

## **PRELIMINARY REPORT**

**(24<sup>TH</sup> AUGUST TO 24<sup>TH</sup> SEPTEMBER: FIRST MONTH**

**TOWARDS BUILDING AN AGE FRIENDLY COMMUNITY,  
NEW BARRACKPORE, NORTH 24 PARAGANAS,  
(Suburban Kolkata) WEST BENGAL.**



**SELF MANAGEMENT AND COMMUNITY INITIATIVE FOR JOINT PAINS AND  
HYPERTENSION IN OLDER WOMEN**



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## 2. BACKGROUND:

**2.1 Population Ageing in India:** A major demographic issue for India in the 21st century is population ageing, with wide implications for economy and society in general. With the rapid changes in demographic indicators over the last few decades, it is certain that India will move from being a young country to an old country over the next few decades. Presently (Census 2011), India has around 90 million elderly almost 8% of the total population and by 2050, the number is expected to increase to 315 million, constituting 20 per cent of the total population. The Population Composition in the percentage of population in the age group 60 years and above, in bigger states of India is as mentioned below (Indian Census 2011). Since our project area is Kolkata we have highlighted that the urban parts of the state of West Bengal show a higher trend, with 9.3 % of population as elderly men and 9.6% as elderly women<sup>(1)</sup>

**Percentage of population in the age group 60 years and above to total population by sex and residence, India and bigger States, 2010**

India and bigger States	Total			Rural			Urban		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
<b>India</b>	<b>7.5</b>	<b>7.2</b>	<b>7.8</b>	<b>7.5</b>	<b>7.2</b>	<b>7.9</b>	<b>7.3</b>	<b>7.0</b>	<b>7.7</b>
Andhra Pradesh	7.7	7.1	8.4	8.3	7.8	8.9	6.4	5.5	7.3
Assam	5.5	5.6	5.3	5.3	5.5	5.2	6.3	6.5	6.1
Bihar	6.4	6.4	6.3	6.4	6.5	6.3	6.0	5.9	6.1
Chhattisgarh	6.5	5.9	7.1	6.6	5.9	7.3	6.0	5.9	6.2
Delhi	5.7	5.4	6.0	4.8	4.5	5.1	5.8	5.5	6.2
Gujarat	7.5	6.8	8.3	7.8	7.0	8.6	7.0	6.3	7.8
Haryana	6.1	5.3	6.9	5.9	5.0	6.9	6.5	6.1	7.0
Himachal Pradesh	10.1	9.9	10.3	10.3	10.1	10.5	8.2	8.1	8.3
Jammu & Kashmir	7.7	7.9	7.6	7.6	7.7	7.4	8.4	8.3	8.5
Jharkhand	5.9	5.6	6.2	5.9	5.5	6.3	6.0	6.0	5.9
Karnataka	7.9	7.6	8.2	8.4	8.1	8.8	6.9	6.6	7.2
Kerala	11.8	11.0	12.6	11.8	11.0	12.6	11.9	11.1	12.7
Madhya Pradesh	6.7	6.4	7.0	6.7	6.4	7.1	6.6	6.6	6.5
Maharashtra	9.2	8.7	9.7	10.2	9.5	10.8	7.9	7.5	8.2
Odisha	8.7	8.5	8.9	8.9	8.7	9.1	7.5	7.5	7.5
Punjab	8.9	8.4	9.4	9.5	9.1	10.0	7.9	7.4	8.4
Rajasthan	6.8	6.2	7.4	6.8	6.3	7.4	6.8	6.1	7.5
Tamil Nadu	10.0	9.6	10.3	10.4	10.1	10.8	9.4	9.1	9.7
Uttar Pradesh	6.4	6.2	6.5	6.5	6.3	6.7	5.9	5.8	6.0
West Bengal	7.5	7.4	7.5	6.8	6.6	7.0	9.3	9.6	8.9

Figure 1: Percentage of population in the age group 60 years in main Indian States and above from Indian Census 2011

