Knowledge, Attitude, and Practice (KAP) of the Anganwadi Workers about the Oral Health in Visakhapatnam, Andhra Pradesh, India

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Abstract: Dental caries is one of the most common childhood diseases. Dental caries can be prevented by maintaining proper oral health. Government of India has launched Integrated Child Development Services (ICDS) on 2nd October 1975. Anganwadi workers are community based voluntary frontline workers of the ICDS program. As oral health is an integral component of general health, basics of oral health care have to be delivered through primary health care infrastructure. This study aims to assess the Knowledge, Attitude, and Practice of the Anganwadi workers about the child’s oral health and also to evaluate the effectiveness of awareness classes among them regarding the child’s oral health.

METHODOLOGY: The study was conducted in three phases among the Anganwadi workers in Madhurawada, Visakhapatnam District, Andhra Pradesh. Study was conducted by circulating the self-formulated questionnaire among the Anganwadi workers before and after the awareness program. Statistical analysis was performed using the SPSS 20 software, Paired t-test was used to compare knowledge scores between pre and post-test.

RESULTS: Study was conducted among 50 Anganwadi workers of 25 to 40 years of age. After awareness program, statistical analysis of pre and post-test questions showed a significant (P<0.001) increase in knowledge level of primary health care workers.

CONCLUSION: Awareness program improved the knowledge of Anganwadi workers regarding a child's oral health. This indirectly helps in health promotion of rural population especially in prevention of dental caries.

Keywords: Anganwadi Workers, Children oral health, Awareness Programs
I. Introduction

To maintain proper oral health in all children American Academy of Paediatric Dentistry (AAPD) emphasized the need for prevention, early diagnosis and treatment of diseases. However, in the present scenario, lack of basic knowledge in primary health care workers regarding the oral health of children remains the reason as to why any of the preventable oral diseases are left attended and untreated. Studies have shown that in developing nations, the oral health status of the children is poor and dental caries is the most common chronic childhood disease. [1,2] Hence, proper guidance and awareness starting from the base level should be advocated to bring about changes in this current scenario. Integrated Child Development Services (ICDS), is one of the largest integrated family and community welfare schemes in the world. [3,4,5,6] It is focusing on providing a base for proper mental, physical and social development of children below 6 years in India and providing health and nutritional information and education to the mother of young children. To achieve its objectives, ICDS provides services like, Immunization, Supplementary Nutrition, Health check-up, Referral Services, Preschool non-formal education, Nutrition and Health Information. [7,8,9] Anganwadi workers are community based voluntary frontline workers of the ICDS program. These Anganwadi workers play a pivotal role in educating the people and strengthen them to deal with their own health problems.

In a country like India, integration of the awareness programs about child’s oral health among Anganwadi workers can bring about a ripple effect on the rural community as they are dealing with all the children and their mother of their respective work areas with equal importance. Children from the rural area find their first teachers, away from home, in the Anganwadi teachers. These workers not only provide preliminary education but also monitor the general health and nutritional status of the children under them. Hence, upgrading their knowledge about oral health will improve their attitude toward the need for good child oral health and also will help them to provide proper practical guidance for the children and mother. It helps to maintain a healthy oral status which will become the mirror of the general health in future. [10,11,12]

KAP studies regarding general oral health was conducted among Anganwadi workers in various parts of India. None of the study conducted in Madhurawada, Vishakapatnam District of Andhra Pradesh in relation to child’s oral hygiene and its role in prevention of dental cares. So, the present study aims to assess the knowledge, attitude, and practice (KAP) of the Anganwadi workers about the child’s oral health and also to evaluate the effectiveness of awareness classes among this group regarding the child’s oral health.

II. Material and Method

The study was conducted among the Anganwadi workers of Madhurawada, Vishakapatnam District, Andhra Pradesh over a period of 3 months from February 2018 to April 2018. Clearance from Child development project officer was taken to conduct the study at ICDS Office, Visakhapatnam. 50 Anganwadi workers were randomly selected and included in the study with their consent. The program was
designed in three sessions, two questionnaire sessions and an awareness class. The questionnaire session was based on the child’s early dental health care and parental guidance. The awareness session was based on the basic oral health care needs and practices of children from the perspective of an early caregiver such as Anganwadi workers.

