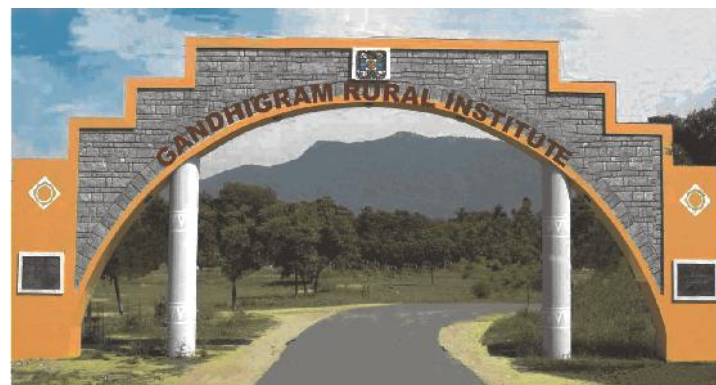


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EDITORIAL

Science, Technology and Society has been a topic of discussion in contemporary Indian Society in view of transformations occurring in various dimensions of society. Transfer of technology is the strategy to modernize society in the major sectors of economic growth. The society experiencing transformations, obviously has implication for resistance as well in the complete acceptance and final adoption of the science and technology based innovations and creativity towards modernization. Conventionally Indian Society is recognized as a tradition bound society with strong influence of conformities emerging from the value system. This makes the process of application of modern science and technology for economic growth in such a society marked by tradition bound, culture based Society. However modernization through application of science and technology is an essential and unavoidable one in transformational experience.

The application of science and technology in Indian context, inspite of its limitations, is penetrating in all the three sectors namely primary, secondary and tertiary. Technological transformation in agriculture, mechanization, automation, modern gadgets in these three sectors have been taking place to a large extent and also yielding necessary dividends for the betterment of people for their prosperity. Globalization in contemporary times is further accelerating the process of transformation through application of science and technology. However in a most populous country like India economic growth is not realized as per the target fixed through development planning. Social safety net and structural adjustment programmes are inevitable to deal with problems of globalization through application of science and technology in contemporary society.

This issue of Journal of Extension and Research(JER) carries research papers focusing on subjects and topics dealing with Agriculture, Horticulture, Entrepreneurship, Womens Empowerment, Community based Organization, Trade, Reproductive Health, Social Welfare, Marginalized Group, Differently Abled Persons, Social Exclusion and Inclusion, Fertility Studies, Development and Displacement etc.

Last but not least, I am delighted to inform the subscribers of the Journal, Faculty Members, Research Scholars, Students and all other well-wishers that JER has been granted recognition by University Grants Commission with Journal Number..... As such, the contributors of this Journal are given the necessary credit in the form of weight age in appointments career advancement and promotions. I wish the subscribers and readers of this Journal all the best and look forward their continuous patronage.

S.GURUSAMY
EXECUTIVE EDITOR

JOURNAL OF EXTENSION AND RESEARCH
Volume XVII. No.1 September 2017

CONTENTS
Editorial
Articles

- | | | |
|--|--|---|
| 1. Effect of Tillage on Crop Performance in Kigali, Rwanda, Africa | <i>Deepak Das And R.Udbayakumar</i> | 1 |
| 2. Studies on Cold Storage of Coorg Mandarin Fruits | <i>Viresb Kumargoud, M.N. Ramesh, G.V. Mobith Kumar and Sudarshan Pattar</i> | 1 |
| 3. Herbalized Dairy Products is a Profitable Venture to Self Help Groups - A Review | <i>M.Seethalakshmi and D.Govindammal</i> | 1 |
| 4. A Study on Trends in Natural Rubber Trade in the Context of Asean-India Free Trade Agreement | <i>* Nivya V .Neelankavil and ** Dr.S.Nebru</i> | 1 |
| 5. Intercultural SyNthesis, Radical Humanism and Rabindranritya : Re-evaluation of Tagore's Dance Legacy | <i>*S.Yasodhamani</i> | 1 |
| 6. Analysis of Inter District Variations of Women's Reproductive Health Problems in Tamil Nadu | <i>C. Sivapragasam and V.Saravanakumar</i> | 1 |
| 7. Women and Child Welfare of urban Poor: Health Budget Analysis of Maternity Homes of BBMP in Bangalore | <i>K. Prabbakar</i> | 1 |
| 8. Impact of Kudumbashree on the Empowerment of Women | <i>Saravana Selvi.C, Sithara Balan And K.S.Pushpa</i> | 1 |

- | | | | |
|-----|---|--|---|
| 9. | Work Life of Women Domestic Workers at Gulbarga, Karnataka | <i>Bhagyashree.S.Vadageri and M.Hilaria Soundari</i> | 1 |
| 10. | Study of Dalit Women Entrepreneurs in Selected Blocks in Dindigul District | <i>L.Rathakrishnan And Chinnamurugan</i> | 1 |
| 11. | Use of Assistive Devices in Resistive Environments - The Experience of an Indian University in Remote Rural Regions | <i>M. P. Boraian</i> | 1 |
| 12. | Development Needs of Socially Excluded: The Case of Arunthathiyar Community in Tamil Nadu | <i>S.Rajangam</i> | 1 |
| 13. | Value of Child and Fertility Behaviour of Rural Women - A Study in Athoor Block of Tamil Nadu | <i>T.Rajendran</i> | 1 |
| 14. | Peasants and Displacement: Issues and Implications | <i>S. Gurusamy</i> | 1 |
| 15. | Organizational Culture and Employee Retention | <i>S. Radhakrishnan And R. Vinotha</i> | 1 |
| 16. | Women's Health Problems Associated with Surgical Menopause | <i>R.Jayasree and Kalavathamma</i> | 1 |
| 17. | Drought prone Conditions and Migration -A case study in Anantapur District of A.P. | <i>K.Somasekhar</i> | 1 |
| 18. | Wo | <i>Bha</i> | 1 |
| 19. | Book Review | | 1 |

EFFECT OF TILLAGE ON CROP PERFORMANCE IN KIGALI, RWANDA, AFRICA

Deepak Das And R.Udhayakumar

Abstract

Crop performance studies were conducted in the experimental site of Rwanda, for both dry seasons. In the experimental site four sample plots of 16m x 12m each were taken up. Two plots were prepared by using disk plough for 30cm depth followed by two passes of disk harrowing. Another two plots were conventionally prepared with hand hoe. All the four plots were chosen side by side. The ruling varieties of maize (Pool,9) and beans (PK 10) crops were selected and raised in tilled and conventionally prepared plots separately for comparison. During short dry season (Mid Dec 2009 to Feb 2010) in tillage operations, 89% and 92%; sowing, 16.4% and 19.4% and weeding operations, 18.3% and 18.6% of man-hour saved for maize and beans crops respectively under tilled plot when compared with conventional plot. Similarly in case of yield, 5484 kg/ha and 2026 kg/ha obtained in tilled plot for maize and beans crop respectively when compared with conventional plot (4765 kg/ha and 1796 kg/ha). The same trend was observed during long dry season (15th may 2010 – Aug 2010).

Key words: crop performance – yield of maize – yield of beans - tillage

Introduction

Rwanda popularly known as land of thousands of hills situated in the Central part of Eastern Africa, some 1600 km from the sea; latitude 2°S and longitude 30°E; surrounded by Uganda, Tanzania, Burundi and Congo-Kinshasa. The country has a total geographical area of 26,338 km². Eleven per cent (2,849 km²) of the country is occupied by lakes, rivers, marshes, towns, roads and built-up areas. The remainder (23,487 km²), called “green land”, can be used for crops, grazing, and natural vegetation.

Soil and climatic condition of Ruburizi farm restricts rooting, and eventually crops grown during dry seasons suffer water and nutrient losses leading to yield decrease (Rutunga, 2007). In addition to this

problem, Rwandan farmers are still using primitive tool like hand hoe for both primary and secondary tillage operations having maximum depth of 8 cm to 10 cm.

The continuous ploughing at shallow depth results in development of plough pan which restricts nutrient movement and root penetration. This leads to the acute moisture deficiency problem during the dry seasons which eventually affects the crop growth and yield (Blevins, 1991). So far no study has been conducted to understand the effect of modern tillage practice and its effect on crop performance during dry season. Therefore, approaches have been made through this field study to reveal the positive impact of tractor drawn tillage machinery on crop performances during dry seasons of Rubirizi farm.

Materials and Methods

In the experimental site four sample fields of 16 m x 12 m size plots were taken up. All the four plots were chosen side by side. A gap of 1 m was provided between the plots as path way. Two plots treated with best tillage practice out of eight tillage treatments and remaining two plots were prepared conventionally with hand hoe. The ruling variety of maize (Pool 9A) and beans (PK 10) selected as test crops. Each plot was applied with 375 Kg of FYM before sowing. The recommended seed rate and spacing were adopted for maize and beans whereas sowing carried out by manually. Recommended dose of inorganic fertilizer of NPK 15:15:15 was applied at the rate of 4 Kg/plot after first weeding operation as per the recommendation of the Directorate of farm production, ISAE. It was applied manually by making a hole near the plant by hoe and then it was covered with soil. Three weeding were carried out and adequate plant protection measures were taken up.

The said agronomical practices were adhered for short and long dry seasons for both crops. The following observations were made.

- Number of man-hours engaged in seed bed preparation, sowing and weeding
- Plant parameters like plant height and stem diameters
- Crop yield

Results and Discussion

The previous tillage research study on in the same Rubirizi plot concluded that disk ploughing at 30 cm depth with two passes of

harrowing is the best tillage practice for the moisture conservation point of view in the experimental site. Hence in order to ascertain the moisture retention level in the experimental site the ruling variety of Maize and Beans were raised in short and long dry seasons and compared the plant parameters, labour requirements and yield performance was compared with conventional method of cultivation during the same period.

Crop performance during short dry season

Labour requirement for different farm operations in maize and beans cultivation in short dry season

The man hour used for different operations were carried out in the tilled and conventional plots are given in Table 1.1.

Table Man hours used for different operations in tilled and conventional plots for short dry season

Crop	Seed bed preparation		Sowing		Weeding	
	Tilled	Conventional	Tilled	Conventional	Tilled	Conventional
Maize	0.90	8.20	5.10	6.10	5.15	6.30
Beans	0.70	9.10	5.20	6.45	7.45	9.15

Referring the data showed in Table, regarding man power involvement in different operations for maize and beans crops, following figure was obtained.

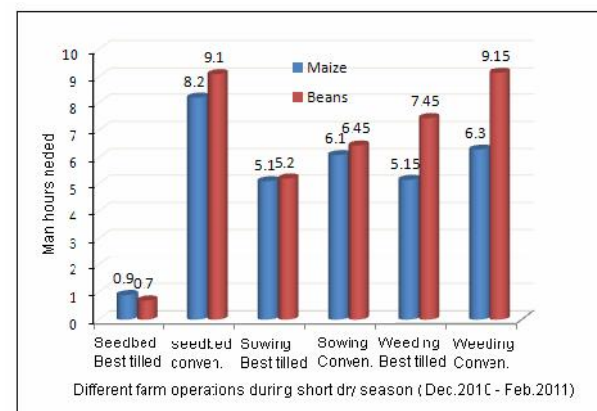


Figure 1 Man hours involved to undertake farm operations in short dry season

Referring the above figure, the following results are obtained:

- The number of man hours needed for the maize crop seed bed preparation in the tilled plot was 0.9 and for the conventional method was 8.2 man hours. Similarly in case of Beans crop, 0.7 man hours for tilled plot and 9.1 man hours for conventionally prepared plot. Hence, 89 % and 92 % of man – hour saved for Maize and Beans crops respectively under tilled condition. This could be reason for preparing seed bed easily and quickly in pulverized soil rather than un- ploughed condition.
- Around 16.4 % and 19.4 % saving in man-hour found in tilled soil condition for Maize and Beans crop respectively when compared with conventional method of sowing. In both cases sowing carried out by dibbling.
- Similar trend was observed in case of weeding operations. Around 18.3% of man-hour saved for maize crop under tilled condition compared to conventional cultivation plot. The same (18.6%) was found in case of Beans crop. This variation occurred because of more plant population found in tilled condition which could suppress the weed growth.

Comparison of plant parameters of maize and beans in short dry season

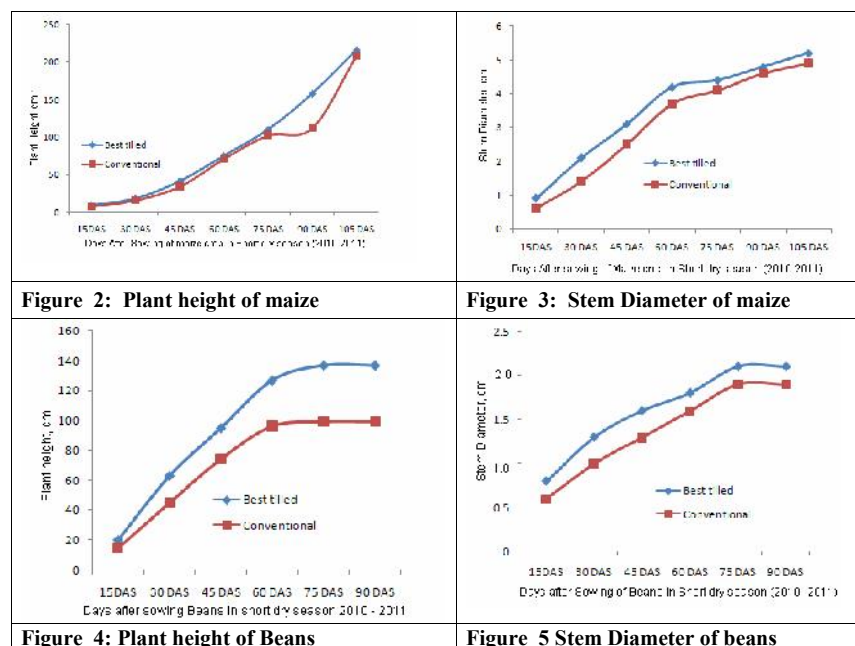
The plant height and stem diameter were recorded after every 15 days interval from the day of sowing for both crops in tilled and conventionally prepared plots. The plant height (cm) and stem diameter (cm) of crops in different Days After Sowing (DAS) in tilled and conventional plots for the maize and beans crops are given in Table 1.2.

Table Plant height (cm) and stem diameter (cm) of crops for short dry season

Crop	Till	15 DAS		30 DAS		45 DAS		60 DAS		75 DAS		90 DAS		105 DAS	
		Ht	Dia.	Ht	Dia.	Ht	Dia	Ht	Dia.	Ht	Dia.	Ht	Dia.	Ht	Dia.
Maize	Tilled	9.0	0.9	18	2.1	41	3.1	75.1	4.2	110	4.4	158	4.8	216.1	5.2
	Con.	7.5	0.6	15.8	1.4	34	2.5	71	3.7	102	4.1	112	4.6	208.1	4.9
Beans	Tilled	20.1	0.8	63	1.3	95	1.6	127	1.8	137	2.1	137	2.1		
	Con.	14.8	0.6	45	1.0	74.1	1.3	96	1.6	99	1.9	99	1.9		

Note: Ht- Height, Dia. – Diameter, Tilled – Tilled plot. Con. – Conventionally tilled plot with hand hoe

The data of Table represented in the following figures.



The analysis of Table 2 and Figure 2 to 5 revealed the following aspects;

- With regard to the plant height of maize crop in the tilled plot and conventionally prepared plot, the figure 2 showed that the plant height at 15 DAS was 9 cm and 7.5 cm respectively and then the height of the

crop in both plots found increasing in a curve linear form almost at the same rate of growth up to 75 DAS to a height of 110 cm and 102 cm. Similarly for beans, the height of the plant was 20.1 cm and 14.8 cm at 15 DAS. The plant height increased to 137 cm and 99 cm at 75 DAS for the tilled plot and conventional plot.

b. The stem diameter of maize crop in the tilled plot and conventionally prepared plot, the figure 3 showed that the increase in stem diameter of tilled plot from 15 DAS to 105 DAS was 0.9 cm to 5.2 cm compared to the conventionally prepared plot having 0.6 cm to 4.9 cm. This showed that the plant girth was much higher in the tilled plot because of increased moisture holding capacity and porosity of the soil.

c. In case of plant height of beans crop in the tilled plot and conventionally prepared plot, the figure 4 showed that the plant height after 15 DAS to 60 DAS found increases at increasing rate. Thereafter, the plant height was not appreciably increasing because it attained the stage of maturity.

d. The stem diameter of the beans crop in the tilled plot and conventionally prepared plot, the figure 5 showed that the stem diameter after 15 DAS to 75 DAS found increases at increasing rate. The unique feature observed is after 75 DAS there was no further increase in stem diameter of the crop, due to the fact of the crop attained maturity.

Crop yield in short dry season

The yield per plot of maize crop was recorded for both tilled plot and conventionally prepared plot. In the beans crop, the average number of pods per plant and the yield were also recorded and given in table 1.3.

Table 3 Crop yield in tilled and conventionally prepared plots during short dry season

Crop	Yield, Kg/plot of 16 m x 12 m		Average number of pods per beans plant	
	Tilled	Conventional	tilled	Conventional
Maize	105.3	91.5	--	--
Beans	38.9	34.5	20	15

The above table reveals the following facts:

The yield in the tilled plot of maize crop was 105.3 Kg (5484.3 kg/ha) and the conventionally prepared plot was 91.5 Kg (4765 kg/ha) for the same area of the plot. The percentage increase in yield of maize was found to be 15.1% in the tilled plot compared to the conventionally prepared plot. This could be due to the influence of tillage in increasing the soil moisture holding capacity of the plot.

The yield in the tilled plot of beans crop was 38.9 Kg (2026 kg/ha) and the conventionally prepared plot was 34.5 Kg (1796.8 kg/ha) for the same area of the plot. The percentage increase in yield of beans was found to be 12.8% in the tilled plot compared to the conventionally prepared plot. This might be increasing moisture holding capacity of the soil due to tillage practices.

The average number of pods per beans plant in the tilled plot was 20 numbers whereas 15 numbers of pods found in conventional plot. The percentage increase in number of pods per plant was found to be 33 % of in the tilled plot compared to the conventional plot. This could be due to better absorption by the crop in the tilled plot.

Crop performance during long dry season

Labour requirement for different farm operations in maize and beans cultivation in long dry season

Both maize and beans crops were raised in long dry season by keeping the plot size, variety, seed rate, basal dose application, sowing method, row spacing, plant protection measures and weeding operation were the same as that of short dry season. The crops were raised in both tilled plots and compared the performance by raising at the controlled plots. The man-hours needed to prepare farm operations are given in Table 4 and represented in figure 6.

Table 4 Man hours used for different operations in tilled and conventional plots for long dry season

Crop	Seed bed preparation		Sowing		Weeding	
	Tilled	Conventional	Tilled	Conventional	Tilled	Conventional
Maize	1.00	8.50	5.25	6.25	5.00	6.50
Beans	0.75	9.00	5.45	6.75	7.25	9.25

Referring the data showed in Table 4, regarding man power involvement in different operations for maize and beans crops, following figure was obtained.

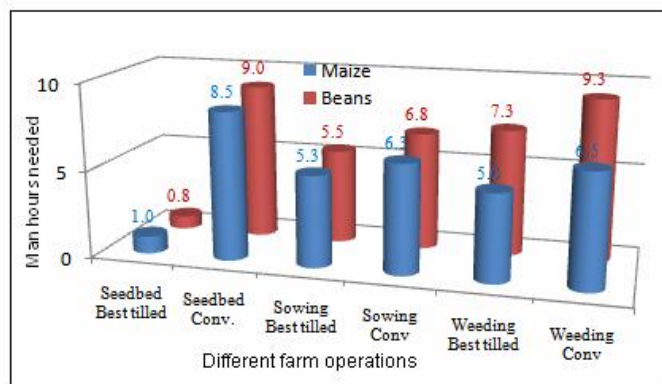


Fig. 6 Man hours involved to undertake farm operations in long dry season

Referring the above figure 6, the following results were obtained:

- The number of man hours needed for seed bed preparation for maize crop in the tilled plot was 1.0 and for the conventionally prepared plot was 8.5 man hours. Similarly in case of beans, 0.8 man hours utilized for seed bed preparation in tilled plot and 9 man hours spent for conventionally prepared plot. Hence, it is concluded that man-hours needed for seed bed preparation found less i.e 88 % for maize and crop and 91% for beans crop under tilled plot compared with conventional plot
- The number of man hours needed for sowing in case of maize crop in the tilled plot was 5.3 and for the conventionally prepared plot was 6.3 man hours. Similarly in case of beans, there was a comparison of 5.5 man hours for tilled plot and 6.8 man hours for conventionally prepared plot. Hence, it is concluded that the difference of man hours needed for both types of plot preparation was approximately 1.0 man hour only. It was concluded that sowing needs approximately same amount of man hours.

- In case of weeding, number man hours needed for the maize crop in the tilled plot was 5 and for the conventionally prepared plot was 6.5 man hours. Similarly in case of beans, there was a comparison of 7.3 man hours for tilled plot and 9.3 man hours for conventionally prepared plot. There was a difference of 1 to 2 hours in weeding operation between tilled plot and conventionally prepared plot. This was because of the nature of weeds grown and the method of plot preparation. Hence, it is concluded that the difference of man hours needed for both types of field preparation was approximately 1.0 to 2.0 man hour only.

Comparison of plant parameters of maize and beans in long dry season

The plant height and stem diameter were recorded after every 15 days interval from the day of sowing for both crops in the in tilled and conventionally prepared plots. The plant height (cm) and stem diameter (cm) of for the maize and beans crops in different Days After Sowing (DAS) in tilled and conventional plots are given in following Table 5 and Figure 7 to 10.

Table 5 Plant height (cm) and stem diameter (cm) of crops for long dry season

Crop	Till	15 DAS		30 DAS		45 DAS		60 DAS		75 DAS		90 DAS		105 DAS	
		Ht	Dia.	Ht	Dia.	Ht	Dia	Ht	Dia.	Ht	Dia	Ht	Dia	Ht	Dia
Maize	Tilled	8.1	0.80	16.2	2.00	38.9	2.9	71.0	4.00	103	4.1	154.5	4.5	206	4.8
	Con.	7.3	0.50	15.4	1.30	38.0	2.4	70.0	3.50	102	4.0	148.0	4.3	198	4.6
Beans	Tilled	19	0.74	60.0	1.24	90.0	1.5	120	1.65	130	2.0	130.0	2.0	--	--
	Con.	14	0.38	42.0	0.70	70.0	1.0	90	1.37	94	1.4	94.0	1.4	--	--

Note: Ht- Height, Dia. - Diameter, Tilled- Tilled plot.
Con. - Conventionally tilled plot with hand hoe

Referring Table 5, the following figures were obtained.

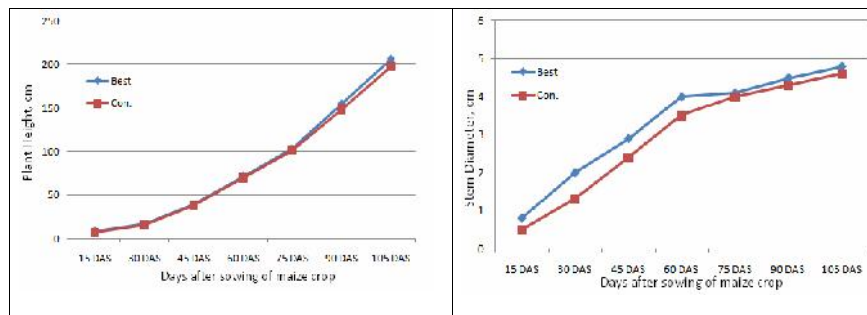


Figure 7: Plant Height of maize

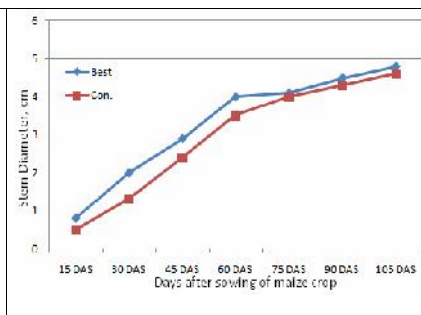


Figure 8: Stem Diameter of maize

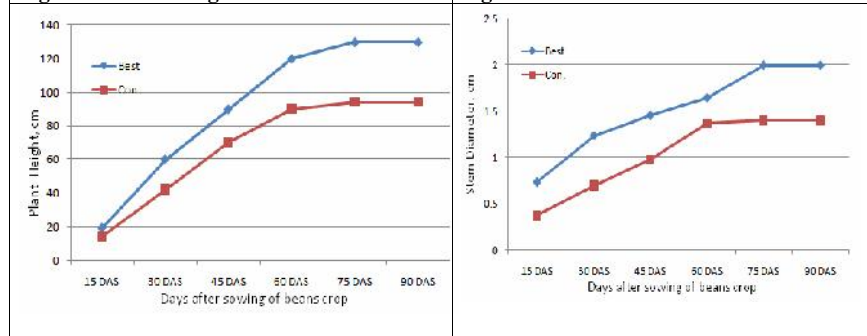


Figure 9: Plant Height of Beans

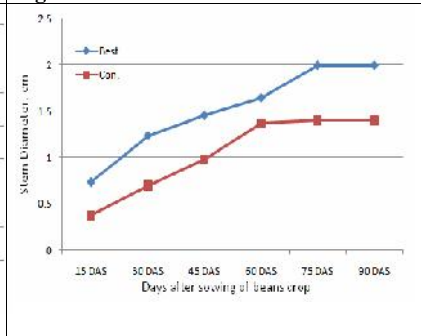


Figure 10: Stem Diameter of beans

Referring Figures 7 to 10, the following inferences were obtained

- The plant height of maize crop in the tilled plot and conventionally prepared plot, the figure 7 showed that the plant height at 15 DAS of sowing was 8.1 cm and 7.3 cm respectively. Thereafter, the height of the crop in both plots are increasing in a curve linear form almost at the same rate of growth. The plant height at 75 DAS was found to be 103 cm and 102 cm. Similarly for beans, the height of the plant was 19 cm and 14 cm at 15 DAS. The plant height increased to 130 cm and 94 cm at 75 DAS for the tilled plot and conventional plot.
- The stem diameter of maize crop in the tilled plot and conventionally prepared plot, the figure 8 showed that the increase in stem diameter of tilled plot from 30 DAS to 60 DAS was 0.5 cm 0.7 cm compared to the conventionally prepared plot. This showed that the plant girth is much higher in the tilled plot because of pulverisation of soil and increased moisture

holding capacity and porosity of soil. But, the interesting feature is that after 75 DAS the stem diameter in both plots were almost same. This was because the plant has attained enough maturity.

- The plant height of beans crop in the tilled plot and conventionally prepared plot, the figure 9 showed that the plant height after 15 DAS to 60 DAS increases at increasing rate. The rate of increase was 2.2 cm/day in the tilled plot but it was only 1.7 cm/day in the conventionally prepared plot. The unique feature observed was after 75 DAS there was no further growth of the plant. This was due to the fact that the crop attains its maturity.
- The stem diameter of the beans crop in the tilled plot and conventionally prepared plot, the figure 10 showed that the stem diameter after 15 DAS to 60 DAS increases at increasing rate. Therate of increase was 0.30 cm/every 15 days in the tilled plot but it was only 0.33 cm/every 15 days in the conventionally prepared plot. The unique feature observed was after 75 DAS there was no further increase in stem diameter of the crop. This was due to the fact the crop attains its maturity.

Crop yield in long dry season

The yield per plot of maize crop was recorded for both tilled plot and conventionally prepared plot. In the beans crop, the aaverage number of pods per plant and the yield were also recorded and given in table 6.

Table 6: Crop yield in the tilled and conventionally prepared plot during long dry season

Crop	Yield, Kg/plot of 16 m x 12 m		Average number of pods per beans plant	
	Tilled	Conventional	Tilled	Conventional
Maize	97.2	85.5	--	--
Beans	36.2	31.5	18	14

The above table reveals the following facts:

The yield in the tilled plot of maize crop was 97.2 Kg (5062.5 kg/ha) and the conventionally prepared plot was 90.5 Kg (4713.5) for the same area of the plot. The percentage increase in yield of maize was

found to be 13.7% in the tilled plot compared to the conventionally prepared plot. This was due to the fact that there is pulverisation of soil and increased moisture holding capacity and porosity of soil in the tilled plot.