## 2.2 Towards building an age friendly community:

In developing countries, the share of elder population in urban communities will multiply 16 times from about 56 million in 1998 to over 908 million in 2050. By that time, elders will comprise one fourth of the total urban population in less developed countries.<sup>(3)</sup>



Seeing this huge increase in the number of elderly it is important that cities provide structures and services to support their residents' wellbeing and productivity. Older people in particular require supportive and enabling living environments to compensate for physical and social changes associated with ageing. The concept of Age Friendly City was conceived in June 2005 at the opening session of the XVIII IAGG World Congress of Gerontology and Geriatrics in Rio de Janeiro, Brazil. Later many other countries participated, wherein a Guide for Global Age Friendly Cities was published by the WHO, (Ageing and life course, Family and Community Health) in 2007. The guideline included the checklist of core age-friendly features which provided a universal standard for an age-friendly city <sup>(3)</sup>

The eight essential features taken into consideration which make a city age friendly are

- i. Outdoor spaces and buildings
- ii. Transportation
- iii. Housing
- iv. Social participation
- v. Civic participation and employment
- vi. Respect and social inclusion
- vii. Communication and information
- viii. Community and health service

The concept of Towards Building an Age Friendly City emphasizes an active role of the elder as full partners in improving their life and environment placing strong importance on collaboration, active participation, and community engagement with elders. The WHO framework on Active Ageing also forms the basis for success of an Age Friendly City. Active Ageing is the process of optimizing opportunities for health, participation and security in order to enhance quality of life as people age. In an age-friendly city, policies, services, settings and structures support and enable people to age actively by recognizing the wide range of capacities and resources among older people (Active Ageing: A Policy framework)

**2.3 Dharma Foundation of India (DFI) programs towards Building Community and Health Service:** The DFI has worked since 2010 to establish an Age Friendly Community at New Delhi in collaboration with local senior citizen organisations. The present DFI-WHO SEARO collaboration shall entail an effort towards this cause at New Barrackpore, a suburban area of Kolkata in the state of West Bengal.



**2.4 Health of elders in India:** The incidence of health conditions in elderly, such as falls, cognitive impairment, vision impairment, hearing impairment, delirium, dizziness and frailty, is increasing. The average Indian doctor does not get exposed to the required education to manage such conditions. Geriatric medicine is not encouraged as a practice. As a result of this, except for a few private hospitals, geriatric patients are attended to in the internal medicine department of most government owned public hospitals. Internists, without being specially qualified to assess and treat geriatric conditions attend to such patients. Therefore, the average geriatric medical condition goes under/untreated and the total burden in the population of such conditions is always underestimated. With increasing life spans, elders in India are commonly facing conditions which were considered rare two generations back.

**2.5 Older women in India:** Various studies proved that the share of older women especially in rural areas appears to be larger than their male because of their higher life expectancy. Income insecurity, illiteracy, age related morbidity, and physical and economic dependency are factors that tend to make the Indian elderly, and particularly elderly women, vulnerable. In addition to problems of illiteracy, unemployment, widowhood and disabilities, older women in India also face life-long gender based discrimination, resulting in differential patterns of ageing of men and women<sup>(2)</sup> The Global Report on Ageing in the 21st Century (2012) reinforces the observations made in India that there is multiple discrimination experienced by older persons, particularly older women, including access to jobs and health care, subjection to abuse, denial of the right to own and inherit property, and lack of basic minimum income and social security (UNFPA & Help Age International, 2012). Compared to men, the health status of women in India was found to be poor. Currently, elder women in India face a multitude of health problems like cough, joint pains, blood pressure, heart disease, diabetes and cataract/loss of vision<sup>(2)</sup>

