Role of Social Capital in enhancing the efficiency of Community Kitchen: A Study based on Attappady Tribal Block, Kerala

Tanita Eloo Philip, Research Scholar, Department of Economics, University of Kerala and Dr. Manju S.Nair, Professor, Department of Economics, University of Kerala

Abstract

The unceasing occurrence of malnourishment and infant deaths in Attappady Tribal Block, Kerala points to the fact that the tribal community in Kerala remained neglected from the developmental process of the state. High infant fatality due to malnutrition in Attappady implies the inefficiencies in the design and operation of the various development programmes meant for the upliftment of tribal community. On this ground, government has implemented NRLM (National Rural Livelihood Mission) in 2012-13, with the aim of achieving skill development, community networking and sustainable livelihoods. NRLM functions with the help of several institutions and components through social mobilisation and community networking, which result in generation of social capital. Community Kitchen is an initiative to run a common kitchen by tribes themselves with the assistance of NHGs and governments to improve their health and nutritional status, by adopting a practise of having food together in a community to enhance solidarity. The working base of Community Kitchen is group participation and group efforts taken by the members of NHGs among the tribal community. The paper tries to analyse whether Social Capital mobilised within the community resulted in enhancing the working efficiency of Community Kitchen.

Key words- *Malnourishment, NRLM, Community Kitchen, Social Capital*

Section 1- Introduction

Indian policy makers realize the fact that without considering tribal community who constitute around ten percent of total population, it is impossible to achieve inclusive growth (GOI,2011). However, in spite of the plethora of developmental interventions programme, the plight of the tribal communities still remains deplorable or at a much lower pace as compared with general population (Mohindra, 2010). Studies have pointed out that the existing programmes for the upliftment of tribal population could not attain the intended success as they have not taken into due consideration the socio political and cultural background of the tribes, the geographical peculiarities, local specifications, income and asset position and in particular the capability of tribal beneficiaries to handle the implemented schemes (Shyjan, 2008). Of late the need for enhancement of capabilities of tribal population to enable them to effectively take part in the development programmes is increasingly recognised by the policy makers as evidenced by the implementation of National Rural Livelihood Mission (NRLM) in 2011. The developmental process that the state of Kerala has followed, which resulted in attainment of high human development status has eluded the tribal communities in the process (Shyjan,2008). Moreover, a higher prevalence of poor health outcome is observed among Scheduled tribal community than general population in Kerala (Mohindra et al. 2006). Therefore, the generic applicability of Kerala Model of Development becomes questionable when the human development status of Scheduled tribal communities is analysed.

The deprivation of tribal people in Kerala is however reported to be not uniformly dismal, with reference to socio economic status. Also, the existing literature and empirical evidence points out to the concentration of poverty and deprivation among tribal groups belonging to certain geographical areas; Attappady tribal block being the finest example (Kunhaman, 1985). Of late, Attappady has been receiving much public attention because of the continued infant deaths, with the number of new born death tolls reported to be 37 within six months in 2012. Studies on field reported consecutive infant deaths in Attappady due to the combined impacts of loss of indigenous food items, poor public distribution system, unavailability of alternate nutritious food and the loss of employment opportunities (Ekbal, 2013; and Sathyan, 2014). Of all the intervention programmes targeted to solve issues in Attappady, National Rural Livelihood Mission (NRLM) deserves special mention because of its multi-pronged approach. The project consists of three aspects – social development, livelihoods (Mahila Kisan Sakthikaran Pariyojana) and skill development. The major components of NRLM projects are Institution building, Community Kitchen, bridge school, bridge course, centre of excellence, gender resource centre, youth resource centre, micro finance, livelihood (animal husbandry, goat village, KILA Canteen, Production mill etc.), convergence activities and capacity building. The project was introduced by focusing on building exclusive tribal women's institutions like NHGs, Ooru samithis and Panchayath Samithi. These institutions would function with the Integrated Development Project of Attappady under the Kudumbasree Mission supported by NRLM among the women in the three tribal communities of Irula, Muduga and Kurumba in Agali, Pudur and Sholayoor Panchayats.