The yield in the tilled plot of beans crop was 36.2 kg (1885.4 kg/ha) and the conventionally prepared plot was 31.5 Kg (1640.6 kg/ha) for the same area of the plot. The percentage increase in yield of beans was found to be 14.9% in the tilled plot compared to the conventionally prepared plot. This was due to the fact that there was pulverisation of soil and increased moisture holding capacity and porosity of soil in the tilled plot.

The average number of pods per beans plant in the tilled plot was 18 numbers and the conventionally prepared plot is 14 numbers of pods. The percentage increase in number of pods per plant was found to be 29 % of pods in the tilled plot compared to the conventionally prepared plot. This was due to the fact that there is more nutrient uptake and soil moisture absorption by the crop in the tilled plot.

Conclusion

The data processed and interpretation offered in the proceeding chapter was summarized and the relevant conclusions useful to the farmer's point of view are given below:

During the short dry season, it was found that the yield of maize in best tilled field is compared with the conventional tilled field. The yield recorded in the best tilled field of maize crop is 105.3 Kg and the conventionally prepared field is 91.5 Kg for the same area of 16 m x 12 m. The percentage increase in yield of maize is found to be 15.1% in the best tilled field. Similarly, the yield in the best tilled field of beans crop is 38.9 Kg and the conventionally prepared field is 34.5 Kg for the same area. The percentage increase in yield of beans is found to be 12.8% in the best tilled field.

During the long dry season, the percentage increase in yield of maize was found to be 13.7% in the tilled plot compared to the conventionally prepared plot. The percentage increase in yield of beans was found to be 14.9% in the tilled plot compared to the conventionally prepared plot.

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STUDIES ON COLD STORAGE OF COORG MANDARIN FRUITS

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and Sudarshan Pattar

Abstract

Investigations on cold storage of individually wrapped Coorg mandarin fruits were conducted in the Department of Horticulture, Forestry College, Ponnampet, Kodagu District. The fruits were treated with Sportak (Prochloraz 45%) 0, 100, 250 and 500 ppm prior to wrapping in 0.01 mm thick High Density Polyethylene (HDPE) bags. Physiological loss in weight was lower in fruits treated with Sportak 250 ppm and wrapped in HDPE bag. The spoilage percentage was also minimum in Sportak treatment with HDPE bag. The organoleptic rating decreased and it was found to be superior in fruits treated with 250 ppm Sportak and sealed in HDPE. A marginal increase in total sugars was observed in fruits treated with higher doses of Sportak, a slight increase in total soluble solids was observed in fruits treated with higher doses of sportak and sealed in HDPE. Acid content decrease with the increase in storage period up to 120 days.

Introduction

Storage losses of fresh fruits in India are high. Storage at low temperature immediately after harvest reduces the rate of respiration resulting in reduction and build up if the respiration heat, thermal decomposition, microbial spoilage and also helps in retention of quality and freshness for a longer period. Coorg mandarin become exceedingly popular with the growers and consumers in Karnataka because of its superb fruit quality coupled with good tree vigour, higher cropping potential and better performance. To avoid the perishable consequences of these fruits due to market glut during the harvesting season, prolonging its storage life is of prime importance. The post-harvest objectives is the retention of quality for as long as possible so that the marketing period can be extended to a higher value period. This can be conveniently achieved for most fruits through cold storage. Coorg

mandarin individually wrapped in HDPE film can be stored at room temperature for 8 weeks individually wrapped fruits, a micro-atmosphere is created in the polyethylene bag which reduces the rate of respiration. This water saturated atmosphere (WSA) in bags may also help to reduce the incidence of chilling injury and act in a synergistic way to further slow down loss of water, rate of respiration, fermentation and help in maintaining fruit firmness, freshness and taste for more than 8 weeks (Ben-Yehoshua et al., 1981). Several species of fungi are responsible for major losses of citrus during storage and marketing. HDPE seal packaging in combination with fungicide application has been reported to reduce the decay in Valencia oranges (Ben-Yehoshua et al., 1981). The present investigation was carried out to evaluate the cold storage suitability of fruits treated with sportak fungicide and packaged in HDPE film.

Material and Methods

The experiment on cold storage of individually wrapped Coorg mandarin was carried out at the department of Horticulture, Forestry College, Ponnampet Kodagu District. Fully ripe fruits, uniform in size and free from blemishes and bruises, were harvested from 15 year old free grown at the Horticulture farm ponnampet. The harvested fruits were washed in tap water to remove dirt and residual spray material contamination and then dried under shade. The fruits were given the following disinfection and fungicidal treatments (Prochloraz):

Treatments:

1. Fruits treated with chlorinated water
2. Fruits treated with chlorinated water + HDPE
3. Fruits treated with chlorinated water + 100 ppm Sportak.
4. Fruits treated with chlorinated water + 250 ppm Sportak.
5. Fruits treated with chlorinated water + 500 ppm Sportak.

The fruits were dipped for 5 min in chlorinated water (0.05% bleaching powder) and 2 min in fungicidal solution of different concentrations. The fruits were air dried. Each treatment was replicated thrice.

The treated fruits were individually wrapped in HDPE film of 0.01 mm thickness. The sealed fruits were placed in corrugated fibre board

(CFB) of 5 kg capacity and kept in a cold store temperature (-3.0 to -4.0°C and RH 85-90%).

Results and Discussion

The loss in fruit weight increased significantly with the increase in the storage days (Table-1). The individual seal packaging of Coorg mandarin fruits significantly reduced the weight loss. The mean maximum weight loss (12.25%) was recorded in non-sealed fruits. Further, the application of Sportak fungicide coupled with the sealing was effective in reducing weight loss. This may be due to the blocking of stomatal aperture and lenticels, thereby reducing the rate of respiration and transpiration. Similar results have been reported by Ben-Yehoshua *et al.*, (1981) in Valencia oranges.

The fungicidal treatment (Sportak 250 ppm) significantly reduced the incidence of spoilage as compared to other doses (Table 1). The incidence of decay increased with the prolongation of storage period. The extend of decay was markedly higher in control fruits than the fruits which were sealed with HDPE film and treated with higher doses of Sportak. This might be due to the check in the spread of infection by individual wrapping and sportak which acts as a barrier to Penicillium infection. Similar results were observed by Ben Yehoshua *et al.*, (1981). The maximum spoilage was observed in longer storage days which might be due to the weakening of the defence systems against fungal attack.

The results indicate that superior organoleptic rating was recorded from the HDPE sealed fruits in different treatments which may be due to better retention of quality parameters and higher permeability of polyethylene to CO₂ than to O₂ diffusion. Ben-Yehoshua (1984) while working with grapefruits reported that HDPE wrapped fruits retained excellent external and internal qualities for 3 months but were slightly softer and began to develop off flavour later on. The non-sealed fruits showed unacceptable appearance coupled with abrupt increase in total soluble solids and acidity and poor palatability. The organoleptic rating decreased with the increase in storage period.

The maximum content of total sugar (9.07%) was found in fruits treated only with chlorinated water (Table 2). The minimum content of total sugar (7.05%) was found in fruits treated with Sportak 500 ppm +

HDPE. There was an increase in total sugars with an increase in the storage time from 60 to 120 days.

The total soluble solids increased with the prolongation of the storage period (Table 3). The highest TSS (12.18%) was recorded in unsealed fruits. This may be due to maximum water loss in these fruits. The increase in total soluble solids with the prolongation of storage period may be due to increased hydrolysis of polysaccharides and concentration of juice due to dehydration. The better retention of TSS (slow increase) in HDPE sealed fruits following fungicidal treatments might be due to the maintenance of high relative humidity in HDPE film resulting in slow losses through evapotranspiration and dehydration. Similar results have been reported by Singhrot *et al.*, (1987).

The data of total acids content revealed that the acidity values decreased with the prolongation of the storage period (Table 3). The decrease in acidity may be due to the utilization of organic acids in respiratory process. The unsealed fruits showed more reduction in acidity because of higher rate of respiration. The fruits sealed in HDPE film followed by Sportak treatments retained higher acidity upto 120 days. This higher percentage of acidity may be due to reduced respiration by the fruits (Garg and Ram, 1973; Dhillon *et al.*, 1977).

Conclusion

The fully ripe Coorg mandarin fruits were surface disinfected with chlorinated water and treated with fungicide sportak (100, 250 or 500 ppm) prior to wrapping in 10 micron thick HDPE bags. The physiological loss of weight and spoilage was minimum in fruits treated with 250 ppm sportak and plastic wrapped upto 120 days of storage. The fruits maintained freshness, firmness and good taste upto 90 days as indicated by organoleptic ratings. A marginal increase in total sugars was observed in fruits treated with higher doses of sportak. A marginal increase or decrease in TSS was noticed in fruits treated with higher doses of sportak and wrapped in HDPE film. Acid content decreased with the increase in storage period upto 120 days.

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HERBALIZED DAIRY PRODUCTS IS A PROFITABLE VENTURE TO SELF HELP GROUPS - A REVIEW

M.Seethalakshmi and D.Govindammal

Abstract

Uses of Aloe vera in nutritional, pharmaceutical and cosmetic preparations draw attention for generation of scientific information. Looking to the importance of biologically active components possessed by the leaves of Aloe vera plant and its wide spread use, it has become imperative that, the leaf should be processed to retain its biologically active compounds. Aloe vera juice in the probiotic yoghurt will be a promising trend towards use of herb as well as functional ingredients in the dairy foods. The addition of Aloe vera juice may improve the activity of starter cultures in the product and may account for better textural properties leading to varying percentages of syneresis by reducing the amount of liquid separation in gels and owing to dairy products, such as yoghurt, helps to improve the overall quality of the diet and increases the chances of achieving nutritional recommendations. The use of Aloe vera juice in the probiotic foods can be a promising trend towards use of herb as well as functional ingredients in the dairy foods.

Keywords: *Aloe vera, yoghurt, herbalization.*

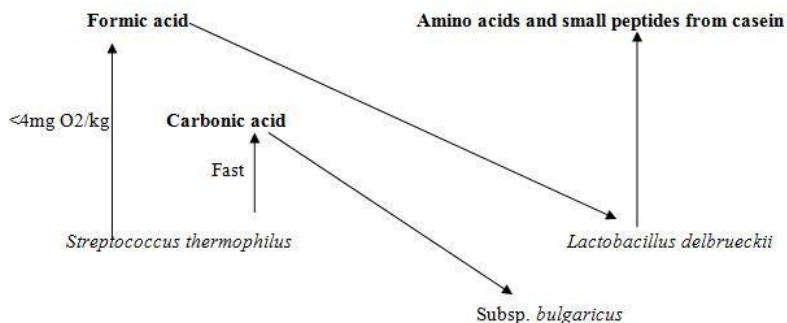
Introduction:

Milk is increasingly considered as a basket of pharma and nutraceuticals as more clinical evidence emerges on the therapeutic benefits of milk and milk-derived ingredients. As consumers are becoming more aware of health and benefits from dairy foods in the prevention of contemporary diseases, the global market for dairy foods and nutraceuticals will increasingly grow worldwide. Hence, the compositional analysis, and development of new ingredients and formulations will become increasingly important. New technique will need to be developed to extract the bioactive and therapeutic components in milk, process them without affecting their bioactivity, protect them and deliver them in active and or viable forms to the consumer.'

Yoghurt:

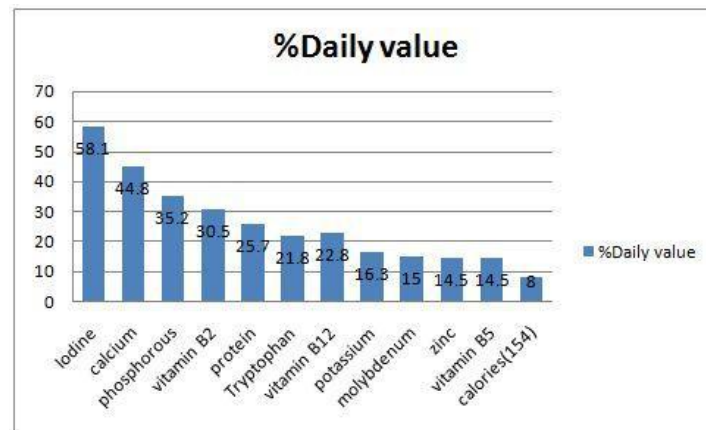
The word “yoghurt” is derived from Turkish “jugurt”, used to describe any fermented food with an acidic taste (Younus *et al.*, 2002). Historically, yoghurt was made by fermenting milk with indigenous microorganisms. Yoghurt having high nutritional and therapeutic properties is being highly consumed and produced (Karagul *et al.*, 2004). Yoghurt is stored at 2- 4°C throughout the distribution chain for avoiding risk of spoilage from yeasts (Tamime *et al.*, 2000) and also for preventing further activity by starter culture. Because of the low pH, yogurt is less prone to quality deteriorations caused by contaminants of microbial origin.

Mechanism of formation of yoghurt: (Siddharth Priyadarshi et al ., 2012)



Nutritional facts of yoghurt: (Siddarth Priyadarshi et al ., 2012)

Components	Value (100g)
Energy	257KJ
Carbohydrates	4.7g
Fat	3.3g
Protein	3.5g
Vitamin –A equiv	27µg (3%)
Riboflavin (vit B2)	0.14mg (12%)
Calcium	44.8%



Nutrients in yoghurt per cup (245.00 gms) (www.whfoods.com)

Health Benefits of Yoghurt:

Probiotic yoghurt is aimed at reducing medical conditions by restoring the beneficial microbial population in the colon, medical conditions such as constipation and diarrhea. It is beneficial to our digestive system, especially stomach and colon. Cow’s milk is preferred for preparing yoghurt as having low fat. It provides immunity, protect us from cold, cough and strengthen body’s defense mechanism. It strengthens the collagen in the skin and is good for our skin. It lowers the blood pressure, bad cholesterol and risk of heart attacks. Yoghurt is a source of natural proteins; it is safer for those having problem in tolerance of lactose. Yoghurt is rich in calcium so; it protects the bones against osteoporosis and arthritis. It discourages vaginal infections. It helps in cutting down calorie and thus helps in burning fat. By daily consumption of yoghurt, disease causing bacteria are flushed out from the colon and thus help in protecting against colon cancer. Consumption of yoghurt can shut down *Helicobacter pylori*; the bacterium responsible for most ulcers.

Aloe vera:

Aloe vera leaf contains 95 percentages of water, 75 percentages nutrients, 200 active compounds, 20 minerals, 18 amino acids, 12 vitamins and 92 enzymes. It can be used as the source of vitamins like A, B₁, B₂, B₆, B₁₂, C, E, Folic acid, Niacin etc. owing to its succulent properties, it is a rich source of nutrients and essential minerals. There is growing experimental evidence for its use as an antiviral, antimicrobial activity an ulcer remedy and an adjuvant cancer treatment due to its immune

modulating effects. Due to its high nutritional value it can be incorporated as base food products like aloe juice, aloe squash, to get nutritional food to human health (Pankaj,2013).

Theraupetic value of *Aloe Vera*

Aloe vera plays an important role in maintaining the healthy functioning of the major organs, and preventing diseases.

- ◆ *Aloe vera* releases pepsin, which aids digestion, soothes digestive tract irritations, colic pain and ulcers. It also heals heart burns. This has come down from the traditions of folk medicine of Europe, and proved in recent clinical trials in Japan.
- ◆ *Aloe vera* acts as a general tonic, raises immunity and fights diseases. Research reveals its efficacy in conditions like HIV and cancer, especially leukemia, due to its ability to produce white blood cells. Consequently, it can minimize the side effects of chemotherapy and radiation.
- ◆ It boosts circulation, and thus increases the supply of oxygen to the cells. Therefore, it could play a major role in alleviating the condition of thalassemia patients.
- ◆ *Aloe vera* is also beneficial for Asthma patients.
- ◆ It helps to maintains healthy joints and muscles, and thus, prevents arthritis.
- ◆ *Aloe vera* detoxifies the body, and is considered the best colon cleanser. It prevents constipation; therefore, it is an effective blood purifier.
- ◆ It is beneficial in kidney and liver problems, like jaundice.
- ◆ *Aloe vera* also reduces blood sugar, and controls diabetes.
- ◆ It reduces cholesterol and triglycerides, leading to a healthy heart, and preventing cardiac problems.
- ◆ *Aloe vera* reduces inflammation and infection of the eye and ear.
- ◆ Finally, it provides energy, and acts as a restorative. Moreover, it is said to alleviate depression. (Sampath Kumar *et al*, 2010)

Table1. Chemical composition and properties of *Aloe vera*

Constituents	Number and identification	Properties and activity
Amino acids	Provides 20 of the 22 required amino acids and 7 of the 8 essential ones	Basic building blocks of proteins in the body and muscle tissues
Anthraquinones	Provides Aloe emodin, Aloetic acid, alovin, anthracine	Analgesic, antibacterial
Enzymes	Anthranol, barbaloin, chrysophanic acid, smodin, ethereal oil, ester of cinnamonic acid, isobarbaloin, resistannol	Antifungal and antiviral activity but toxic at high concentrations
Hormones	Auxins and gibberellins	Wound healing and anti-inflammatory
Minerals	Calcium, chromium, copper, iron, manganese, potassium, sodium and zinc	Essential for good health
Salicyclic acid	Aspirin like compounds	Analgesic
Saponins	Glycosides	Cleansing and antiseptic
Steroids	Cholesterol, campesterol, lupeol, sistosterol	Anti-inflammatory agents, lupeol has Antiseptic and analgesic properties
Sugars	Monosaccharides: Glucose and Fructose Polysaccharides: Glucomannans/polymannose	Anti-viral, immune modulating activity of acemannan
Vitamins	A, B, C, E, choline, B12, folic acid	Antioxidant (A, C, E), neutralises free radicals

(Pankaj,2013)

Aloe vera Based Dairy Products

The *Aloe vera* juice finds wide application in dairy/food products like production of ready to serve drink, health drink, soft drink, laxative drink, *aloe vera* lemon juice, sherbet, *aloe* sports drink with electrolyte, diet drink with soluble fibre, hangover drink with B vitamin, amino acids, healthy vegetable juice mix, tropical fruit juice with *aloe vera*, *aloe vera* yoghurts, *aloe vera* mix for whiskey and white bread, cucumber juice with *aloe vera* (Ahlawat and Khatkar, 2011). *Aloe vera* products are available in various forms like capsules, gel and juice. It has cooling effect and bitter in taste, it contains *aloin* that is responsible for its purgative action and well known for its therapeutic properties. It regulates the peristaltic movements of intestines and promotes digestion. Regular consumption of *aloe vera* juice on a daily basis brings about gradual and

gentle health benefits, without irritant or harmful side effects. It also improves blood circulation due to its ability to detoxify. To establish an efficient, economic and profitable system for their industrial scale production, a proper understanding of these products herbalization is essential. This herbalization knowledge will help to design and develop innovative product to meet the demands of the product. In this context, the desirable attributes having herbalized dairy products has challenging target of the food world. Some notable food products available in the markets are as under:

- 1) *Aloe vera* herbal ice cream (pughazhendhi, 2012)
- 2) *Aloe vera* Chocolate (Jayabalan and Karhiketen, 2012)
- 3) Papaya-*Aloe vera* Ready To Serve (RTS) Beverage (Boghani et al., 2012)
- 4) *Aloe vera* Powder (Madan and Nindo et al., 2012)
- 5) *Aloe vera* Enriched Flavoured Milk (Jyothilingam and Pughazhendhi, 2012)
- 6) Therapeutic RTS made from blend of *Aloe vera* (Sasikumar et al. 2012)
- 7) *Aloe* Gel Enriched *Dahi* (Ramachandran and Srividhya ., 2014)

Future direction of Research:

The scientific research on *Aloe barbadensis miller* shows its potential therapeutic values. The detailed information in this review will provide a pathway for future study. From the above details it has been proved that *aloe vera* can be incorporated in food products without any side effect. *Aloe vera* can be incorporate fermented product (yoghurt) to enhance the nutritional value and to enhance the growth and viability of the probiotic and to prevent syneresis. The *aloe vera* enhances the growth of probiotics whereby it acts as prebiotic. As this plant is a rich source of biologically active compounds and phyto nutrients activity which helps to enhance the nutritional components of the newly developed products.

Contribution to the Society:

This plant can be grown at any conditions and in all seasons and so there is no need for special land preparations. It has high therapeutic value and it is used for many diseases and it can be used in dairy product and increase its value and to prevent certain diseases. As it has high medicinal value it reaches the consumer in a highly profitable manner. The practice of herbalization of yoghurt with *aloe vera* may introduce to

SHG members and small scalable food production units will gain popularity and expected to fulfill more nutritional needs also.

Conclusion:

Commonly herbals having multiple health benefits and high phytonutrients quality, it is better to utilize such natural food source in the right way for developing healthy population. They should be coping with the nutritional disorders and allied problems. Hence it can supplement a multispecialty aspect to dairy products. Yoghurt can be supplemented with various useful ingredients. Addition of herbs could be an effective strategy to improve functionality of milk and milk products with respect to the health benefits, food safety and bio preservation.

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A STUDY ON TRENDS IN NATURAL RUBBER TRADE IN THE CONTEXT OF ASEAN-INDIA FREE TRADE AGREEMENT

* Nivya V .Neelankavil and ** Dr.S.Nehru

Abstract

Global integration is a process of establishing linkages across the world. Establishing linkages and increasing geographic integration has been central to the development of the world economy. In other words, it represents geographic widening of market place. These developments have profound impact on what people produce, how they produce, and how well they live (Adams, 2011). The international integration has been directed by the various economic, political, social, cultural & historical dimensions of globalisation. Among these, vital are the influence and power in the global economy determined by the economic and political factors. Thus geo-politics determines how strongly economic integration can deepen between traditionally defined national borders. Free trade agreements are the result of geo-politics based economic integration.

Keywords : Natural Rubber, Trade, Trade Agreement Globalization

Introduction

The present world involves a more liberalised and commodified set of historical structures, driven by the restructuring of capital and political shifts (Gill.S 1995). This process involves the spatial expansion and social deepening of economic liberalisation which we call as globalisation. With global barriers to trade in goods substantially reduced, the gains from economic integration can be secured by a wider range of instruments aimed at free movement of capital & labour and promoting greater competitiveness. This overall effect can be described as “deep integration” a term adopted by the World Bank. In its widest form, globalisation involves economic integration; the transfer of policies across borders; the transmission of knowledge; cultural stability; the reproduction, relations, and discourses of power; it is a global process, a

concept, a revolution, an ‘establishment of the global market free from socio-political control (Nikitin & Elliott, 2003). On the other hand, globalisation does not mean that all activities should operate on a global scale – it can be both global as well as local in scope. Rational geographic distribution of economic activity would suggest a world with some activities on a global scale, some concentrated in urban locations, some scattered across the landscapes. Much depends on economies of scale and specialisation, and on the costs and other constraints of transportation and communication. The optimal degree of globalisation increases over time as transportation and communication costs declines and as the world becomes more informationally/ culturally integrated (Adams, 2011).

Statement of the Problem

India embraced trade liberalisation in the background of external payment crisis of 1991, famously known as ‘LPG’ changed the course of India’s economic history. Competitiveness of countries in individual products/commodities is expected to play a major role in the international trade. Through globalisation, as trade barriers are reduced and unfair competition is disciplined, freer trade is expected to take place for many commodities. India is a signatory to the Uruguay Round Agreement of the General Agreement on Tariffs and Trade (GATT). This makes it mandatory for India and all member countries to open up their economies to the world market. In this process, agriculture is a key sector. Free trade agreement (FTA) with Association of South East Asian Nations (ASEAN) and India (AIFTA) was inked on August 13, 2009 in Bangkok after six long years of negotiation which started in 2003 as a part of the Framework Agreement on Comprehensive Economic Cooperation Agreement (CECA) between India and the 10 Southeast Asian countries. The AIFTA became effective from January 01, 2010. The signing of this agreement is an important milestone in India’s ‘Look East Policy’. This agreement, however, has also created controversies with substantial domestic resistance, particularly from the plantation sectors in the southern states of the country.

Asia is witnessing the rapid proliferation of free trade agreements (FTAs). The growing trend of signing FTAs is irreversible in any region of the globe, but especially so in the Asian region (Plummer et.al, 2010). Historically, India’s engagement with Asia has mostly been on shared

cultural, geographical and colonial ties. The inking of the ASEAN-India FTA (AIFTA hereafter) is a significant step in this direction. India's Look East Policy holds more relevance today as countries from this region are some of the most dynamic growth areas. The ASEAN - India FTA has created one of the largest regional trade blocs in the world. The agreement is key to create an open market across the region. ASEAN with 600 million people - against India's billion plus - presents a substantial opportunity for India's export sector. India would - through the FTA - gain access to machinery, steel products, chemicals and synthetic textiles and also allow Indian business opportunities in ASEAN countries and open up the bloc's services sector. Furthermore, Australia, China, Japan, New Zealand and South Korea have already signed FTAs with ASEAN and India cannot stay away. Hence signing of AIFTA is one of such regional trade agreement where there are traces of geo-politics and aspirations of growth. The ASEAN -India FTA takes a number of measures to improve trade flow between the regions. According to the agreement, the involved countries will not institute or maintain any non-tariff measure on the importation of goods from other members of FTA.

The ASEAN -India FTA or AIFTA classifies the tariff lines into four broad heads. These are: -

Natural rubber (NR), classified as an industrial raw material comes under the exclusion list of AIFTA considering its importance to the national economy as a strategic industrial raw material and as an import substitute good. This implies that there would be limited reduction in tariff from the existing level. India is the fourth largest natural rubber producing country after Thailand, Indonesia and Malaysia and largest consumer of natural rubber in the world market. Against this background, the present exercise makes an attempt to examine the trends in natural rubber trade in the context of ASEAN -India Free Trade Agreement.

Objectives of the study

The main intension of the study is to examine the trends in natural rubber trade in the context of ASEAN-India Free Trade Agreement.

Methodology

The present exercise is based on secondary data are drawn from Rubber board database during the period from 2004-05. The main aim

of this study is to examine the trends in natural rubber trade in the context of Asean -India Free Trade Agreement. According to the figures recently released by the Indian Rubber Board Statistics, the consumption pattern of natural rubber exceeded the production pattern (Figure 1). This trend indicates clearly, how the natural rubber is an essential commodity in the present era.

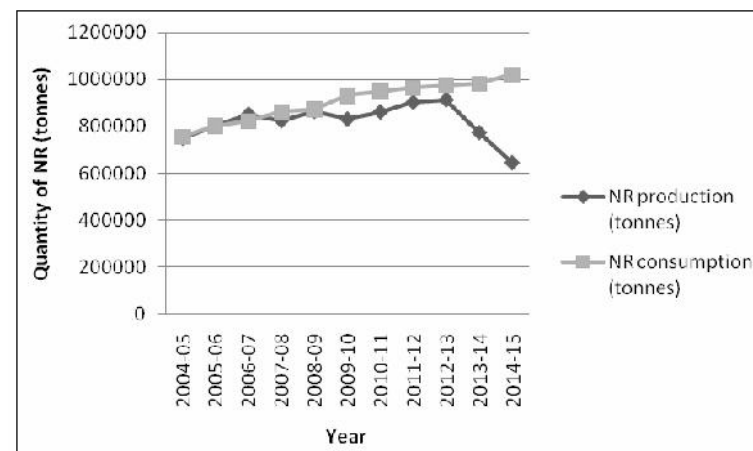


Figure: 1 Production & Consumption of NR in India

Source: Compiled from Rubber Board Database

The important product groups that dominate India's import basket from ASEAN are: edible vegetables, edible fruits, coffee, tea, spices, cereals, oil seeds, vegetable oil, cereal preparations, food residues, and natural rubber. Together these product groups account for 88.67 percent of total agricultural imports from ASEAN. It has been identified that the import share of natural rubber from the world and especially from ASEAN has increased and this has been done in order to meet the demand deficit in the country. Available statistics on import of natural rubber indicates the increasing trend of import (Figure 2 & 3). Therefore, rising imports of NR raises concern about the sustainability of the domestic industry. Though natural rubber is included in the exclusion list, there is an implicit lapse for future expansion in imports (Sunita, 2009).

