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Adolescent Development Education through Anganwadi Workers: A Study Report from Kerala

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Abstract

Integrated Child Development Services Scheme (ICDS) has been a pioneering initiative of the Government of India for the betterment of adolescent girls and mothers. The current paper is an attempt to develop an intervention program for adolescent girls on enhancing their psychosocial competence through Anganwadi teachers and evaluate its outcome. The master trainers (Anganwadi workers) were trained and they conducted interventions for adolescents on four topics with 16 activities. The post assessment result on a control and intervention group shows that significant changes in adolescent girls can be effected through the intervention of Anganwadi workers. The paper also highlights that planners and the policy makers need to give serious thought to effective utilisation of the human resource available at the disposal of the ICDS programme for improved service delivery to adolescent girls under ICDS.

Keywords: ICDS, Adolescent girls, interventions

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Introduction

The Adolescent Girls' Scheme of ICDS (Integrated Child Development Services Scheme) is a pioneering national level programme initiative for betterment of the adolescent girls in our country. Though this programme was initiated with great enthusiasm, the same was not translated in to action when it got implemented. Even after 20 years and three revisions in its implementation strategy, it is still groping in the dark. Effective utilisation of the ICDS resources has been neglected among various other aspects in the implementation of the scheme. ICDS functionaries at the grass root level, who are the primary stake holders in implementing the project are yet to receive proper training for capacity building on 'adolescent development'. The Current study was planned in this background to validate the feasibility and utility of implementing an 'adolescent development education programme' through Anganwadi workers. This training intervention can be replicated in other parts of the country for better service delivery of the non nutritional component of the adolescent girls' scheme (AG scheme) of ICDS.

An Overview of the Scheme

In India many of the health and social indicators including sex ratio, literacy rate, nutritional status, mortality and morbidity data indicates a relatively lower status for women and girls in society Considering the importance of adolescent girls as future mothers, this age group demands special attention of their health and nutritional care. Interventions at this stage can rectify the developmental defects of early childhood. All these considerations lead to the conceptualisation and formulation of adolescent girls' scheme which was launched in 1991.

The ICDS programme is intended to to improve the nutritional and health status of girls in the 11-18 years age group and to provide literacy and numeracy skills through non formal education. It was meant to train and equip adolescent girls to improve or upgrade home-based skills, vocational skills, and promote awareness of health, hygiene, nutrition and family welfare, home management, child care and to take all measures to facilitate their marriage only

after attaining the age of 18 years. It was also meant to gain understanding about their environment related social issues and its impact on their lives. Lastly it also aims to encourage adolescent girls to initiate various activities to be more productive and useful members of the society.

Services under the Scheme

Girl To Girl Approach Scheme to address issues of 11-15year age group especially the school drop outs and *Balika Mandals scheme*- to give education sessions on health and nutrition along with skill development sessions supported by local resource persons and also with the help from experts in health, food and nutrition board etc through mahila mandals. Apart from these two services the scheme envisaged to provide the following common services to all adolescent girls in the community i.e 1)Watch over menarchy 2)Immunisation 3)A general health check up every six months 4)Treatment for minor ailments 4) Deworming 5)Prophylactic measures against anaemia, goitre, and vitamin A deficiency and 6)Referral services. Initially the above programmes were introduces on a pilot basis in 507 ICDS projects in the country.

As per the report published by (Prempati & Suman, 2010) the budget allocation of ICDS is sufficient only to provide supplementary nutrition to 19.4 Lakh adolescent girls, when the total number of adolescents in the 11-18 year category as per 2001 census report is approximately 844 lakhs .

Studies done on adolescent girls' scheme implementation in various parts of the country showed that there was lack of training of functionaries (Formative Research and Development Services, 2009 & Sen. 2009) and poor impact of the nutrition and health education sessions on increasing the knowledge level of the adolescents (Malhothra, 2010). Anganwadi workers have reported shortage of funds and trained resource persons to handle the education sessions for adolescents (Solidarity among Women, 2009). Lack of time for adolescent girls to participate in the scheme activities due to their busy academic schedule and lack of knowledge on the part of the workers to give education sessions for adolescent girls (AGs) have been reported as the reasons for poor

functioning of adolescent girls clubs at the Anganwadi level (Wilson, 2011). In this background the current study aims to look at the feasibility and utility of developing and implementing an adolescent development education programme for the Anganwadi centres in Kerala using Anganwadi workers as master trainers. It is expected that empowerment of the grass root level ICDS functionaries through capacity building would strengthen the AG (adolescent girls) scheme implementation.