#### **2.6 About hypertension and joint pain in older women:**

Hypertension is one of the most important treatable causes of mortality and morbidity in the elderly population<sup>(8)</sup> Patients with hypertension may experience adverse effects on well-being and health-related quality of life which can be associated with headache, dizziness, and tiredness. Hypertension is the key disease which leads to cardiovascular diseases. Joint pains in forms of arthritis, fibromyalgia, and osteoporosis are common in elderly. It has also been proved that more than half of the elderly (more number of women than men) represented various physical problems from which joint pains is the commonest one with 59.5% in men and 67.3% in women<sup>(2)</sup>

#### **2.7 Self Management and Community Based Wellness Program for elder women:**



Proper nutrition and lack of exercises plays a major role in an individual's overall health; psychological and physical health status. In this collaborative attempt between WHO SEARO and DFI on the concept "Towards Building an age friendly world" <sup>(3)</sup> we have introduced a Self-Management and Community based wellness program for older women in the urban community. Older women with joint pains and hypertension are chosen to participate in this project. This program is a multi-dimensional intervention that engages subjects within a series of classes in which they are helped to develop critical knowledge, skills and motivation to move forward in their recovery and achieve their personal goals. Such nonmedical interventions can assist elders in coping with and adapting to their illnesses as proven through various studies provide better functional outcomes and are more cost effective than conservative care, surgery or more invasive procedures.



### **3. Project Area:**

The project area chosen for this work is New Barrackpore in District North 24 Paraganas West Bengal. (Figure 1). It lies in the suburban area of Kolkata.



Figure 2: District 24 Paraganas, West Bengal (Suburban Kolkata)



### 3.1 Geography of New Barrackpore

New Barrackpore comes in the jurisdiction of Kolkata 700131. New Barrackpore (also spelt New Barrackpur) is a town and a municipality under New Barrackpore police station of Barrackpore subdivision North 24 Paraganas district in the Indian state of West Bengal.

### 3.2 Statistics of New Barrackpore:

Statistics of New Barrackpore is still not available in India Census 2011. India Census 2001 shows the following statistics (Figure 2) <sup>(4)</sup>

Population	83,192 (Census-2001) (Male-41,813, Female - 41,379)
% of Literacy	95.19% (Male-97.59%, Female-92.72%)
Area	16.89 Sq. K.M.
Ward	19 Nos.
Mouza	4 Nos.
Holding	14,680 Nos.
Density of Population	4925 Nos.
Population under BPL	20,889 Nos.
No. of Hospital	One Maternity & General Hospital run by Municipality, Ambulance-2 Nos. Two IPP-VII Centres, 11 sub-Centres, 4 CUDP-II Health Sub-Centres
Post Office	3 Nos. (One-Main & Two sub-Post Office)
Cinema hall	1 No.
Police Station	1 No.
Road	115.84 KM. (Pucca –108.80 KM, Kuccha – 7.04 KM,)
Drain	321.10 KM (Pucca – 43.92 KM, Under Ground Drain - 0.51 KM, Kuccha – 276.67 KM)
Educational Institution	College – 3, H.S School – 7, Secondary School – 3 ,Jr. H.S. - 1, Primary School-36
Water	Hand Tube well –316 Nos., Deep Tube well- 15 Nos.
Burial Ground	2 Nos. (Muslim - 2)

Figure 3: Statistics of New Barrackpore, Indian Census 2001

### 3.3 Profile of New Barrackpore:





New Barrackpore's population is primarily based on the descendents of refugees from Bangladesh (formally East Pakistan), who migrated here prior to 1950s due to turmoil in Bangladesh. New Barrackpore hosts 'Pushpa Mela' every winter with many fascinating collections of many enterprising florists. 'Kristi' is a community auditorium where often cultural events are held. There are universities and good Bengali medium schools in the vicinity. Some centres and playgrounds cater to various activities for children in the area. Common transport like auto rickshaw, cycle rickshaw, van, bus take commuters from the interior part of the New Barrackpore to the main street or road connecting to the other parts of Kolkata .The condition of roads available are satisfactory, the roads are appropriately lit with good lights. Some of the roads leading to markets are congested and water logged during the rainy season. Drinking water is available through pipelines systems or carried by people from tube wells constructed in some areas.



