deal with aspects that have a bearing on the emerging health threats among two dominants caste group's i.e. Rajput and Sonar to looks at environmental and cultural conceptions of the body, health and illness. This research paper focuses on the relationship between health indicators and environmental variable in cross-sections of semi – urban population.

KEYWORDS | Health, Disease, Environment, Terai region

Introduction

Anthropologists using an ecological perspective to understand disease patterns view human populations as biological as well as cultural entities. It is a truism to say that what man is and to what disease he may fall victim depends on a combination of sects factors his or her genetic factors and the environmental factors to which he or she is exposed. These factors interact and then interaction may be health promoting or deteriorating. Thus, conceptually the health of individuals and whole community may be considered to be the result of many interactions, enumerates the determination of health, these determinants are biological determinants, behavioural, socio-cultural condition, and environmental. Hence, the main question of this research paper is whether increasing environmental stress or traditional beliefs and practices reduce the health status of a sampled area.

Objective

The main purpose of present study was to investigate the various construction of the universe of disease and cure by the people inhabiting in Terai region of Uttar Pradesh.

Materials and Methods

The present study was undertaken in the rural areas of Uttar Pradesh with two caste groups of Bhatpar Rani, Deoria District. There are 326 villages spread out regions in tehsil Bhatpar Rani; as for the sample division from sampled village, 400 household were selected from both caste group. The total sample size selected for the study includes 800 households, taken equally from both the caste group.

Table 1- Population covered by the Study

Caste	Number of Households	Number of Persons	Size of the Households	Percent
Rajput	400	2040	5.1	54.3
Sonar	400	1720	4.3	45.7
Total	800	3760	4.7	100.0



Source: Agricultural Informatics Division
Figure 1– Tehsil map of district Deoria

Methods and Procedure

The respondents were interviewed at their residence and community were judged by observation, group discussion and informal interview and discussion with the subjects. Key informant interview were conducted among the health professionals, social workers, academicians, and other activists. Thus the data collected are both quantitative and qualitative ones. The unit of analysis was head of households. The data analysis was done using the Statistical Package for Social Sciences (IBM SPSS Statistics 17.0).

Ethical consideration

Ethical clearance was obtained from the Departments of Anthropology; for this study. The research was approved by the Ethics Committee of University of Delhi, Delhi - 110007.

Result and Discussion

Human beings are exposed to environment, changes in water, air, food quality and quantity, ecosystems, agriculture, liveli-

hoods and infrastructure. These exposures can cause death, disability and suffering. Ill health increases vulnerability and reduces the capacity of individuals and groups to adapt to variations in their surroundings. Factors such as particulate matter in the air, water pollution and other environmental degradation damage the health of thousands of people every year, major contributors to childhood deaths, illnesses and disability from acute respiratory disease, diarrheal diseases, physical injuries etc. The links between environment and health have been examined mostly at the micro-level in epidemiological studies.

The objective of research describes more a profiling nature of the fieldwork output along with the comparisons in terms of distinct aspects of the area i.e. environmental characteristics of sampled area such as Water sanitation, Settlement, Surrounding area, and Energy sources etc.