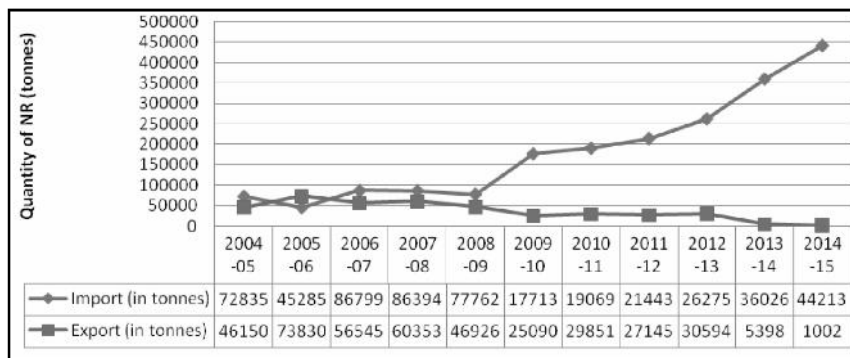


Figure: 2 Pattern of Trade in NR between India and world nations
 Source: Compiled from Rubber Board Statistics

Across themember countries, the potential import threat is evident in the following productschapters: Indonesia (Fish, Edible vegetables, Oilseeds, *Natural Rubber*, Vegetable saps),Philippines (Edible vegetables, Vegetable saps, *Natural rubber* and Beverages & spirits),Vietnam (Cof-fee, Tea, Spices; Food residues; *Natural Rubber*), Malaysia (Ediblevegetables, sugar & confectionary, Edible preparations, *Natural Rubber*, Cocoa and Beverages & Spirits), and Thailand (Edible vegetables, Edible fruits, Sugar & Confectionary, Edible preparations, Food resi-dues, *Natural rubber*, Oil seeds, Flowers, Vegetable saps) (ASEAN – India TIG-CTC).

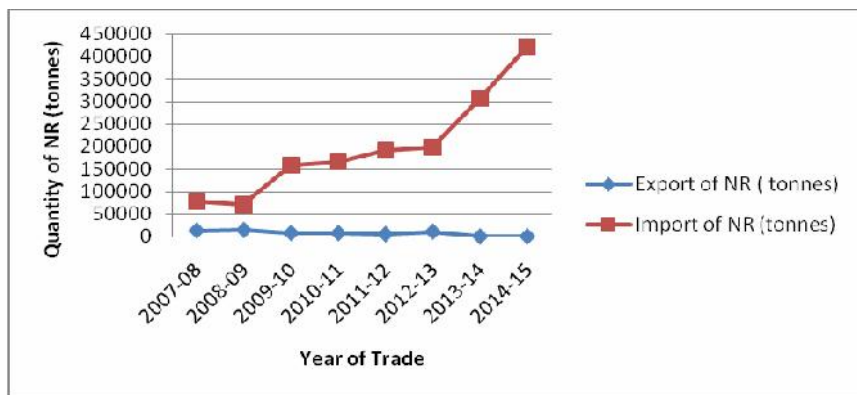


Figure: 3 Trade in NR between India and ASEAN,
 Source: Compiled from Rubber Board Statistics

Note: 1. Since the export quantity for the year 2014-15 is unavailable, it has been marked zero for depicting in the figure.

The data shows that export of NR is decreasing, while import is increasing especially so after the year 2008- 09 when AIFTA has been agreed. This confirms that, trade between India and ASEAN has increased and mostly due to increased import to India. The analysis done by Sunita (2009) has shown that the duty concessions do not seem to have any significant impact on import trends as they have been placed under Exclusion list or under Special Products. In the case of Tea, Pepper and Natural rubber, the average imports from ASEAN as also from the world have increased. The primary reason has been the access to duty free channel imports for value-added exports. This would mean that these products are being imported (from ASEAN and other countries) under duty free channel for exporting value-added products in the pre-FTA years and are likely to continue in the post-FTA period.

Natural Rubber in India

Plantations form the most commercialized sub sector of the agricultural sector. They have many of the industrial characteristics that qualify them even to be categorized as ‘plantation industry’ (Pillai, 2004). The growth attained by the Indian rubber plantation industry since its commercial beginning has no parallel in the agricultural scenario of the country. In terms of productivity, growth in area & production, and the extent of price realization at the farm gate, the Indian rubber plantation industry is ahead of all the other major natural rubber (NR) producing countries in the world (Lalithakumari & Jacob, 2000).

The growth in area under rubber during the first decade of the 20th century was slow, but hiked during the beginning of the second decade. The legislation to exempt rubber and other plantation crops from the purview of land ceiling, relatively remunerative price for rubber, coupled with incentives introduced by Rubber Board, fuelled the process of crop –shifting in favour of rubber. The traditional rubber growing regions in India are Kerala, and the Kanyakumari district of Tamil Nadu. Currently rubber is successfully grown in Karnataka, Tripura, Assam, Meghalaya, Mizoram, Manipur, Nagaland, the Andaman and Nicobar Islands, Goa, Maharashtra, Orissa, Andhra Pradesh, Madhya Pradesh and West Bengal. However Kerala enjoys a near monopoly position of area under crop production. The dominance enjoyed by the smallholding sector in the rubber plantation industry in India is another unique feature.

Rubber sector provides considerable employment opportunities directly and indirectly such as tapping, processing, transportation, marketing etc.

Table: 1 Annual Trend in Area, Production, Yield and Consumption of Natural Rubber in India

Year (April to March)	Rubber Area (ha)	Tappable Rubber Area (ha)	Production (tonne)	Average Yield (kg/ha)	Consumption (tonne)
2004 – 05	584090	439720	749665	1705	755405
2005 – 06	597610	447015	802625	1796	801110
2006 – 07	615200	454020	852895	1879	820305
2007 – 08	635400	458830	825345	1799	861455
2008 – 09	661980	463130	864500	1867	871720
2009 – 10	686515	468480	831400	1775	930565
2010 - 11	711560	477230	861950	1806	947715
2011 – 12	734780	490970	903700	1841	964415
2012 – 13	757520	504040	913700	1813	972705
2013 – 14 p	778400	518100	774000	1629	981520

Source: Statistical Highlights, Rubber Board. P: provisional

Major findings

- ◆ The study found that the area of Rubber cultivation has shown an increasing trend. It was 584090 hectares in 2004-05, which has constitutently and reached to 778400 hectares in 2013-14. During a period of 10 years, the area under rubber cultivation has increased 194310 hectares.
- ◆ The study also found that the area under trappable rubber has increased significantly from 439720 hectares in 2004-05 to 518100 hectares during 2013-14.
- ◆ With regard to production, the study found that the production of natural rubber has shown a fluctuating trend during the study period.
- ◆ With regard to the average yield of natural rubber, the study found that the average yield of natural rubber has noticed a fluctuating trend during the study period.
- ◆ The average yield per hectare ranges between 1629 kgs and 1879 kgs during the study period.

- ◆ With regard to consumption of natural rubber, the study found that an increasing trend has been noticed. It was 755405 tonnes during 2004-05 which has constitutently increased and reached to the highest level of 981520 tonnes during 2013-14.
- ◆ The study found that the import on natural rubber exceeding the export which is mainly due to higher demand for natural rubber in the domestic market during the study period.

Conclusion

AIFTA has provisions for protecting the sentiments of farmers in the plantation sector, such as inclusion of plantation crops under the negative list, rules of origin, bilateral safeguard measures including imposition of safeguard duties etc. But there needs to be monitored by government to ensure that these agreements will not aggravate market failures and livelihood security of farmers, since it can only add up the reserve army if the labourers lose their jobs due to non-competitiveness; and not replace them into another sector as full employment principle suggests. The plantation sector, being highly labour (women) intensive, operating in the backward and ecologically fragile regions and dominated by millions of small and marginal farmers, plays a vital role in accomplishing inclusive growth that is being upheld today in our development strategy. Therefore what we need is not survival strategies during the era of market integration process, instead, a development strategy for a sustained growth of rubber sector considering its three facet role as an agricultural crop, industrial raw material and an import substitute commodity.

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INTERCULTURAL SYNTHESIS, RADICAL HUMANISM AND RABINDRANRITYA : RE-EVALUATION OF TAGORE'S DANCE LEGACY

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Abstract

Rabindranath Tagore imbued Indian dance and music with a new modern sensibility. He created novel and eclectic dance-and-music genres, Rabindranritya and Rabindrasangeet, when the national trend was toward classical revivalism. He inspired Indian women to dance on the national stage at a time when dance was associated with immorality and cultural degeneration. This article explores Tagore's song and dance creations, connecting them to his radical political and philosophical thought on universal humanism. Focusing on his views on creativity and freedom, nationalism and cosmopolitanism, and women and essentialism, it is argued that this eclectic intercultural synthesis of ideas served to promote individual consciousness, empowerment and cosmopolitanism without rejecting their Indic cultural roots.

Keywords: Bauls, Bengal, cosmopolitanism, dance, humanism, India, inter-culturality, Java, nationalism, Rabindranritya, Sbantinkketan, Tagore, universalism, women

Introduction

Rabindranath Tagore (1859-1917]:77) clearly connected performance and life when he wrote in his book titled Personality, a compilation of lectures he delivered in America on what he considered life's essential knowledge:

[T]he curtain rises, life appears on the stage, and the drama begins whose meaning we come to understand through gestures and language resembling our own.....We know what life is, not by analysis of its parts, but by a more immediate perception through sympathy. The 150th birth anniversary of Rabindranath Tagore (7 May 1861-7 August 1941)

in 2011 was an occasion for many kinds of reflections on Tagore's legacy (see Banerjee, 2011). The present article focuses on a lesser investigated arena of this legacy, related to dance, Rabindranritya. In researching Tagore's magna opera of artistic and literary works, we find that his song-dance compositions and dance dramas have remained peripheral to scholarly enquiry. Yet, in Tagore's song-dance compositions and dance dramas we find the full blossoming of life's meanings, as he understood and expressed it through verbal and non-verbal modes of communication: gestures, language and, more importantly, sympathy. He envisioned an integration of language with human emotion/empathy and somatic consciousness. To summarise, his radical departure from various artistic and literary conventions of the time, Chaudhuri (2010:551) writes: 'Unlike previous Bengali dramas, Tagore's dance dramas emphasize a fusion of lyrical flow and emotional rhythm tightly focused on a core idea'.

As a dance-maker and scholar, my first impulse is to investigate this notable lack of attention to the very first creation of modern Indian dance, nothing less than a revolution during its time. The thinness of scholarly attention is even more significant because the organic relationship between knowledge and humanity (something that Tagore spent his life bridging) can be dynamically grasped through his song-dance creations. These were his expressive dances set to poetry (nritya-abhinaya) and dance drama (nrityanatya). His idea of universal humanism is luminescent in these creations. Yet, the dance from that Tagore created, Rabindranritya, has been dismissed by many, such as Ashutosh Bhattacharya, the eminent historian of Bengali drama, as the weakest link to Tagore (Bose, 2008: 1087).

Creativity, Freedom and Movement

Dance entered Shantiniketan through enactments of dramas, poetry and musical renditions. From its inception, this involvement was not bound by rules and regulations. Much like his painting (which Tagore began in the 1920s), his dance was not methodical or technical. Tagore himself performed frequently. As early as 1915, Tagore performed the blind, free-spirited, dancing Baul in his play Phalguni, an event that was

put on canvas by the painters Ababindranath Tagore and Nandalal Bose. Ghose (1999:6), the veteran Rabindrik (Tagorean) dancer and singer who spent his entire career in Shantiniketan, described it as a dance of pure joy and freedom.

Tagore was deeply influenced by the classical Indian philosophy of the Upanishads, Buddhist thought, Hindu-Muslim syncretism and the free-spirited folk traditions of the Bauls of Bengal. He was also, as we know, greatly influenced by western liberal humanism and the individual expression of creativity. He thought that dance, like poetry, should embrace non-realistic representations and he was moved by the abstract expressivity of American modern dance. Tagore saw the potential of dance to express deep emotional experience without the restrictions of text or formulaic vocabulary. It was an art that could uncover the innermost unifying rhythm of a fragmented universe. His thoughts are echoed in his verse: '*Mama chitte niti nrtitey keje nache tata thei thei*' (My translation: Inside my heart / who is it that dances daily / tata thei thei).

Tagore crystallised his vision of dance through his *Nrityanatya* or dance dramas such as *Valmiki Pratibha*, *Kalmrigaya*, *Mayar Khela*, *Chitrangada*, *Shyama* and *Chandalika*. He composed the songs for these plays so that they could be performed through movement and rhythm. *Valmiki Pratibha* was first staged in March 1881 in his ancestral house in Jorasanko in North Calcutta. He was only 20 years old when he composed it and performed the lead role himself when it was staged later. The style of dancing we know as *Rabindranritya* today emerged from these early experimental renditions based on literary forms and musical compositions. His experiments with dance movements in Shantiniketan included songs, dialogue, dance, music, stage sets and costumes. The primary style in which students were trained was Manipuri dance. Ghose (1983:26-31) writes about the signal contribution of Nabakumar Singh, the primary Manipuri teacher in Shantiniketan. Kathakali, the main classical dance style from Kerala, was also incorporated in the dance repertoire, as the primary expression of male dance. Ghose (1983) writes about his travels to learn various dance forms from all over Asia, including visits to Kerala to learn Kathakali. Details about his travels were published

in the yearly journal of Shantiniketan: ‘Santimoy Ghose visited several parts of South India to study indigenous forms of dancing during the year, and was thus greatly helpful in teaching dancing to students’ (quoted in Ghose, 1983:50).

Although *Rabindranritya* was/is a synthesis of Manipuri and Kathakali, it often incorporated other classical styles such as Bharatnatyam and Kathak. These styles were used to portray specific characters for his dramas which were no longer music dramas, but came to be known as dramas or *Rabindra Nrityanaty*. For instance, in the staging of *Shyama* in 1938, Asha Ojha, trained in Kathak, performed the character of Uttiya, and Mrinalini Sarabhai played the character of Vajrasena using Bharatnatyam (Bose, 2008: 1089). However, Tagore was not as enthusiastic about Kathak and Bharatnatyam as he was about the Manipuri, Balinese and Javanese styles. He was particularly impressed with Javanese dance and the Balinese gamelan and wrote during his visit to Java (ICCR, 2011):

The life of man with its joys and sorrow, its trials and triumphs, courses along waves of form and colour and sound. If we reduce the whole of it to sound, it becomes rich music: similarly, if we leave out everything else except its motion, it becomes pure dance-it became clear that their dance, also, is not intended to display the beauty of motion, but it is their language, the language of their history and their annals. Their gamelan also is but a tonal dance, now soft now loud, now swift; it is also not intended to express musical beauty, but only a song for their dance.

Thus for Tagore dance and music were much more than beautiful motion and sound, they encapsulated the annals of human activity and culture. But his eclectic experimentations and analyses of various dance forms were not always satisfactory for its practitioners. Tagore’s daughter-in-law Pratima Devi wrote, originally in the 1930s, about the struggle to give voice to a modern Indian dance idiom: ‘It was like groping in the dark with a mixture of mime, musical expression and body movements. The mixture did allow scope for emoting but it was not completely fulfilling’ (Devi, 1965 [1949]:20-1, quoted in Chakraborty, 2010:196).

Not surprisingly, Tagore’s notions of modern dance as an amalgam of various styles had many critics, as expressed in the following lines by an unknown commentator, quoted in Ghose (1983:84): For me, however, they seem to be artificially pushed in, disturbing the atmosphere of Tagore’s play. Imagine the dance of the guards jumping and dancing all over stage...to me Tagore’s dramas and characters—the whole atmosphere of his plays—cannot form a platform for exhibition of the various techniques.

Tagore ultimately did not see his dance as something that would or could be codified to render the same movement vocabulary everywhere it was performed. That is why we learn from Ghose’s (1983) detailed description of Tagore’s dance dramas how the same song was danced on different occasions using different vocabularies. The idea of continuous re-creation and spontaneity was instilled deeply in Tagore’s philosophy of creativity and freedom. For him, creativity was an ongoing search for perfection that would create empathy and free the human soul. This reflects his search for universal humanism which began from developing empathy and sensitivity to other human beings and cultures. His teachings at Shantiniketan were based on these ideals cultivated through the arts. Tagore (1929:73) wrote: ‘I invited thinkers and scholars from foreign lands to let our boys know how easy it is to realise our common fellowship’. Interestingly, Tagore’s search for creative freedom and personal self-re-invention lasted well beyond his search for a new idiom for Indian dance. He turned to painting in his sixties and painted till his last years.

His ideal of creativity and freedom, two sides of the same coin to him, was not confined only to artistic matters. Although Tagore believed that true freedom is found in our creative juices or emotion and is not bounded by detached reasoning, he thought that man, with his intelligence, is the originator of rules, rhythm and creative unity in the world. This creative consciousness in man according to him is *atmashakti*, the highest consciousness and a true discovery of selfhood (Roy, 2005:4). For him, creative expression originates from finding one’s place in the wider world. He found it first in his intimate relationship with nature and later in human relationship. Tagore wrote that man is connected to

the rest of the world through sympathy/empathy or emotion. By enjoying the world's emotive juices numerous relationships are developed by man. The world of appearance that is the external world is gradually transformed into the intimate world of sentiments. He further explained that when we appreciate aesthetic emotion (*rasa*), it is not only a feeling about the object of our appreciation but also a feeling about ourselves. Through these 'feeling states' our consciousness becomes more pronounced and we are able to express ourselves (Roy, 2005:18).

Tagore's View about femininity

Tagore's changing ideas about femininity are perhaps best captured in the dance drama *Chitrangada*, which he rewrote from an earlier version in 1936. In this dance drama, the female protagonist *Chitrangada* is a warrior queen of what is today Manipur. She has an androgynous identity. She desires Arjuna (the major character in the *Mahabharata*) and transforms herself into a beautiful woman to attract him. But ultimately she reveals her true self to Arjuna as his equal in the battlefield. In the dance drama, *Chitrangada* expresses a fluid identity where masculinity and femininity are external to her inner-self. As Sen (2013:6) writes: '*Chitrangada* asks her sakhigan (female friends), to 'mould her anew' by 'cloaking her in a new dress' (*abharan*)'. She goes on to argue that the idea of 'cloaking' is crucial as gender seems to function merely as an external grab that can be put on and cast off. Here Tagore seems to question any ontologically fixed essence of the feminine. In this dance drama, then, *Chitrangada* asserts her self-realisation (*atmashakti*) as a human being who is not attached to any intrinsic feminine trait and in fact shows that she is equal to her male counterpart, Arjuna. Moving away from notions of the essential feminine, Tagore here rejects any kind of biological determination of gendered identity. Tagore's radical departure from his previous notions of bounded gender identity is perhaps even more explicitly expressed in his poem '*Chitra*' (1941) where he embraces an androgynous identity (*ardhanarishwara*) for himself.

Tagore's message of women's rights, dignity and self-empowerment that he propagated through *Rabindranrita* certainly continues to capture young choreographers today. I observed a powerful example of this recently in Kolkata in a production by *Sanved*, an

institution that uses dance therapy to rehabilitate women and girls who have been trafficked and physically and mentally abused. The programme was a tribute to Tagore. In a creative college of dance, music and text, *Sohini Chakraborty*, the founder and choreographer of *Sanved*, staged a powerful and graceful piece on women's empowerment. *Chakraborty*, a student of *Chaki-Sircar*, impressively wove an amalgam of movements with *Rabindrasangeet* and western music. The signature movement style was *Navanrita* and the choreographic piece was titled '*The Inner Light*'. The work showed that Tagore's song - dance creations have enabled creativity and empowerment to come together for women of many classes in Bengal today.

Conclusion

The dance style Tagore created, *Rabindranrita*, has not quite stood the rest of time. Few dancers and choreographers are aware of it outside Bengal. *Rabindranrita* was never codified and Tagore who believed in spontaneity over strict discipline (going back to his childhood experiences) never created a rigorous regimen for training dancers. Although dance was fully integrated with the educational curriculum at *Shantiniketan*, it remained experimental and ad hoc. Not a dancer himself, Tagore was unable to create students or a lineage to perpetuate his dance aesthetic after he was gone. But what has remained is his foundational role in imbuing Indian dance with a modern aesthetic and sensibility. His dance was a step in ushering in modernity itself in India. He made dance respectable and a worthy art form at time when it was considered a degenerate pursuit.

Tagore's method of synthesising various dance styles from many parts of the world to create an integrated whole inflected his own unique understanding of cosmopolitanism and multiculturalism. In his view, interculturality and cultural boundary-crossing could create a rich life in civil society where political and statist identities would be pushed to the margins. For him political identities were fixed like national boundaries, but cultural identities were open-ended and could absorb others. According to him, if we are connected to the larger human family we can keep our personal identities porous and create ourselves a new. This was his vision of a multicultural self, both culturally specific and universal.

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ANALYSIS OF INTER DISTRICT VARIATIONS OF WOMEN'S REPRODUCTIVE HEALTH PROBLEMS IN TAMIL NADU

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Abstract

The State of Tamil Nadu in comparison with the national level has shown better demographic indicators but the reproductive health level of women is not uniform in all its districts. The main objective of this paper is to examine the inter district variations in women's reproductive health problems of women in Tamil Nadu. The Reproductive Health status of women was measured by constructing Reproductive Health Index (RHI) using the indicators on which data was collected in the survey. From the analysis, it is found that there is wide inter district variations in RHI and the reproductive health index for DLHS-2 is 0.770 and 0.712 for DLHS-3. The southern districts, namely, Ramanathapuram, Virudhunagar, Pudukkottai, Kanniyakumari, Sivagangai and Tiruchirappalli having poor RHI need to be taken for special care to improve the reproductive health of women. The present paper suggests that suitable policy measures for specific district level plan needed for reducing inter district variations For this it needs involvement of Panchayat Raj Institutions, local NGOs and Self Help Groups. Creating awareness and health education to the targeted women in the high focused districts will help to improve the reproductive health of women in Tamil Nadu.

Introduction

Development studies have been focusing on the health of general population, particularly more special groups like women and children. Within the family the women are found to be marginalized in terms of autonomy, which is very essential to boost self-esteem. The role of women and the autonomy she enjoys in patriarchal society like India is a well-researched area. Due to low position in the family and society, women face a host of problems throughout their life cycle. Woman's health seeking behaviour is very much limited by her status in the family and also by her self-perceived role that prevents her from taking decisions on

her own care. Various studies conducted in India have pointed out the self-perception of the illness and lack of access to good quality health care services are the major reasons for women not seeking timely health care (Prasad et al., 2005; Rangaiyan and Surender, 2006).

A concern on the concept of women's health was raised in the developing countries after the two important international events, the International Conference on Population and Development held at Cairo in 1994, popularly known as ICPD, 1994 and the fourth World Conference of Women held at Beijing in 1995. The issues of women's health and the approach of the prevailing health delivery systems were critically examined in these conferences and it was suggested to adopt a 'life cycle approach' in delivering health care to the women. All participated nations in ICPD, 1994 agreed to revise their policies and programmes and India being a signatory, expanded its 'Family Welfare' programme, integrating the MCH services and adding new services, and launched the Reproductive and Child Health (RCH) programme in the year 1996. The monitoring mechanism to track the improvements in reach of health services and reproductive health status indicated mixed performance of the programme. Various studies and surveys showed that while there was marked improvement in the general health of the population; the gap in the health status of the population between rural and urban residents remained wide, indicating that the rural health delivery system required further focus (Jejeebhoy, 1998; Barua and Kurz, 2001).

To improve the reach and effectiveness of the rural health delivery system, the Government of India launched the National Rural Health Mission (NRHM), 2004, a mile stone to improve the health conditions of Indian population, which is predominantly rural and the government also intend to launch National Urban Health Mission (NUHM) to address the problems of urban poor.

Reproductive Health Index will clearly identify the districts which are lagging behind with respect to reproductive health of women in Tamil Nadu. Composite indices are generally used to measure phenomenon that are multidimensional in terms of conceptualization (Ramanathan, Mala, 1998).

In this context, it is necessary to examine and to identify the districts which are below the average health index to take immediate steps to remove the inter district variations among the districts of Tamil Nadu.

Review of Literature

Audinarayana (2006) examined the district level household survey data collected in a large scale survey and concluded that the government health services are losing charm among the people.

Anjali and Kanitkar (2004) analysed the data collected by the National Family Health Survey-II with a view to understand the treatment seeking behaviour of women in urban India. They found that among symptomatic women only 45 percent sought treatment for their reproductive health problems. The women for their reproductive health problems overwhelmingly sought Private Doctors followed by Government doctors. The decision to seek advice or treatment is significantly influenced by the number of women reported symptoms.

Meena Gopal and Lakshmi Lingam (2003) on reviewing the studies conducted on women's health suggested that the future studies should focus on how class, caste and gender variable intervene, interact and contribute to illnesses and differences in prevalence rates, intra-class and inter class variations in women's morbidities and the factors that influence women's experience of illness, perceptions of disease, and the social etiology of disease and access to health care.

Generally in India, women tend to consider many symptoms of reproductive problems as normal, do not seek treatment until discomfort is quite high and so apparently remain infected for a long time (Oomman 2000; Apte and Trasi, 2001; Prasad et al., 2005; Rangaiyan and Surender, 2006;). Married women are reluctant to seek medical treatment because of lack of privacy, lack of female doctor at the health facility, the cost of treatment and their subordinate social status (Jejeebhoy, 1998; Barua and Kurz, 2001), prevailing cultural and traditional practices, which are harmful to the health of the women.

Reproductive health is seen as inextricably linked to the concept of reproductive rights and takes into account the ethical regard for 'women's integrity and self-determination'. It is thus intertwined with the concept of women's human rights [Correa 1994].

Tamil Nadu is one of India's socio economic and demographically developed state. But still reproductive health care, particularly the treatment taken for reproductive health problems is not up to the mark (Anjali Radkar and Tara Kanitkar, 2004). From the above reviews, it is clear that there are limited studies and it is necessary to identify the districts which are below the state average to monitor and evaluate the government health programs to improve the standards. The findings of the present study will help in re-orienting the programme to be women-centric.

General Objective

The overall objective of this paper is to examine the inter district variations in women's reproductive health in Tamil Nadu.

Methodology

Data sources

The present paper utilizes the district level household survey (DLHS) data. In order to analyse the above objectives, the recent available reproductive and child health DLHS-3 and DLHS-2 data have been used. The surveys were carried out by International Institute for Population Sciences (IIPS), Mumbai, under the guidance of Ministry of Health and Family Welfare, GoI in 2007-08 and 2002-04 respectively. The survey collected the information by using the separate questionnaire for the individual household, women, husband, village and health respectively. This paper utilizes only the information collected from the women who are currently married and in the age group of 15-44 years in the state of Tamil Nadu. Further it utilizes the sample of 32,623 households (HH) in DLHS-3, 32,685 HHs in DLHS-2 into consideration, in which 26,685 women in DLHS-3 and 25,522 women in DLHS-2 were interviewed both from rural and urban residence by taking the entire 31 districts of Tamil Nadu.

Reproductive Health Index

Reproductive health mainly account for the women's reproductive health. Reproductive Health Index (RHI) is calculated as similar to Gender Development Index (GDI) in order to focus on the most important aspect of women's health. RHI needs to recognize the complexity of factors that directly or indirectly determine the reproductive health status of women (HD Report, Govt. of Tamil Nadu, 2003).

For examining the inter district variation of women's reproductive health in Tamil Nadu, reproductive health index (RHI) is used in contrast to the absolute figures with respect to individual indicator. The paper intended to calculate the RHI for each district of Tamil Nadu. The RHI measures the reproductive health status of women. It is a composite index constructed by taking into account four indicators representing different aspects of reproductive health.

The four indicators are the following:

1. Percentage of women reporting pregnancy complications.
2. Percentage of women reporting delivery complications.
3. Percentage of women reporting post-delivery complications.
4. Percentage of women reporting symptoms of reproductive tract infections.

By using the above indicators we calculated the reproductive health burden for each of the above said indicators using the formula given in appendix A. Then the average reproductive health burden index is constructed by taking a simple average burden of the four indicators. Now the reproductive health index is measured as one minus the average reproductive health burden index. (See Appendix-A)

Reproductive Health Problems of Women

The reproductive health problems of the currently married women were estimated from the women's self-reported experience in the three months preceding the survey with any of the following problems, namely, pregnancy complications, delivery complications, post-delivery complications, and RTI/STI problems given in Table 1 (DLHS 3). These four indicators were used to calculate the Reproductive Health Index.