Buses, taxis frequently ply on these roads connecting the main parts of Kolkata to New Barrackpore. The Kolkata International airport is approximately 10 kms from the centre of New Barrackpore. The New Barrackpore Railway station is very close by, so communication to the city of Kolkata and other districts are quite easy.



### **3.4 Facilities for older persons at New Barrackpore:**

Most elderly are associated with one of the many organisations in the area. There are many temples and community centres at New Barrackpore which older persons visit. Festivals like Dassera, Diwali are held in great spirits and scale where elders play an important role. The main health problems faced by older women in the area are diabetes, cardiac issues and arthritis. Most of the seniors avail health benefits under government sponsored schemes like CGHS, ECHS etc. The neighbouring organisations hold health camps and awareness workshops which are sponsored from big hospitals like Apollo, Fortis and local nursing homes. These hospitals are around 10-15kms from New Barrack pore. During emergencies elders visit these hospitals. The population of elders also belong to the low socio economic class, who are labourers or working as helpers in houses/residencies of the area. These elders take health consults from the charitable health clinics running in the vicinity like Tridhara, Vivekananda Parishad and Palli Udayan. There are chemists, grocery shop, fish and vegetable markets in municipal markets of New Barrackpore.

### **4. Aim and objectives of the study:**

- To teach self management of joint pains and hypertension through exercises and diet modifications to older women.
- To connect older women to community group therapy and peer groups having similar problems.
- To create a future model for sustainable and cost effective community and health services and promote age friendly communities.



#### **4. Methodology:**

##### **4.1 Training:**

Physiotherapists, dieticians and their assistants were trained for doing assessments and following intervention of exercises and diet protocols for joint pain and hypertension.

##### **4.2 Interventions:**

###### **4.2.1 Self-management**

Self-management is about using one's own resources to help manage their condition. a combination of the following techniques is used.

- i. Keeping active, exercising daily.
- ii. Following healthy diet pattern.
- iii. Keeping notes or a diary regarding one's own symptoms, treatment and activities to establish what makes the arthritis or hypertension better or worse.

###### **4.2.2 Community Initiatives:**

- i. Attend workshops/group therapy on joint pains and hypertension
- ii. Individual assessment by physical therapist and dietician
- iii. Peer group discussion meetings in the Community Centre in small and big groups to learn/share from each other, how to manage the symptoms of joint pains and hypertension.

###### **4.2.3 Physical Therapy Intervention**

The following interventions advise to the subjects by the physical therapists after a detailed assessment of her joint pains and hypertension.

- i. Joints protection
- ii. Practical changes at home and at work:
- iii. Managing pain

d) Exercises for subjects with joint pain:

The following points were explained to subjects <sup>(5)(6)</sup>

- Benefits of exercises
  - I. A better range of movement and joint mobility
  - II. Increased muscle strength



- III. Less stiffness
- IV. Increased strength and energy
- V. Managing weight
- VI. Better sleep
- VII. Maintain bone strength
- VIII. Improve sense of well-being

- Types of exercise shown

- I. Range of movement
- II. Strengthening
- III. Aerobic exercises
- IV. Breathing exercises.

- Keeping active with arthritis

- I. Walk– to work, to the shops etc
- II. Mopping the floor, is a good aerobic exercise
- III. Doing the washing up can help loosen finger joints
- IV. Gardening can work out the whole body

e) Exercises for subjects with hypertension and prevention of hypertension:

Having high blood pressure and not getting enough exercise are closely related. The risk of high blood pressure (hypertension) increases with age, and if the blood pressure is already high, exercise and physical activities to ones daily routine help<sup>(7)</sup> Physical activity that increases heart and breathing rates is considered aerobic activities are,

- I. Household chores
- II. Climbing stairs
- III. Walking
- IV. Jogging

At least 150 minutes of moderate aerobic activity or 75 minutes of vigorous aerobic activity a week or a combination of moderate and vigorous activity is recommended to control hypertension<sup>(7)(8)</sup>.