Methods

It is almost impractical to implement a whole series of non-nutritional component activities coordinating the services of various other sectors when ICDS functionaries have no control over any of them. Many a time's resource persons from other departments (health, education etc.) were not available to conduct education sessions for the AGs at the Anganwadi level. It is proposed that when the functionaries themselves are trained enough, they can handle such sessions in the absence of experts from other fields. Training programmes with the help of expert resource persons can be organised during the school vacations when school-going children are freer to attend such sessions making the research idea more feasible. This paper aims to explore the feasibility of developing and implementing a training programme on adolescent development for the Aganwadi centres in Kerala. A quasi-experimental control group design (Baker, 1988) with pre and post evaluation was done to check the utility of the training intervention. Process evaluation was done at the end to check the feasibility of the training intervention.

Tools for Data Collection

The following tools were used to collect data from the master trainers and the participant adolescent girls (both experimental and control group).

1. Socio demographic profiles of the participant adolescent girls were assessed using a structured questionnaire.

2. A self awareness inventory was prepared by the researcher to assess the self awareness level of the adolescents. This inventory had 21 statements. Total self awareness score was calculated by adding the scores of all the items included in the inventory. Face validation was done before using the tool for the study.

3. A checklist was used to assess the knowledge level of the adolescent on healthy living. This twenty item checklist had four response options with one right answer for each item.

4. An inventory to assess the relationship perception of the adolescents was prepared by the researcher to use in this study. This tool was prepared to assess the relationship perception in the context of their relationship with parents, others in the family, peer group members, with those of the opposite gender and with strangers. This tool had 18 items in the form of statements with 4 response options (i.e. strongly agree, agree, disagree, and strongly disagree).

5. A checklist on growth and development was used to assess the knowledge level of the adolescents on growth and development. This checklist had 20 statements in which 9 were true or false statements and 11 were multiple choice questions. Face validation of this tool was also done with the help of subject experts before using it for the study.

6. Process evaluation data from the experimental group adolescents were collected using a set of 4 open ended questions. They had to answer these questions on completion of each module.

Process evaluation questionnaire for the master trainers were used to assess their evaluation of the training programme.

Apart from all these, reports from two independent observers were also taken to substantiate the evaluation reports taken from other sources.