Table 1: Percent distribution of Reproductive Health Problems of women in districts as per DLHS

Districts	Percentage of Complications: DLHS 3 (2007-08)			
	Pregnancy	Delivery	Post- delivery	RTI/STI
Ariyalur	41.7	21.4	14.7	5.0
Chennai	38.4	25.6	9.1	2.1
Coimbatore	44.1	44.4	14.9	8.7
Cuddalore	48.3	42.1	15.0	7.8
Dharmapuri	39.4	21.0	12.6	7.4
Dindigul	53.1	36.8	25.8	17.9
Erode	38.8	33.5	4.1	1.7
Kancheepuram	32.0	29.1	8.8	3.1
Kanniyakumari	76.9	61.4	29.6	23.2
Karur	53.8	33.4	27.0	6.7
Krishnagiri	22.8	22.5	7.5	4.4
Madurai	53.1	54.5	28.3	20.7
Nagapattinam	61.9	34.6	15.7	12.4
Namakkal	67.5	43.6	19.9	10.9
Perambalur	41.7	21.4	14.7	5.0
Pudukottai	54.6	44.4	18.6	14.6
Ramanathapuram	67.6	51.9	31.0	31.7
Salem	44.3	30.8	9.8	4.4
Sivagangai	61.6	46.6	38.3	25.5
Thanjavur	50.1	58.7	19.8	19.5
The Nilgiris	31.1	38.0	8.4	9.7
Theni	57.7	46.1	27.3	17.5
Thiruvallur	29.1	31.2	9.5	3.5
Thiruvavur	63.0	38.7	24.5	14.7
Thoothukudi	28.7	20.2	8.0	6.4
Tiruchirappalli	54.6	39.5	26.1	17.6
Tirunelveli	61.3	37.9	25.5	7.9
Tiruvannamalai	42.3	9.9	6.8	8.6
Vellore	46.2	34.4	14.6	3.8
Viluppuram	24.4	33.2	14.0	8.1
Virudhunagar	73.4	55.3	41.6	20.7
State Tamil Nadu	47.8	37.6	18.8	11.1

The mean, S.D and Coefficient of variation is calculated for pregnancy, delivery, post-delivery and reported symptoms of RTI/STI to know about the lesser variability among DLHS 3 and DLHS 2 data. The average complications reported by mothers is higher than in DLHS 3 compared with DLHS 2 except RTI/STI. The standard deviation is lesser for DLHS 2 compared with DLHS 3 except for RTI/STI. The Coefficient of variation for DLHS 3 is lesser for pregnancy (29.9 percent) and delivery complications (32.9 percent) and C.V is lesser for DLHS 2 for post-delivery (37.4 percent) and RTI/STI symptoms (46.1 percent) which are shown in Table 2.

Table 2: Descriptive Statistics

Statistics	Average	S.D	C.V
Pregnancy complication			
DLHS 3	47.8	14.3	29.9
DLHS 2	26.3	9.0	34.3
Delivery complication			
DLHS 3	37.6	12.4	32.9
DLHS 2	32.1	11.4	35.5
Post -delivery complication			
DLHS 3	18.8	9.7	51.4
DLHS 2	16.6	6.2	37.4
Any symptoms of RTI/STI			
DLHS 3	11.1	7.7	69.7
DLHS 2	17.1	7.9	46.1

Note: S.D = Standard Deviation C.V = Coefficient of Variation

Calculation of Reproductive Health Index:

The reproductive health burden for each of the above said indicators for example pregnancy complications will be calculated for Ariyalur district is as follows:

$$B11 = (41.7 - 0) / (100 - 0) = 0.417$$

The maximum value will be considered as 100 and the minimum value is 0. Similarly after calculating burden index for all districts and all indicators, the average burden index is calculated by dividing the total burden index by 4. The reproductive health index is calculated as

Total burden index = Sum of four indicators' burden index.

Average burden index = Total burden index / 4.

Reproductive Health Index =

1 - Average burden index = 1 - 0.207 = 0.793

Results and Discussion

The reproductive health index for DLHS-2 is 0.770 and 0.712 for DLHS-3 which is shown in Table 3. This clearly shows that there exists a decline in RH index in Tamil Nadu. As per the reproductive health index calculated from DLHS-2, the top three districts were Pudukkottai, The Nilgiris and Coimbatore and the bottom three districts were Nagappattinam, Perambalur and Madurai respectively. As per DLHS-3, the top three districts were Krishnagiri, Thoothukudi and Tiruvannamalai and the bottom three districts were Ramnad, Virudhunagar, and Kanniyakumari respectively. As per DLHS 2, in total 19 districts were below the RHI level and 12 districts were above the RHI level of Tamil Nadu (0.770). And as per DLHS 3, in total 15 districts were below the RHI level and 16 districts were above the RHI level of Tamil Nadu (0.712).

The difference between the RHI calculated from DLHS 3 and DLHS 2 is shown in Table 4. In total, two thirds of districts in Tamil Nadu have contributed negative performance of RH Index. The top six districts which have better reproductive health patterns are Perambalur, Thiruvallur, Tiruvannamalai, Thoothukudi, Kancheepuram and Chennai respectively. There exists a positive improvement of RH pattern. The bottom six districts having decreased RH pattern are Ramnad, Virudhunagar, Pudukkottai, Kanniyakumari, Sivagangai and Tiruchirappalli respectively.

Conclusion and Suggestions

The government of Tamil Nadu has taken lot of measures to achieve health goals in the recent decades and achieved the improved status comparing with other states of India with the help of national programmes, state programmes and state Population Policies. But still there exists variations between the districts for some of the health indicators. Special efforts have to be taken by the government of Tamil Nadu to reduce the inter district disparities in demography and development. The southern districts, namely, Ramanathapuram, Virudhunagar, Pudukkottai, Kanniyakumari, Sivagangai and Tiruchirappalli, need to be taken for special care to improve the

reproductive health of women. Targeted people in the high focused districts have to be identified to create awareness among women for reproductive health needs.

Proper monitoring of government programmes, involving local people at Panchayat level and local NGOs and providing health education to the targeted women will help to improve the reproductive health status of women and to reduce the inter district variations in Tamil Nadu.

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**WOMEN AND CHILD WELFARE OF URBAN POOR:
HEALTH BUDGET ANALYSIS OF MATERNITY
HOMES OF BBMP IN BANGALORE**

K. Prabhakar

Abstract

The findings of the study revealed that the budget allocation for maternity and child welfare was less when compared to its previous years, that there was decreasing trend of deliveries as against ANC registered form BBMP maternity hospitals. The findings also revealed that budget allocation for total health care was less when compared to maternity home and child care budgets. This is evident that the state government has triggered and created awareness among the health care programmes which are run by the municipal health sectors. The study findings itself indicates the status of ignorance of urban public health sector. This is evident that the state government has to trigger and create awareness among the health care programmes which are run by the municipal health sectors. The study suggest that the prime importance of health care both at micro and macro levels needs to attentive both at budget allocation as well as management strategic decisions in order to regulate the health care policy in an appropriate way so as to achieve this sectors as one the millennium development goals which is most vital for growing urban population through both public and private partnership interventions.

Keywords: urban health, child care, maternity services, Primary Health Centres (PHCs),

Introduction

India is the largest economy in the accordance with its Gross National Income in reference to Public Private Partnership (PPP) basis and also greater possible to grow well-built and more equitably, and to emerge to be included as one of the developed nations of the world. On the other end, India today possesses threat for basic health needs, which requires a sophisticated health care infrastructure and budget allocation

due to environmental factors such as technologies and knowledge required for providing better health care for general public. Since from many years this gap exists and health care outcomes continue to widen. Therefore, the services of existing health care interventions are not sufficient by the administration of health systems to deliver better health as a greatest need, in a on an adequate scale and comprehensive way. Further, many National Health Policies have been noticed and addresses the urgent need to improve the performance of health systems. It is being formulated at the last year of the Millennium Declaration and its Goals, in the global context of all nations committed to moving towards universal health coverage. Given the two-way linkage between economic growth and health status, the present National Health Policy (NHP, 2015) is a declaration of the determination of the Government to leverage economic growth to achieve health outcomes and an explicit acknowledgement that better health contributes immensely to improved productivity as well as to equity. The primary aim of this Policy is to reinforce and prioritize the role of the Government in shaping health systems in all its dimensions, financial protection strategies, regulation and legislation for health.

The Bruhat Bengaluru Mahanagara Palike (BBMP)

The history of municipal governance of Bangalore dates back to March 27, 1862, when nine leading citizens of the city formed a Municipal Board under the Improvement of Towns Act of 1850. Later, a similar Municipal Board was also formed in the Cantonment area of the city. The two boards were legalized in 1881, and functioned as two independent bodies called the Bangalore City Municipality and the Bangalore Civil and Military Station Municipality. The following year, the concept of elected representatives come into being and also saw the introduction of property tax.

After Indian independence, the two Municipal Boards were merged to form the Corporation of the City of Bangalore in 1949, under the Bangalore City Corporation Act. The corporation then consisted of 70 elected representatives and 50 electoral divisions. The name of the council then changed — first to Bangalore City Corporation (BCC) and then to Bangalore MahanagaraPalike (BMP).

With the formation of Bruhat Bengaluru MahanagaraPalike in 2007 by integrating the areas of erstwhile BMP with those of 8 Municipalities and 110 urbanized Villages around it, the jurisdiction of BBMP has been extended to nearly 800 Sq. Km from the erstwhile 226 Square Kms. And the numbers of wards have also increased from 100 to 198. Now a great responsibility of providing all the 198 wards with basic infrastructure facilities and good environment lies on all the 198 Corporate and other elected legislators.

The BBMP represents the third level of government Bruhat Bengaluru MahanagaraPalike is run by a city council. The city council comprises elected representatives called "corporators", one from each of the wards (localities) of the city. Elections to the council are held once every 5 years, with results being decided by popular vote. Members contesting elections to council represent one of more of the state's political parties. A first election to the newly-created body was held on 28th of March 2010, after the delays due to delimitation of wards and finalizing voter lists.

It has been observed that the municipalities (local government) are spending only 2.2% of total health budgets; however the BBMP or the Bruhat Bengaluru MahanagaraPalike (Greater Bangalore Municipal Corporation) is spending less than even this average. The rise in BBMP population about 82% of increase (projected population 2010) over 2001 census population i.e. almost double over a period of 10 years (2001 – 2010), in 1999 there are 30 maternity homes and urban family welfare centre's, but today there are 24 Centers off that only 20 centre's are functioning. Through our shocking research findings, real budgetary allocations for Health by BBMP in 2009- 2010 over 2006-2007 it is -67%, this itself shows real picture of how BBMP concerned about urban poor health.

Result and Discussion

The study makes an attempt to explain briefly about budgetary allocations for total for health general, health Medical as against total BBMP budgets, and within the Health total allocations, how much allocated to health general and for health medical, further, the study also focuses on detailed analysis for allocations for Maternity health as against Health Medical and Health total.

The Table 1, reveals that there was decreasing trend of deliveries as against ANC registered form BBMP maternity hospitals. One more interesting findings we can found from given below table, over a period of time trend of ANC registration and delivers are gradually decreasing, and only OPD service is increasing, it means Maternity homes center are functioning like a just first aid centers only.

Table.1. Trend of deliveries as against ANC registered form BBMP maternity hospitals.

Sl.No.	ALL 24 MHS'	2005-06	2006-07	2007-08	2008-09	2009-10
1	ANC Registered	24.5	20.2	22.1	21.7	15.2
2	Deliveries	10.5	9.0	9.2	8.9	6.0
3	OPD	58.6	66.2	60.9	63.2	74.5
4	% of Deliveries as against ANC Registered	48.8	47.0	46.3	44.3	35.5

Based on secondary data collected all 24 maternity homes of BBMP, in 2009-10, 9090 deliveries have taken place, same time 2009-10 budgetary allocations (payments) shows that allocation for maternity homes is ' 470 lakhs (salaries are not part of this budgetary allocations), this is part of Health medical budgetary allocations. So, on average every delivery is getting ' 5170/- per delivery, in reality urban poor ' 5170/- worth service are getting is the question of challenge. The findings on budgetary allocations for as brief by Health General, health Medical as against total Health allocation to understand next section budgetary allocations for Maternity homes.

Table.2 BBMP Budgetary Allocations of Total Health

Budgetary Allocations by BBMP for Health	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010.
Total for "Health - General"	11.4	11.4	11.3	12.4	11.4	11.6	3.6	1.0
Total for "Health - Medical"	1.4	1.2	1.1	1.4	1.6	1.2	1.1	0.6
Total for "Health (General & Medical)	12.8	12.7	12.4	13.8	12.9	12.8	4.7	1.6

The Table 2 reveals that budgetary allocations for health as whole from BBMP budgets from 2002 to 2009, total budgetary allocations for Health is more or less equal till 2007-2008, and it is highest in the year 2005-2006 (13.8%), but from 2008-2009 it is decline from more than 12% to 4.7% and 1.6% in 2009-2010. Total allocations for health declined 3

times from 2002-2006 budgetary allocation in 2008-2009 and 2009-2010. From the total health allocations majority is going for health general which supports the health department, but actual health care taker Health medical is getting less than 2%,shockingly it is less than one percent (0.6%) in last year budgetary allocation. From 2008-2009 and 2009-2010 budgetary allocations are very low for both Health General and Health Medical.

Further the findings of Health General and Health Medical allocations form total health allocations, i.e. of the budgetary allocation to total health we can quantify how much is reallocated to health General and Health Medical. More than three fourth is allocated to health General except last year i.e.2009-100 it is 60%. For health Medical where medical care actual taken was increase slightly from 2008-2009 and 2009-2010 by 23% and 40% respectively. The findings also reveal that overall BBMP allocations were very less when compared to its previous year and consequent years.

The study also made an attempt to investigate on budgetary allocations for maternity homes. Actually allocation for Maternity home are form Health Medical payments (Budgetary allocations). The findings of the study reveals that, the share for Health Medical is between 1.6% to 0.6%, of this share maternity home getting less than 17% (this is the highest allocation). From the given below table, we can observe that % spending for maternity homes from Health medical budgetary allocations. From 2008-2009 and 2009-2010 this % is little bit higher than the previous year. If we look at % of allocations for maternity homes as against total health budgetary allocation, till 2007-2008 is very minimal, but last year budgetary allocation, it is looking better (7%) than to previous year budgetary allocations.

Table.3 BBMP BUDGETARY ALLOATIONS TO MATERNITY HOMES

SPENDING FOR MATERNITY HOMES	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
% of spending for Maternity Homes from Health -Medical budget	5.5	12.4	9.4	5.5	11.0	2.3	12.3	17.3
% of spending for Maternity Homes as against total Health Budget	0.6	1.2	0.8	0.6	1.3	0.2	2.8	6.9

Further, during the study period it was most fascinating thing to explore that where the money was going and what was actually happening in the budget allocations, the findings revealed that budgetary allocations under two departments such as Health General and Health Medical are presented in the Table.4.

Table.4 Section wise Contribution of activities in Health General and Health Medical

PAYMENTS -GENERAL	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Salaries	52.3	50.6	43.9	44.8	43.4	33.7	79.9	53.8
Public Health	33.1	33.4	38.5	39.6	42.1	52.4	4.1	3.6
Current Assets/Liabilities (Statutory Deductions - Salary Deductions)	12.7	10.4	10.0	9.6	9.4	4.8	8.8	23.7
Running & Maintenance charges	0.0	2.3	2.7	2.9	3.0	2.5	0.0	0.0
Animal population control Expenses (street Dog Management & Cattle Catching Vehicle)	0.9	1.2	1.2	0.8	1.3	1.7	4.9	15.2

Form the above Table.4, almost half of the Health General allocations are going to salaries except (2007-2008) and interestingly spending for public Health is decaling form 2008-2009 and 2009-2010 budget allocation, but share of spending on public health was more than one third and it is more than fifty per cent (52% in 2007-2008); Under the public health head major activities like Cleaning & transportation of garbage, Toilets, Decentralized composting, purchase of MC Equipments & Larvicides, Co-ordination of Mosquito Control programme etc are taken care. Interestingly spending on Animal population control is increasing, every year more money is spending on this programme, it is 15% in 2009-2010 budgetary allocation. Even though spending money for dog control from 2002, year by year allocations for this head also increasing, then where is the control of dog population? Actually if they are doing dog population control properly actually allocations should come down under this head, but here it is other way.

The expenditure patter of Maternity Homes & Child welfare department at total health payments (Budgetary Allocations) level, Health- Medical level andwithin the Maternity Homes & Child welfare department level and finally to know priority of expenditure by health Medical (important line items) to identify priority for Maternity homes.

Table.5 Budgetary allocation of Maternity Homes & Child welfare department in total health:

Maternity Homes & Child Welfare Expenses against total Health payments	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
M & R to Equipment	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
Purchase of Chemical Apparatus & Equipments	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Post Natal Care Kits for Deliveries in BBMP Hospitals	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.5
purchase of Equipments -MH	0.1	0.0	0.0	0.1	0.0	0.0	0.8	1.5
Purchase of Medicines & Other Accessories	0.2	1.1	0.4	0.4	1.1	0.1	0.8	2.2
Purchase of Medicines (Hepatitis B)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Purchase of Mid-wifery Articles, Medicines & Linen	0.1	0.0	0.2	0.0	0.2	0.1	0.2	0.4
Supply of Milk, Bread, Diet to Milk Centres & Maternity Homes	0.2	0.1	0.1	0.1	0.0	0.0	0.1	0.4
purchase of Walk - in Cooler	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.7
Total for "MH & Child Welfare"	0.6	1.2	0.8	0.6	1.3	0.2	2.8	6.9

From the above table we can observe that Budgetary allocations for Maternity Homes & Child welfare department form Health total (include both Health General and Health Medical), till 2007-2008 it is less than are equal to one percent, it show that how real medical care was neglected by BBMP. But from 2008-0229 (3%) and 2009-2010 (7%) it is increasing, even though increasing, growth of increasing trend is very minimal or negligible only. From the above table we can see that there some line items which are allocated lees than one percent like supply of Milk & Bread (0.4%), purchase of medicines (Hepatitis B), M& R Equipment are 0.1%, purchase of Medicines & Other Accessories (2.2%) etc, the percentage which we identified are highest than other year, this itself highest percentages are itself very less, then we can imaging ground reality with these kind of budgetary allocation for real medical from health total budgetary allocations by BBMP for urban poor. The study reveals that the Maternity Homes & Child welfare department budgetary allocations as against health Medical Budgetary allocations that, it was 12.4% in 2003-2004 and 2008-2009, and in last year it is 17.3% which is highest other than previous years' budgetary allocation. We can observe what percent of budgetary allocations for line items in Maternity Homes & Child welfare department as against from total Health Medical payments (budgetary allocations) for example Purchase of Medicine & Other accessories are not increasing as year by year patient load increased, except 2003-2004(11%) it is less than 6% for other years. This itself shows BBMP concerned about urban poor health. Shockingly purchase of post-natal Kits for deliveries in BBMP Hospitals only from last years, rest of the years it is nil/zero only.

Conclusion

The study points out that private health care sector are very systematic with respect to both budget allocation and maternity care services and accessibility of health services which plays an important role in providing health services, however in case of urban health the budget allocation and the services are less when compare to service render by private health care services in municipalities and metro's. In this connection there is a need to bridge the gap between municipalities and state budget allocation to minimise the health services especially for urban poor women. The study concludes that the budget allocation for urban health was very less when compared to other sectors such as welfare, town planning, markets etc., it was fascinating to note that major part of expenditure was absorbed to paying salaries which accounts for nearly 60% of total health allocations. The study also conveys that among 24 priority ranks of BBMP Budgetary allocations for health was 23rd priority, which clearly indicates the ignorance and this has to been taken as prime significance area of health sectors. Finally, the stud also revealed that the trends of deliveries as against ANC registered from BBMP maternity hospital was declining over the years and many urban people preferred to avail private health care hospital for their better health. Hence, budget allocation for health services is prime important which directly influences the mortality rate of both pregnant women and child in long run . This situation indirectly propels the urban people to the trap of out of pocket spending's expenditure on health (OOPS).

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IMPACT OF KUDUMBASHREE ON THE EMPOWERMENT OF WOMEN

Saravana Selvi.C, Sithara Balan And K.S.Pushpa

Abstract

Empowerment of women and their participation in the development process has been considered an essential feature of development. It is presumed that real development is possible only if the women and men work in equal terms. There had been intensive efforts in nineties to bring the women-folk, especially those belonging to the weaker sections and poor, who had been economically and socially underprivileged within and outside the family, to the forefront and empower them through specific programmes and thereby empower the entire family and community. Ensuring justice to women was one of the prime objectives of the development agenda of the People's Planning Campaign initiated in 1997. "Kudumbashree" in local language (Malayalam) means prosperity of the family which helps enjoy the economic opportunities by a good number of poor women folks in rural and urban Kerala. It is the transformed form of poverty alleviation scheme with special emphasis on women empowerment through their co-operation, mobilization of their small savings and utilization of these savings for starting micro-enterprises. Kudumbashree is: "To eradicate absolute poverty in ten years through concerned community action under the leadership of Local Self Governments, by facilitating organization of the poor combining self-help with demand led convergence of available services and resources to tackle the multiple dimensions and manifestations of poverty holistically". It is basically concerned with equality, participation, influencing decision and access to opportunity.

Introduction

Development is the mantra of globalization and liberalization. Women have an important role in the development process. Women are actively involved in all spheres and streams in our society now. They are no more a passive part of our social fabric. Over the past decades, it has been practically proved that they have got a well-defined and definite role to play within the community and contribute their share to the

development of nation. Jawaharlal Nehru commended "in order to awaken the people, it is the women who has to be awakened first. Once she is on the move, the household moves, the village moves, the country moves and thus we build the India tomorrow". But the recent past women in developing and underdeveloped countries is not considered good. The change in the status of women in India is a slow, steady and continuing process. Rural women are regarded as voiceless and defenseless. This is intended to make them and their family's self-dependent. This poverty eradication project was officially launched in the state on May 17, 1998. This was experimented first in an urban setting in Alappuzha, which was later scaled up to selected panchayats. Removal of poverty by the year 2007 is the declared goal of this programme. The mission statement of Women are central to the success of poverty alleviation efforts. This realization brings women at the center stage of the development effects. The key to programming women lies in recognizing their problems and constraints and programmes should be adoptable to suit the specific need. Empowerment of women through Kudumbashree is the needs of the hours.

Scope of the study

The people in Munnar whose economic and social well-being is not improved for many years especially in the women community is considered. The term "Women Empowerment" is a new context for the residents of Munnar. But in the recent past, "Kudumbashree" has influenced a drastic change in the life of women in Munnar. This development of the women community through the activities of Kudumbashree in various fields and their improved standard of living forced the investigator to peep in to the role of Kudumbashree in Munnar. Hence the present study on impact of Kudumbashree on the empowerment of women will highlight their socio economic status, factors influencing women empowerment and their level of empowerment.

Objectives

- i. To elicit the socio economic status of the selected samples.
- ii. To measure the level of empowerment attained by the sample
- iii. To identify the factors influence on empowerment.
- iv. To study the constraints faced by the members.

Methodology

MunnarPanchayath in Idukki District was selected for the study. A total of 2606 women were participating in Kudumbashree activities at different wards of Munnar Panchayat, out of which 100 women members were selected by using purposive sampling method. There are 345 Kudumbashree units functioning within 21 wards of Munnar Panchayat. Out of which 10 wards were selected, and 10 members from a unit of each ward were selected by using lottery method. Interview method was used for collecting the data regarding the sample. An interview schedule was used to elicit the socio-economic status of Kudumbashree members. A three point empowerment scale was developed by the researcher was distributed amongst 11 judges from the related area to test its validity and reliability. Both primary and secondary data were collected for the study. The collected data were statistically analyzed and interpreted using appropriate statistical tools.

Results and Discussion

Socio economic profile
Table - 1 Personal variables

Characteristics	Percentage (N=100)
<u>Age in (years)</u>	
Below 30	30
Between 30-50	56
Above 50	14
<u>Religion</u>	
Hindu	89
Christian	11
<u>Caste</u>	
Forward	14
Backward	86

From the above table it can be inferred that, fifty six percent of the samples were from the age group of 30-50 years of age and fourteen percent of the samples belong to the age group of above 50 years. About eighty nine percent of the samples were Hindu and eleven percent was Christians. Eighty six percent of the samples were backward caste and fourteen percent were forward caste. It was heartening to note there could be noreligious and caste discrimination.

Table - 2 Social variables

Characteristics	Percentage(N=100)
<u>Type of house</u>	
Owned	52
Rented	48
<u>Type of Family</u>	
Nuclear family	78
Joint family	22
<u>Marital Status</u>	
Married	88
Unmarried	7
Divorce/Widow	5
<u>Number of Children</u>	
One	14
More than two	81
Nil	5
<u>Educational Status</u>	
Illiterate	13
Up to Std 10 th	62
10 th and Above	25

From the above table, it was understood that fifty two percent of the samples resides in owned house and forty eight percent in rented house. Seventy eight percent of the samples belong to nuclear families and twenty two percent belongs to joint family. Eighty eight percent of the samples were married were as seven percent were unmarried and five percent of them were either widow or divorced. About fourteen percent of the samples have one child sixty two percent have more than two children and five percent have no children at all. Thirteen percent of the samples were illiterate, sixty two percent studied were up to tenth standard and twenty five percent of them were tenth and above.

Table - 3 Economic Variables

Characteristics	Percentage(N=100)
<u>Type of Occupation</u>	
Labour	86
Private	4
Self employed	10
<u>Husbands occupation</u>	
Labour	62
Driver/Business	30
Nil	7
<u>Total monthly Income</u>	
Below Rs.5000/-	8
Rs.5000/- to Rs.7000/-	65
Above Rs.7000/-	27
<u>Source of Income</u>	
Agriculture	69
Company	26
Business	5
<u>Savings</u>	
Yes	89
No	11
<u>Assets</u>	
Yes	75
No	25
<u>Reasons for joining Kudumbashree</u>	
Unemployment/Poverty	71
Social Service	21
Husband's death/Others	8

Regarding the type of occupation Eighty six percent of them were labourers, four percent were private employees. About husband's occupation, sixty two percent were laborers, thirty percent were drivers/ Business and eight percent have no occupation. It was found that sixty two percent of the samples have an income between Rs.5000 – 7000.

Almost sixty nine percent of the samples depend on agriculture for their income source. Eighty nine percent of the samples have their savings in Bank chitty, and Post Office. About seventy five percent of the samples have assets like land/house/shop. The reason for joining Kudumbashree varies among the samples seventy one percent of the samples opined both unemployment and poverty.

Level of empowerment of the samples

An empowerment scale was developed and used by the researcher to find out the level of empowerment of women in Kudumbashree units. It includes 25 statements regarding personal, familial, and economic, social and political empowerment. The response of the samples was marked in a three point scale (Always, Sometimes, and Never) and was given a score of 3, 2, and 1 respectively. Thus the maximum score obtained by a sample for the empowerment scale was 75 and minimum score was 25. Further the scores, obtained for the empowerment scale were categorized in to low level (less than 65%) medium level (65-70%) and high level (above 70%). The details regarding the empowerment of the members in selected Kudumsree units are discussed in table No.IV.

Table –4 Level of Empowerment of the samples

Characteristics	Percentage (N=100)
Low level (less than 65%)	26
Medium level (65-70%)	55
High level (above 70%)	19

More than half of the kudumbashree members (55 %) had medium level of empowerment followed by low level empowerment (26 %) and (19 %) high level empowerment.

Association between empowerment level and related variables

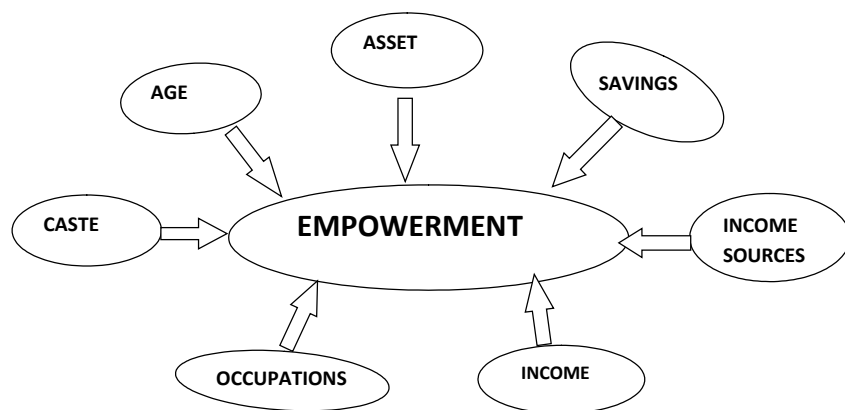
While comparing the empowerment level and age, caste, occupation, monthly income, income source, savings and assets of the samples,

it was found that there is significant relationship between empowerment level, the variables like age, caste, occupation, monthly income, income sources, savings and assets of the samples.

While comparing the empowerment level and type of house, type of family, marital status and educational status of the samples, it was found that there is no significant relationship between empowerment level and the variables like type house, type of family, marital status and educational status.

