2.2 A study to identify suitable interventions to bring individuals in Jodhpur district of Rajasthan with knee pain to a lower level of discomfort

Principal Investigator: *Dr. A. K. Dixit, Scientist 'F'*
Co- Investigator: *Dr. K. R. Haldiya, Ex-Scientist 'G' and Dr. Manju Singhi, Scientist 'D'*
Collaborator: *Dr. D. Jalan, Assistant Professor (Ortho.), AIIMS, Jodhpur*

Commencement: September, 2015 **Duration**: Three Years **Status:** Ongoing
Funding Agency: Desert Medicine Research Centre, Jodhpur (Intra-mural)

OBJECTIVES

1. To identify and demonstrate the effectiveness of such interventions, which may bring an individual with knee pain, from existing level of discomfort to a lower level of discomfort.
2. To bring delay in onset and progression of the problem by a considerable span of time

Back Ground

Musculoskeletal disorders that results from normal wear and tear of cartilage in older age, affecting larger joints, including back, hip and knee is most frequent in India, with reported prevalence, as high as 39%. There are number of known risk factors, which can increase the chance that an individual develops the disease. A study in Jodhpur district has been done under ICMR Task Force Project 'Musculoskeletal Conditions in India', 2012. This study estimated an overall prevalence of 10.38% of the problem and described the distribution of the severity with respect to various factors such as age, sex, education etc. In the present study, it is planned to trace individuals selected randomly from each group of discomfort from the study by ICMR in Jodhpur so as to study the factors pushing the individuals in to the next group of discomfort; as well as the factors, helping the individuals intact with their original group of discomfort so that appropriate interventions could be designed to bring back an individual from higher level of discomfort to next lower level of discomfort, the threads which were missing in ICMR study.

Methodology

We have the base line data at individual level (ICMR study) for 5 villages and 5 wards in Jodhpur. Subjects studied from these places in the ICMR study would be traced. The target is 50 cases and 50 controls from each category of discomfort in rural and urban area both. Actual sample will depend upon the availability of subjects being traced. Worked out interventions will however be applied to all the individuals found in each group of discomfort. These interventions will be followed every six months to judge for their effectiveness.

To assess the level of pain, the same questionnaire is used, which has been used in ICMR study.

PROGRESS

Tracing of the earlier subjects (ICMR study) is done in 4 villages; namely, Beenawas (149 individuals traced), Kaparda (67 individuals traced), Ramasani (63 individuals traced), and Holpur (50 individuals traced). In all 329 individuals could be traced (40% tracing). These individuals were interviewed to note for their present condition of knee pain. To assess the level of pain, the same questionnaire was used as used before in ICMR study.

Table 1 shows the distribution of change in discomfort level. There have been four groups of discomfort; ranging from 'No Discomfort (Normal), 'Mild', 'Moderate' to 'Severe' as per the score obtained on discomfort questionnaire. There has been change to different discomfort levels in 60% of individuals out of which 20% changes occurred among those who had 'No Discomfort' earlier. This was interesting to note what type of changes occurred in "No Discomfort' group. This is given in Table 2. It is noted from this table that more than 50% subjects have reached to 'Moderate 'discomfort level in 7 years time of last study. Considerable differences in shift, gender wise are noted from table 3. Changes among females have been twice the changes among males as is read from this table. Table 4 presents age and sex wise distribution of shift in discomfort levels. It is noted from here that maximum shift that too from 'Normal' level to 'Moderate' level are occurring in younger age group of 35 -55 and females in this age group are the most sufferer.

Table 1. Distribution of change in discomfort level

Change in discomfort level	No. of cases (n=329)
No Change	130 (39.52%) ~ 40%
Changes among Normal	68 (20.66) ~20%
Changes among initial sufferers	131 (39.82%) ~ 40%

Table 2. Changes in discomfort level among the 'No Discomfort' (Normal) Group

Change in discomfort level of the Normal	No. Of cases (n=68)
Normal → Mild	17 (25.00) ~25%
Normal → Moderate	39 (57.35) ~ 57% (More Than Half)
Normal → Severe	12 (17.65) ~18%

Table 3. Distribution of change in Discomfort level of the Normal according to gender

Change in discomfort level of the Normal	Male	Female
Normal → Mild	8	9
Normal → Moderate	9	33
Normal → Severe	4	5
In All (n=68)	**21**	**47 (2 times)**

Table 4. Distribution of change in discomfort level as per age and gender

Age Group	No Change M F	Normal → Mild M F	Normal → Moderate M F	Normal → Severe M F
18-35	11 21	1 2	1 3	0 0
35-55	27 20	2 4	3 19	2 1
55-65	7 18	1 1	2 5	1 2
65+	9 17	4 2	3 6	1 2
All	130	17	42	9