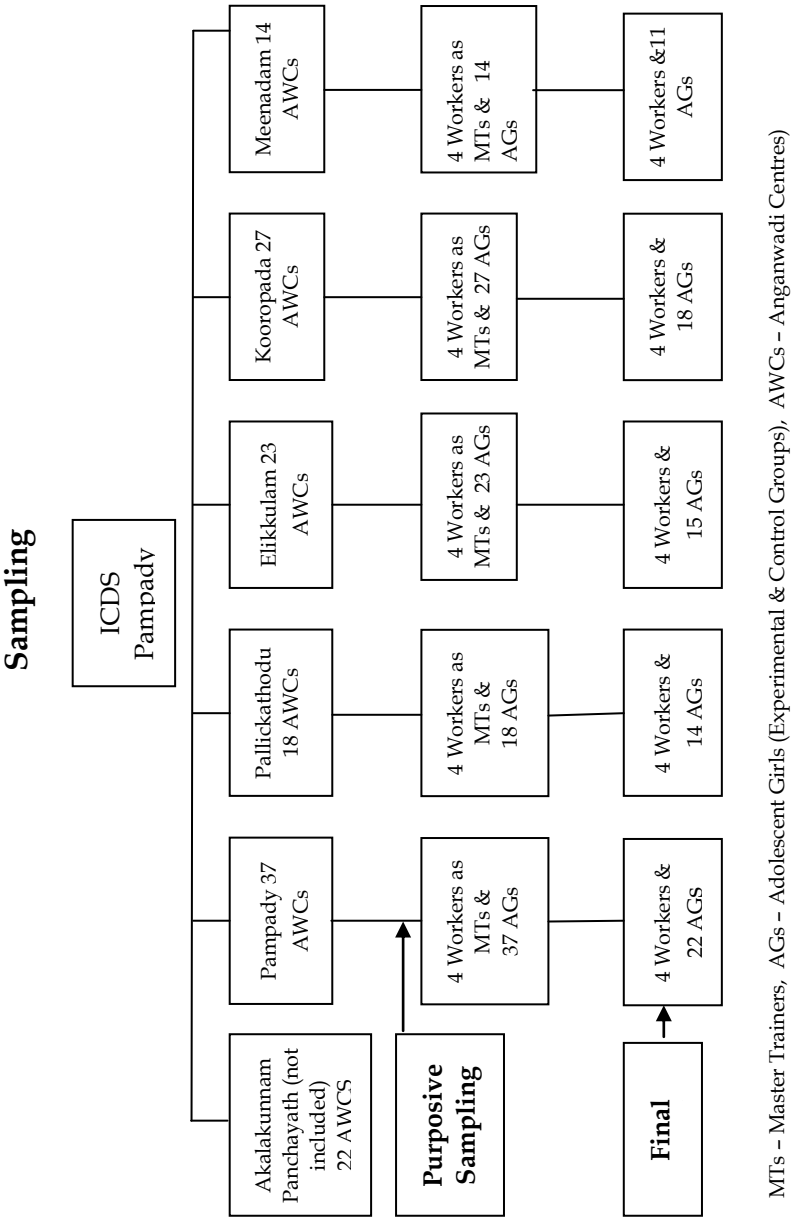
Study Locale and the Sample

Kerala had a total of 163 ICDS projects spread over 14 districts at the time of this study. From among this Pambady ICDS Project of Kottayam district was selected randomly to implement the project. This is a rural project situated in the Pambady block Panchayath of Kottayam district Kerala (Project profile of ICDS Pambady,2005). Selection of the project was done using multistage random sampling method. Since this study was a part of another larger study done in three projects in three districts of the state, the selection of this project was done from among the three projects selected for that study using simple random sampling.

The total project area of Pambady ICDS project was 166.30 Sq. kms and the total population in the area was 1,39,160 (Project profile of ICDS, Pambady, 2005).There were a total of 141 Anganwadi centres spread over six Panchayaths (Monthly progress report of ICDS Pambady, January 2008). Among these Panchayaths the Akalakkunnam Panchayath (with its 22 Anganwadi centres) was kept out of the main study, owing to the reason that the population in that Panchayath was exposed to the module and tool while pre testing it. Thus the total sample for the study was selected from 119 Anganwadi centres of the other five panchayaths of the Pambady ICDS project. From each of these five panchayaths, 4 Anganwadi workers each, who volunteered first, were selected to be included as master trainers. Thus, a total of 20 Anganwadi workers were selected to be master trainers.

Selection of the experimental and control group adolescents were done using the purposive sampling technique. One adolescent girl beneficiary, preferably the leader of the club from each of the selected 119 Anganwadi centres of the Pambady ICDS project was included in the experimental group. If it was inconvenient for that girl to attend the programme, another girl in a responsible position in the AG club was taken to be included in the experimental group. Purposive sampling was used at this stage with the aim that, if the club leader or a person in a responsible position participates in the training programme, they could organize or assist the Anganwadi worker at their respective Anganwadi centre to take similar classes.

This selection was done with the help of the respective Anganwadi workers of the 119 centres.



Even though all the selected adolescents were informed about attending the training programme, only 105 girls came to attend the training on the first day. From among this 105, only 80 could be included in the final sample of the experimental group, after eliminating the responses of those who did not attend all the 16 sessions and also removing those response sheets which were incomplete and erroneous. Thus the final sample in the experimental group was 80. For selection to the control group, one other member of the adolescent club who was of same age as the experimental group participant was selected from each of the Anganwadi centres. This was done with the help of Anganwadi workers. Selection of the sample was done in such a way that the two groups were comparable to the maximum extent possible.Informed consent was taken from the parents of the participants and from the girls themselves, before collecting data of the participants. Permission was taken from the concerned authorities of the local self government and the ICDS officials before conducting the training programme.