Figure-1

FACTORS INFLUENCING WOMEN EMPOWERMENT



Major Constrains faced by the members

Lack of women friendly agriculture implementation, lack of land for cultivation, politics of group leaders, non-recognition by the local self-Government bodies, lack of exposure, lack of security, absence of impact studies, delay in sanctioning bank loans, Lack of knowledge in marketing field, lack of marketing support and networks, non-availability of infrastructure and misunderstanding at the group formation stage.

Suggestions and Recommendation

- ◆ Kudumbashree members should be motivated to attend awareness generation and training programmes.

- ◆ Capacity building and training programme should be strengthened to suit the members need and abilities.
- ◆ Training has to conduct in nearby area so that all the members would benefit.

Conclusion

Kudumbashree can play an effective role in achieving the long cherished objectives of poverty alleviation and rural development through their diversified programmes. The formation of common interest groups has a substantial impact on the lives of its members. Empowerment of women through Kudumbashree will undoubtedly have long term socio-economic benefits. The first and foremost visible impact of the emergence of the scheme is that the unity and solidarity of the beneficiaries have been substantially improved and socio-economic conditions of the members have been improved from the pre-existed status of the rural poor. Their general awareness on Socio-economic programme implemented by the Government has improved considerably. It was heartening to see that the Kudumbashree activities gave topmost priority for women empowerment. Participation of women in the Kudumbashree activities helped to come to the limelight and many of them were chosen as candidates in the local body elections by various political parties. The programme has created a new system that value women, putting the needs and issues of women at the top of the agenda. It is a unique system for poverty eradication involving poor women who work together in order to bring a positive shift in their socio-economic status. It could be concluded that the Kudumbashree programme could bring about radical changes in the lives of the poor sections of the society in the years to come.

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WORK LIFE OF WOMEN DOMESTIC WORKERS AT GULBARGA, KARNATAKA

Bhagyashree.S.Vadageri and M.Hilaria Soundari

Abstract

Poverty and unemployment are the factors which have created a way for the women to enter into the informal sector. Due to the lack of alternatives the women from lower socio-economic background with low literacy are forced to work as domestic labourers. It is noticed that the women's participation in the unorganized sector is increasing day by day especially in the household domestic work. According to census report 2011, 41.3 lakhs were domestic labourers in India in which women were 27.9 lakhs. These women domestic labourers are from the marginalised section of the society and are migrants from rural area. These women are exploited by their employers, as the placement agencies are yet to find out strategies for the protection of these women. Lack of proper legislations and legal support has put these women domestic labourers into still more vulnerable condition. Even though the women domestic workers work for more hours, they are paid very less. It affects their personal and social life. The main objectives of the study are to understand the socio-economic problems of the women domestic workers, to study the challenges faced by women domestic workers, and to suggest alternatives for the enhancement of work life of women domestic workers. This study was based on the both primary and secondary data from different sources. It attempted to search for new prospects in the life of women domestic workers in Gulbarga, Karnataka.

Key Words: Rural Women, Domestic worker, Socio-economic Problems

In India, women are involved more in the unorganised sector as compared with organized sector. In this unorganized sector, household domestic work is one of the important domains. From ancient period to till date both in rural and urban areas, the domestic work force is contributing more for the informal economy of India.

However, this is the sector where the competition is less as compared to other sectors. Women from lower socio-economic background tend to involve in the domestic works in different households than men. Mostly the less educated or illiterate, low skill or unskilled persons, who didn't have other alternatives to earn their livelihood are involved in domestic works (Sunitha, 2015). Urbanization is the one of the phenomena which has created a platform for raising the demand for domestic workers in the cities. It is very high in urban areas than in rural areas, as the urban working house wives are in need of someone to do their household works.

Domestic Worker

According to National Commission for Women (2008) "Domestic Worker is a person who is employed for remuneration whether in cash or kind, in any household through any agency or directly either on a temporary basis or permanent, part time or full time to do household work allied work". A domestic worker is one who involved in the works within a employer's household. This domestic worker perform different works for her employer or for the family of employer, such as taking care of children, elderly and other households works like cooking, laundry, dish washing, cleaning etc. Some domestic workers stay in their employer's house. Some others work in different houses without staying in any employer's house. Many a time domestic workers are more vulnerable to be exploited by their employers. It is also seen as impure occupation which is traditionally performed by women, who belonged to lower caste in the society (John, 2013).

Classification of Domestic Workers

Domestic workers are engaged in the domestic tasks of their employers households either part time or full time basis. The domestic workers can be classified into the following categories on the basis of their working hours and nature of employment relationship,

- i. Part time labourers: the one who work for one or more employers for specific number of hours per day or perform specific tasks for each of the multiple employers every day.

- ii. Full time labourers: the one who works for the single employer every day for a specified number of hours (normally full day work) and return back to her home every day after work.
- iii. Live in workers: the one who works full time for single employer and also stays on the employer or in a dwelling provided by the employer (which is close to the house of the employer) and does not return back to her/his home every day after work. (Women in Informal Employment: Globalizing and Organizing-WIEGO, 2011).

Women and Domestic Work

Some of the push and pull factors of women in selecting domestic work are being presented below.

Push Factors

Globalization is the one more factor which has forced women to this occupation. The adverse impact of globalization has further impoverished the poor. Poverty and failure of the government programmes to irradiate poverty and to ensure the employment has pushed women into domestic work (Ghokhale, 2012). The religious and cultural practices push women and children into this occupation. Lack of laws, policies and legislations in the border area, parents death or single parent, widowhood, separation from husband and alcoholic husbands are the major reasoning factors which push women to this occupation for the survival of them and their children (NDWM, 2011). Family problems, disputes, ill-treatment, rural and male unemployment are other pushing factors (John, 2013). Victimization of natural calamities and poor rehabilitation of those who are displaced due to disaster such as drought, earthquake, flood, etc also forced them to select this occupation (Ghokhale, 2012)

Pull Factors

The growing market is increasing the demand for the low paid labourers. Increase in the number of nuclear families and increasing number of working couples has created need for the domestic workers (Sunitha, 2015). Debt bondage raising consumerism is also pulling women into this occupation. The preference for the children in domestic work as they are less organized powerless against abuse.

Attraction towards city life and false image of security, stable and healthy environment in the house of the employer are other factors which pull them into this occupation (Ghokhale, 2012).

The women domestic workers are more vulnerable in this unorganised sector. Usually family problems, rural and male unemployment, loss of parents or husband, separated from husband or those with alcoholic husband, illiteracy, etc, are the few reasons by which the women were forced into domestic work (SEWA 2008). Studies have shown that the female from low socio-economic background were involved in the domestic works. Due to lack of alternatives and the need of economic source, women were doing this occupation at the lower wage. They were working more than eight hours but they were paid very low even less than Rupees 60 per day. They got Rupees 200-500 as monthly wages (Kathyayini, 2007). The wage was decided on the basis of nature of work and size of the family. They were continuously involved in the manual work which affected their health (Equal Times, 2015).

Hence, the author has conducted a study in Gulbarga area to understand the working condition of women who involved in domestic work. The present paper is based on the results of the empirical study.

1. to present the socio- economic condition of women domestic workers in Gulbarga
2. to discuss the challenges faced by women domestic workers in their occupation; and
3. to analyse alternatives for the enhancement of work life of women domestic workers.

Methods and Tools

Gulbarga is one of the backward regions of Karnataka. It is a municipal corporation city with the population of 533,587 in which of 271,660 male and 261,927 female population(census 2011). In Gulbarga city there were around 57 recognized slums (census 2011). Around 8.26% of the total population of the city resides in these slums. Domestic work is the most common occupation for the women of these slum. As per 2011 census from the labour department, 5600 women domestic workers were in Gulbarga city.

Four slums of Gulbarga city were selected among 57 slums, namely Kanak Nagar, Indira Nagar, Ganga Nagar and Sidharth Nagar with the help of the Karnataka state women domestic workers union. The slums with high population of women domestic workers were selected. purposefully by using purposive sampling method and then the 29 respondents were selected randomly from each four slums as sample by using the simple random method. The 116 women domestic workers, were selected from the 5600 population of women domestic workers in Gulbarga (as per 2011 census from the labour department Gulbarga).

The researcher used interview schedule to collect the basic information about the population and the nature of problem of women domestic workers. It included the domains such as personal details, social, economic, psychological and physical aspects of women domestic workers. It has come out with suggestions to enhance their work life.

Socio Economic Profile

Socio-demographic details includes basic information about the respondents regarding age, marital status, education, religion and caste. It helps to understand the respondents and their living conditions more clearly.

Table 1
Profile of the Respondents

Particulars	Categories	Number of Respondents (N=116)	Percentage (%)
Age (in Years)	18-30	41	35.3
	31-43	49	42.2
	44-56	21	18.1
	57 and above	5	4.3
Marital Status	Married	87	75.0
	Unmarried	4	3.4
	Divorcee	4	3.4
	Widow	21	18.1
Level of Education	Illiteracy	71	61.2
	Primary	24	20.7
	Secondary	16	13.8
	Higher Secondary	5	4.3
Religion	Hindu	105	90.5
	Muslim	11	9.5
Caste	Schedule Tribe	48	41.4
	Schedule Caste	17	14.7
	OBC	37	31.9
	General	3	2.6
	Not Revealed	11	9.5

41.4% of the women domestic workers belonged to scheduled tribes and 14.7% belonged to scheduled caste and 31.9% belonged to backward classes. 61.2% of them were illiterates. These above data showed women domestic workers were belong from the that lower social strata of the society. 75% of them were married and 61.2% illiterate.

Economic aspect plays very important role in every individual's life and their family as a whole. The earnings, income, savings of individuals and their family have the greater impact on the health, education and other aspects of their life. The details of the economic aspects of the respondents is given below in table 2.

Table 2
Income of the Respondents

Particulars (per month in Rupees)	Number of Respondents (N=116)	Percentage (%)
1. Individual Income		
a) Below 2500	67	57.8
b) 2501-4500	43	37.1
c) 4501-6500	5	4.3
d) Above 6500	1	0.9

57.8% of them were getting below Rs.2500 wage per month and only 0.9% were getting above Rs.6500 wage per month

Participation in Associations

Groups, associations and unions has its own role in the development of every individuals. It helps to enhance the abilities and capacities. It also develops a kind of motivation among the group members. It is channel of the resolving the problems of both individuals and groups. The details about the respondent's membership and nature of the group is given below.

Table 3
Group Membership

Particulars	Number of Respondents (N=116)	Percentage (%)
1.Member of any group		
a) Yes	45	38.8
b) No	71	61.2
2.If yes specify the group		
a) Self-help group	35	30.2
b) Loan group	2	1.7
c) Karnataka state women domestic workers association	8	6.9

The table 3 described the group membership and nature of group, which partially helps to add credit to the development of the members which has its impact on their community. 61.2% of respondents were not members of any groups or association and 38.8% of respondents were members of some community based groups. It also revealed that 30.2% of respondents were the members in Self Help Groups (SHGs). 6.9% of the respondents were members in Karnataka state women domestic workers association and 1.7% of the respondents were member of loan group (It is formed by an organization who is involved in micro credit).

Nature of Occupation

Occupation is the one of the task which is the main earning source of individuals. It provides the economic support for individual to fulfill their family needs such as food, shelter, cloth, etc. The following tables and figures explained the different occupational aspects of the women domestic workers.

Table 4
Age and Channel of Entry for Domestic Work

Particular	Number of Respondents N=116	Percentage (%)
1.Age (in year)		
10-18	38	32.8
19-27	71	61.2
28 and above	7	6.0
2.Channel of Reference		
Self	58	50.0
Through Neighbours	46	39.7
Through Relatives	12	10.3

The age of women domestic workers when they entered in domestic work occupation is given in table 4. 61.2% of the respondents has entered in domestic work occupation at the age group of 19-27 years. 32.% of them were involved in this occupation between the age group of 10-18 years, this stage of life span is very important where both physical and psychological changes takes place. At this stage due to their occupation they could not enjoy their important part of life. 6.0% of them started after the age of 28 years.

The explains the channels through which the respondents entered in domestic work. 50% of the respondents were entered in this occupation by themselves they stated that they searched for the houses where they can work. 39.7% of them entered this occupation through neighbours and 10.3% of them entered in this occupation with the help of their relatives.

Working Condition of Women Domestic Worker

The women domestic workers were working for more hours and paid very low. 115 respondents were part time workers and only one was working as full time worker. 59.5% of them were working more than 2 employers 37% of them were working for more than 5 employers and 2.6% of them were working more than 6 employers. Every day their day starts at 4 or 5 o'clock morning and ends at 11 or 12 o'clock in the night. They were spending more time for their occupation and they were paid very low. 97.4% of the respondents has to travel around 1-4 kilometre every day for reach their work place, and they prefer to go by foot to reduce expenses. 87.9% of them were getting leaves after demanding for it and 12.1% were not getting any leaves. They were stated that if they want any leaves they have to replace some one on their place then only they will get leave.

Suggestions

The government and non-government organizations (GOs & NGOs) has take proper measure to identify their felt need and design a monitoring mechanism. In order to provide adequate support programmes, legislations, projects and schemes has to built strongly and it should implement in an effective manner. These

programmes and all should be easy to assess for them, they need to educate regarding all welfare measures taken by the GOs and NGOs That is the best way to bring them into the mainstream of the society. Along with all their family and social support plays vital role in the upliftment of the women domestic workers. There is a need for identifying the felt needs of the domestic workers. If on the basis of that programmes and projects are formed then it will help them in improving them more effectively.

The women domestic workers has to report about the abuse and exploitation by the employer or any to the respective authorities. Only then occurrence of exploitation can be reduce. The placement agency has to visit at least once in three or six months to the employer's house and check the working condition of the women domestic workers.

Conclusion

Women domestic workers are the most disadvantaged group in the unorganized sector. There is need for bringing them to the mainstream of the society. They are the one who is indirectly contributing to the other organized sector by helping the employers to manage their household responsibilities. Restoring their social dignity and rights, certainly will pave a path for society of equality and integral development.

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STUDY OF DALIT WOMEN ENTREPRENEURS IN SELECTED BLOCKS IN DINDIGUL DISTRICT

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Abstract

Women are treated as a second citizen in the world. They play double role in the society (engaging income generating activities and family maintenance). After independent, women are empowering socially, economically and politically through entrepreneurial activities; giving solution to the problem of unemployment and poverty. The women entrepreneurs are facing a lot problem while doing enterprise activities. They are lack of confidence, marketing problem, financial problem, lack of knowledge in business, lack of support from family members and inadequate skill training etc. Hence, a study was conducted to evaluate the performance of the Dalit women entrepreneurs and their problems in Dindigul district. The study is descriptive in nature. The study has used primary and secondary data. 100 samples have been selected for the present study. Primary data was collected from Dalit women entrepreneurs in study area and secondary data was collected from government official records. Snowball method was used for data collection. The study found that number of Dalit women entrepreneurs are increasing since 1990 and 55 per cent of the women entrepreneurs are satisfied in involving themselves in enterprise activities.

Key words: Dalit women, Empowerment and Entrepreneurs.

Introduction

India is one of the growing economies in the world. Women, particularly Dalit women are emerging as full-fledged participants in economic activities through enterprise activity. Women entrepreneurship is relatively a recent phenomenon, which came into prominence since 2008. The developments of Dalit women as entrepreneurs have generated multifaceted socio – economic benefits to the country. Post - independent period, the participation of women in entrepreneurship activity is in high order. The Dalit women are engaged in different types of entrepreneurial

activities, such as agriculture and allied activities and non – agricultural activities.

During the early decades of planning, women's role in economic activities was not given much importance and only during the Sixth Five year plan (1980 – 85), special emphasis was given to women entrepreneurship and the steps were undertaken in that direction. Further, the Eighth Five year plan (1992 – 97) promised to ensure that benefits of development from different sectors do not bypass women. The Rashtriya Mahila Kosh was set up in 1993 to meet the credit needs of poor and asset less women. The Ninth Five year plan (1997 – 2002) has made two significant changes in the strategy of planning for women. First “empowerment of women” became a primary objective and second the plan attempted to “convergence of existing services” available in both women – specific and women related sectors. The Tenth Five year plan (2002 – 2007) had made a major commitment towards “empowering women as the agent of socio-economic change and development”. Based on the recommendation of National Policy on Empowerment of women, the Tenth Five year plan suggests a three-fold strategy for empowering women namely social empowerment, economic empowerment and gender justice or gender equity. In this direction, a micro level study was conducted on status of Dalit women entrepreneurs in Dindigul district, Tamil Nadu.

Conceptualization of Women Entrepreneurs

Women Entrepreneurs are the women or a group of women who initiate, organise and operate a business enterprise. The government of India defined women entrepreneurs as “an enterprise owned and controlled by women having a minimum financial investment (51 per cent of the capital) and giving at least 51 per cent of the employment to women”.

Review of Literature

Lalitha Rani (1996) in her study of 100 women entrepreneur in manufacturing, trading and service sector in Visakhapatnam city of Andhra Pradesh analysed the socio-economic background of women entrepreneurs. The respondents were either from families which were

already in business or having highly educated husbands or fathers. Women preferred to start enterprises based on their educational background. Service sector enterprises have become entrepreneurs with higher level of education and trading with comparatively lower education level. In manufacturing, nearly half of them had technical education. Majority of the entrepreneurs in the service sector were employed prior to start the enterprise. The socio-economic profile of women entrepreneurs in Visakhapatnam was largely found that Telugu speaking forward community, Hindu, in the 30-39 year age group at the time of starting the enterprise coming from a nuclear, middle class family and with well - educated husbands settled in business.

Manimegalai and Rajeswari (2000) have investigated the problems of women entrepreneurs of SHGs in rural areas of Trichirapalli District in Tamil Nadu and found that one – third (33 per cent) of women enterprises faced the problem of shortage of capital. This is because the members got loan only from their SHGs and their own micro finance institution. The study revealed that 21 per cent of the women entrepreneurs faced marketing problems also.

Anil Kumar (2005) in his study of 120 women entrepreneurs engaged in small manufacturing enterprises in six districts of Haryana has attempted to determine the factors which compelled women to enter business ventures. The entrepreneurs were asked to rank the three optional proposed, namely (a) to achieve the goal through a successful careers, (b) to make fruitful use of free time and (c) the compulsion of family circumstances. The study reveals that women have started participating in economic activities not due to family compulsions but fruitful use of free time. It indicates that high growth in the economy, and positive development of the society. Further this study indicates that women entrepreneurs, who have given first preference to achieve the goal, are of a higher level of income as compared to other respondents. This shows that these two features are positively correlated. Next is to make use of free time by starting a small enterprise. Only 15 per cent of women respondents gave the first rank to family compulsion to start their business and 47 per cent assigned the third rank. Family compulsion was found more in the case of respondents with low level of education.

Sujata Mukherjee (2006) in her study of 125 women entrepreneurs from service, trading and manufacturing sectors in greater Mumbai and Pune districts of Maharashtra examined the motivational factors of women entrepreneurship. The entrepreneurs selected were of low income strata. The study revealed that the respondents were motivated to entrepreneurship primarily to satisfy their socioeconomic needs. Satisfying psychological needs of becoming economically independent, increasing self-confidence and ability to take risks were considered the motivating factors for venturing into entrepreneurship.

Varsha P.Chhichhia (2007) carried out a study on problems faced by women entrepreneurs and importance of training in their enterprise. The information was collected through questionnaire. Sample of 40 women entrepreneurs of different field of Jamnagar related to brass industry, fashion world, beauty world and handicraft and hospitality business were selected. A majority of the respondents (79 per cent) said that they had a family responsibility and had a financial pressure. The study found that a majority of the respondents faced marketing difficulty (46 per cent). 91 per cent said lack of availability of training centre.

Objectives

- 1) To study the income and expenditure pattern of the Dalit women entrepreneurs in rural areas of Dindigul district and
- 2) To document the problems and challenges faced by Dalit women entrepreneurs in the study area.

Methodology

The study was carried out with 100 sample Dalit women entrepreneurs in Dindigul district, who were identified through snow ball method. The study is descriptive – cum - explorative in nature. Dalit women entrepreneurs were selected purposively. Primary data were collected for the present study from Dalit women entrepreneurs in the study area. The Dindigul district is bound by Erode, Tirupur, Karur and Trichy districts on the North, Sivaganga and Tiruchi District on the East, Madurai district on the South, and Theni and Coimbatore Districts and Kerala State on the West. It is spread over an area of 6266.64 Sq. Kms. It comprises of three Revenue Divisions, eight Taluks and fourteen Panchayat Unions. Out of 14 panchayat union, four panchayat unions were selected for the study, namely Athoor, Nilakkottai, Bantlagundu

and Oddanchatram. The total population of the district is 21, 59,775. Male constitute 10, 80,938 (50 per cent) and female constitute 10, 78,837 (50 per cent) population. Total Dalit population in the district is 4, 60,440 (21 per cent) of which male are 2, 29, 668 (11 per cent) and female are 2, 30,772 (11 per cent). Density of district was 357 per sq.km. Literacy rate is 76.85 per cent, Here Dalit women are engaged in the enterprise activities to develop their economic conditions such as agricultural and allied activities, vegetable vending, tailoring, fruits vending, herbal medicines, animal husbandries, food articles and pickles.

Data Analysis and Interpretation

Table 1: Block - Wise Distribution of Dalit Women Entrepreneurs

Sl.No	Blocks	No. of Dalit Women Entrepreneurs									Total
		2006	2007	2008	2009	2010	2011	2012	2013	2014	
1	Athoor	0	1	2	2	3	4	4	4	5	25
2	Nilakottai	1	2	2	1	3	4	3	4	5	25
3	Batlagundu	1	0	2	2	3	2	4	5	6	25
4	Oddanchathiram	2	0	1	1	3	3	4	5	6	25
	Total	4	3	7	6	12	13	15	18	22	100

Source : Primary data.

Table 1 shows the distribution Dalit women entrepreneurs across the blocks in Dindigul district. 25 women entrepreneurs were selected from each block in the study area. Thus, 100 samples were chosen randomly. Women Entrepreneurs activities are started to gain momentum since 2010. They are owners of various kinds of enterprise activities like Milching animal, goat rearing, tailoring, petty shop, herbal medicine sales, garments, vessels sales and service activities. Hence, most of the women entrepreneurs' livelihood security depends upon enterprise activities.

Table 2: Distribution of Monthly Income and Expenditure (in Rs.)

Sl. No	Name of the Block	No. of Entrepreneurs	Investment	Monthly Income	Expenditure	Savings	Borrowing	Repayment	Overdue
1	Athoor	25	6,25,000 (21)	80,000 (21)	58,000 (21)	22,000 (19)	200,000 (24)	1,60,000 (23)	40,000 (29)
2	Nilakkottai	25	6,70,000 (22)	100,000 (26)	68,500 (25)	31,500 (28)	1,80,000 (21)	1,50,000 (21)	30,000 (21)
3	Batlagundu	25	7,87,500 (26)	95,000 (24)	69,000 (25)	26,000 (23)	2,25,000 (27)	1,90,000 (27)	35,000 (25)
4	Oddanchatram	25	9,37,500 (31)	1,12,000 (29)	78,000 (29)	34,500 (30)	2,40,000 (28)	2,05,000 (29)	35,000 (25)
	Total	100	30,20,000 (100)	3,87,500 (100)	2,73,000 (100)	1,14,000 (100)	8,45,000 (100)	7,05,000 (100)	1,40,000 (100)

Table 2 shows the respondents' monthly income and expenditure pattern. 31 per cent of the respondents living in Oddanchatram block have invested more than (37 per cent) other the block respondents. About one-third of the total investment is made by them in the selected district on entrepreneurial activities. As investment is higher, the income, expenditure and savings pattern was also found higher in Oddanchatram block. However, in terms of return on investment, Nillakkottai block have done well. With 22 per cent share on investment, it has generated more income and savings. Athoor block is doing badly with respect to the overdue (29 per cent) and savings (19 per cent).

Table 3: Satisfaction Level of Dalit Women Entrepreneurs

Sl. No	Opinion	No. of entrepreneurs	Per cent
1	Extremely satisfied	17	17
2	Satisfied	55	55
3	Dissatisfied	14	14
4	Extremely dissatisfied	9	9
5	No opinion	5	5
	Total	100	100

Source: Primary data

Table 3 reveals that a majority of the respondents (55 per cent) are satisfied with their occupation. In fact, 17 per cent of the respondents are extremely satisfied. However, 14 per cent of the respondents are dissatisfied, nine per cent of the respondents are extremely dissatisfied and five per cent of them have not perceived any satisfaction in their enterprise activities.

Table 4: Problem Faced by the Dalit Women Entrepreneurs

Sl. No	Type of Problem	No. of Respondents	Per cent
1	Marketing problem	26	26
2	Financial problem	50	50
3	Lack of support from family members	9	9
4	Inadequate training and skills	10	10
5	Lack of identifying available resources	5	5
	Total	100	100

Source: Primary data

Table 4 reveals problems faced by the selected Dalit women entrepreneurs. 50 per cent of the entrepreneurs are facing financial problem to start enterprise. Lack of formal financial accessibility, time taken for loan process, high rate of interest loan, tightened loan repayment scheduled, processing fees for loan borrow, margin money requirements, insisting on collateral and ignorance of bank loan have added the reasons for financial problem. 26 per cent of the respondents faced the problem of marketing their products or problem in launching in the market. Nine per cent of the women respondents felt lack of support from their own house, lack of elders support, absence of husband and children support for enterprise activities and monetary management by the male members. 10 per cent of the women entrepreneurs were faced inadequate training and skill in the study area.

Women entrepreneurs' family and personal obligations are a great barrier for succeeding in business career. Only a few women are able to manage both home and business efficiently, devoting enough time to perform all their responsibilities in priority.

Recommendations

- ◆ Facilitate education - vocational and technical at school level to all girls and particularly Dalit girls.
- ◆ The girls at the school level should be motivated to adopt entrepreneurship.
- ◆ Government should facilitate marketing of products made by Dalit at block and District level.
- ◆ The formal financial institutions should offer 100 per cent loan without processing fees and collateral security.

Conclusion

The recent trend indicates that Dalit women entrepreneurs are sensitive to change their socio-economic conditions in the country. The analysis shows that the statuses of Dalit women entrepreneurs are progressing positively. Hence, past one decade Dalit women have improved significantly in socially, economically and politically. Thus, the statuses of Dalit women are empowered through entrepreneurship activity. The Government and Non-Government

Organisation and financial institutions should have to provide financial and training support to poor Dalit women. It is also expected that the negative attitude towards women entrepreneurs by the family and the society should be changed.

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USE OF ASSISTIVE DEVICES IN RESISTIVE ENVIRONMENTS – THE EXPERIENCE OF AN INDIAN UNIVERSITY IN REMOTE RURAL REGIONS

M. P. Boraian

Abstract

Assistive devices contribute to the comfort and ease of persons with disabilities in their domestic routines, education, health care, skill training, employment, entertainment and in social interaction. The experience of Gandhigram Rural University (South India), with RENGO and LIFE Tokyo-funded project on ‘Assistive Devices for the Differently abled persons’ reveal that assistive devices themselves do not constitute a critical factor in benefiting them, but serve only as a core component in the galaxy of other factors - such as geographic location, topography, domestic facilities, housing type and location, community infrastructure, social structure and environmental setting.

Key words: Assistive devices, persons with disability, resistive environments, rural/foothill areas.

This paper capsulizes the experience of this project in the utilization of assistive devices among those persons living in backward villages, remote settlements, farm houses, and foothill areas, who largely comprise the poor households. The project area is not endowed with wheel chair-friendly homes and tri-cycle - friendly infrastructure in the community. For instance, use of wheel chair by Polio affected persons requires a free space at home, smooth flooring surface, and an even level of connectivity to other rooms. Tri-cycles too require similar structures, and free connectivity to the streets and roads, which should have smooth surface, free from higher elevations, staircases and steep steps.

Most often, parking their tri-cycles at home is a problem, but when parked outside, they gather dust and rust. Cycling by young women to lonely places invites risks. Similarly, use of battery operated tri-scooter too bristles with problems. Lack of initial training to the beneficiaries,

absence of previous two-wheeler experience, lack of electricity facility at home, and frequent power cuts, cause great hardship to the beneficiaries. Although the use of devices like dark glasses, and walking sticks by the visually impaired, hearing aid by the deaf, and crutches and calipers by the mobility impaired persons, are presumed to be a ‘necessity’ to them, they don’t consider that they are ‘essential’ too. They feel that the use of any external devices, as against their erstwhile self - managed routines in an inconspicuous manner, would magnify their disability in the eyes of others. For those dwelling in farm houses and foothill areas, the undulate terrains, narrow farm bunds, cropped fields, especially water-filled paddy fields, pose a risk to the assistive device users. They apprehend that their employment chances would be dim in the perception of their prospective employers.

