

**RHEUMATOLOGICAL  
DISEASES, THEIR PREVALENCE AND  
THE VARIATION IN THEIR  
DISTRIBUTION IN RURAL & URBAN  
POPULATION OF NORTH INDIA  
(LUCKNOW )**

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# *AIMS OF STUDY*

- To study the distribution of common diseases and rheumatological problems in Rural and Urban Population of Lucknow(North India).

# **METHODS**

- Survey carried out using the COPCORD model
- Cluster Sampling done
- Data collected by Door to Door Visit
- Screening Questionnaire was used to screen Rheumatological Problems as well as other Common Disease
- Person reporting musculoskeletal problems was clinically evaluated & investigation were carried out

# **SELECTION OF STUDY AREA**

- **Urban Area:**
  - Rakabganj Kundari (3 Kms. from KGMU).**
  - **Mixed Population with all Castes, Religions and Economic Status.**
  - **Majority of the Population hails from Middle Socio Economic Status.**
- **Rural Area:**
  - Rehmat Nagar subcenter CHC Gosaiganj(35 Kms from KGMU).**

# **QUESTIONNAIRES** **(COPCORD)**

- Questionnaire for the Socio Economic and Demographic profile.
- Phase One Screening Questionnaire.
- Core Questionnaire for Joint Pain and Musculo-Skeletal Pain.
- Questionnaire for Clinical Assessment.

# Details of Population Studied In Rural Area

**N = 5118**

**M = 2676(52%)**

**F = 2442(48%)**

**MSK Pain**

**n = 772(15%)**

**No MSK Pain**

**n = 4346(85%)**

**Clinical Evaluation**

**n = 657**

**Refused = 90**

**Shifted=16**

**NA=8**

**Expired=1**

# Details of Population Studied In Urban Area

**N=5053**

**M=2575(51%)**

**F=2478(49%)**

**MSK pain  
n=1720**

**NO MSK pain  
N=3333**

**Clinical Evaluation  
done  
N=1469**

**Refused=166  
Shifted=77  
NA=2  
Expired=6**



# Age & Sex Distribution in Rural & Urban Population

Age Group	0<=15		15-<=40		>40	
	M	F	M	F	M	F
Rural	1137 (22.21%)	1053 (20.57%)	1092 (21.33%)	930 (18.17%)	447 (8.73%)	459 (8.96%)
Urban	682 (13.49%)	595 (11.79%)	1176 (21.27%)	1216 (24.06%)	717 (14.18%)	669 (13.23%)

# Self Reported Prevalence of Various Diseases

Name of Diseases	Urban n = 5053		Rural n = 5118	
	No.	%	No.	%
Musculo Skeletal Pain	1720	34	772	15.08
Diarrhea	124	2.45	766	14.9
Pain in Abdomen	486	9.6	1138	22.2
Diabetes	203	4.01	16	0.31
Eye Problem	694	13.7	302	5.9

# Self Reported Prevalence of Various Diseases

ENT Problem	296	5.85	440	8.5
Cough	486	9.61	815	15.9
Hypertension	377	7.46	36	0.7
Cardiac Problem	114	2.26	17	0.33
Palpitation	66	1.3	48	0.93
Dyspnea	236	4.67	138	2.69
TB	33	0.65	32	0.62

# Distribution of Various Rheumatological Diseases in Rural & Urban Area of Lucknow

Diagnosis	Urban (n =5053) (n=1469 )	Rural (n = 5118 (n=657)
OA	619 (12.25%) (42.13%)	263 (5.13%) (40.03%)
Fibromyalgia	264 (5.22%) (17.97%)	210 (4.10%) (31.96%)
Backache	541(10.70%) (36.82%)	181(3.53%) (27.54%)
Gouty Arthritis	5(0.09%) (0.34%)	0 (0%)
Rheumatoid Arthritis	24(0.47%) (2%)	8(0.16%) (1.21%)
Neck pain	110(2.17%) (7.48%)	7(0.13%) (1.06%)

Diagnosis	Urban (n = 619)	Rural (n =263 )
OA Knee	582(12%)(94%)	236(5%)90%
OA Shoulder Jt.	2(0.5%)	3(1%)
OA Hip	3(0.5%)	8(3%)
OA Cervical Spine	26(1.1%)(4%)	10(1.2)(4%)
OA Lumbar Spine	6(1%)	6(2%)

# Sex Distribution of OA Knee Joint

Sex	Urban n = 582	Rural n = 236
Male	225(39%)	81(34%)
Female	357(61%)	155(66%)

# Age Distribution of OA Knee Joint

<b>Age Group</b>	<b>Urban n = 582</b>	<b>Rural n = 236</b>
<b>&lt;=40</b>	<b>82(14%)</b>	<b>25(11%)</b>
<b>&gt;40</b>	<b>500(86%)</b>	<b>211(89%)</b>