Paralleled to other communities in a society, tribes lack basic endowments in terms of human, physical, financial and even natural capital which was once their source of livelihood. Implementation of projects or initiatives among tribal community is not so easy as their initial endowment is low. To overcome this, NRLM implements a participatory approach to make intervention fruitful. All the components of NRLM are being implemented through the community network, capable of creating social capital. NRLM ensures that at least one member from the identified tribal household is brought under the self-help group (SHG) network in a time bound manner. This clarifies that NRLM tries to address poverty through SHGs. Participation in SHGs makes the beneficiaries empowered (Desai & Joshi, 2012; Deininger & Liu, 2013; Banerjee *et al.* 2014). Long term exposure to poverty alleviation programmes (through SHGs) puts positive impact on the consumption, nutritional intake and asset accumulation (or wealth accumulation) of beneficiaries (Deininger & Liu, 2009); which ensures economic and food security of beneficiaries. Additionally, involvement in SHG network increases the social capital of members (Folgheraiter & Pasini, 2009; Nayak, 2015). The social capital is a resource derived from people's social participation. This social participation increases the social awareness that creates more concern regarding basic necessities including education (a component of educational security) sanitation, and drinking water (which are subcomponents of health security). Thus, participation in SHG ensures educational security and health security to tribal communities through the creation of social capital. Thus, in nutshell, it can be articulated that through the participation in SHG, beneficiaries could attain five dimensions of livelihood security, i.e., empowerment, health security, economic security, educational security and food security.

Wherefore NRLM is implemented with the objective of creating social capital through the support of SHGs and thereby, social capital formation can have a positive ramification on generating capital and resources that they lack now. Groups and associations are often seen as a forum for the creation of social capital (Spaaji and Westerbeek, 2010). Putnam (1993) suggests that social capital in the form of networks, norms and trust, facilitates cooperation

for mutual benefit. Therefore, the authorities took efforts to form local groups to make this project successful. Naturally, it could be assumed or presumed that an amount of social capital has been generated over the years.

NRLM functions through several institutions, of which Community Kitchen is one of the most important one created with an aim to address the malnourishment problem of tribal community. It is an initiative to run a common kitchen by tribes themselves with the assistance of NHGs and governments to improve their health and nutritional status, by adopting a practise of having food together in a community to enhance solidarity. The working base of Community Kitchen is group participation and group efforts taken by the members of NHGs among the tribal community. NHGs in each hamlet runs at least one Community Kitchen as self-managed unit, where the executive committee will choose two ladies to cook and manage the kitchen.

Also, the project is implemented with an expectation to nurture the social capital of Community Resource Persons along with protocols and modules developed for deployment wherever needed for supporting and guiding the tribal communities. Community Kitchen acts as a platform for the tribal women to come together and discuss their social issues. The functions of Community Kitchen continue in Attappady since 2014 and the government proposes to implement the same among tribal communities in other parts of the state. This indicates that the very purpose of Community Kitchen has been served. It can be assumed that when the NRLM project was implemented, the level of social capital was low among tribes. Over the years, the working of NRLM might have resulted in social capital interventions. On this ground, an attempt is done to look whether social capital has been created as a result of NRLM and whether this is determining the performance of Community Kitchen.

Performance of Community Kitchen is determined by observing the magnitude of various factors like availability of infrastructure facilities, continuity of operation, food security and funding system. These factors can be successfully generated by those NHGs who are aware of their rights and who can act collectively in demanding, mobilising and operationalising these determinants. The role of social capital become significant here as those groups who have attained a higher social capital has the capability and power to work together and materialise these aspects. Hence, an observation of social capital generation and presence of social capital characteristics in these groups becomes necessary to comprehend the successful operation of Community Kitchen.