Assistive devices, though greatly comfort the disabled persons, also pose a hurdle in their day-to-day living, and work prospects especially in rural, tribal and foot hill areas. Their psychological reluctance and refusal to put on these devices often undermines their physical necessity. The project found that the preparedness of the device users, supported by a congenial physical environment and a conducive social atmosphere, play a critical role in the proper utilization of assistive devices.

Definition of Assistive devices

Assistive technologies such as the mobility devices, education devices, and other disability-friendly devices enable persons with various disabilities to minimize their barriers and maximize their personal convenience, functional independence, inherent capabilities and work performance resulting in higher dignity, greater productivity and better quality of life. WHO (2011) defines assistive technologies as “any piece of equipment, or product, whether it is acquired commercially, modified or customized that is used to increase, maintain or improve the functional capabilities of individuals with disabilities”. Mobility devices, according to WHO (2001), are those which have been designed to facilitate or enhance a user’s personal mobility – this relates to their ability to change and maintain body position and walk and move from one place to another.

Assistive technology is redefining what is possible for children and adults with a wide range of disabilities. In the home, the classroom, the work place and the community, assistive technology is providing creative solutions that enable individuals with disabilities to be more independent, self-confident, productive, and integrated into the mainstream society. These technology solutions improve an individual’s ability to learn, compete, work, and interact with family and friends (Enders, 1990).

UNICEF observes that accessible and assistive technologies are a critical means to bridge the disparity/gap between children with and without disabilities, and offer an important solution in leveling the playing field for children with disabilities. Access to appropriate assistive devices, according to UNICEF, has ripple benefits beyond the user of the devices. Assistive devices cover a wide range of “devices or systems that allow individuals to perform tasks that they would otherwise be unable to do or increase the ease with and safety with which tasks can be performed (WHO, 2004).

(GRI) one of the 129 Deemed Universities in India (besides 736 Universities and over 35000 colleges) has “service to the marginalized sections and empowerment of the rural community” as one of its prime concerns, besides the basic functions of teaching and research. Through its Centre for Disability and Development, GRI has been working among persons with disabilities, aged, destitute women, and tribal’s in its rural and foothill areas.

Japanese grant

The Japanese Trade Union Congress (RENGO), and LIFE Tokyo assisted GRI in the provision of free assistive devices to differently abled persons dwelling in rural and foot hill areas of Dindigul district (Tamil Nadu) during 2013-’14. Target groups numbering around 220 persons with various types of disabilities lived in 10 rural clusters in the vicinity. Categories of their disability comprised locomotor disability, visual, speech and hearing impairment, cerebral palsy with mental retardation, and leprosy.

Females comprised 60 percent of the target group. Nearly 75 percent of these persons belonged to poor households, and 40 percent of them were from socially backward segments of the population. More than 60 percent were illiterates. Disability had struck nearly 85 percent of the target groups during their birth and early childhood period, while 12 percent suffered from accident - caused disability. About three percent of them had their disability during delivery, due to use of forceps by the Doctors. Persons who had availed the benefits of government's rehabilitation programmes constituted only around 30 per cent. RENGOLIFE Tokyo project sought to reach those persons who had not availed government programmes hither to, because of various constraints.

The Project

Under this project, mobility devices such as tri-scooter, tri-cycles, wheel chairs, walkers, crutches, and calipers were provided to the Polio affected persons in the project area. Further, assistive devices like spectacles (dark glasses), *braille* watches including talking watches, and radium-coated mobility canes were provided to visually impaired persons. The school-going children with visual impairment were given low vision stand, Fresnel book magnifier, and universal braille kit and braille educational equipments. Mentally retarded children were distributed package of M.R. Kits comprising merry links, fun with beads, alphabet trainer plates, quick shape and allied materials. Cerebral palsy affected children were offered cerebral palsy chairs, specially made for them, with a cushioned seat. The experiences gained from the project beneficiaries – both positive and negative in the use of various assistive devices are elucidated in this paper.

Project benefits

Tri-cycles: In the Project area, free distribution of assistive devices brought in certain visible changes in their physical, psychological and family front. For instance, polio affected persons who were provided with tri-cycles made short trips away from home to attend to their nature calls, visited their local neighbors, and frequented shops and farms nearby. Some ventured into the nearby towns on their own. The breadwinners

also took out their goats for grazing nearby, which is a source of livelihood to their family. Some persons worked under the Govt. of India's rural employment programme (MGNREGS) by reaching out to the worksites on their tri-cycle. During weekends, they visited banks to collect their wages disbursed through their personal account.

CP Chairs: Provision of Cerebral palsy chair has enabled the parents to be free from the burden of holding the child on hand daylong, until the child sleeps. The parents felt happy that keeping the child on this chair made the child to be slowly active, as the child moved the hands up and down, raised its head, bent its leg and kept it on the chair. Previously, the child was just a bunch of flesh and bones, passively lying on the mother without any major movement. The child now look at people, smiles, nods its head raises its voice and watches TV. The child sleeps well at night and expresses its joy, sorrow or anger by moving its arms, legs and head. The parents are happy with whatever minor changes have happened in their children's lives. Access to appropriate assistive devices has ripple benefits beyond the user of the devices, (De Jong, 2007).⁶ When children with disabilities are able to be independent within the home, parents would have the opportunity to earn and add to the household income, and the care giving siblings would be free to go to school.

Hearing aids: The beneficiaries, who have been properly using the hearing aid, after a thorough check up by an ENT specialist, followed by an Audiogram assessment, found it rewarding. With the newly acquired hearing power, they could listen to others, watch TV, listen to Radio, and respond to others. Persons living nearby the busy National/State highways expressed satisfaction that they were able to hear the horn raised by vehicles from behind, and respond immediately. Those with young babies, and children recalled that they could listen to their babies' sweet voice and enjoy. There are also instances where the visually impaired youth were fascinated by the dark glasses, which they wore it proudly. Cheers from their able-bodied peer groups pepped them up to wear the glasses without removing.

Environmental settings

Provision of mobility devices should be equitable to avoid

discrepancies between genders, age groups, impairment groups, socio-economic groups, and geographical regions. (WHO,2001). In the project area, it was found that the level of sophistication of assistive devices did not synchronize with all classes of people, with various disabilities. Certain sophisticated devices, distributed by the project often did not match with the very low infrastructure available in poorer households and resource poor communities. Experience reveals that those disabled persons who, lived in remote hamlets and foothill settings, those with extreme disability, abject poverty and those having scarce or no family support (as care takers or escorts), had less access to the assistive devices, provided by social workers and service organizations freely.

Use of devices such as calipers, or shoes by disabled farm workers posed hardship while crossing fields, walking along the narrow bunds, stepping into paddy fields or entering into muddy waters in order to do their farm work for earning their daily wages. Persons living in foot hill villages with compulsions to walk in narrow foot paths of undulated terrains, or graze animals in the thorny bushes amidst thick forests, avoided use of any assistive devices, as they would obstruct their normal day-to-day operations. "Social and cultural barriers may also affect the use of mobility devices – for example, orthoses for lower-limb weakness often come ready-fitted with a shoe, which means they cannot be used in places of worship and homes". (Mulholland, et. al., 2000).⁷

The requirement of certain assistive devices for the disabled persons varied from person to person, and region to region. Radium-coated mobility canes used by visually impaired persons were crucially needed in crowded places like towns and cities, while moving among the new population, and to cross over heavy traffic roads and bridges. Almost none of the beneficiaries had anything to do in towns and cities, since they were more stationary and stay put at home/village. They largely lived in villages and foothill regions, where people knew each other, and hence such tools of identification were not a desideratum. Instead, it would propagate their disability, and distance them from others.

The need for a Braille watch by visually impaired persons, who largely stayed at homes was not acute, as against for persons who were on the

move from one place to the other in new settings, and while performing time bound tasks. Hence, the visually impaired persons did not put on their watch on their wrists. Among several studies performed on the non-use of provided assistive technology, all of them reported high rates of non-use. (Wessels et al. 2003).

Risks in Mobility devices

In homes without electricity, charging the battery of the tri-scooter was at stake. When delayed or only irregularly charged, the battery lost its life, and hence the scooter could not be used for the purpose intended. Disability-friendly though, assistive devices such as wheel chairs of import quality were not class-neutral and poor-friendly. Devices like tri-cycles were not gender-friendly. Polio affected girls and women who ventured out on tri-cycles to longer distances from home ran the risk of safety and sexual assault. The mentally retarded and mentally ill women, especially the young ones, spontaneously slipping away from home, had similar risks.

Suggestions

- ◆ The provision of assistive devices should have synchronization with the infrastructure and space available in the households of persons with disabilities and their community of habitation. Persons living in remote settlements and extreme disability are the ones who badly require assistive devices, but these are the ones who are the most neglected by the system.
- ◆ Training of persons in using the disability devices should invariably precede the provision of assistive devices, and the follow up in the terms of maintenance, repair and servicing should succeed. Responsible and constant use of assistive devices should be the criteria for providing assistive devices to persons with disabilities but not merely their physical requirements and occupational needs.
- ◆ In every district, the government may have a Service and Repair Centre, for various types of assistive devices. For sophisticated devices, requiring heavy investment, the govt. may reimburse or subsidize the repair / service cost to the private manufacturers.
- ◆ Government may support and subsidize manufacturers of disability devices to produce tri-scooters /battery tri-scooter, tri-cycles, wheel chairs, dark glasses, crutches, mobility canes, Braille watches and the like.

◆ Engineering colleges, Polytechnic colleges and community colleges having mechanical, instrumentation and other related departments, can offer facilities to repair, refit, or service the assistive devices to disabled persons living close by to these institutions.

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DEVELOPMENT NEEDS OF SOCIALLY EXCLUDED: THE CASE OF ARUNTHATHIYAR COMMUNITY IN TAMIL NADU

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Abstract

Since social exclusion is about domination, discrimination and deprivation, those who benefit from it do want to introduce any change while those who are discriminated against, who are supposed to be 'inferior', 'incapable', 'less meritorious' and 'lower' are not in a position to mobilize and organize to alter the existing social system. They do not want to remain in the dehumanizing social order but fear that may be subjected to repression if they resist exclusion and discrimination. To study the socio-economic condition of scavengers. To expose the social discrimination experienced by the respondents in the study area. To suggest measures to rectify the problem of the scavengers. Descriptive method has been adopted for the present study. Judged by the norms of civilized society, manual scavenging, personal sanitary and cleaning works in open environment and closed places is degrading and low profile job. The work status of scavenger is something considered by general public as undesirable, unwanted and disliked.

Keywords : Social Exclusion, Scavenger, Public health, Discrimination

Introduction

Social exclusion is a process through which certain groups are systematically discriminated against their caste, religion, gender, disability, and HIV status, migrant status which occurs in public institutions, such as the legal system, education, family and health. Social exclusion keeps a social group outside the power centers and resources. It takes the form of segregation from the social, political, economic, cultural, educational and religious domains of society. It thus infects a sense of superiority and

inferiority among members of a society or culture that results in a system of domination and subjugation. These processes ultimately lead to oppression and exploitation. The term 'social exclusion' was originally used in France in the 1970s to refer to various categories of people, labeled 'social problems', who were unprotected by social insurance. Since the late 1980s, the European Commission has embraced the concept. In Britain, the Labour Government of Tony Blair set up a cross-departmental Social Exclusion Unit to address issues of poverty, relative deprivation and social exclusion across many regions of the United Kingdom. The notion of social exclusion exists to some extent in the US under the label 'under classes. In Australia, the use of the concept of social exclusion includes that adopted by the US and some elements of the concept in the UK.

Arunthathiyar Community:

Arunthathiyars, with a population of over 700,000, are one of the most marginalized social groups in Tamil Nadu. Arunthathiyars consider themselves as Tamil, though many also speak Telugu at home. Dalits constitute about one-fifth of Tamil Nadu's population, and of these the Arunthathiyars are one of the bigger groups constituting about one-third of the state's Dalit population. Arunthathiyars have historically worked as grave diggers, dead animal disposers, street sweepers and manual scavengers. Because of the nature of their work, they are regarded as outcastes and untouchables. In rural areas, there are Arunthathiyars who work as agricultural bonded laborers-there are cases where parents, shackled by illiteracy and poverty, have sold their own children to their landlords.

Objectives:

The following objectives are formulated for this study:

- ◆ To study the social structure of the study area.
- ◆ To study the socio-economic condition Arunthathiyar community.
- ◆ To expose the social exclusion experienced by Arunthathiyar community.
- ◆ To analyse the social exclusion and problems of Arunthathiyar community in the study area.

- ◆ To suggest measures to rectify the problem of the Arunthathiyar community.

Methodology and Research Design

Descriptive method has been adopted for the present study. Area of the present study is Nambiyampalaiyam village Panchayat located in Avinashi block in Tiruppur District. The Universe of the study area is Nambiyampalaiyam village panchayat covering rural dalits in the age group of 20-60, above and the total number of dalits in the said area comes to 2250 dalits. For the purpose of the study 10 percent of rural dalits have been selected through simple random sampling method. Accordingly the sample size constitute 225 rural dalits are the respondents for the present study. To interpret the primary data collected from the respondents the descriptive research design wasad opted. The data for the present study is both from primary and secondary sources. The primary data are collected on the basis of the structured personal interview schedule which contains questions on general information of the respondents and other particulars which are very relevant to study for instance, health status of rural married women cultural aspects, religious aspects, customs and traditions, economic conditions and state of being excluded from the ordered life of a community. The secondary data has been collected from journals, magazines, books etc.

Table -1
Respondents by their Age-Group and Gender

Sl.No	Age-Group	Gender		Total
		Male	Female	
1.	21-30	47 (28.7)	05 (8.2)	52 (23.1)
2.	31-40	41 (25.0)	27 (44.3)	68 (30.2)
3.	41-50	43 (26.2)	11 (18.0)	54 (24.0)
4.	51-60	15 (9.1)	07 (11.5)	22 (9.8)
5.	Above 60	18 (11.0)	11 (18.0)	29 (12.9)
Total		164 (72.9)	61 (27.1)	225 (100.0)

Figures in parentheses indicate percentage to the respective total

Table No.1 shows the distribution of the respondents according to their age-group and gender. Out of 225 respondents 52 (23.1%) of them were in the age group of 21-30 followed by 68 (30.2%) belong to 31-40 years age group, 54 (24.0%) in the age group of 41-52; 22 (9.8%) were in 51-60 years age group and the remaining 29 (12.9%) in the total were in the category of above 60 years old. The gender-wise distribution of the respondents reveals that of the total a majority 164 (72.9%) of them were males while the rest 61 (25.8%) constituted by females. Further, it is found that majority 28.7% (47) of the males were in the age-group of 21-30 years while 44.3% (27) in the total females were in 31-40 years age group.

The inference drawn from the above table is that majority of Arunthathiyar respondents 142 (54%) were in the age group of 31-50 years and 164 (72.9%) in the total were males.

Table -2
Respondents by their Occupation

Sl.No	Occupation	No. of Respondents		Total
		Male	Female	
1.	Daily wage	52 (71.2)	21 (28.8)	73 (32.4)
2.	Agriculture	46 (70.8)	19 (79.2)	65 (28.9)
3.	Leather work	14 (100)	Nil	14 (6.2)
4.	Scavengers	02 (28.6)	5 (71.4)	7 (3.1)
5.	Govt.Employee	06 (85.7)	1 (14.3)	7 (3.1)
6.	Pvt.Employee	26 (68.4)	12 (31.6)	38 (16.9)
7.	Business	15 (83.3)	3 (16.7)	18 (8.0)
8.	Unemployed	03 (100)	Nil	3 (1.3)
Total		164 (72.9)	61 (27.1)	225 (100.0)

Figures in parentheses indicate percentage to the respective total

Table No-2 shows the occupation-wise distribution of the respondents. As presented in the table, out of the total respondents, 73 (32.4%) were engaged in daily wage works, another 65 (28.9%) were involved in agriculture, 38 (16.9%) were private employees, 18 (8.0%) were doing business, 14 (6.2%) involved in leather work, 7 (3.1%) were being scavengers, 7 (3.1%) were government employees and 3 (1.3%) of the respondents remain unemployed.

The conclusion drawn from the above table is that majority 73(32.4%) of the Arunthathiyar respondents involved in daily wage and agricultural works and females outnumbered males both in agriculture and scavenging while males are engaged in leather work.

Table - 3
Respondents' Perception on Selected Social Matters

Sl.No	Social Matters	Perception		Total
		Yes	No	
1.	Dowry is prevalent	172 (76.4)	53 (23.6)	225 (100.0)
2.	Practice of caste based occupation	139 (61.8)	86 (38.2)	225 (100.0)
3.	Participation in other religious ceremonies	75 (33.3)	150 (66.7)	225 (100.0)
4.	Celebration of other religious festivals	61 (27.1)	164 (72.9)	225 (100.0)
5.	Inviting other religious friends to their festivals and functions	167 (74.2)	58 (25.8)	225 (100.0)
6.	Prevalence of religious discrimination	167 (74.2)	58 (25.8)	225 (100.0)
7.	Prevalence of problems in your religion	72 (32.0)	153 (68.0)	225 (100.0)
8.	Celebrating village functions	130 (57.8)	95 (42.2)	225 (100.0)
9.	Organising get together activities	70 (31.1)	155 (68.9)	225 (100.0)
10.	Arrangement of village meetings regularly	66 (29.3)	159 (70.7)	225 (100.0)
11.	Social organizations working at their village	88 (39.1)	137 (60.9)	225 (100.0)
12.	Self-help groups formed	193 (85.8)	32 (14.2)	225 (100.0)
13.	Availability of adult and non-formal education	57 (25.3)	168 (74.7)	225 (100.0)
14.	Youth clubs formed	53 (23.68)	172 (76.4)	225 (100.0)
15.	Voluntary organizations working at their village	52 (23.1)	173 (76.9)	225 (100.0)
16.	Caste organisations formed at their village	73 (32.4)	152 (67.6)	225 (100.0)
17.	Women forum formed	52 (23.1)	173 (76.9)	225 (100.0)

Figures in parentheses indicate percentage to the respective total

Table – 3 depicts respondents' perception on selected social matters. Their perception reveals, as stated by majority 172 (76.4%) of them dowry is prevalent; 139 (61.8%) in the total practice caste based occupation; as many as 150 (66.7%) in the total never participated in other religious ceremonies; and 164 (72.9%) in the total never celebrate other religious festivals; however, 167 (74.2%) in the total invite other religious friends to their festivals and functions. Further 167 (74.2%) of the respondents perceived that religious discrimination is prevalent and as a consequence prevalence of problems in their religion particularly in the areas where they reside 153 (68.0%); 130 (57.8%) in the total celebrate village functions; organized get together activities 155 (68.9%); and 159 (70.7%) stated that they arrange village meetings regularly. About 61% (137) in the total stated that no social organization is working in their village; 193 (85.8%) replied that women self-help groups were formed in their areas; youth clubs 172 (76.4%), caste organization 152 (67.6%) and women forum 173 (76.9%) were not formed according to majority in the respective total. It is to be mentioned that no voluntary organizations workings in their villages according to 173 (76.9%) in the total and 168 (74.7%) stated that adult and non-formal education Centre-facilities are not available to them.

Major findings

- ◆ Majority (47.5%) of the respondents belonged to productive age group of 40-49 years.
- ◆ Lack of education is one of the main causes for selecting this job. Some of them are involved in this job hereditarily.
- ◆ (77.5%) respondents were married.
- ◆ 32.5% of the respondents were engaged in garbage cleaning works.
- ◆ 87.5% of the respondent's monthly income was 5000 – 10000.
- ◆ 32.5% of the respondents were working for garbage cleaning and 25% were working for street cleaning, and 25% were engaged in ditch cleaning, 5% were doing bathroom cleaning and 25% other working.
- ◆ Most (57.5%) of the respondents were aware of the PCR Act.
- ◆ Majority (65%) respondents were reaching the work spot by walk.

- ◆ Most of the respondents faced with untouchability in all levels of life. Such as working place discrimination by the higher level authorities.
- ◆ Arunthathiyar community perceived the scavenger as available person. Among the respondents, majority of persons are afraid of community discrimination at present and future.

Suggestions

- ◆ Promote education among the young students for understanding the causes and prevention of epidemic diseases.
- ◆ Creating awareness on PCR Act among the women groups, youth clubs, working place at large.
- ◆ The Governments must implement the special schemes for scavengers.
- ◆ The Governments should provide free medical aids for scavengers.
- ◆ To promote the wage income for both sex.
- ◆ To provision of equal opportunity, decision making process for such as Gram Sabha meetings.
- ◆ The State government should promote suitable income generation programme for scavenger's workers.
- ◆ The self-help groups and youth clubs should be encouraged to take up the development programmes among the scavengers.

Conclusion

Judged by the norms of civilized society, manual scavenging, personal sanitary and cleaning works in open environment and closed places is degrading and low profile job. The work status of scavenger is something considered by general public as undesirable, unwanted and disliked. In a large country like India with more than 120 crore of population, it is not possible for governments to fulfill public health and sanitation in the entire counters. Moreover Indian professions are also classified based upon caste based works as division of labour in the Varnasharma Dharma. As a result the scavenging, cleaning, sanitation related works which are assessed low profile. Obviously it attends with

lowest Varna namely the Chandala and the same is attended by panchamas and chandalas. These people are identified as lower category of caste namely Arunthathiyar. They are the worst victims of the tradition based work of this kind.

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VALUE OF CHILD AND FERTILITY BEHAVIOUR OF RURAL WOMEN – A STUDY IN ATHOOR BLOCK OF TAMIL NADU

T.Rajendran

The present study is concerned with the analysis of the value of male and female children as reported by rural women, preference of children, who asked the women to have only male child, and opinion of rural women regarding their son performing rituals and disallowing their daughter performing rituals. The study will be of immense use to understand the value of children and fertility behaviour among rural women across socio-cultural groups in rural areas of Tamil Nadu.

Key words: value of child, fertility behavior

Introduction

Since the early 1970s, there has been an increasing interest in the social-psychological study of the Value of Children (VOC) as one of the basic determinants of fertility behaviour. The social-psychological approach has been hailed as a major theoretical “breakthrough” in the understanding of fertility differentials between socio-economic strata, and of fertility decline in modernizing societies. In Asia, more major demographic surveys have been conducted in the past decade than elsewhere in the world, and particularly in South and Southeast Asia, there has been more social-physic logical research on fertility behaviour than in any other region of the developing world (Duncan, 1973; Baum et al., 1974; UN – ESCAP, 1974).

Sex Preference for Children

A strong preference for sons has been found to be pervasive in Indian society, affecting both attitudes and behaviour with respect to children (Arnold et al., 1998; Arnold, 1996; Busu, 1989; Das Gupta, 1987; Das Gupta and Bhat, 1997; Kishor, 1995; Koenig and Foo, 1992; Kulkarni et al., 1996; Murthi et al., 1995; Nag, 1991; Parasuraman et al., 1994; and Soudha and Rajan, 1999). In NFHs – 2, women who gave a numerical

response to the question on the ideal number of children were asked how many of these children they would like to be boys, how many they would like to be girls, and for how many the sex would not matter.

Statement of the Problem

From the insight and perspectives provided by review of certain studies on Value of Child and Fertility Behaviour of Rural Women, the present study is undertaken with specific reference to Dindigul District where no systematic and comprehensive research work has been done on the issues like Value of Child and Fertility behaviour

The Value of Child is associated with social, cultural, religious, psychological, economic etc factors. These values influence child birth which in term increases high fertility. The Government introduced family welfare Programmes nearly 45 years ago. Nevertheless the population shows an upward trend because of social, cultural, economic and psychological ethos attached to the size of the family.

Objectives of the study

1. To know the value of male and female children as reported by rural women
2. To know the preference of children
3. To know as to who asked the women to have only male child

Methodology

Descriptive research design is adopted to carry out the empirical investigation based on the data analysis and discussion to fulfill the objectives and to test the validity of the hypothesis.

One district in Tamil Nadu State namely Dindigul district was selected for the study. Out of 14 blocks in Dindigul district, Athoor Block was selected Randomly for the present purpose of empirical operation related to value of child and fertility behaviour of rural women in the block. Athoor block was identified and selected taking into account the socio-economic and psychological values of children held by the people towards fertility behaviour among rural women in the age group of 15 – 49 years. The married rural women coming under the age group of 15 – 49 years of the study villages were the respondents for this study. The respondents were identified through primary health workers, Balwadi,

NGOs, SHG, local leader's village panchayat presidents as well as from the eligible couple registers.

Discussion and Analysis

When the respondents are asked about the usefulness of male child, a higher proportion of respondents reported that male children will be useful as an old age security (46 per cent) followed by safeguard property (23 per cent) and economic source of life long income and economic utility (21 per cent) (Table. 1)

Table : 1, Usefulness of children

<i>Table Number</i>	<i>Usefulness</i>	<i>Number (n=600)</i>	<i>per cent</i>
1.1	<i>Usefulness of Male Child</i>		
	Old age security	276	46.0
	Safeguard property	140	23.3
	Economic utility	80	13.3
	Lifelong income	46	7.7
	Perform rituals	26	4.3
	Family lineage	15	2.5
	Strength to family	2	.3
	Asset creation	7	1.2
	Daughter-in-law brings dowry	8	1.3
1.2	<i>Usefulness of female child</i>		
	Assisting household works	171	28.5
	Caring at old age	197	32.8
	Helping at sickness	141	23.5
	Lifelong caring	39	6.5
	Economic support	14	2.3
	Family lineage	23	3.8
	No use	15	2.5
	Total	600	100.0

Source: Field data

When the respondents programmed usefulness of female child a higher proportion of respondents reported that female child will take care of parents at oldage (33 per cent) and help the parents when they are sick (24 per cent). Parents also perceived that the female child will assist household works (29 per cent). It seems that looking after the parents by the female child is either at old age or during sickness. This is an important usefulness of the female child. Assisting household work is a next important reason reported for usefulness of female child.

Table : 2

Preference to be alone in the case of only female child and reasons
Respondent's preference to be alone at old age if they have only female child and reasons

TableNumber	Stay alone and reasons	Number	per cent
2.1	Stay alone at old age		
	Yes	397	66.2
	No	203	33.9
	Total	600	100.00
2.2	Reason for Yes		
	It is not our culture	108	27.2
	Do not want to disturb daughters	123	30.9
	It creates problem	82	20.7
	It is a prestige issue	84	21.2
2.3	Reason for No		
	I will be with my daughter	35	17.2
	Daughters look after	77	38.0
	I will adjust the situation	91	44.8

Source: Field data

Two-thirds of parents preferred to be alone at old age (Table 2). They felt that living with daughter is not a cultural practice (27 per cent), do not want to disturb daughters (31 per cent), and it will create problems (21 per cent). They also felt that living with daughters is not good due to other prestigious factor (21 per cent).

One-third of respondents preferred to stay with their daughters in old age with a hope that daughters will look after them and they will adjust with situation. It seems that is the cultural practice that parents should not stay with their daughters during their old age and this will lead to son preference. i.e. having more number of sons than daughters so that they can live with their sons at the old age.

Table.3.

Preference to be alone at old age if they have only male child and reasons
Respondent's preference to be alone at old age if they have only male child and reasons

Table Number	Stay alone and reasons	Number	per cent
3.1	Stay alone at old age		
	Yes	370	61.7
	No	230	38.4
	Total	600	100.0
3.2	Reason for Yes		
	Daughter in law creates problem	196	53.0
	Don't disturb his life	174	47.0
3.3	Reason for No		
	I'll be with my son	114	49.6
	It is our tradition	116	50.4

Source: Field data

Sixty-two per cent of the respondents reported that they will stay alone. It is interesting to note this and contradictory to the expected positive value of children that male children will support their parents in their old age that is why people desired to have more number of male children than daughters. Parents do not want to stay with their male children because of the problem that will be created by daughter-in-law which will create problem with the son's life, whereas thirty-eight percent of respondents reported that they will stay with sons, stating that staying with the son is a traditional practice in the society.

Suggestions

- ◆ Periodic study of social, economic psychological and political values of children need to be done among various sections of population in different social and cultural settings in adopting population control measures.
- ◆ Gender equality needs to be sensitized among the youth.
- ◆ Attitudes towards having male/ female child needs to be modified and promoted positively through various government welfare programmes.