Inclusion criteria for the adolescent girls were 1)AGs who were in the age group of 11-18 years, 2)Adolescent girls who were members of AG clubs at the Anganwadi level, 3)Those girls who were holding a responsible position of the AG club at the Anganwadi level(only for experimental group). Exclusion criteria for the experimental group were that those girls who did not attend all the 16 sessions covered in the programme, adolescents who had attended any other training programme of a similar kind, adolescents who did not complete both the pre and post evaluations (applicable for both experimental and control groups)would not qualify.

Intervention Programme on Adolescent Development

The intervention training programme on adolescent development was planned after extensive literature review and consultation with subject experts. There were a total of four modules in the training programme and these were as follows: 1) self awareness, 2) interpersonal relationship, 3) healthy living and 4) growth and development. Also 16 activity based sessions were included under these four modules. Each session needed an average of 45 to 60

minutes to complete. Participatory teaching methodology was used for the training programme. Topics included were simplified in such a way, that the master trainers (in this case the Anganwadi workers) could handle the sessions easily. Detailed description on how to conduct a session was included in the module.

The main objective of doing the module on *self awareness* was to help the participant girls identify their own strengths and weaknesses, to teach them how to identify and prioritise personal needs , to give them clarity about their personal goals and to make them feel proud of their own gender. To achieve these objectives this module had four activities. The second module on *interpersonal relationship* was designed to help the participants to improve their relationship with their parents to help them to analyse and understand their relationship network, to teach them how to make and maintain a healthy relationship with friends and with those of the opposite gender and finally to help them to identify and deal with gender related exploitation and violence in their personal life. This module had 5 activities. The third module on *healthy living* had three activities. The objectives of doing it was to make the adolescents understand the nutritive value of common food stuff, to make them understand healthy and unhealthy eating and cooking practices and to make them aware of life style based diseases. The fourth module on *growth and development* basically aimed at helping the adolescent understand the various changes that occur during this life stage, the importance of hygiene during menstruation, various changes that take place in a menstrual cycle, and finally the process of conception and child birth.

Intervention Programme and Data Collection

The selected 20 workers who volunteered to work as master trainers were given training (Training on Trainers) on 'Adolescent Development Education Programme' developed for the research purpose. The TOT was for three days consecutively. The researcher herself did the entire TOT for training the master trainers. Two independent observers who volunteered to help the researcher also participated in the TOT. A hand book prepared based on the topics under discussion was given to the master trainers.

These trained workers were given necessary assistance to organize similar kinds of training programmes for the selected adolescent girl beneficiaries of their respective Panchayaths. This included a training kit (the hand book on adolescent development, notebooks and pens for the participants, chart papers, sketch pens and all the other material required to conduct the sessions), financial provisions to meet the training requirements etc (i.e. arranging food etc for the participant girls). So at each Panchayath, the trained workers who were four in number together and organized one camp for the adolescent girl beneficiaries.

The master trainers helped the participant girls to fill in the pre and post evaluation questionnaire (containing tools of data collection) before the training intervention and again at the end of the training. Process evaluation data was collected from the experimental group adolescent girls only at the end of the intervention programme. Along with this the master trainers were also asked to give process evaluation report in the prescribed format at the end of each session. Anganwadi workers of the respective Anganwadi centres helped the control group girls to fill the pre and post evaluation questionnaires (which were the same as that was given to the experimental group) twice. The first and second data collection from the control group was done at an interval of one week. No intervention was done with the control group at this time. Process evaluation details were not collected from the control group as they didn't have exposure to any training at that point of time.