Social capital in this context is understood on the basis of six dimensions, they are groups and networks, trust and solidarity, collective action and cooperation, information and communication, social cohesion and inclusion, and finally empowerment and political action (Grootaert et al., 2004). These dimensions are used as the best proxies to measure the enhancement of social capital among tribal community in Attappady over the years.

Thus, the focus of this paper is to highlight the dynamics of social capital mobilisation through NRLM which gets reflected in the working of institutions (say for example, Community Kitchen) and further how it ensures nutritional security of tribal population.

Section 2 – Methods

Study relies upon data collected from 60 samples to examine the efficiency of Community Kitchen under NRLM in Attappady and how social capital determines the efficient working of Community Kitchen. The tools developed by World Bank for measuring social capital is used to examine whether the performance of Community Kitchen is determined by Social Capital that is mobilized within the community.

Measuring tools:

- **Social Capital Assessment Tool (SOCAT)** and
- S**ocial Capital Integrated Questionnaire (SC-IQ).**

SOCAT is an integrated quantitative/qualitative tool used in survey. It measures the constraints and opportunities of individuals and groups by considering the social assets and networks that shows their level of resources. (SC-IQ) is a part of SOCAT, which measures to extract quantitative data based on different dimensions of social capital. Groups and Networks, trust and solidarity, collective action and cooperation, information and communication, Social cohesion and inclusion, finally empowerment and political action are the six key dimensions identified as appropriate proxies for social capital. These dimensions are used in this study to analyse whether NRLM resulted in social capital formation through the support of NHGs. The presence and magnitude of these dimensions of social capital is different for different individuals and between groups.

Quantitative techniques

Social Capital Index (SCI) is calculated by using six dimensions;

SCI1-Groups and Networks,
SCI2-Trust and solidarity
SCI3- Collective action and cooperation
SCI4- Information and communication,
SCI5- Social cohesion and inclusion
SCI6- Empowerment and political action.

Each index is computed by SCI= $\frac{actual-minimum}{maximum-minimum}$, so that the index lies between 0 and 1.

Finally, a combined Social capital index is worked out by averaging the individual social capital indices. On the basis of Social Capital index, the level of social capital in each Community Kitchen is rated as high, medium and low.

If SCI is greater than $Mean + SD$, Social Capital formation is high

If SCI lies between $Mean \pm SD$, Social Capital formation is medium

If SCI is less than $Mean - SD$, Social Capital formation is low

Performance Index (PI) is calculated by using four dimensions;

PI1- Infrastructure,
PI2- Funding,
PI3- Food and Nutrition
PI4- Continuity

Each index is computed by PI= $\frac{actual-minimum}{maximum-minimum}$, so that the index lies between 0 and 1.

Finally, a combined performance index is worked out by averaging the individual performance indices. On the basis of Performance index, efficiency in the performance of Community Kitchen is rated as high, medium and low.

If PI is greater than $Mean + SD$, performance of Community Kitchen is high

If PI lies between $Mean \pm S$D, performance of Community Kitchen is medium

If PI is less than $Mean + S$D, performance of Community Kitchen is low

Discriminant Analysis.

Discriminant analysis is used to understand the relationship between social capital formation and performance of Community Kitchen. A discriminant analysis is undertaken to delineate factors that contribute to successful or efficient performance of Community Kitchen.

Discriminant analysis is used in the study to discriminate two categories of Community Kitchen– i.e., high and low performance. The analysis creates a discriminant function which is a linear combination of the weightings and scores on these variables. This can be represented in the form

$Z_{jk} = a + w_1 X_{1k} + w_2 X_{2k} + _{...} + w_n X_{nk}$

Where

Z_{jk} = Discriminant Z score of discriminant function *j* for object *k*.

a = Intercept.

w_i = Discriminant coefficient for the Independent variable *i*.

X_{jk} = Independent variable *j* for object *k*.