- ◆ Fertility behaviour needs to be shaped towards having a child irrespective of sex.
- ◆ Social values towards having a child of any sex are to be promoted in all walks of life among all section of population.
- ◆ Changing the social norms by emphasizing the value regarding reproduction.
- ◆ Imparting sex education right from the level of primary school.
- ◆ Family counseling on gender equality may be imparted.
- ◆ Improving upon the status of women will enhance the limiting the desired more no.of children and neglect of female child.

Conclusion

Community values the children from the point of view of socio and economic aspects which are traditionally nurtured and practised. Son preference also leads to have more number of children. The perceive value of son in terms of earning income and contribution to the family income, inheritance of property, mobility in search of employment and security for the period of old age, are the economic factors responsible for the preference of son for daughters. The preserved social value of sons in terms of performing rituals, family lineage, cultural practice of staying with son at oldage otherwise staying alone in the case of having only daughter are responsible for preparing for more sons than daughters. Women are expecting more such support from sons rather than daughter. Every woman prepares to give for opportunity of consultation on matters of family to the sons rather than daughters. The expected social, economic and psychological supports derive from sons lead to the son preference and its effect is found to be strong with one or two children and it diminishes thereafter.

Generally daughters are preferred from the point of view of emotional support provided at the time of illness and at old age for their parents. The society norms and other traditional cultural practices are responsible for valuing the female child at lower level compared to male child.

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PEASANTS AND DISPLACEMENT: ISSUES AND IMPLICATIONS

S. Gurusamy

Abstract

The Plight of peasantry depends upon the influence of topography interfaced with environment, the nature of production relations and land cultivation practices. Land in India is the life line and livelihood security of the peasantry. Any programme which effects the land, environment and topography in the name of modernization in Indian agriculture through green revolution and related technological transformation and commercialization, the land remained under the control of peasantry and the peasants were independent and autonomous in respect of their decision about cultivation practices. Some introduction of modernization on land the capitalists influence had displaced peasantry caused pauperization and proletarianization. What is more now is penetration of industrial capitalism and corporate influence, real-estate business etc. has further deteriorated the condition of peasantry and intensified the suffering of peasantry. Globalization has led to deprivation and totally displacement of peasantry from their roots. Consequently there had been instances of farmer's suicides spread in various parts of the country. This paper addresses comprehensively all these issues within the larger frame work of plight of peasants and throw lights on displacement of peasantry in view of programmes of modernization in agriculture and the issues and challenges faced in the process by the peasantry.

Keywords : Peasant, Production relations Displacement Globalisation

Prelude

We have focused our development in all fields dealing with humanities and social sciences, behavioural sciences, agriculture and soil sciences etc. using the technology of science and technology at large to have a special berth in the universe. Indeed, we have remarkably progressed in the field of science and technology, other behavioural sciences and we have deserve for all appreciations achieved from each corner of the universe but it is not enough to see our smiling faces today. We need peace, promotion and prosperity not only for individual

but society as a whole. These are possible only through better utility of our natural resources, proper understanding of modern science and technology, effective way in delivering of policies and programmes, better identification between haves and have-nots etc. To-day all these are within our reach but effective utilization of natural resources like Land, water, Air, Fire, Space etc. in general and land in particular is a core issues now. In 21st century, we must be specific to address our priority not only for sustainable development but peaceful survival also. Therefore, peasantry And land in one hand and modernization in another hand is to be linked in such a way that they always remain interrelated. It is possible only when we understand their values, our prime needs with better way of linking our past and present scenario.

Pre-independence Scenario

Pre-independence scenario in India was such that the untimely death of people was usual in nature due to famines. It was recorded that in Bengal 10 million out of a total population of 30 million died in the terrible famine of 1769 -70. This was followed by other devastating famines in the years 1784, 1787, and 1790 respectively (Haque and Sirohi (1985). Therefore, people were unrest to find the suitable solution to face the challenges in producing sufficient food grains. But this solution was in the hands of British Rulers. In 1757, The East India Company which wrested political and economic power from the Nawab of Bengal, created new Zamindaris. The major portions of land remain controller their regime and the production was carried out through tenants, labourer with the understanding of payment of rents or share crops etc. The attitude of Zamindars was such that actual cultivators lost their traditional rights and security which had great impact on land. Land remain fallow, productivity was lost etc. Therefore, in mainstreaming the settlement issues, several acts were enacted in the different parts of India. For example (regulation VII 1822) in united provinces, (Ryotwari Madras and Bombay),(regulation of VII of 1822 and regulation IX of 1833 Punjab). In 1885, the Bengal Tenancy Act) Agra Tenancy Act (1926), Bihar Tenancy Act (1885) , Orissa Tenancy Act (1914) Land Alienation Act (1901) Cooperative society Act (1904), Usurious loan Act(1918), Provincial influence Act (1920), Punjab Institution of money lender and

land mortgaged Act 1938 (Haque and Sirohi (1985)). In 1938, the National Planning Committee was constituted under the chairmanship of Pt. Jawaharlal Nehru which visualized future agricultural organization along with cooperative lines. But these all measures could not resolve the genuine issues, peasantry fell into the clutches of money lenders; exploited by capitalists etc. ultimately affected the production.

Post –Independence Scenario

Based on the previous experience, our vision was also fixed to achieve self-sufficiency in food grains. Composite development of society through creation of employment, availability of adequate shelters, safe drinking water and health care etc. Therefore, various plans (five year plans) and programmes were introduced to see our country developed one.

Therefore, the peasants-land –modernization so interrelated, always are subjected to debate. With this understanding, this study has been conducted on identifying certain areas in India which reflects better issues on peasants –land in the modernization era.

Review of Literature

Kroeber (1948) defines peasants as a part of societies with part cultures. They are definitely rural yet live in relation to market towns. Gandhi (1951); God forbid that India should ever take to industrialism in the manner of the west. The economic imperialism of a single tiny island kingdom is today keeping the world in chains. Teodard Shanin (1966) takes more or less a similar stand on peasant family farm. In his view, peasantry consist of small agricultural producers who with the help of simple equipment and labour of their families produce mainly for their own consumption Boudhayan (1970) argued that the growth of commercial capitalism, especially during the Muslim period, would have led to the growth of Industrial capitalism in India had not this trend been interrupted by the British conquest Marx (1977;20-21) visualizes a particular relationship between the economic structure and the non-economic structure of the society when he says “the totality of these relations of production constitutes the economic structure of the society, the real foundation, on which arises a legal and political superstructure

and to which correspond definite forms of social consciousness. **Gadgil and Guha** (1992) stressed that the technologies adopted could be capital or labour intensive; they could be oriented towards satisfying the demand for luxury goods or fulfilling the basic needs of the masses **Pangare** (1992) reveals the concept of equitable distribution of water rights among the landed as well as the landless is still not widely accepted in India, even though it has been applied successfully in places like Ralegan Sidhi, Maharashtra. **Gurusamy** (1993) views about peasants politics and socio and political issues of pressure groups in South India **Hobsbawm** (1995) views the issues of development and displacement are interwoven with the broader policy changes of the Government in a given period of time. **Kanbur** (2002) rare is the development project, policy or process that only creates winners. The displacement theme brings to centre stage the losers. One form or another of displacement is often part of the development footprint **Guha** (2004) views that the land acquisition act has no provision to compensate the villagers who may not be the owners of a particular piece of agricultural land when the recent environmental Impact assessment does not have any provision to calculate the economic costs for the loss of common property resource in agricultural land **Misra** (2007) views changing technology and market conditions the farmers are increasingly being exposed to the uncertainties of the product as well as factor markets. **Sharma** (2007) stressed basic human needs have the first claim on society’s resources and is an obligation to arrange its economic affairs in a manner that the needs of all members are met. **Alagh** (2011) Technology is the prime mover of productivity in agriculture where natural resource are fixed. Public sector technology generations fails to take into account farmer’s needs, perception, location specific conditions for each crops leading to significant gaps between variety released by the public sector institutions and the number of varieties actually used by the farmers. Based upon the background “plight of peasantry with an over tone on land and modernization” the following researchable issues are emerged.

- ◆ What strategy India should adopt to curb the misuse of land?
- ◆ What methodology country should adopt for healthy agricultural production?

- ◆ What measures are needed for socio-economic and political development of peasantry?
- ◆ Why corporate sectors are intended to occupy agricultural land and vulnerable towards social responsibilities?
- ◆ We need modernization but what extent? In what cause?

Conceptual Frame work:

This study is based on conceptual frame works on Marxian thoughts of class conflict and alienation. According to Karl Marx (1818-1883) every stage in history, there is a war between classes land owner and land less. Landowner exploits the land less on production issues, there is endless antagonism and hatred. Marx views a particular class owns and controls the means of production and the virtue of this exploits the rest of the people. The capitalist class makes use of the state as an instrument of oppression and exploitation. According to Marx, the essence of capitalist exchange is to proceed from money to money by way of commodity and end up with more money than one had at the outset "Capital is gained". In his theory of surplus value, Marx believed that the capitalists accumulate profit through the exploitation of labour. The workers produce more wealth in the form of food, manufactured goods and services than is necessary to meet their basic needs, produce "Surplus wealth" but they do not enjoy the surplus production, capitalists seize the surplus wealth as profit for their own use, this is a main source of class conflict between the classes. He views the capitalist economic systems transformed the masses of people into workers, created for them a common situation and included in them a common situation and included in them an awareness of common interest called 'proletariat'. Exploitation of the workers can only add to their misery and poverty. The wealth of the bourgeoisie is swelled by large profits with corresponding increase in the mass of poverty; of pressure, of slavery, of exploitation of the proletariat. The people who labour, are condemned to toil for no more than the barest necessities of life, with this, society gets divided into rich and poor. The workers caught in the various circle of exploitation find no way to get out of it. They lose interest in work. The responsibility of the worker gets diminished because he does not own the tools with which he works and finally get alienated. The alienate

class club together and associate themselves to revolt and throw out the capitalists. Ravenste (1889) push and pull theory of migration. People move because they are pushed out of their former location whether other moves because they have been pulled to some place etc. Gidden (1990) Post-Fordism is used to refer to a set of overlapping changes that are occurring not only in the reel of work and economic life but throughout society as a whole some writers argue that the tendency towards post-Fordism can be seen in spheres as diverse as party policies, welfare programmes, consumer life style choices where observes of late modern societies often point to many of the same changes. M.N Srinivas "the changes brought about Indian society and culture as a result of over 150 years of British rule, the term subsuming changes occurring at different levels technology, institution, ideology and values. His views modernization includes humanitarianism and rationalism, building of Nation State: development of political culture, traditional goes hand in hand with modernization. **Yogender Singh (1994)** views that modernization in India started with

the western contact. The basic direction of this contact was towards modernization but in the process a variety of traditional institutions also get re-enforcement. This demonstrates the weakness of assuming a neat contrariety between tradition and modernity.

Objectives

- ◆ To examine the issues involved on land and peasantry in the pre and post industrialization era.
- ◆ To analyze the various policies and programmes introduced from time to time by the government and its impact factors.
- ◆ To assess the feasibility of applying modern technology in Indian Agriculture
- ◆ To draw inferences and conclusion.

Aim of the Study

To explore the various dimensions of problems, issues and challenges faced by the peasants and land with respect to the modernization process in India.

Selection of Study Area

Based on review of relevant literature, discussions with leaders of various peasants organization, newspaper reports, old archives, historicity and geographical position etc. certain areas of West Bengal (Kharagpur block, 1 (West Medinipur Dist) (Singur block (Hooghly District) Kulpi (24 Parganas) where peasants are found to be unrest due to land issues on modernization factors identified for the study.

Sampling Method and Size

The sample technique used for this study is purposive and accidental sampling method. The purpose of the study is to find out causes and effects of said objectives which have already aroused in due course of time where the peasantry is involved. Hence the selection of sample using purposive technique is justified.

Limitation: As the universe is large and unknown in the selected study areas. The purposive and accidental sampling technique was found to be more suitable for this study.

Results and Analysis

Agriculture is a prime production in India and contribute major portion of gross domestic product. Since independence, various measures were taken by the government for more production and productivity for making India as food sufficiency. But it could not appreciate much and India faced the challenges in producing sufficient food grains in mid-60, therefore, green revolution programmes were the turning points at that time to enhance agriculture productivity and incomes to rural population. The major components are analyzed as follows:-

Table: 1 Components of Gross Domestic Product

Year	Agriculture	Industry (incl. construction)	Services
1951-52	55.4	15.4	29.3
1961-62	49.4	19.5	31.1
1971-72	43.1	22.5	34.5
1981-82	37.6	24.6	37.9
1991-92	30.3	25.6	44.1
2001-02	24.0	25.0	51.0
2009-10	14.6	28.5	56.9

Source: CSO 2011 reports

Table I shows the gross domestic production various year since (1951-2010) in all the three sectors (agriculture, industry and tertiary). In the year 1951-52, the first five year plan year, the agricultural sectors alone contributed much (55.4 percent) of GDP compare to industrial sector (15.4 percent). But, in T.E 2009-10 shows only (14.6 percent) compare to other sectors is a matter of concern.

Table 2: Some Indicators of Land Use and Waste Lands in India

Year	Gross cropped area	Net sown area	Not available for cultivation	Cultivable waste lands	Cropping intensity	Fallow land
TE 1983-84	176.35	142.05 (46.70)	40.09 (13.2)	16.11 (5.3)	124.17	23.26 (7.6)
TE 1993-94	184.82	142.23 (46.7)	40.84 (13.4)	14.66 (4.8)	129.93	24.22 (7.9)
TE 2003-04	184.65	137.98 (45.2)	41.95 (13.7)	13.45 (4.4)	133.77	27.53 (9.0)
TE 2008-09	194.25	140.76 (46.0)	43.16 (14.1)	13.03 (4.3)	138.00	25.30 (8.3)

Source: Government of India (2010 d)

Note: Figure in parentheses is percentages to the total reported area.

This table focuses about land use pattern in India. Here it is noticed that cropping intensity has increased from 124.7 percent in TE 1983-84 to 138 percent in TE 2008-09 which is the result of improved irrigation facilities. The increment of gross cropped area in TE. (1984-84) to TE (2008-09) has an indication of effective using of scarce resource.

Table 3: Net Area Irrigated By Different Sources in India

Year (T.E)	Govt. canals	Pvt. Canal	Tank	Tubewell	Other well	Other sources	Total
1953-54	7.30(35.2)	1.23 (5.8)	3.47 (16.5)	00	2.59(12.3)	2.59 (12.3)	21.01
1963-64	9.63(37.8)	1.16 (4.5)	4.66 (18.3)	0.73(2.8)	2.43(9.6)	2.43(9.6)	25.48
1973-74	12.12 (38.5)	0.87(2.7)	3.82(12.1)	4.87(15.5)	2.31 (7.3)	2.31 (7.3)	31.50
1983-84	15.82(38.57)	0.48(1.2)	3.28(8.0)	10.68(26.0)	2.31 (5.6)	2.31 (5.6)	41.05
1993-94	16.83(33.3)	0.48(0.9)	3.11(6.2)	15.79(31.3)	3.23(6.4)	3.23(6.4)	50.50
2003-04	14.85(26.9)	0.21(0.4)	2.15(3.9)	23.10(41.8)	3.63(6.6)	3.63(6.6)	55.37
2008-09	16.53(26.2)	0.21(0.3)	2.01(3.2)	25.70(40.8)	6.04(9.60)	6.04(9.60)	63.00

Source: Government of India (2010 d)

Figures in parentheses are percentage to net irrigated area.

Ground water is a scarce resource today due to heavy excavation and non-recharge of surface water. This table shows the trends of using tube well for irrigation is increased from zero percentage in (1953-54) to 25.70(40 per cent) in (2008-09). In India the majority of peasantry is small and marginal. They are unable to afford own tube well for irrigation. The money lenders are promoting such tube well on rent basis which put extra burden to them.

Findings and Conclusion

This study is based on observation, discussions, self-feelings which are quantified and qualitatively measured supported with case studies. Therefore, it may be concluded with better versions so that it provides some instinct ideas for formulating of policies and programmes on the issues of land –peasantry and modernization. It is true we need modernization but at what cost? Is it at the cost of scarce resources, human resource etc.? We need to attend our sustainable growth which means optimal use of natural resources with minimal adverse impact. The demands on these resources will expand daily, government policies and programmes are also required to be implemented and positive or negative impact can-not be ignored but we must always see the amount of social acceptance of all the policies and programmes, under various circumstances before applying that one. Food insecurity, inflation are the major concern today, we need to work closely with peasants. Their experience must be tapped at appropriate time for better productivity at the same time we must focus on other sectors to shift the surplus agricultural labour to these sectors. We have abundant unemployed youth population especially in villages; their potentiality must be utilized providing technological knowledge for better application in agriculture and allied sectors. Therefore modernization should be sustainable in nature and it should not be livelihood hindrance for stake holders. Agricultural productivity should be based upon type of cropping patterns, labour intensive according to topography with affects small holders particularly small peasantry whose livelihood security is only land. The negative impact of modernization, consistent loss, dept burden raise conflict between government and peasantry which not only affect agriculture production but also unnecessary protests which may lead to penetration

of extremists elements into their soil ultimately result it class conflict which affect communal harmony and social integration as well as prosperity of the country. In this direction agricultural development policies /programmes should be focused to address the needs and challenges of the peasantry in the contemporary society within the larger frame work of peasants' development in the Indian context.

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ORGANIZATIONAL CULTURE AND EMPLOYEE RETENTION

S. Radhakrishnan And R. Vinotha

Abstract

Today, employee retention is the top priority of organizations due to increasing competition. It is an efficient and productive advance towards the employee management who are considered to be 'greatest assets' to the company. It is not only important to have the best and the most talented employees but it is equally necessary to be able to retain them for long-term benefits to both the organization and its people. There are lots of factors influencing employee retention. Amongst those factors, this study aims to find out the relationship between the organizational culture and employee retention. A study was conducted in Ramanathapuram District Sarvodaya Sangh with a sample size of 90 respondents (45 male and 45 female employees). The result of the study showed that the organizational culture plays a key role in employee retention.

Keywords: *Organizational Culture, Employee Retention, Longterm benefits, Factors, Ramanathapuram District Sarvodaya Sangh.*

Introduction

Basically, organizational culture is the personality of the organisation. Culture is comprised of the assumptions, values, norms and tangible signs (artifacts) of organization's members and their behaviors. Members of an organisation soon come to sense the particular culture of an organisation. Culture is one of those terms that are difficult to express distinctly, but everyone knows it when they sense it. For example, the culture of a large, profit corporation is quite different than that of a hospital which is quite different than that of a university.

Multiple definitions of organizational culture exist with many of them centering on enduring attributes of culture such as values, assumptions and beliefs. Organizational culture gives a sense of what is valued and how things should be done within the organization. It can be thought of as the 'normative glue' in organizations that preserves and strengthens the group through maintaining equilibrium (Sleutel 2000). Also it is a sense making and control mechanism that guides and shapes

the behavior and attitudes of an organization's members (Weick 1995, Robbins 1996). Rooted in anthropology, the concept of culture goes back centuries. Organizational culture research can be traced back to the 1930s (Trice & Beyer 1993). The concept began to receive serious attention in the organizational sciences in the 1980s in response to works by Peters and Waterman (1982) and Ouchi (1981).

Organizational culture provides a sense of identity to members and increases their commitment to the organization. It is a sense-making device for organization members. It reinforces the values of the organization and serves as a control mechanism for shaping the behavior of the members of the organisation.

Literature Review

One of the more commonly cited frameworks is that of Schein (1992). In Schein's framework, culture manifests itself at three fundamental levels, represented in a hierarchical fashion: (1) observable artifacts, (2) values and (3) basic underlying assumptions. Artifacts, the most accessible elements of culture, are tangible or visible aspects of cultures. Values are the explicitly articulated norms, social principles and ideologies considered to have intrinsic worth and importance within the organization. And finally, assumptions, the deepest level or core elements of culture, provide expectations that influence perceptions, thoughts and feelings about the organization. Assumptions are the taken-for-granted beliefs about reality and human nature that practitioners in an organization share. In Schein's view artifacts are manifestations of values, while values are manifestations of assumptions. The three levels constantly shape each other in an iterative process. Other conceptual frameworks of organizational culture include the works of Hatch (1993) and Trice and Beyer (1993) amongst others.

Materials and Methods

Study design

This study is descriptive in nature.

Aim of the study

There are lots of methods and ways existing to acquire and retain the talented workforce in this modern and scientific business era. But, still employee retention remains a bigger question mark. This study focused to find the relationship between the organisational culture and employee retention.

Sample size

The study was conducted in Ramanathapuram District Sarvodaya Sangh, Srivilliputtur. The sample size comprised totally 90 respondents (45 male and 45 female) who are working for a long term, more than 15 years. The respondents were selected by using simple random method.

Data collection

This study mainly focused on primary data. Data were collected through a well-structured interview schedule and focused group discussions.

Analysis

The interview schedule was structured with 16 items, in order to find the factors of the organizational culture that cause the employee retention. Percentage analysis was used for this study.

Table : 1
Factors of Organizational culture for employee retention among male and female employees

Factors of Organizational culture for employee retention	Male employees				Female employees				Total	
	Yes		No		Yes		No			
	No.	%	No.	%	No.	%	No.	%	No.	%
Easily follow able rules	25	27.8	20	22.2	37	41.1	8	8.9	90	100.0
Zero harassment	10	11.1	35	38.9	45	50.0	0	0	90	100.0
Employee dignity is respected	45	50.0	0	0	30	33.3	15	16.7	90	100.0
Organizational support	32	35.6	13	14.4	24	26.7	21	23.3	90	100.0
Friendly peer group	14	15.6	31	34.4	39	43.3	6	6.7	90	100.0
Superior's genuineness	36	40.0	9	10.0	20	22.2	25	27.8	90	100.0
Team spirit	9	10.0	36	40.0	36	40.0	9	10.0	90	100.0
Name and Fame of the Organisation	42	46.7	3	3.3	38	42.2	7	7.8	90	100.0
Well behavior shaping	41	45.6	4	4.4	27	30.0	18	20.0	90	100.0
Sense of belongingness created by the organisation	23	25.6	22	24.4	35	38.9	10	11.1	90	100.0

Source: Primary data

Table 1 clearly shows the relationship of the factors of Organizational culture with the employee retention. Out of 45 male employees 27.8% responded for easily follow-able rules, 50% for employee dignity, 35.6% for organizational support, 40% for superior's genuineness and 46.7% for name and fame of the organisation. Out of 45 female employees 41.1% responded for easily follow-able rules, 50% for zero harassment, 43.3% for friendly peer group, 40% for team spirit, 42.2% for name and fame of the organisation and 38.9% for sense of belongingness.

Discussion

The male employees expressed that the organizational culture factors namely, employee dignity, superior's genuineness, name and fame of the organisation and well behavior shaping were the main cause of their retention with the organisation. While, female employees preferred easily follow able rules, zero harassment, friendly peer group, team spirit and sense of belongingness.

Conclusion

It is clearly found that the organizational culture has a vital role in employee retention, though the preferences changes among the male and female employees. Further, it is proved that the name and fame of the organisation is preferred by both the male and female employees. As it gives a social identity, every organisation should try to get and maintain a good image in society. Female employees are having much sense of belongingness than male employees. Zero harassment emphasizes their sense of belongingness.

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WOMEN'S HEALTH PROBLEMS ASSOCIATED WITH SURGICAL MENOPAUSE

R Jayasree and Kalavathamma

Abstract

The surgical menopause is an inevitable stigmatizing psychological event, signifying the end of reproductive life and of youth and is often associated with fears of loss of femininity, fertility and menstrual function which may have an impact on a woman's self-esteem and sense of wellbeing. Woman with surgical menopause has to heal both physically and mentally and is the time for personal adjustment. Surgical menopause occurs when a premenopausal woman has her ovaries surgically removed called bilateral oophorectomy induces an abrupt menopause with women often experiencing more severe menopausal symptoms than if they were to experience menopause naturally. Bilateral oophorectomy was performed for uterine, cervical, ovarian cancers and to treat non-cancerous conditions such as dysfunctional uterine bleeding, fibroids, uterine prolapse, pelvic inflammatory disease, endometriosis, adenomyosis, bilateral hydrosalpinx and ovarian cysts. In the above context, the present paper tries to analyse the issues and problems of women associated with surgical menopause. The paper is based on an empirical study carried out in Kurnool district of Andhrapradesh.

Keywords : Surgical Menopause, Health Problems oophorectomy

Introduction

Menopause is a reproductive milestone in a woman's life. Menarche and menopause are basic physiological characteristics in the life cycle of women. Menopause marks the time in a woman's life when there's a transition from her reproductive phase to her post-reproductive phase. Midlife brings many changes for women and during menopause the body is resetting itself for the oncoming years and results in a variety of fluctuations in mood and emotional balance, weight, hormone levels,

cardio-vascular health and the increased risk of osteoporosis. Surgical menopause has significant physical and physiological consequences and deteriorates the health related quality of life.

The onset of menopause and the loss of ovarian function are associated with a significant increase in the prevalence of diseases such as coronary heart disease, osteoarthritis and osteoporosis. The prevalence of these debilitating diseases continues to increase through the postmenopausal period. Hormone replacement is an obvious treatment approach to counter the problems associated with the loss of ovarian function and subsequent estrogen deficiency in managing vasomotor symptoms and maintaining bone density.

The International menopause society, in collaboration with the world health organization, has designated 18th October, 2007 as “World Menopause Day” and the celebrations around the world symbolizes a unity among women by sharing the same experience of menopause. **Jeremy Page’s World Prout Assembly** by the Institute for social and Economic change, based in Bangalore (2007) found that 3.1 percent of Indian women, that is about 17 million underwent surgical menopause between the ages of 30 and 34 years and 8 percent, about 44 million were in menopause by the time they are 39 years and 19 percent have gone through the change of life by the age of 41 years, Natural menopause attained between the ages of 45 and 55 years with the global mean age being 51 years and premature menopause before the age of 40 affects one percent of women worldwide.

Marcha Flint (2005) conducted a cross-cultural, community based investigation on menopause and showed that menopause was experienced differently in India compared to the United States. The majority of Indian women 93 percent reported loss of interest, tightness in the head and body, hot flushes and worry about nervous breakdown which were much higher in Indian women as compared to American women and aches, fatigue, headache, excitability, sleep disturbances, poor concentration, blues were higher in American women and Indian women were low

level of education, ignorance of the nature of menopause leads to imagine that they were suffering from all sorts of illness and suggested that a clear understanding of symptoms that is different between vasomotor and psycho-somatic was essential and differences that exist must be imparted to the women.

According to **Mohan Rao (2004)** an Indian women if a hysterectomy was done on a woman who would have liked to become pregnant, depression was a natural reaction and a woman was disappointed for marital conflicts or ends a woman’s sex life. There is a need to understand and accept that the menopausal experience is not a biological phenomenon but one that is strongly influenced by socio-cultural factors. Each woman is unique and must make her own informed decisions about her health. Women can expect to live greater portions of their lives postmenopausal. Proactively managing menopause is an opportunity for women with adequate exercise, healthy balanced diet along with life -style modifications to prevent risks of heart disease, osteoporosis and promoting general well-being with quality of life. Women need to be fully informed about the physical effects of the menopause, and advised about the ways they can change their lifestyle and behavior to lead a healthy and active life.

Objectives

- 1) To study the socio economic and demographic profile of the surgical menopausal women.
- 2) To assess the consequences /problems of women associated with surgical menopause.

Operational definition

- **Oophrectomy:** In a woman when both ovaries are removed menstruation stops and a woman loses the ability to have children and the females sex hormones estrogen and progesterone are no longer produced.
- **Surgical Menopause:** Women who undergo bilateral oophrectomy prior to natural menopause will experience sudden induced bodily changes from the surgery.

Universe of the study

The population in this study includes the women in the selected hospitals of Kurnool District who were not attained natural menopause and undergone bilateral oophorectomy surgery in Kurnool district of Andhra Pradesh.

Sample framework

For the 1st instance, Kurnool District of Andhra Pradesh state was selected purposively for the convenience of the researcher. During the next phase of sampling, random sampling technique was followed based on the high occurrence rate of oophorectomy operations. Four major hospitals from Kurnool District have been selected. In the next stage, from the selected each hospital 100 oophorectomy cases were identified randomly for the study. So that total sample has become 400. For safer side researcher had considered 110 cases from each hospital so that to tackle with incomplete data and missed data due to several reasons. Addresses and socio-demographic data were gathered from the respondents during hospitalization period after surgery. From the Hospital records the respondents were selected and primary data for the present investigation was gathered through interview schedule by meeting the respondents at their residence minimum six months after the surgery.