Findings

Socio demographic profile of the respondents showed that the mean age of the experimental group respondents were 14.87 and that of the control group were 15.16. Comparison of the ages of both the groups using t test showed that the two groups were comparable. Religion wise analysis of the sample showed that majority of them in both the groups belonged to the Hindu religion (66.25%in experimental and 56.25%in control group) followed by the Christians (32.50and 41.25%respectively). Monthly income of the family of the respondents showed that the majority of them in both the groups (65%in the experimental and 63.75% in the control group) belonged to the Rs 1000-3000 categories. In both the groups

21.25% earned an income up to Rs 5000. These figures indicated that majority of the respondents in the present study were from poor families. The Chi square test for homogeneity was used to compare the control and experimental groups with respect to their religion and family income level. No significant difference was observed between the two groups on both these variables. Self reported academic performance level of the groups also showed a similar distribution in both the groups.

Education and the occupation level of the fathers of the sample respondents, clearly showed that the beneficiaries of the Anganwadi centres belonged to poor families and majority of them have below tenth standard education (contrl gp 77.09% and exp gp 78.75%) and were working as daily wage earners (53.25 %in the experimental group and 55.84% of them in the control group).Mothers were reported to be better educated than the fathers in both the groups(41.77% in the control and 31.25% in the experimental group have their mothers educated up to the degree level or the pre degree level). Regarding the occupational status of mothers, majority of them in both the groups (89.74%in the control and 77.92% in the experimental) said that their mothers were home makers. Both the groups were comparable with respect to education and occupation level of their fathers and mothers.

Descriptive data on the various study variables at pre test in both the groups showed the following results.

Table 1 Comparison of the pre test scores of both the groups on various study variables

	Number	Mean		Standard Deviation		t	df	Sig . (2-tailed)
		Exp gp	Contl gp	Exp gp	Contl gp			
Self awareness	80	68.33	67.30	6.15	7.72	-0.929	158	0.354
Relationship perception	80	54.38	55.41	7.44	6.079	0.966	158	0.338
Healthy living	80	12.76	14.08	3.147	3.072	2.669	158	0.008*
Growth and development	80	10.76	12.85	2.905	3.135	4.369	158	0.000*

Pre test self awareness scores of the two groups showed that 74.4% had good self-awareness and the rest of them had an average level of self awareness. Mean self awareness score of the experimental group was (68.33) slightly better than that of the control group (67.30). These values indicated that the self awareness level of the total sample is good. Comparison of the self-awareness scores using t test showed, that before the intervention the self awareness levels of both the groups were comparable

Similarly relationship perception in both the groups showed that only 53.23% have good relationship perception and, 46.25 % had an average score on relationship perception. Mean relationship perception score of the experimental group was found to be 54.38 and that of the control group was 55.41. Mean values of both the samples indicated that they both are in the average category as far as relationship perception was concerned. The t- test was used for the comparison of the control and experimental groups with respect to their scores on relationship perception. Results showed no significant difference between the pre test scores of the two groups.

At the baseline, both the groups seem to have fairly good knowledge on healthy living. Pre test scores on the knowledge level of both the groups together showed that 24.36% had very good knowledge on healthy living, 46.25% had good knowledge and 16% showed poor or very poor knowledge on healthy living. When we look at the mean values of both their groups, it is seen that the control group had better knowledge (14.08) on healthy living at the pre test when compared to the experimental group (12.76).Comparison of the mean scores using t- test showed that the variation between the two groups is significant at 1% level.

Base line knowledge scores of both the groups in growth and development showed that, though the scores fell in the good category it was still in the lower limit. Mean values of the two groups showed that, the control group had better knowledge on growth and development at pre test (12.85) when compared to the experimental group (10.76). The t-test was used to compare control and experimental group scores with respect to their knowledge level on growth and development. Results showed significant difference ($p<0.001$) between the pre test scores of the two groups.

The control group had better scores than the experimental group at pre test.