'w's known as discriminant coefficients maximizes the distance between the mean of the dependent variables, and the discriminant score is the value obtained from applying the formula on each case (Poulsen and French, 2008).

Wilk's Lamda is used as an ANOVA (F) test of mean differences in Discriminant Analysis. The structure matrix and the functions at group centroid show the relative importance of the variables which discriminates the two groups (Poulsen and French, 2008).

Section 3- Results

In the result session, the results derived regarding magnitude of social capital formation, overall performance of Community Kitchen and the relationship between social capital attained and performance of Community Kitchen is made.

Magnitude of Social capital formation

In this study, SOCAT (Social Capital Assessment Tool) and SC-IQ (Social Capital Integrated Questionnaire), the two tools framed by World Bank are used to analyse the presence and magnitude of social capital among the members of selected Community Kitchens. As mentioned in the methods, SOCAT and SC-IQ are constructed on the basis of six dimensions. Each dimension is characterized by different variables or aspects; and the presence and magnitude of each dimension and its determining factors or variables differs between groups and among members in each group. Structured questions related to each variable is incorporated in SC-IQ questionnaire, so as to extract accurate qualitative and quantitative data to analyse the dynamics of social capital creation.

Social Capital Index is worked out by averaging the sub dimensions like 'Groups & Networks', 'Trust', Collective Active, 'Information & Communication', 'Social Cohesion & Inclusion', and finally 'Empowerment & Political Action'.

Table 1: Social Capital Index

CK	Groups & Networks (Gpnw)	Trust (t)	Collective Active (Col)	Information & Communication (In)	Social Cohesion (Sc)	Empowerment (Em)	Social capital
CK-1	0.85	0.85	0.78	0.59	0.72	0.67	0.74
	0.09	0.08	0.13	0.04	0.09	0.22	0.09
CK-2	0.97	0.90	1.00	0.56	0.86	0.67	0.83
	0.02	0.04	0.00	0.08	0.08	0.12	0.05
CK-3	0.63	0.61	0.61	0.37	0.69	0.61	0.59
	0.13	0.23	0.27	0.19	0.13	0.18	0.18
CK-4	0.24	0.30	0.17	0.29	0.48	0.25	0.29
	0.08	0.07	0.16	0.08	0.06	0.16	0.09
CK -5	0.56	0.50	0.61	0.37	0.55	0.48	0.51
	0.07	0.10	0.13	0.10	0.07	0.17	0.07
CK-6	0.28	0.47	0.70	0.43	0.67	0.43	0.50
	0.03	0.10	0.21	0.11	0.10	0.17	0.11
CK-7	0.68	0.68	0.72	0.50	0.65	0.58	0.64
	0.18	0.17	0.04	0.13	0.12	0.23	0.12
CK-8	0.57	0.68	0.68	0.49	0.71	0.56	0.61
	0.12	0.14	0.18	0.17	0.08	0.23	0.14
CK-9	0.52	0.53	0.59	0.40	0.61	0.35	0.50
	0.12	0.13	0.23	0.12	0.08	0.18	0.13
CK-10	0.24	0.25	0.12	0.24	0.24	0.18	0.21
	0.10	0.13	0.18	0.09	0.12	0.14	0.12
Total	0.57	0.59	0.61	0.42	0.63	0.49	0.55
60	0.26	0.24	0.30	0.15	0.18	0.23	0.21
(Chittoor- CK-1, Chundakulam- CK-2, Kottamala- CK-3, Melekandiyoor- CK-4, Nakupathi- CK-5, Oothukuzhi- CK-6, Osathiyoor- CK 7, Sholayoor- CK 8, Thachampadi- CK-9, Thazemanchikani- CK- 10)							

Source: Primary Data.

Chundakulam Community Kitchen with mean value of 0.83 stands with the highest level of social capital followed by Chittoor and Osathiyoor. Lowest level of social capital is witnessed in Thazhemanchikani followed by Melekandiyoor.