# Sex Distribution in Back Ache

<b>Sex</b>	<b>Urban n = 541</b>	<b>Rural n=181</b>
<b>Male</b>	<b>177(33%)</b>	<b>63(35%)</b>
<b>Female</b>	<b>364(67%)</b>	<b>116(65%)</b>



# Age Distribution of Back Ache

<b>Age Group</b>	<b>Urban n = 541</b>	<b>Rural n = 181</b>
<b>&gt;0-&lt;=15</b>	<b>7(1%)</b>	<b>2(1%)</b>
<b>&gt;15-&lt;=40</b>	<b>281(52%)</b>	<b>90(50%)</b>
<b>&gt;40</b>	<b>253(47%)</b>	<b>89(49%)</b>

# Sex Distribution in Fibromyalgia

<b>Sex</b>	<b>Urban n = 264</b>	<b>Rural n = 210</b>
<b>Male</b>	<b>15(6%)</b>	<b>40(19%)</b>
<b>Female</b>	<b>249(94%)</b>	<b>170(81%)</b>

# Age Distribution of Fibromyalgia

<b>Age Group</b>	<b>Urban N=</b>	<b>Rural n =210</b>
<b>&gt;0- &lt;=15</b>	<b>3(1%)</b>	<b>2(1%)</b>
<b>&gt;15- &lt;=40</b>	<b>170(65%)</b>	<b>92(55%)</b>
<b>&gt;40</b>	<b>91(34%)</b>	<b>116(44%)</b>

# Sex Distribution of Neck pain

<b>Sex</b>	<b>Urban n =110</b>	<b>Rural n =7</b>
<b>Male</b>	<b>35(32%)</b>	<b>2(29%)</b>
<b>Female</b>	<b>75(68%)</b>	<b>5(7%)</b>

# Age Distribution of Neck pain

<b>Age Group</b>	<b>Urban n =110</b>	<b>Rural n =7</b>
<b>&gt;0- &lt;=15</b>	<b>2(2%)</b>	<b>0</b>
<b>&gt;15- &lt;=40</b>	<b>52(47%)</b>	<b>3(43%)</b>
<b>&gt;40</b>	<b>56(51%)</b>	<b>4(57%)</b>

# Sex Distribution in RA

<b>Sex</b>	<b>Urban n = 24</b>	<b>Rural n = 8</b>
<b>Male</b>	<b>3(12%)</b>	<b>2(25%)</b>
<b>Female</b>	<b>21(88%)</b>	<b>6(75%)</b>

# Age Distribution in RA

<b>Age Group</b>	<b>Urban n = 24</b>	<b>Rural n = 8</b>
<b>&gt;0-&lt;=15</b>	<b>1(4%)</b>	<b>1(12%)</b>
<b>&gt;15- &lt;=40</b>	<b>5(21%)</b>	<b>3(38%)</b>
<b>&gt;40</b>	<b>18(75%)</b>	<b>4(50%)</b>

# OBSERVATIONS AND CONCLUSIONS

- MUSCULOSKELETAL PAIN
  - In 15.1% of rural area.
  - Only complaints of abdominal pain and cough more than musculoskeletal pain
  - In urban area 34% making it most common
  - The total number of cases were 1469 in urban area and 657 in rural area



- **AGE AND SEX DISTRIBUTION**

- Most cases over 15 years of age.
- Only 4.9% cases in rural and 5.0% cases in urban were below 15 years.
- Nearly 62% cases in both rural and urban were females

- **OSTEOARTHRITIS**

- Was the most prevalent musculoskeletal complaint in both rural and urban area, 619 and 263 respectively. (>40%)
- OA knee was the most prevalent in both rural and urban area. 582 cases were there in urban area and 236 in rural. (>90%)
- There was female predominance in both 357 in urban and 155 in rural areas. (60%)

- **BACKPAIN**

- Is highly prevalent in urban area n= 541 but in rural area there were only 181 cases.
- This might be due to the sedentary habits in urban area.
- There was female predominance 364 in urban and 116 in rural.(67%,65%)

- **FIBROMYALGIA**

- The total number of patients in urban areas were 264 and rural area they were 210
- However this was 17.97% of total rheumatological cases in urban area and 32% in rural areas.
- There was significant female predominance of 149 in urban and 170 in rural.(94%,81%)

- **RHEUMATOID ARTHRITIS**

- Total number of cases were 32
- The patients were more in the urban area, n= 24 and in rural area total patients were 8.
- There was female predominance 21 in urban and 6 in rural.

- **NECK PAIN**

- There was a significantly higher number of cases in urban area.
- There were 110 patients in urban area and only 7 patients in rural area.

- GOUT

- There were only 5 cases of gout
- All were in the urban population
- 3 were females and 2 patients were males.

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