Self-administered close ended questionnaire having 15 questions were prepared in English language then translated to local language and given to the Anganwadi workers, before and after educational training program. Questions were based on the basic knowledge, attitude, and practical approaches that an early caregiver like an Anganwadi workers should know to provide good oral health for the children and health advice to the mother. In the first session, the participants were given the questionnaire and asked to complete within 30 minutes. Questionnaire from all the participants was collected and filed. After one month second session was the awareness class session taken by the dental health professionals from the department of Dentistry, Gayatri Vidya Parishad IHC & MT. The awareness program was based on child's oral health facts and various practical approaches. This is done with the help of Audio-visual aids like Power Point presentation and videos.

As Anganwadi workers deal with both the child and mother, sessions included a various maternal health-related problem that influences the child's oral health. The class also focused on explaining the role of the early caregivers in maintaining proper oral health care to a child. A separate session for the clarification of the participant's doubts was also included. After the second session, the same questions were distributed, and another half an hour was given for answering those questions. The answered questionnaire was collected and filed separately for the analysis. A paired t test using SPSS version 20 (IBM) was used for statistical analysis. P < 0.05 was considered as statistically significant.

III. Results

A total of 50 Anganwadi workers of age group 20 - 45 years participated in the study. Study was conducted during their monthly project level meeting. Maximum educational qualification of the participants is intermediate so classification based on educational qualification was not taken. The answer to the questions was scored as “1” if their answer was correct and “0” if it was wrong. The score for each of the contestants was found for the pre-scenario. (Table 1).

Statistical analysis showed a significant (P < 0.05) increase in the knowledge of Anganwadi workers regarding the basic knowledge about the number and eruption of teeth, causes for dental caries in children, symptoms of dental caries and proper oral hygiene methods to be used to maintain a proper child’s oral health. Anganwadi workers already had little knowledge about the signs and symptoms of dental caries and they were taking few preventive measures. So, we couldn’t find statistically significant change but definitely an improvement in the knowledge about the questions related to their practice.

IV. Discussion

Dental caries is one of the most common childhood diseases. It can be prevented by maintaining good oral health right from early childhood. Anganwadi workers play a major role in giving health education to children and their parents. Knowledge gap present in primary health care workers can be accessed by KAP studies and can be filled by various health related training.
programs. In India numerous KAP studies and awareness programs were conducted among Anganwadi worker for the benefit of the community. [6-9,12,17,20-25]

Early dental interventions starting during pregnancy were proved to be efficient with respect to the prevention of oral diseases, especially caries. In our study most of the participants are not aware of significance of cleaning gum pads after feeding and also when to start brushing of teeth.

Our pre-test (55.2%) and post-test (91.6%) results show a significant improvement in the knowledge of primary health care workers which was correlating with Sandhya et al.

Our analysis showed an improvement in the knowledge of the participants about the eruption of teeth (49.6% to 88.8%), total number of primary teeth present in the oral cavity (60.2% to 93.9%). The knowledge about the effect of improper oral hygiene habits (33.1% – 86.9%), intake of sweets, sticky food, bed-time drinks (35.8% - 95.4%) causing dental caries have been improved. The results were in accordance with Chandramohan. S et al, Gangwar. C et al, Sequeira P et al and Iram Jan et al.

Studies have shown that maternal oral microbes are one of the greatest predictors of infants and children oral flora. AAPD advocated educating the parent to avoid saliva-sharing behaviours (e.g., Sharing spoons and other utensils, sharing cups, cleaning a dropped pacifier or toys with their mouth) to prevent infections. [14,15&16] In our study initially 40% of participants responded that the main causative factor for caries is bacteria, majority believed that calcium deficiency, fungus, and virus might be the main cause for caries. Post-test analysis showed 92.9% of participants answered correctly.

Our results (58% to 94.5%) showed that participants understood different home-based practical methods to reduce caries. They understood the importance of brushing tooth twice daily, mouth rinsing, reduction of food intake, increased intake of fibers in diet etc. Our results were correlating with the results of Thakare.M et al, Patil SB et al and Chandramohan. S et al.

Nowadays, many oral health companies are introducing different toothbrushes for the need of infants, toddlers, and children with attractive pictures and shape which reinforce kinds to use them. They are also found to be handier and more acceptable for the kids and bring changes in their approach toward brushing. However, in our study, only 35.8% of the participants were aware of the different types of toothbrushes and tooth paste available for children, and their knowledge increased to 95.4% after their educational training. Similarly in Raj. S. Goel et al. study awareness of maintaining oral hygiene in children reduces the caries activity in children.