Community Kitchens are finally classified into three, on the basis of Social Capital formation, i.e., Community Kitchen with high Social Capital, Community Kitchen with medium Social Capital and Community Kitchen with low Social Capital. On the basis of Social Capital Indexing, Chundakulam and Chittoor comes under high level of social capital mobilised Community Kitchens, whereas Osathiyoor, Sholayoor, Kottamala, Nakupathi, Oothukuzhi, and Thachampadi belongs to Community Kitchen with medium levels of social capital formation and low level of social capital is witnessed by Thazemanchikani and Melekandiyoor.

During the field survey, the researcher could understand that the credibility of animators and their personal rapport with the helpers and members are well established and that further resulted towards high degree of social capital in Chundakulam and Chittoor. Moreover, a harmonious social relation was found among the beneficiaries of Chundakulam and Chittoor. This relationship ensures functional sustainability of these two kitchens. Functional transparency was also evident among the members in Chundakulam and Chittoor. It implies that each member is well informed of all functioning activities happening in their kitchen. Further it draws the idea that the functional transparency along with proper maintenance of records and accounts of kitchens could have generated into mutual confidence among the members of Chundakulam and Chittoor.

Whereas lack of these factors led to low social capital score in Melekandiyoor and Thazhemanichikani. Monitoring and coordinating abilities of animators and helpers is found to be poor and posed a major barrier to possess high social capital score, because they are the ones who facilitate necessary platform to run Community Kitchen from scratch. The animators of Melekandiyoor and Thazhemanichikani were found to be reluctant to visit their kitchens regularly. The conversation with the helpers during the field survey supports the above finding. When the head is sick the whole body is sick- Dutch Proverb.

Overall Performance of Community Kitchen

Performance of Community Kitchen is measured by using four indices, which are identified on the basis of focus group discussion made with NRLM office bearers and animators in Attappady. The indices are Infrastructure index, Funding index, Food & Nutrition index and Continuity index.

PI1- 'Infrastructure index' examines the aspects which enhance the infrastructural capacity required for the smooth functioning of community kitchens.

PI2- Funding index scrutinizes whether the funding system under NRLM has served the purpose in a systematic manner over the years.

PI3- Food and Nutrition index considers the variables which measures the quality and quantity of food served among the beneficiaries of community kitchen.

PI4- Continuity Index measures whether each Community Kitchen continues their functions regularly without any break.

Table 2: Performance Index

CK	Infrastructure Index	Funding Index	Food and Nutrition Index	Continuity Index	Performance Index
CK-1	0.75	0.66	0.97	0.95	0.83
	0.01	0.02	0.05	0.05	0.03
CK-2	0.77	0.71	1.00	0.94	0.86
	0.02	0.03	0.00	0.03	0.01
CK-3	0.47	0.56	0.76	0.86	0.66
	0.03	0.02	0.07	0.08	0.04
CK-4	0.27	0.26	0.35	0.21	0.27
	0.02	0.07	0.05	0.15	0.05
CK -5	0.47	0.49	0.64	0.79	0.60
	0.06	0.06	0.08	0.09	0.05
CK-6	0.32	0.39	0.46	0.52	0.42
	0.07	0.05	0.16	0.14	0.07
CK-7	0.53	0.50	0.59	0.79	0.60
	0.04	0.05	0.07	0.07	0.04
CK-8	0.50	0.52	0.64	0.65	0.58
	0.04	0.07	0.11	0.11	0.05
CK-9	0.58	0.51	0.54	0.55	0.54
	0.01	0.04	0.05	0.18	0.06
CK-10	0.15	0.18	0.38	0.29	0.25
	0.03	0.06	0.12	0.18	0.08
Total 60	0.49	0.49	0.65	0.68	0.58
	0.19	0.16	0.23	0.27	0.20
(Chittoor- CK-1, Chundakulam- CK-2, Kottamala- CK-3, Melekandiyoor- CK-4, Nakupathi- CK-5, Oothukuzhi- CK-6, Osathiyoor- CK 7, Sholayoor- CK 8, Thachampadi- CK-9, Thazemanchikani- CK- 10)					

Source: Primary Data.