Table 2- Distribution of basic amenities among Rajput and Sonar

		Caste				Total	
		Rajput		Sonar			
		No	%	No	%	No	%
Ownership of the house	Own	314	78.5	263	65.7	577	72.2
	Rented	57	14.2	94	23.5	151	18.8
	Other	29	7.3	43	10.8	72	9
	Total	400	100	400	100	800	100
Type of House	Pucca	249	62.3	352	88	601	75.1
	Semi Pucca	77	19.2	28	7	105	13.2
	Kuccha	62	15.5	17	4.3	79	9.8
	Other (Mixed)	12	3	3	0.7	15	1.9
	Total	400	100	400	100	800	100
Material Used	Mud	14	3.5	0	0	14	1.7
	Wood	48	12	9	2.3	57	7.2
	Cemented	134	33.5	211	52.7	345	43.1
	Bricks	188	47	123	30.8	311	38.8
	Other	16	4	57	14.2	73	9.2
	Total	400	100	400	100	800	100
Separate room for kitchen	Yes	116	29	339	84.7	455	56.8
	No	284	71	61	15.3	345	43.2
	Total	400	100	400	100	800	100
Separate Bathroom	Yes	179	44.7	296	74	475	59.3
	No	221	55.3	104	26	325	40.7
	Total	400	100	400	100	800	100
Number of living rooms	Below 3	146	36.5	64	16	210	26.3
	3-5	204	51	186	46.5	390	48.7
	5-10	32	8	91	22.7	123	15.4
	Above 10	18	4.5	59	14.8	77	9.6
	Total	400	100	400	100	800	100
Power supply	No electricity	45	11.3	21	5.3	66	8.3
	Regular	13	3.2	34	8.5	47	5.9
	Regular cuts	228	57	276	69	504	63
	Irregular cuts	65	16.2	57	14.2	122	15.2
	Kerosene oil	49	12.3	12	3	61	7.6
	Total	400	100	400	100	800	100
Sources of water for drinking	Unprotected well	23	5.7	2	0.5	25	3.2
	Hand pump	214	53.6	131	32.7	345	43.1
	Protected well	46	11.5	9	2.3	55	6.9
	Tap water	117	29.2	258	64.5	375	46.8
	Total	400	100	400	100	800	100
Disposed of refuse/ wastes	Just outside the house	53	13.2	202	50.6	255	31.9
	dumps in own land	218	54.6	22	5.5	240	30
	Community dumps	71	17.7	143	35.7	214	26.7
	Other	58	14.5	33	8.2	91	11.4
	Total	400	100	400	100	800	100
Drainage pattern	Closed or Bed	63	15.8	209	52.3	272	34
	Open	227	56.7	92	23	319	39.8
	Satisfactory	21	5.2	48	12	69	8.6
	No drainage	89	22.3	51	12.7	140	17.6
	Total	400	100	400	100	800	100
Immediate surroundings	Clean inside / dirty outside	94	23.5	146	36.5	240	30
	Dirty inside / clean outside	161	40.2	109	27.2	270	33.8
	Clean both inside and outside	56	14	82	20.6	138	17.2
	Dirty both inside and outside	89	22.3	63	15.7	152	19
	Total	400	100	400	100	800	100

In Terai region many diseases are spread more frequently from person to person by germs in faeces. Some experts believe health problems from poor sanitation can be prevented only if people change their personal habits, or "behaviours," about staying clean. But this idea often leads to failure because it does not consider the barriers that people face in their daily lives, such as poverty or lack of access to clean water.

Causes of death among the Sonar and Rajput

There are 112 death cases reported from households where 8.9 percent deaths due to heart diseases and 3.5 per cent deaths due to other reasons where people do not know the reasons of death. 7.1 per cent deaths are due to cancer and diabetic both and another 0.8 per cent due to respiratory infections. There are 6.2 per cent of deaths due to complications in pregnancy. While comparing these data, it is evident that the rate of Encephalitis is very high among the Sonar and Rajput that is up to 16.9%; in which percentage of encephalitis cases found among Rajput are more.

Table 3- Causes of death among Rajput and Sonar

Causes of Deaths	Caste Group				Total	
	Rajput		Sonar			
	No	%	No	%	No	%
Encephalitis	14	20.2	5	11.6	19	16.9
Stomach Ulcers	3	4.3	9	20.9	12	10.7
complication pregnancy	5	7.2	2	4.6	7	6.2
Accident	6	8.6	4	9.3	10	8.9
Diabetic	2	2.8	6	13.9	8	7.1
Kidney failure	8	11.5	3	6.9	11	9.8
Respiratory infection	1	1.4	0	0	1	0.8
T.B	11	15.9	4	9.3	15	13.3
Cancer	3	4.3	5	11.6	8	7.1
Heart disease	7	10.1	3	6.9	10	8.9
Others	4	5.7	0	0	4	3.5
Not Known	5	7.2	2	4.6	7	6.2
Total	69	100	43	100	112	100
Missing System	331		357		688	

Total	400	400	800

Family fallen sick in last 3/6/9/12 month

The number of family cases fallen sick due to illness in last 3/6/9/12 month that only 367 household of Rajput family of the sample population fallen sick month ranging from three month to twelve month. Sonar those family fallen sick are either in the category of 3 to 12 month due to illness are 239 household.