The next three questions were related to the oral care measures that the participants were practicing in their respective Anganwadis. 73.2% of the participants responded that they noticed children taking leave due to the tooth pain. As that question was based on their previous experience, no such statistical change was observed in the post-test analysis. In effect, the question made them realize about the severity of the spread and effect of dental related problem on child population. The questionnaire also evaluated the participants approach in informing the parents about the oral diseases they found in a child’s mouth, especially with the mother. Even though the response of the participants were obtained as 73.3% in the pre-test which was a positive response, the participants reported the fact that they noticed the oral conditions only when the child started to complain about pain or difficulty in eating. This condition would have been due to the lack of knowledge of the participants in the early diagnosis of caries or due to the negligence. However, this indicated the need of basic knowledge regarding the different aspects
of caries including the preventive measures among the early caregivers and incorporation of more dental check-up programs among the children of the rural population. [21,22,23,24]

The last question was about their approach to evaluate the oral hygiene practices of children in their school after meals. It responded positively as 94.3% in the pre-test and 98.2 in the post-test response. It indicated the fact that the early caregivers such as Anganwadi workers follow a positive practice regarding a child’s health care and it is only the knowledge gap about the different practical and preventive measures of dental diseases. It is also the reason why they cannot provide proper instructions regarding the child’s oral condition.

V. Summery and Conclusion

The present study suggests that Anganwadi workers in Madhurawada, had little knowledge about child oral health, importance of maintaining good oral hygiene, prevention and diagnosis of dental caries. Conducting survey and training program among them increased their knowledge and attitude towards child oral health care. With this we conclude that Anganwadi workers are the Grassroots of the community health care system and educating them is indirectly educating the community.

VI. Recommendations

- The practical approaches these early caregivers are following should be analysed for the expected results of future bright smiles.
- When the Anganwadi worker is recruited, they should undergo an official training in which the authorities can consider to include dental training in their curriculum.
- Furthermore, Medical colleges can adopt Anganwadi centres in their vicinity, and the Medical interns can be utilized to train the Anganwadi workers.

VII. Acknowledgements:

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References


Table 1: 
THE PERCENTAGE OF RESPONSES GIVEN TO THE QUESTIONNAIRE BEFORE AND AFTER CHILD ORAL HEALTH TRAINING PROGRAM.

<table>
<thead>
<tr>
<th>S.NO</th>
<th>Question</th>
<th>Before (%)</th>
<th>After (%)</th>
<th>P -Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>How many set of teeth are there in Humans?</td>
<td>49.6</td>
<td>91.0</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>2</td>
<td>When does the first tooth erupt in the Oral Cavity?</td>
<td>49.6</td>
<td>88.8</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>3</td>
<td>How many baby teeth are present in a child’s mouth?</td>
<td>60.2</td>
<td>93.9</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>4</td>
<td>What are the main reasons for caries in children?</td>
<td>54.2</td>
<td>94.4</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>5</td>
<td>When should care givers should start cleaning child’s mouth?</td>
<td>55.2</td>
<td>91.6</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>6</td>
<td>Enlist a few bad oral habits?</td>
<td>33.1</td>
<td>86.9</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>7</td>
<td>What are the symptoms of dental caries?</td>
<td>26.8</td>
<td>93.4</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>8</td>
<td>What are the main causative agents of caries?</td>
<td>40.4</td>
<td>92.9</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>9</td>
<td>What is the home-based preventive method you can suggest to mother to reduce caries in children?</td>
<td>58.0</td>
<td>94.4</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>10</td>
<td>What kind of food causes dental caries?</td>
<td>35.8</td>
<td>95.4</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>11</td>
<td>Is there a need for tooth paste and brush for children?</td>
<td>35.8</td>
<td>95.4</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>12</td>
<td>How many times should the child brush his teeth?</td>
<td>86.8</td>
<td>100.0</td>
<td>&lt; 0.001</td>
</tr>
<tr>
<td>13</td>
<td>Have you noticed children taking leave due to toothache?</td>
<td>73.2</td>
<td>75.4</td>
<td>0.690</td>
</tr>
<tr>
<td>14</td>
<td>Do you regularly inform parents about oral diseases that you notice in the child’s mouth?</td>
<td>83.3</td>
<td>94.3</td>
<td>0.007</td>
</tr>
<tr>
<td>15</td>
<td>Do you regularly check the oral cleaning methods in children after meal?</td>
<td>94.3</td>
<td>98.2</td>
<td>0.113</td>
</tr>
</tbody>
</table>