Table 2 shows the overall performance index obtained by taking the averages of four indices, i.e. Infrastructure Index, Funding Index, Food and Nutrition Index and Continuity Index.

As mentioned in the methods, indexing is used to determine the performance of Community Kitchen. Performance Index (PI) of Community Kitchen is worked out by averaging the sub dimensions of 'Infrastructure Index', 'Funding Index', 'Food and Nutrition Index' and finally 'Continuity Index'. It is obvious from the performance index criteria that Chundakulam and Chittoor are the best performing Community Kitchens as the performance level attained by these kitchens are the topmost with a mean value of 0.86 and 0.83 respectively. While Thazhemanichikani (with a mean value of 0.25) and Melekandiyoor (with a mean value of 0.27) are the least performing (low efficiency) Community Kitchens among the selected sample. On the other hand, Community Kitchens like Kottamala (0.66), Osathiyoor (0.60), Nakupathi (0.60), Sholayoor (0.58), Thachampadi (0.54) and Oothukuzhi (0.42) belongs to Community Kitchen with medium level of efficiency.

Relationship between Social Capital attained and Performance of Community Kitchen

An attempt is made in this section to examine the relationship between Social Capital mobilised in the community and efficiency in the performance of Community Kitchen. The fundamental argument is to find whether performance of Community Kitchen depends on the magnitude of Social Capital that is generated in the community. Efficiency is defined as "a measure of how productively resources are used to achieve a goal" (Jones & George, 1998). Social Capital is defined as comprising the structures of social organizations, such as trust, norms and networks that can improve the efficiency of society by facilitating coordinated actions (Putnam, 1993). This study is based on the idea that Social Capital is developed through trust, norms and networks prevailing among the tribes in each hamlet of Attappady, along with harmonized actions generated through NHGs which have subsequently improved the working efficiency of Community Kitchen.

Table 3: Relationship between Social Capital Index and Performance Index.

Community Kitchen	Social Capital Index			Performance Index		
	High	Medium	Low	High	Medium	Low
Chittoor		✓		✓		
Chundakulam	✓			✓		
Kottamala		✓			✓	
Nakupathi		✓			✓	
Melekandiyoor			✓			✓
Osathiyoor		✓			✓	
Sholayoor		✓			✓	
Oothukuzhi		✓			✓	
Sholayoor		✓			✓	
Thachampadi		✓			✓	
Thazemanchikani			✓			✓

Source: Primary Data.

Table 3 shows the correlation between social capital index and performance index of Community Kitchen. The results of performance index and social capital index clearly indicates that there is direct relationship between social capital and performance of Community Kitchen. Community Kitchen with high social capital index shows high level of performance. Highest score of social capital index and performance index is acquired by Chundakulam Community Kitchen, which strongly depicts the correlation between the two. Meanwhile, Community Kitchens with medium level of social capital exhibit medium level of performance except in the case of Chittoor Community Kitchen. Even though Chittoor belongs to a category of medium level of social capital, the performance level of this Community Kitchen is high. In fact, there is only a slight difference between the social capital index score obtained by Chittoor compared to Chundakulam. Moreover, the difference in social capital index score obtained by Chittoor compared to rest of the Community

Kitchens belonging to medium level is high. Scores of Thazhemanichikani and Melekandiyoor also designates that there is correlation between social capital and performance of Community Kitchen as the two indices are very low for these two hamlets.

Discriminant analysis

Discriminant analysis is used to find out the factors which discriminate a Community Kitchen with high performance level from a Community Kitchen with low performance level. For discriminant analysis, the sum of weighted averages of variables determining the performance of Community Kitchen is obtained. Community Kitchens with average performance score of more than 0.5 are considered to be best performing ones, meanwhile those which are having score below 0.5 are referred to as low performing kitchens.