#### **4.2.4 Diet Intervention:**

##### **a) Diet and Osteoarthritis:**

A healthy diet to keep weight down is recommended<sup>(9)</sup>

- I. High in fruit and vegetables
- II. High in starch and fiber
- III. Low in fatty foods and salt
- IV. Low in added sugars



The following points will be reiterated

- Cut Extra Calories
- Fruits and Vegetables
- Add Omega-3 Fatty Acids

#### **b) Diet and hypertension**

Importance of proper diet play a very major role in the prevention, management and treatment of hypertension is explained .As hypertension is a lifestyle disorder which requires various diet modifications will be explained to subjects. <sup>(9)(11)</sup> Counseling people regarding the complications of hypertension as well as educating how changes in the diet especially in the intake of salt consumption, fat and sugar intake can lower the blood pressure and hence decrease the complications holds key importance. Education on maintenance of ideal body weight and reduction in body weight (if overweight), lowers the blood pressure.

#### **4.3 Inclusion and exclusion criteria:**

- I. Women equal or more than 50 years of age.
- II. Able to understand and follow exercise and diet regime.
- III. Able to read and write.
- IV. Able to move in and around the house.
- V. Women who were bedridden and requiring long term care will be excluded.
- VI. Women diagnosed with accelerated hypertension will be excluded
- VII. Women with severe cardiac and neurological disorders will be excluded

#### **4.4 Sampling Method:**







A community initiative to recruit subjects was arranged by the local senior citizen organizations called Welfare Association of Senior Citizen, New Barrackpore at a Community Centre. Mr. Ashit Bhattacharya an active member of this organization was the point of contact. The Indian Red Cross Unit of New Barrackpore Branch also participated. Awareness of the workshop and its benefits to elders having joint pain and hypertension was advertised by the local cable TV operators with a campaign stating “Awareness and Assessment of Joint Pains and Hypertension in Older Women” The program was scheduled for 30<sup>th</sup> August 2015 .A convenient sampling method was used to recruit older women who came to the “Awareness And Assessment Program”



#### **4.5 Resource material on intervention:**

Leaflets on exercises in easy pictorial format were distributed. Diet information was also explained clearly in pictorial form. Subjects were asked to continue the exercises and diet as prescribed for 8 weeks.

**4.6 Caregiver Education:** Caregivers with elderly were educated about subject problems and how to help the elderly at home to do exercise and diet modification.



#### **5. Outcome measures:**

The following outcome measures shall be documented as part of initial assessment.

- Age, education marital status and occupation of subject shall be documented.



- **Mini Nutritional Assessment:** The MNA is a validated nutrition screening and assessment tool that can identify geriatric patients age 65 and above who are malnourished or at risk of malnutrition. The MNA was developed nearly 20 years ago and is the most well validated nutrition screening tool for the elderly. Originally comprised of 18 questions, the current MNA now consists of 6 questions and streamlines the screening process.
- **Measure Blood Pressure (BP)** (using sphygmomanometer)
- **Brief Pain Inventory:** The Brief Pain Inventory (BPI) has become one of the most widely used measurement tools for assessing clinical pain. The BPI allows patients to rate the severity of their pain and the degree to which their pain interferes with common dimensions of feeling and function. Initially developed to assess pain related to cancer, the BPI has been shown to be an appropriate measure for pain caused by a wide range of clinical conditions. The BPI has been used in hundreds of studies. In some ways, the BPI is a “legacy” instruments—a self-report measure that has, over time, become a standard for the assessment of pain and its impact.
- **Barthel Index (BI):** The Barthel scale or Barthel ADL index is an ordinal scale used to measure performance in activities of daily living (ADL).

BPI, BP and BI shall be documented at the end of 6 weeks of start of intervention.

