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A study to assess the effectiveness of nutritional enhancement programme on knowledge and micronutrient deficiency assessment skills among mothers of anganwadi children and dietary intake of micronutrients of anganwadi children in selected anganwadi centres of Udupi district, Karnataka.

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"ABSTRACT

“A study to assess the effectiveness of nutritional enhancement programme on knowledge and micronutrient deficiency assessment skills among mothers of anganwadi children and dietary intake of micronutrients of anganwadi children in selected anganwadi centres of Udipi district, Karnataka” was conducted by Ms. Shraddha S Kanchan in partial fulfilment of the requirement for the degree of Master of Science in Nursing at Manipal College of Nursing, MAHE, Manipal.

The objectives of the study were: to assess the knowledge of mothers regarding micronutrients, find out the assessment skills of mothers of anganwadi children regarding micronutrient deficiency, assess the dietary intake of micronutrients of anganwadi children, determine the effectiveness of nutritional enhancement programme in terms of improvement in knowledge, micronutrient deficiency assessment skills and dietary intake and find the relationship between knowledge and micronutrient deficiency assessment skills and find the relationship between knowledge and dietary intake.

The conceptual framework was based on Bertalanffy's General Systems Model developed by Ludwing Von. The research approach was a quantitative approach and pre-experimental one group pre-test post-test design was used for the study.

Convenient sampling was used to select the taluk, simple random sampling technique was used for selecting the zones and anganwadi centres and purposive sampling for selection of mothers.

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The data collection instruments used for the study were Demographic proforma, Structured knowledge questionnaire on micronutrients, 24-hours dietary recall on micronutrients and Micronutrient deficiency assessment tool.

The content validity of the tools were established by giving the tools to five experts and modifications were made based on their suggestions. Pre-testing of tool was done among five mothers of anganwadi children from Chatkalpade anganwadi centre on 3rd November 2017. The reliability of the tool was done among 20 mothers of anganwadi children from Mudelkadi anganwadi centre on 5th November 2017. Pilot study was done among 10 mothers of Padukudoor anganwadi centre on 9th

December 2017.

Administrative permission was obtained from Dean, MCON Manipal, Institutional research committee, MCON Manipal, Deputy Director of Women and Child Development Department of Udupi district, Child development project officer of Karkala taluk, Udupi district and the teacher of selected anganwadi centres of Karkala taluk. IEC clearance were sought (IEC: 748/2017). Informed consent was obtained from the study participants.

The main study was conducted from 14th to 29th January 2018. The total sample size was 35. The participant information sheet and informed consent form were given to the mothers and informed consent form was taken back from the mothers. On day one, pre-test was conducted by administering the tool such as demographic proforma, structured knowledge questionnaire on micronutrients, micronutrient deficiency assessment tool and mothers were interviewed regarding dietary intake of

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their children for three consecutive days (3 week days). Followed by administration of nutritional enhancement programme on micronutrients by lecture cum demonstration method. On day seven, post-test assessment was done using the same tools. The mothers were cooperative throughout the data collection period.

The data were analysed based on the objectives of the study using descriptive and inferential statistics. Data entry was done in SPSS version 16.0 and “dietcal” nutrient software. The study revealed that with regard to age, the highest percentage of children i.e. 45.7% (16) belongs to the age group of 5 years. Majority i.e. 60% (21) were female children. Data on order of birth showed that 65.7% (23) children were first born and 51.4% (18) children were having one sibling. All the children completed their immunization. Majority i.e. 60.0% (21) of them had their birth weight between 2.5- 3.5 kg and 80% (20) children were belonging to non-vegetarian group. Highest percentage of mothers i.e. 71.4% (25) were having their family income <7000. Majority i.e. 42.9%(15) mothers were with primary education. Data on occupation of mother showed that 65.7% (23) mothers were housewives and 40.9% (14) mothers got information regarding micronutrients from health professionals.

Data on knowledge of mothers regarding micronutrients revealed that in pretest, majority i.e. 65.7% (23) mothers had average knowledge and 34.3% (12) had poor knowledge but none of them had good knowledge on micronutrients. In posttest, 8.6% (3) of them had good knowledge, 74.3% (26) had average knowledge and 17.1% (6) had poor knowledge.

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Data regarding assessment skills of mothers of anganwadi children revealed that in pre-test, the mean score was 1.82 with standard deviation of 1.56, whereas in post-test, the mean score was 3.11 with standard deviation of 1.62. This shows that apparently there is an increase in the assessment skills among mothers after the intervention.

Data regarding categorization of percentage of adequacy of anganwadi children revealed that in pre-test, all anganwadi children had substantially inadequate intake of vitamin D. Most (40%) of the children were marginally inadequate in their vitamin A intake and 25.7% had marginally adequate zinc intake. Most (31.4%) of the children were adequate in their iron intake, 25.7% of them had marginally excess intake of zinc and 57.1% of the children had substantially excess intake of calcium. Whereas in post-test, all anganwadi children had substantially inadequate intake of vitamin D. Around 28.6% of the children were marginally inadequate in their vitamin A intake and 42.9% of them had marginally adequate intake of vitamin A. Majority (48.6%) of the children had adequate iron intake, 34.3% of them had marginally excess zinc intake and 77.1% of the children had substantially excess calcium intake. This study concluded that a well-designed nutritional enhancement programme is effective in improving mother's knowledge and assessment skills on micronutrient deficiency. However there is not much improvement seen in the dietary intake among the anganwadi children which could be due to a short term intervention programme. Based on the findings, this interventional study should be carried with sufficient time span as the dietary intake is also very vital with skills and knowledge of mothers. Hence, there is an important need for continuously sensitizing the mothers in the

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community about the micronutrients for which there will be an increase in their knowledge which in turn will improve their skill in identifying the various deficiencies and healthier dietary consumption would be suggested for the anganwadi children."