Ho : discriminant function is not valid
H1 : discriminant function is valid.

The results of discriminant analysis between high performance level Community Kitchens and low performance level Community Kitchens are given below:

Table 4: Eigenvalues

Function	Eigenvalue	% of Variance	Cumulative %	Canonical Correlation
1	1.649[a]	100.0	100.0	.789

Source: Primary Data

a. First 1 canonical discriminant functions were used in the analysis.

Table 5: Wilks' Lambda

Test of Function(s)	Wilks' Lambda	Chi-square	Df
1	.378	53.573	6

Source: Primary Data

The discriminant function for Community Kitchen with high and low performance, projects canonical correlation with value 0.789, which provides a chi-square value of 53.573. Hence, the null hypothesis is rejected and proves that the discriminant function is valid.

Table 6: Functions at Group Centroids

Level of performance	Function
	1
Low level of performance	-1.396
High level of performance	1.142

Source: Primary Data

Table 7: Structure Matrix

Variables	Function
	1
Groups and Networks	.831
Trust	.696
Collective action	.513
Information and communication	.504
Social cohesion and Inclusion	.437
Empowerment and Political action	.304

Source: Primary Data.

It is clear from the result that 'groups and networks' obtains highest score in discriminating Community Kitchens with high performance level from low performance level. Thus, this result implies that the dimension 'groups and networks' is the most important factor contributing to the high performance level of Community Kitchens. The operational yoke of Community Kitchen is group participation and group efforts made by the members of NHGs among the tribal community of Attappady.

The magnitude of this dimension is analysed by examining the density of some selected variables. Variables like Community benefits (gp3), Change in number of beneficiaries (gp10), Decision making (gp11), Effective leadership (gp12), and Level of group interactions (gp13) are the most prominent ones resulted towards high level of group participation.

This position is followed by the dimension 'trust'. Among various trust determining variables, the strength of some variables like 'trust worthiness of members' (t1), 'helping mentality' (t3), 'change in level of trust among members' (t5), 'contribute time for others' (t6) is much gaining compared to rest of the variables. The dimension 'collective action' takes the third position in discriminating Community Kitchens with high performance level from low performance level. While considering this dimension, all the three identified variables like 'work for the benefit of community' (col1), 'to help co-members' (col2), 'to help non-members' (col3) are found to be equally responsible in building this dimension. Fourth position is occupied by the dimension 'Information and Communication' with strong influence of three variables like 'Local representatives/Leaders/Politicians/Animators' (in8), 'Access to information' (in9), 'Person to Person' (in10), 'Telecommunication' (in11). Next position is occupied by the dimension 'social cohesion and inclusion' with high density of variables like 'Feeling of togetherness or closeness' (sc1), 'House visits' (sc5), 'Visits co members house' (sc6), 'Ceremonies attended like wedding, religious festivals' (sc12).

The dimension 'Empowerment and Political action' holds the lowest score in discriminating Community Kitchens with high performance level from low performance level. Among twelve determining factors of this dimension, only two variables like 'Happiness level'(em2), and 'Attends village council meeting, public hearing or public discussion group'(em6) are found to be relatively high.

Section 4- Discussion

The researcher focused on analysing the effectiveness of the implementation of Community Kitchen as a nudge to address directly the problem of malnourishment. To implement a

programme like Community Kitchen is not so effortless as the tribal community lacks even the bare minimum capital which it should possess in terms of money, knowledge, physical capital and even as natural resources etc. In connection with the implementation of NRLM's programme, an assumption which guided the researcher was that the presence of social capital was either insufficient or absent among the tribal community in Attappady. Furthermore, with a perception that NRLM in return resulted into social capital formation through forming NHGs and that further led to the smooth functioning of Community Kitchen over the years.