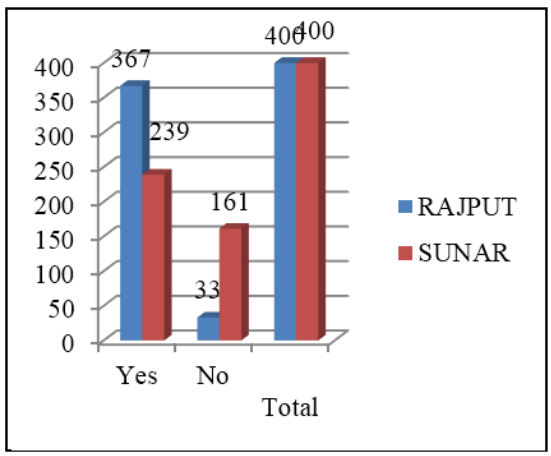

Figure 2- Family Fallen Sick in Last 3/6/9/12 Month

From the analysis of the following table on incidence of illness among the Rajput and Sonar, there are 2077 people 55.2 per cent of the sample population have either general or acute and chronic diseases. Among them, 1370 people (66 per cent) who have acute and general diseases. 37.7 per cent of them had fever which is very high among the incidences of illness. The other acute or general illness is stomachache (11.3 per cent), headache (9.9 per cent), and infection (4.7 per cent) Diarrhoea (2.4 per cent). There are 5.2 per cent (106 persons) have other minor ailments as others like scabies, accidents, arthritis, sore eyes etc. It is very important to understand that these general and chronic illnesses are mainly of water and air-borne diseases. Rapid and comprehensive health interventions could address these health problems.

Table 4- Incidence of illness among Rajput and Sonar

Type of illness	Caste Group				Total	
	Rajput		Sonar			
	No	%	No	%	No	%
Fever	477	42.8	308	31.9	785	37.7
Headache	83	7.4	123	12.8	206	9.9
Stomachache	94	8.5	139	14.5	233	11.3
Diarrhoea	17	1.5	34	3.5	51	2.4
Blood Pressure	87	7.9	103	10.7	190	9.2
Asthma	78	7	19	1.9	97	4.7
Diabetic	28	2.6	41	4.3	69	3.3
Cancer	9	0.8	13	1.4	22	1
Cardio vascular	18	1.6	21	2.2	39	1.8
Backache	54	4.8	67	6.9	121	5.9
Infection	41	3.7	56	5.8	97	4.7
Psychological disorder	48	4.3	13	1.3	61	2.9
Other	79	7.1	27	2.8	106	5.2
Total	1113	100	964	100	2077	100

The causes of death are due to encephalitis, heart diseases, cancer and mostly due to life style diseases. The common incidence of illness is identified is fever in the general category and asthma among the acute and chronic diseases.

Conclusion and future enhancement

Conclusively, it can be said that on the basis of observations and analysis based on the study among Rajput and Sonar of Eastern U.P, the fact that indicates both sampled population is said to be vulnerable to several diseases and social problems. The adverse working conditions, lack of safe drinking water or accessibility to water, mal-nutrition, poor housing conditions etc., expose individuals to a wide range of health hazards. The common incidence of illness is identified as fever (Encephalitis) in the general category, sugar and cancer is among chronic diseases. The incidence of illness identified is more in the Sonar and Rajput as well where as in Rajput number of incidences of psychological disorder. The above findings reveal that the health status indicators are of poor quality.

Acknowledgement

I am very much privileged to complete my research paper under the supervision of respected *Prof A.K.Kapoor* and my sincere thanks to him, first of all for making this paper possible and for having such faith in me, even before it had begun, and also for inspiring conversations and comments throughout this whole process. I also accord my sincere thanks to Ms. Naila Ansari for her valuable comments and sustained guidance during data analysis.

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