Method of data collection

After obtaining formal permission from the District Health and Medical Officer and concerned authorities, the Investigator collected the list of sample. The verbal consent from the respondents was taken and they were assured the confidentiality of their individual performance.

Results and Discussion

Socio economic profile of the respondents: It is interesting to note that nearly 1/3 of the respondents underwent surgery in the early reproductive age between 20-30 years indicated the high prevalence of malignancy state. Thirty four percent of the respondents had education at intermediate level and 11 percent had post graduate level education. Majority of women, 92 percent, were married and 6 percent were unmarried. With respect to

age at marriage of respondents and their husbands nearly one third, 29 percent of the respondents, and 40 percent of respondent's husbands got married below the legal age at marriage i.e., 18 years for girls and 21 years for boys. With regard to health problems 34 percent, had no health problems before oophorectomy surgery. Considering the sexual life aspects, 42 percent had faced problems in their sexual life due to surgical menopause. Twenty Nine percent of women underwent bilateral oophorectomy surgery due to ovarian pregnancy, prolapse of uterus, dysfunctional uterine bleeding and rupture uterus and 25 percent of women with cancer of uterus, ovaries, fallopian tubes and colon.

Table-1 : Percentage distribution of respondents according to consequences (problems) associated with surgical menopause

Consequences associated with surgical menopause	No. of women	Percentage
Low	103	25.8
Moderate	174	43.5
High	123	30.8
Total	400	100.0

The above table displays the consequences faced by women associated with surgical menopause. 44 percent of women had experienced moderate degree of consequences related to surgical menopause. 26 percent of women had faced low degree of consequences with regard to surgical menopause and 31 percent had experienced high degree of difficulties because of surgical menopause. The basic concepts considered for consequences faced by women associated with surgical menopause were physiological (hot flushes, heart palpitations, insomnia, headache), physical problems (weight gain, sagging of the breast, vaginal dryness and vaginal atrophy) and psycho-sexual problems (dyspareunia, depression, affected feeling of loss of femininity).

Table-2:
Impact of background variables on the consequences faced by the women associated with surgical menopause

Independent variables		Low level		Moderate level		High level		Total		Chi-square value (x) (p-value)
		No.	%	No.	%	No.	%	No.	%	
Age	20 - 30 years	38	29.00%	68	51.90%	25	19.10%	131	100%	$x^2 = 18.254^{**}$ $p = 0.001$
	31- 40 years	51	21.80%	94	40.20%	89	38.00%	234	100%	
	41 - 45 years	14	40.00%	12	34.30%	9	25.70%	35	100%	
Education	Upto 10th class	14	15.40%	39	42.90%	38	41.80%	91	100%	$x^2 = 16.099^{**}$ $p = 0.013$
	Intermediate	41	30.40%	59	43.70%	35	25.90%	135	100%	
	Under Graduation	42	32.30%	54	41.50%	34	26.20%	130	100%	
	Post Graduation	6	13.60%	22	50.00%	16	36.40%	44	100%	
Area of Residence	Urban	44	22.30%	81	41.10%	72	36.50%	197	100%	$x^2 = 18.667^{**}$ $p = 0.001$
	Rural	55	28.60%	88	45.80%	49	25.50%	192	100%	
	Urban Peripheral	4	36.40%	5	45.50%	2	18.20%	11	100%	
Having specific problem in sexual life after surgery	Yes	56	33.70%	77	46.40%	33	19.90%	166	100%	$x^2 = 23.668^{**}$ $p = 0.000$
	No	37	17.50%	88	41.50%	87	41.00%	212	100%	

*Significant at 5% level

**Significant at 1% level

NS-Not significant

The above table signifies the impact of age factor on consequences faced by the women due to surgical menopause. It could be stated with the support of Chi-square test that there was a significant influence of age at the level of 5% on the women relating to consequences they faced during surgical menopause.

Education of the women had its bearing on the consequences they come across because of surgical menopause. Hence, it was concluded stating that education had a significant impact on the consequences faced by the women due to surgical menopause. Area of residence consists of infrastructure, information network, accessibility to data, living conditions, etc. impacts the consequences faced by the individuals residing in that area. The table exhibits the association between the area of residence and the consequences faced by the women on surgical menopause.. The rural women may not feel that the physical and physiological problems due to surgery. The analysis with the support of Chi-square test showed that there was a negative correlation between the problems in sex life and consequences faced by the women with post-surgical menopause.

Table-3: Impact of Reasons for surgery and the consequences faced by the women associated with surgical menopause

Independent variables		Low level		Moderate level		High level		Total		Chi-square value (x) (p-value)
		No.	%	No.	%	No.	%	No.	%	
Reason for oophrectomy operation	Cancer of Uterus/ Fallopian tubes / ovaries / colon	17	16.80%	50	49.50%	34	33.70%	101	100%	$x^2 = 18.071^{**}$ $p = 0.021$
	PID/Hydrosalpingitis / Endometritises	32	34.80%	40	43.50%	20	21.70%	92	100%	
	Fibroid uterus / Bulky Uterus / Atrophy ovary/Cystic ovary	27	30.00%	35	38.90%	28	31.10%	90	100%	
	Menorrhagia / Dysfunctional Uterine Bleeding (DUB)	19	32.20%	24	40.70%	16	27.10%	59	100%	
	Ovarian Pregnancy / Prolapse uterus/ Rupture uterus	8	13.80%	25	43.10%	25	43.10%	58	100%	

*Significant at 5% level

**Significant at 1% level

NS-Not significant

The table illustrates the impact of reason for oophorectomy operation on the consequences associated with the surgical menopause. The analysis revealed that 43 percent of the women who underwent surgery due to ovarian pregnancy/ prolapsed uterus/ rupture uterus had experienced high degree of consequences due to surgical menopause. 34 percent of the women who had the problem of cancer of uterus/fallopian tubes/ovaries/colon and underwent surgery had faced high degree of complications due to post-surgical menopause. This indicates that there was a significant impact of reason for oophorectomy operation on the consequences faced by the women regarding surgical menopause. The results were verified and confirmed with the application of Chi-square test.

Table-4: Impact of surgery related variables on the consequences faced by the women associated with surgical menopause

Independent variables		Low level		Moderate level		High level		Total		Chi-square value (x) (p-value)
		No.	%	No.	%	No.	%	No.	%	
Place of Surgery	Govt. Hospital	63	25.40%	117	47.20%	68	27.40%	248	100%	$\chi^2 = 4.414$ $p = 0.110$
	Private Hospital	40	26.30%	57	37.50%	55	36.20%	152	100%	
Mode of treatment received after oophorectomy	Counselling	29	21.20%	63	46.00%	45	32.80%	137	100%	$\chi^2 = 8.214$ $p = 0.414$
	Hormone Replacement Therapy	45	28.50%	60	38.00%	53	33.50%	158	100%	
	Symptomatic Treatment	26	28.00%	44	47.30%	23	24.70%	93	100%	
	No treatment	3	25.00%	7	58.00%	2	17.00%	12	100%	
Follow up after surgery	Yes	90	29.00%	141	45.50%	79	25.50%	310	100%	$\chi^2 = 19.436^{**}$ $p = 0.000$
	No	13	14.40%	33	36.70%	44	48.90%	90	100%	

*Significant at 5% level

**Significant at 1% level

NS-Not significant

Place of surgery determines the level of personal care taken by the service provider which in turn impacts the consequences faced by the respondents. Here, in the table place of surgery was categorized as government hospitals and private hospitals. It was evident from the analysis that place where surgery had taken place had no significant impact on the extent of consequences faced by the women. The table analyses the influence of mode of treatment received by the women after oophorectomy on the extent of consequences faced by the women regarding surgical menopause. The outcome was that 33 percent of women who had 'counseling', 34 percent of women who had 'hormone replacement therapy', and 25 percent of women who had 'symptomatic treatment' experienced high degree of consequences due to surgical menopause. 17 percent of the women who never underwent any type of treatment also expressed high level of consequences due to surgical menopause. By the above observations, it was clear that there was no significant impact of type of treatment received on the level of consequences experienced by the women due to surgical menopause. Thus, it could be concluded that there was no significant impact of type of treatment after surgery on the level of consequences faced by the women because of surgical menopause. The same was verified and proved with the support of Chi-square test.

The table discusses the association between the follow up that was taken by the women after the surgery and their degree of consequences experienced due to surgical menopause. 49 percent of the women who had not taken follow up actions after surgery faced high degree of problems due to surgical menopause. 26 percent of women who had been with the follow up actions after surgery observed a high degree of consequences due to surgical menopause. By using the Chi-square test the same was verified and confirmed. This indicates that follow up actions taken by the women after surgery significantly impact their degree of consequences regarding surgical menopause.

Conclusion

Majority of the respondents reported various surgical menopausal problems. Most of the problems are expressed as physical ailments and psychological distress. Sexual and psychosocial problems were not voiced enough to draw major conclusions. However the lack of approval of

sexual and psychosocial problems informs societal inhibition on expressing and acknowledging such problems, lack of awareness, neglect and denial. Women have an inadequate knowledge and most of them need education as menopause is emerging as an issue owing to rapid globalization, urbanization, awareness and increased longevity in Indian women. Therefore emphasis should be given to the management of consequences associated due to surgical menopause with hormonal or non-hormonal interventions to fulfill the best potential of women's life. Sympathetic family members and considerate health care provider could help in converting "autumn" of the suffering surgical menopausal women into spring of life.

Implications

Identification of problems and awareness of available resources to overcome the problems through Health promotion create a positive attitude towards surgical menopause.

Understanding on healthy living-diet, exercise, safe sex, proper use of leisure activities plays a major role to cope up the situation. Provision of psychotherapy, counseling and family therapy to meet sudden induced psycho-social problems of surgical menopause.

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DROUGHT PRONE CONDITIONS AND MIGRATION -A CASE STUDY IN ANANTAPUR DISTRICT OF A.P.

K.Somasekhar

Abstract

India is predominantly an agricultural economy. Although agriculture accounts for more than 65% of employment, it has been growing only at 3.3% compared to industry's 7.5% per year (NSSO survey). Drought conditions have lead to crop failure, mounting debts chronic unemployment ultimately compelled to distress migration Anantapur district in Andhra Pradesh is one such district where drought conditions are prevailing consistently over many years. The present paper analyses the adverse impact of drought conditions leading to migration and facing problems in search of employment in urban areas and its effect on their living conditions

Keywords :: Drought, Mignation, Minorities Peasant,

Introduction:

Migration means to change one's residence which means the settlement or shifting of an individual or group of individuals from one cultural area or place of habitation to another, more or less permanently. Migration from one place to another has been a key feature of human society in search of improved livelihood. Migration is normally viewed as an economic phenomenon. Since earlier period people started to migrate for various reasons; some time in search of food, at other times to escape from natural calamities, threats, enemies. Whenever human beings do not find at place one resides migration takes place. Migration is defined as move from one area to another, usually crossing administrative boundaries made during a given migration internal and involving a change of residence (UN 1993).

Migrants leave their area of origin from rural areas to urban areas primarily because of lack of employment opportunities and find out better economic opportunities. Further, rural areas are predominantly relying on agriculture for income and employment. As there is complete uncertainty in agriculture due to failure or inadequate of rains causing

drought conditions forced rural people to migrate to urban areas in search of employment. Migration of workers could be viewed as socially and economically beneficial process because the workers get shifted from low productivity labour surplus areas to higher productivity and labour shortage areas. However, these positive implications of migration has been challenged recently, due to the excessive and surplus nature of population migration to largest cities leading to high rate of population growth. This intern leads to excessive pressure up on existing facilities of housing, education, medical, water supply, sanitary service and also creating the problem of environment pollution. And also, the rural-urban migration appears to be accelerating the level of urban unemployment and growing number of urban surplus workers. Consequently the migration of labour force from drought affected areas to urban areas adversely affects the welfare services at the native and burden on the social facilities available at the destinations, particularly in urban areas.

Drought and Migration:

Drought has been a recurring phenomenon in many parts of India due to failures of monsoon. Hardly a year passes in which some part or other of the country does not in some degree suffer from the calamity of drought. It usually refers to lack of precipitation over an extended period of time leading to moisture stress of land. Although, drought may happen virtually in all climatic zones. Yet, its characteristics differ considerably from one area to another. Rainfall, ground water availability reservoir levels and crop conditions determine the nature and extent of drought in a specified geographical area. The most disastrous droughts come at irregular intervals. The core areas comprise about 16 per cent of the total geographical area of the country and 11 percent of its population of the total affected area "chronically drought – prone" areas constituted 33 per cent, which received less than 750 mm of rainfall, and the remaining classified as 'drought prone' received rainfall of 750-1,125 mm (Asian Economic Review : 2008).

Drought can be classified as meteorological which is related to the deficiency of rainfall, hydrological drought is associated with the effects of periods of precipitation shortfalls on surface. Agricultural drought is related with the supply and demand of economic goods such as water food grains, hydroelectric power etc. Due to the recurrent Phenomenon it perpetrate poverty and under development of the particular region. As a result, Due to prevailing of drought poor people may adopt seasonal

migration in order to cope up with the situation. Seasonal migration of rural labour by definition is a movement for employment for short period, not exceeding one year. Seasonal migration is only a temporary change of place for the purpose of work without permanent movement away from the place of birth but only 'change of place of residence'. The period of migration varies in between 15 days to one year based on the nature of work available. Usually migrants to move to urban areas as construction workers, masons, and so on because they get an ample of opportunities this area.

Drought, obviously means scarcity of water, food and fodder. However, the impact of chronic drought accelerates depletion of natural resources, decrease in agricultural production as well as livestock production. The resultant adverse effect on agricultural production and living condition of the livestock and human beings reflected in a loss of output and decrease in farm incomes and employment.

Drought and Migration in Anantapur District:

Anantapur District of AP where drought conditions have been occurring consistently over the past so many years causing adverse impact on the living conditions especially peasants. As per the rainfall data available for the last 60 years it shows that in every ten years almost 7 years are prone to drought. During the last seven years consecutively rainfall deficient years results in severe drought conditions.

The average annual rainfall of the district is 521 mm which is lowest in AP. It occupies 2nd place amongst lowest rainfall districts in the country after Jaisalamer (165 mm) in the state of Rajasthan. The Anantapur district lies between 137-30' and 157-15' latitudes, 767-50' and 787-30' longitudes. The district slopes from North-West to South-West. The maximum temperature of the summer season (March to May) is 40' and a minimum of 28 to 33 Celsius. The forest coverage of the district is only 11 percent of the total geographical area, which is contributing to low rainfall. Anantapur district had only 16 percent of its area cultivated under irrigation mostly under local tanks, bore wells and wells (54 per cent of the total irrigated area) the area under canals was very less (16.1 percent) in the district. Since the rainfall is source for all these lands due to low rainfall or failure of rains effects on agriculture. Due to insufficient irrigation facilities in the district agriculture has become not able and ultimately leads to drought prone conditions resulting backwardness and poverty.

In view of drought conditions there is scarcity of water, food and fodder, depletion of ground water, decrease in agricultural production as well as livestock population. Further the impact of drought conditions low crop production, dried up crops, unable to get any returns on the agriculture and pushed to indebtedness. As a result of drought condition farmers ultimately loses employment opportunities are common problems prevailed in the district. Since the district was facing consecutively seventh year of drought, distress migration was common in search of alternative livelihood activities.

Against this background, an attempt is made to study the impact of drought conditions in Anantapur District on the migrant peasants.

Objectives of the study:

- ◆ To examine the socio-economic conditions of respondents in the selected district
- ◆ To understand occupation and wages of migrants and available employment opportunities
- ◆ To find out the causes for migration.
- ◆ To assess the problems being faced by the migrants.
- ◆ To offer coping strategies and the efficacy of the relief measures for checking migration to be adopted for minimizing effect of drought situation.

Methodology:

The study is based primarily on sample survey conducted among migrants in Anantapur district of Andhra Pradesh. Anantapur district has been specifically chosen because as there exist continuous drought situation in the district and this district stood first in the state of AP in migration to urban areas. In the next stage, Dharmavaram mandal was chosen based on the severity of drought conditions among the mandals in the district in terms of failure of crops, depletion of ground water, large number of people migration to urban areas in search of employment. Again, a study has been carried out in Pothukunta village of Dharmavaram mandal on the basis of severity of drought among the villages in the mandal. Later, 60 families of migrants were identified on random basis for the present study and administered schedule to collect necessary data among the respondents.

Caste Composition:

Table 1 presents the distribution of respondents by the caste which they belong. It may be noted that an overwhelming majority (82%) of the respondents belongs to marginalized sections i.e. Scheduled Caste,

Backward class and Minorities. It can be concluded that weaker sections as they do not have sufficient assets they may not be in a position to cope with drought situation. Therefore in order to meet domestic expenditure they are migrated to urban areas in search of employment.

Table - 1
Distribution of Sample Respondents by Caste

S.NO.	Caste	No. of Respondents
1.	Backward castes	32 (53.33)
2.	Minorities	3 (5.00)
3.	Other category	11 (18.34)
5.	Scheduled Castes	14 (23.33)

Note: Figures in the Parentheses indicate percentages to the total.

Characteristics of Migrants:

The distribution of respondents into sex different age groups and their literacy level is presented in table 2. It may be seen 95% of the respondents are males. It also may be seen that more than half of the respondents are in the age group of 15-35 years. Further, around two-thirds of respondents are literates however maximum number of respondents has studied up to primary level. It shows that youth with minimum literacy background only are keen on migration because they are confident of facing challenges in the migrated area.

Table - 2
Characteristics of Migrants

S.NO.	Characteristics	No. of Respondents
I	Sex	---
1	Male	57 (95.00)
2	Female	3 (5.00)
II	Age	---
1	15 – 25 years	8 (13.33)
2	25 – 35 years	27 (45.00)
3	35 – 45 years	12 (20.00)
4	45 – 55 years	9 (15.00)
5	55 and above	04 (6.67)
III	Education	
1	Illiterate	19 (31.66)
2	Primary	28 (46.66)
3	Secondary	11 (18.33)
4	Degree and others	02 (3.35)

Note: Figures in the Parentheses indicate percentages to the total.

Place of Migration and Duration:

Table 3 shows the distribution of respondents by migration and duration. It may be noted from this table that around three-fourths (76%) of respondents have migrated to Bangalore city and rest of them to Cochin and Chennai cities. Migrants have chosen Bangalore city because it is nearer to their native place when compared to other cities. Further, most of the respondents (70%) will reside in the migration places below 4 months. Particularly during the period when they did not get any employment opportunities in their places.

Table 3

Distribution of Respondents by Place and duration of Migration

S.NO.	Place	No. of Respondents
1.	Bangalore	46 (76.66)
2.	Cochin	8 (13.34)
3.	Chennai	6 (10.00)
Duration		
1	Below 2 months	05 (8.33)
2	2 – 4 months	37 (61.66)
3	4 – 6 months	17 (28.33)
4	More than 6 months	01 (1.68)

Note: Figures in the Parentheses indicate percentages to the total.

Reasons for Migration:

Table 4 shows the distribution of respondents by reason. It may be seen from the table that drought conditions are the major reason for migration. An overwhelming majority of the respondents (79%) have stated that due to drought conditions they migrated to urban areas. It may be said that consecutive drought conditions in the study areas as a result failure of crops, depletion of ground water, and unable to get any type of work compelled them for migration in search of employment and support for domestic expenditure.

Table 4

Distribution of Respondents by Reasons for Migration

S.NO.	Reasons	No. of Respondents
1.	Due to Drought conditions	47 (78.34)
2.	In search of employment	05 (8.33)
3.	To get higher wages	05 (8.33)
4.	To clear debts	03 (5.00)

Note: Figures in the Parentheses indicate percentages to the total.

Wages:

Table 5 shows distribution of respondents by getting wages per day. Around Two-Thirds of respondents (64%) has been getting Rs.300/- 5 per cent and 10 percent of the migrants are getting Rs.200 and Rs.250 wages respectively. Only 4 per cent of the migrants have been getting Rs.400 per day. It shows that average migrants are getting Rs.320 wages per day that too that is not for all the week days. They are getting work 3 to 5 days per week. It indicates that migrants are not getting adequate wages.

Table 5

Distribution of Respondents in terms of getting by days of employment (and wages)

S.NO.	Employment	No. of Respondents
1.	3 Days	0.8 (13.33)
2.	4 Days	49 (78.33)
3.	5 Days	3 (5.00)
4.	6 Days	2 (3.34)

Note: Figures in the Parentheses indicate percentages to the total.

Wages

S.NO.	Wages (per day)	No. of Respondents
1	Rs. 200/-	03 (5.00)
2	Rs. 250/-	06 (10.00)
3	Rs.300/-	38 (63.33)
4	Rs.350/-	11 (18.33)
5	Rs400/-`	2 (3.34)

Note: Figures in the Parentheses indicate percentages to the total.

Challenges:

Table 6 shows distribution of respondents by challenges faced during migration period. It shows that an over whelming majority of the respondents (90%) reported that they are facing challenge in getting employment daily and about 87% of responds stated facing language problem. Around Three-Fourths of respondents (74%) reported that they are under physical and psychological harassment. Further, two-thirds of respondents (62%) reported health problem due to poor quality food long working hours. Further, three-fourths of respondents (75%) stated that migration disrupts on children's education and impact on elderly dependents. It shows that all the respondents are facing many problems by staying in urban areas like physical, psychological, economic, social and cultural problems.

Table 6
Distribution of Respondents by faced the challenges

S.NO.	Nature of Problems/ Challenge	No. of Respondents
1.	Health Problem	37 (61.66)
2.	Language Problem	52 (86.67)
3.	Physical as well as Psychological harassment	44 (73.33)
4.	Searching for employment daily	54 (90.00)
5.	Disruption of children's education and the responsibility of taking care of the elders	45 (75.00)

Note: Respondents reported more than one challenge. Figures in the parentheses indicate percentage to the total.

Conclusion and Suggestions:

The impact of drought conditions which has made peasants of Anantapur district, which is known as chronically drought prone area migrate to urban areas in search of employment has been clearly established. People have resorted to seasonal migration to cope with drought situation. This is the district not only in the state of Andhra Pradesh but also in the country which has been recurrently under the grip of drought conditions due to failure of rains, depletion of ground water, limited forest coverage, low agricultural production, problem of food and fodder for human beings and livestock. Depending upon the intensity of drought, peasants moved to urban areas in search of employment and duration of stay is four months for the many migrants.

The micro level empirical findings highlights the problems are being faced at migratory urban places. These are social, economic, and psychological problems. The finding shows that migrants face lot of hard ship due to the emerging challenges such as available employment, type of work, health problems, language problem and inadequate basic facilities.

Hence, keeping in view the challenges being confronted by the migrants, there is need to look at migration by finding out the alternative strategies to check the migration to urban areas and to cope with drought situation. The following are the suggestions to combat drought conditions providing employment opportunities, emphasis on increasing extension of forestry, change of cropping pattern and to establishing irrigation projects.

- ◆ Providing 100 days guaranteed employment to the household of which who have registered under MGNREGS upto 200 days in the drought affected areas.
- ◆ There is also need to encourage farmers for joint farming activities, which would certainly save water.
- ◆ Cottage and rural industries are to be established.
- ◆ Necessary agricultural inputs such as seeds and fertilizers are to be supplied to the farmers in the drought prone areas at free of cost.
- ◆ Rice and other essential commodities to be supplied through public distribution system in required quantity without any ceiling.

- ◆ All the employment generation programmes should be implemented effectively with a view to providing wage employment to every family so as to cope up drought conditions and check migration.
- ◆ All the agricultural families and all the crops should be brought under crop Insurance Scheme.
- ◆ Recurrent drought prone districts should be given special status in order to establish large scale industries and to attract investments and also to provide agricultural credit liberally by the banks.
- ◆ Special emphasis should be laid on afforestation programmes with the peoples participation viz, joint forest management, social forestry, farm forestry and community forestry for increasing extension of forestry ultimately aiming to increase rain fall and also generation of employment opportunities in the drought prone areas.

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BOOK REVIEW

RURAL INNOVATIONS

Rural Innovations @ Grassroots: Mining the Minds of Masses by R Kalpana Sastry and O K Tara, (2014) published by the National Academy of Agricultural Research Management, Hyderabad - 30.

This book, as the title suggests, is a collection of grassroots level innovations in India. It includes 13 innovations documented in easily readable English. They belong to varied branches of rural development, including agriculture, animal health, artisans' works, food products and so on. Seven of the thirteen innovations, focus on mechanized applications, while the remaining are improved way of making consumer products that already exist in the market. They have been studied and documented at length as individual innovations. They have been documented as cases, and each case is presented as a chapter.

The authors have started with 'what do they call an innovation?' In the words of the authors: *grassroots level innovations are simple and affordable technologies designed at the local level by the local people using the local resources and their set of simple skills, who purpose is reducing drudgery in their work, or improving existing rural livelihoods.* The book has clarity on attributes of innovation; application of each of the innovation in question; the possible socio-economic and ecological impact; and the sustainability. Almost all innovations in this study are models/prototypes or products. They have been innovated either to reduce drudgery of those engaged in such ventures, or to add commercial value to a local product. They are reported to be outstanding in terms of ease of application, utility value, significant reduction in drudgery, and cost-effectiveness.

The start of the innovation process has been mostly due to a strong discomfort that gave the innovator the impetus to think out-of-the-box, so as to bring out either something better or something different. One could read how incorrigible improvisers these innovators have been; and the passion with which they have worked. The blending of passion

with a purpose has yielded the innovation have been able to come out with. Often enough in such rural innovations, scalability, and techno-economic sustainability are vital issues. It is comforting to read the many of these innovations are identified as commercially viable innovations and not a creative idea at concept stage. Many of them have been tested and validated by institutions of higher learning, including some of the IITs.

These innovations suggest a working model of *'identifying and working with what rural people have, rather than what they don't have'*. They have built on and improvised *'what they have'* rather than being bogged down by *'what they fall short of'*. It also suggests of *'grassroots to global model of working'*. When one reads this book, one cannot help thinking about the rural innovations and innovators that still remain in dark, unable to give visibility to their innovation. It is obvious that innovations from formal R & D institutions have high chances of becoming known, and getting popular support. It is high time parallel efforts are made to bring to light local innovations that remain unseen for want of a scientific explanation or institutional support. This book is an effort in that direction that has come out with the support of a World Bank –ICAR funded project. The opening few pages of the book introduces various institutions –governmental and non-governmental –involved in supporting, and diffusion of innovations by local innovators and progressive farmers. Acquiring the knowledge of: *Who they are; and what they do as individual innovators and institutions* in itself is a fund of useful knowledge that can immensely contribute to development practice.

Recognizing and supporting grassroots level innovations is splendid idea that this book project has attempted. Some of them are really fascinating –for instance, the idea of a *'mutti rice cooker'*, or the cycle-driven irrigation pump. Now, many of these innovators are already part of some scientific network. They get support from the government, technical institutions and by NGOs. This is a great service that the scientific community can render to the grassroots level innovators. Yet another thinking that must surface the mind of a reader about these innovators is that recognitions, fame, newspaper coverage, facilitations

by IITs etc come to them much later in life. For instance, it has taken almost 10 years for Shri Guravaiah (Seed Dispenser with Herbi Sprayer) to be able to come out with a working prototype and demonstrate it to the scientific community; and similarly, it has taken more than 12 years for Shri Mallesh (Electric /Electronic gadgets and Solar products) to win a national award in recognition of his contribution to a given field of development. Their persistence is exemplary.

It is Charles Brower, who said *'an innovative idea is delicate. It can be killed by a sneer or a yawn; it can be stabled to death by a quip and worried to death by a frown on the right man's brow'*. But, these innovators have stood the test of time, and have triumphed over all the innovation killers in proof that they are incorrigible improvisers who neither get easily defeated nor get easily satisfied.

This is a very useful and very much usable book. In other words, this is an action –oriented book with innovative technological solutions to the problems of farmers, weavers, potters, nature cure seekers, and bakers etc. Each case reads independently of the others. Therefore, it's possible for one to go straight to any innovation/technology/ she/he is interested in. The authors have tried to provide a connective summary (diagrammatically as well) at the end, briefly though. The authors could have made a *'one-pager'* to open each case, before they start narrating the complete story. Such one-pager at the opening of each case could give: What is the innovation? What problem it addresses? And how it is superior or cost-effective? Then the reader can decide if she/ he is interested in that innovation or skip and go to the next one. The contact address of these innovators would have been much useful as well. I went through the entire book and found the work *'invaluable'*. It must make an interesting reading to anyone interested in grassroots level innovations, and rural development practice.