## **6. Data Collection Procedures:**

All participants who attended the “Awareness and Assessment Program “on August 30<sup>th</sup> 2015 were screened and selected based on the inclusion and exclusion criteria. Out of 63 women who participated in the program, 13 subjects were excluded based on screening, 8 subjects declined to participate in the intervention therefore 42 subjects were selected and assessed individually on the above outcome measures. Exercise and diet interventions were explained to selected subjects. Resource material was distributed to each selected participant.

## **7. Discussion on preliminary work:**

### **7.1 Demographic ,pain and hypertension and nutritional profile of participants n=42**

<b>age range</b>	<b>mean</b>
50-85	61

**Age Profile**

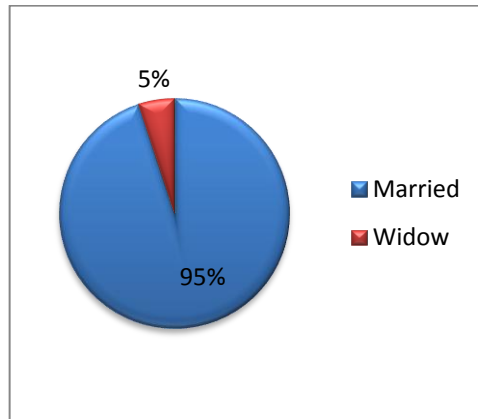


Figure 4: Marital status

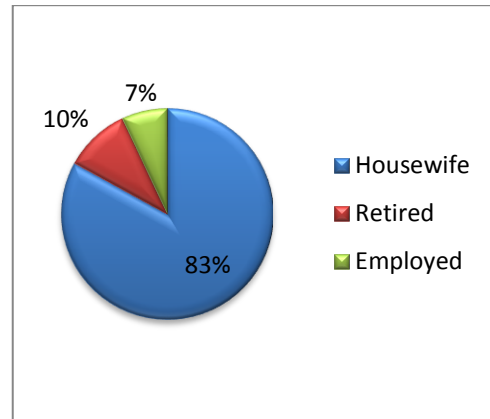


Figure 5: Occupation

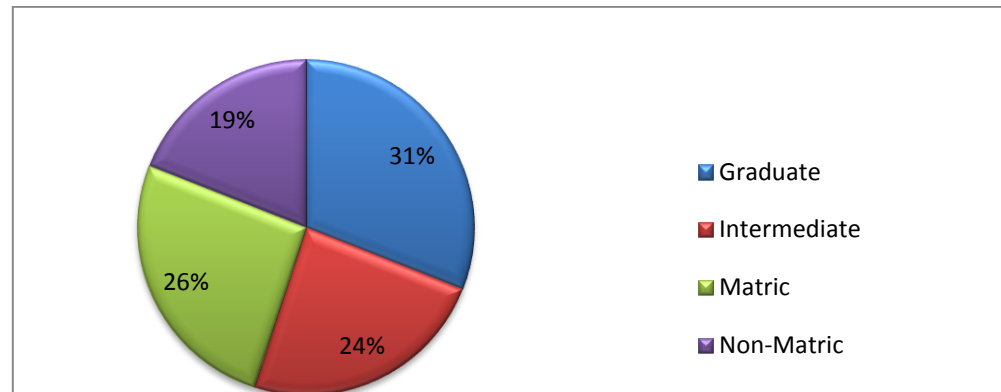


Figure 6: Education

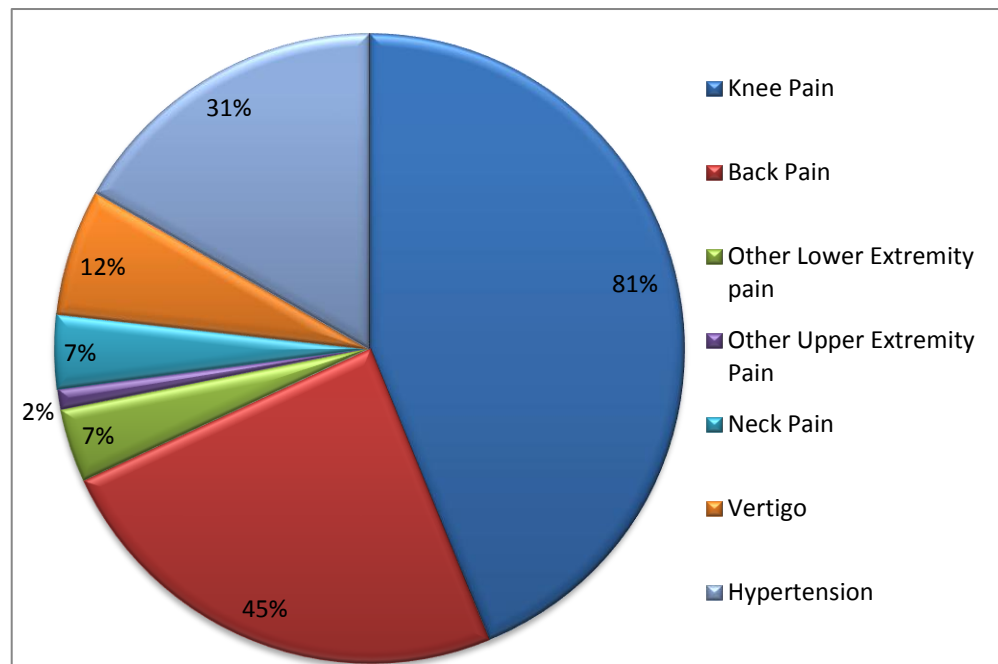


Figure 7: Profile Joint Pain and Hypertension



### Nutritional Profile

Normal nutritional status(12-14)	41	98%
At risk of malnutrition(8-11)	1	2%
Malnourished (0-7)	0	0%

### 7.2 Follow up on phone and at the Community Centre:

The selected subjects are called once a week, to enquire about problems faced by them in following the interventions explained. Those subjects who did not give their phone numbers are individually informed by the local organization to visit the physiotherapist in the Community Centre. The physiotherapist calls all selected subjects telephonically and takes feedback on improvement in pain. Those subjects who are having problems with pain see the physiotherapist at the Community Centre.



### 7.3 Community Initiatives through group meetings:

Group Therapy and discussion meeting amongst older women having similar problems are discussed. Subjects share notes and discuss how they are managing their pain and hypertension. Group discussion was interactive and joyful.