Table 2 Comparison of the post test scores of both the groups on various study variables

	Number	Mean		Standard Deviation		t	df	Sig . (2-tailed)
		Exp gp	Contl gp	Exp gp	Contl gp			
Self awareness	80	73.41	68.28	6.80	7.28	-4.61	158	0.00
Relationship perception	80	59.89	55.83	6.15	7.15	-3.850	158	0.00
Healthy living	80	15.93	13.89	2.86	3.08	-4.33	158	0.00*
Growth and development	80	16.55	12.93	2.64	3.22	-7.79	158	0.00*

Comparison of the post test values of control and experimental groups with respect to their scores on self awareness, showed that the post test scores of the control and experimental groups differed at 1% level of significance(experimental group performed better that control group). Hence the hypothesis that compared to the control group, the experimental group adolescents will have better self awareness subsequent to training was accepted. The t- test was used to compare the gain scores of both the groups. This result also confirmed that the experimental group had significant improvement in their self-awareness level after intervention compared to the control group.

Comparison of the post-test values of the control and experimental groups with respect to their scores on relationship perception showed that the post test scores of the control and experimental groups differed at 1% level of significance. There was a significant positive shift in the relationship perception of the experimental group, which was found to be absent in the control condition.

Comparison of the post test values of the control and experimental groups with respect to their scores on knowledge level on healthy living showed that the post test scores of the control and experimental groups differed at 1% level of significance. After intervention the experimental group showed significant

improvement in their knowledge and their scores were better than that of the control group at the post test. Gain scores of both the groups were calculated and compared which again confirmed the findings.

Comparison of the post test values of control and experimental groups with respect to the scores on their knowledge level on growth and development showed that the post test scores of the control and experimental groups differed at 1% level of significance. The control group had better scores at the pre test. After intervention this trend reversed and the experimental group showed significant improvement in their knowledge score. Gain scores calculated also showed significant difference between the two groups with the experimental group performing better than the control group. Hence the hypothesis that compared to the control group, the experimental group adolescents will have better knowledge on growth and development subsequent to training was accepted.

The results shows that the training intervention made by the master trainers were effective in bringing about a desired change in the experimental group.

The process evaluation report from the trainers showed that they could conduct the training well. For all the sixteen sessions the majority of the trainers expressed a high level of satisfaction with their performance. Even after giving a margin for the possible positive self appraisal, it seems that the sessions were successfully completed. When we look at the workers/trainers evaluation of the module, it shows that none of them have raised any major problems about the practicality of the methodology and age appropriateness of the content of the module. Majority of them had problems in managing the time slot. Participation in the training programme, as well as their role as trainers, has reportedly improved the workers self confidence and motivation levels. They also have reported a definite improvement in their knowledge and skill as trainers of the adolescents. They also reportedly learned programme planning and implementation. This training programme made them think about the importance of time management and collaborative working style said the master trainers in their feedback. Many of them while attending the

training said that the process of learning became more interesting when interactive and participatory teaching methodology was used. Positive changes in knowledge, attitude and behaviour were evident in the participant girls on various study variables included in the intervention programme. Trainers have reported visible changes in the participants which included increased level of participation in discussions, role play activities, increased number of questions and doubts raised by the participants etc.

The observers reported that the workers could handle the sessions well. Participant girls were very active and their participation level was very high as reported by the observers. The Participants request to have more such sessions in the future and their suggestion to include all the adolescent girls in the Anganwadi area for such classes in the future have been sighted as proof of the sessions quality.

A follow up of the study after one year showed that at Pambady ICDS project all the Anganwadi workers were given orientation training on adolescent development with the help of the master trainers who were trained in this programme. Subsequent to this the training programmes for the entire adolescent girls clubs in the project was organised with the help of the master trainers in the year 2011-2012.

Conclusion

Adolescent development education programme done by the Anganwadi workers was effective in bringing about desired changes in the target group beneficiaries. AG scheme as it is implemented today can be made more beneficiary friendly by improving the quality of service delivery. One way to achieve this is through empowerment of the ICDS functionaries, more specifically the Anganwadi workers who are primarily involved in the implementation of the scheme. The available training infrastructure of ICDS can be cost effectively utilised for achieving this. A cascading model of training can be planned where the project officers can be trained first who in turn can train the supervisors and the Anganwadi workers of their respective projects using the module developed in this study. Thus the manpower

available at the disposal of the ICDS scheme can be properly utilised.

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