Inferences from the study points out that NRLM could create an agreeable level of Social Capital. Moreover, the study further scrutinised the performance of each Community Kitchen by working out its performance index and found that among the selected Community Kitchens, two of them are working at high level of efficiency or performance (Chundakulam and Chittoor) and whereas six of them with medium level of performance (Kottamalla, Oothukuzhi, Osathiyoor, Sholayoor, Nakupathi and Thachampadi). Only two Community Kitchens (Thazhemanichikani and Melekandiyoor) were found to be with low level of performance. In short, the performance wise analysis of each Community Kitchen depicts a clear picture that this programme has served its purpose to a great extent.

Further, the study analysed the role of Social Capital on enhancing the performance of Community Kitchen. The scores of performance index and Social Capital index clearly point out that there is direct relationship between Social Capital and performance of Community Kitchen. It is apparent from the analysis that the scores of social capital index and performance index show positive relationship. Community Kitchen with high level of social capital represents high level performance. Social capital is a person's or group's sympathy toward another person or group that may produce a potential benefit, advantage, and preferential treatment for another person or group of persons beyond that expected in an exchange relationship (Robinson et al. 2002). The validity of this theoretical perspective of social capital is strongly evident in this study.

Among the selected Community Kitchens, Chundakulam exhibits the highest range of performance with highest score of Social Capital. Except Chittoor, Community Kitchens like Kottamalla, Oothukuzhi, Osathiyoor, Sholayoor, Nakupathi and Thachampadi, possess medium level of Social Capital and exhibit medium level of performance as well. Although, Chittoor fits in medium level of social capital, the acquired level of performance is high. Moreover, data indicates that there is only minor difference in level of Social Capital attained by Chittoor compared to Chundakulam. On the other hand, low incidence of social capital is perceived among Community Kitchens like Thazhemanichikani and Melekandiyoor and due to which they are restricted to low performance level.

In addition to this, the study has examined the factors which discriminate high performing Community Kitchen from low performing ones by working out the discriminant analysis. The result of discriminant analysis discloses that the dimension 'groups & network' is the major factor of Social Capital which is contributing to high level of performance of Community Kitchen. The base factor which is essential for the creation of social capital is formation of local groups like NHGs (Warner,2001). Solely, it indicates that the prime measure of Community Kitchen is group participation and group efforts made by the stakeholders of NHGs among the tribal community of Attappady. This position is followed by variables like trust, collective action, social cohesion and finally empowerment and information. Besides, the structure matrix shows a better image of unevenness in the presence of determining

variables. At this juncture, the study draws out the need for the intervention of concerned officials and animators to stretch attention to variables (like information and communication) which are not sound and obstructing from better performance level.

Among the selected Community Kitchens, Chundakulam and Chittoor exhibit high level of efficiency. The animators of these two kitchens are graduates. It further helped in improving the level of trust and cooperation, which smoothens the working of Chundakulam and Chittoor Community Kitchen. It can be presumed from the data that the educational qualification of animators has a significant role on strengthening the efficiency level of Community Kitchens. The two common problems faced by the stakeholders of all community kitchens are lack of adequate infrastructural facilities and funding issues. Meanwhile, it is clear from the observation that the voluntary initiatives and helping mentality of non-beneficiaries, animators and helpers are the major factors which made Community Kitchens to function at an impressive standard. This noticeably illuminates the qualities of social capital formation generated through NRLM by forming NHGs.

The study suggests that the major aspects that the officials need to restructure is the funding system, so as to solve the problem of regularity in receiving funds on time. Apart from this, majority of the respondents are satisfied with the working of Community Kitchen. There is no doubt that people are contented with the food served, whereby it implies that this programme could improve the nutritional status of tribal community in Attappady. Thus, the study concludes that NRLM could well execute and implement Community Kitchen in Attappady with the help of institutional framework by forming local groups to build networks, which has the potential to foster the level of social capital formation.

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