#### 7.4 Initial feedback from participants:

Feedback of the awareness and assessment program was taken on phone from 20 subjects randomly 2 weeks after the “Awareness and Assessment Program”. Program evaluations which were answered in YES or NO included the following:

- a) Participants gained knowledge and applied knowledge learned.
- b) Awareness and Assessment Program was useful and interesting.
- c) Should Awareness and Assessment Program be held by local senior citizen organization for continues monitoring of problems faced by elders?
- d) Resources materials provided to participants were helpful.
- e) Follow up on phone and visit to community centre.
- f) Can self-management help deal with chronic health conditions?
- g) Do you feel motivated to follow interventions advised after meeting peers in group therapy and follow up sessions?

The participants felt that the program helped them to understand the pain problems better. 82% participants gave positive feedback on all the above points. 18% participants felt that awareness and assessment programs should be conducted by grassroots level senior citizen organizations for continuous monitoring of health problems. They felt motivation towards self-management of chronic diseases is difficult to maintain and can be helped with group therapy and meetings with peer groups with similar problems.

#### 8. Roadmap for the second and third month

Due to Dassera Festival in the month of October, older women are not willing to participate till end of the festivals that is October 30<sup>th</sup>. The next Awareness and Assessment Program is scheduled for November 1<sup>st</sup>.

Follow ups shall continue to be done by phone calls and visiting those subjects who have increased pain or hypertension. The third month planning would be to check the post effect of the interventions of physical therapy and diet modification in the subjects enrolled. Feedback of program from all subjects recruited shall be monitored at the end of the project.

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