ISRCTN30704933 https://doi.org/10.1186/ISRCTN30704933

Effectiveness of complementary feeding promotion using agriculture extension workers

Submission date
15/02/2016

Recruitment status
No longer recruiting

Registration date
31/03/2016

Overall study status
Completed

Last Edited
06/04/2016

Condition category
Nutritional, Metabolic, Endocrine

[ ] Prospectively registered
[ ] Protocol
[ ] Statistical analysis plan
[ ] Results
[ ] Individual participant data
[ ] Record updated in last year

Plain English summary of protocol

Background and study aims
Complementary feeding practices (that is, feeding infants additional food when breast milk alone is no longer providing them with all the nutrients and energy they need) are often inadequate in developing countries, resulting in infants becoming malnourished at between 6 and 24 months of age. In Ethiopia, the number of children under five that are underweight and suffer from stunted growth is 25% and 40% respectively and the dietary diversity score (that is, a score that looks at how much variety there is in the diet) is as low as 4%. Despite Agriculture Extension Workers (AEWs) being involved in livestock and crops production there is no information on interventions (that is, programmes) to help them promote food consumption including promotion of complementary feeding for infants and young children. The purpose of this study was to test the performance of a complementary feeding promotion using AEWs in addition to existing Health Extension Workers (HEWs), compared with the work done by HEWs alone, on improving both the care givers complementary feeding practices and how nourished the children are (nutritional status) in the Wonchi Woreda Oromia region of southwestern Ethiopia.

Who can participate?
Children aged 6-12 months and their caregivers living in a kebele (or neighbourhood) enrolled in the study.

What does the study involve?
Each kebele included in the study is randomly allocated to either the control or the intervention group. Participants in the intervention group receive information in the form of messages on different aspects of complementary feeding, including how much to give and when, thickness, variety and how to prepare it by trained agriculture extension workers (AEWs) every two weeks. Participants in the control group do not receive this information from AEWs. All participants are followed up at 3, 6, 9 and 12 months to assess how nourished the infants are, how much complementary feeding are they getting, whether they are eating a varied diet and how much they have grown.

What are the possible benefits and risks of participating?
There are no risks associated with the study. However, caregivers that participate in the study

will benefit from complementary feeding messages that was provided through AEWs. Implementing the complementary feeding messages could help their infants to grow well and better nourished.

Where is the study run from?
The study is run in one of the World Vision Ethiopia program areas and takes place in six kebeles in the Oromia region Wonchi Woreda.

When is the study starting and how long is it expected to run for?
March 2014 to March 2015

Who is funding the study?
Investigator initiated and funded

Who is the main contact?
Dr Sisay Sinamo

Contact information

Type(s)
Scientific

Contact name
Dr Sisay Sinamo Boltena

Contact details
World Vision Ethiopia
AMCE Bole Road
P.O.Box 3330
Addis Ababa
Ethiopia
3330

Type(s)
Scientific

Contact name
Prof Thandi Puoane B

Contact details
University of the Western Cape
Faculty of Community and Health Science
School of Public Health
Private Bag X17
Bel lville
South Africa
7535

Type(s)
Scientific

Contact name
Dr Nelia Patricia Steyn

Contact details
Division of Human Nutrition
University of Cape Town
Medical Campus
Anzio Road
Anatomy Building
Floor 2, Room 2.01.5
Cape Town
South Africa
7925

Additional identifiers

Study information

Scientific Title
Effectiveness of a complementary feeding promotion program for care givers of infants using trained agriculture extension workers (AEWs) in a rural area of Ethiopia

Study objectives
H1: Care givers of infants six to twelve months who received complementary feeding promotion by means of trained AEWs (in addition to existing health extension workers (HEWs)) have improved complementary and feeding practices (measured by dietary diversity & minimum meal frequency) than those who received it from HEWs only.
H1: Care givers of infants six to twelve months who received complementary feeding promotion by means of trained AEWs (in addition to existing HEWs) have better nourished infants (measured by weight for age & height for age) compared with those who received it from HEWs only.

Ethics approval required
Old ethics approval format

Ethics approval(s)
1. Office of the Dean, Department of Research Development, University of the Western Cape, 07/11/2013
2. Health Research Ethics Review Committee, Oromia Health Bureau, 08/01/2014, ref: BURO/HBIFH/1-8/28

Primary study design
Interventional

Study design
Cluster randomized controlled trial

Study type(s)
Prevention

Health condition(s) or problem(s) studied
Infants nutritional status

Interventions
This study was a cluster randomized control trial to assess caregivers complementary feeding practices and also weight and length gain and nutritional status (measured by weight-for-age & height-for-age) of infants aged six to twelve months. It used quantitative and qualitative (phenomenology approach) methods of data collection. There were two groups, an intervention and control group. Baseline characteristics of infants enrolled in the intervention and control groups were similar except caregivers' vegetables and fruits production and frequency of complementary foods consumption in the control group.

The study included six kebeles in the Oromia region Wonchi woreda located south-west of the capital Addis Ababa. First, each kebele was ranked based on its agro-ecology e.g. high land, mid land and low land and level of food security. Ranking of the kebeles based on their different characteristics was done jointly with World Vision Wonchi area program health and agriculture project staff and the government staff working in woreda agriculture and health offices. Next, kebeles in similar agro-ecology, level of food security and equal number of both types of extension workers were randomly assigned to the intervention and control groups. Two kebeles with only one AEW were excluded from sampling. Out of the remaining 22 kebeles 3 kebeles were randomly assigned to each group (intervention and control). One group was randomly assigned to receive complementary feeding message using AEWs (the intervention group) and the other was left to continue the current practices. Distance among the kebeles was considered to avoid contamination either from the AEWs or minimize likelihood of contact among care givers & exchange of information among the groups.

The intervention group received complementary feeding messages that focus on frequency, amount, thickness, variety, active feeding and hygienic preparation of food promoted through trained AEWs in addition to their regular activities. The AEWs were supposed to provide the same messages throughout the twelve months study period. In the control group the AEWs conducted their regular work. The HEWs continued their regular health and nutrition activities in both groups.

The AEWs in the intervention area were using complementary feeding messages consistent with those of HEWs to promote harmonized complementary feeding recommendations in the intervention groups. The researcher gave one days training to the AEWs. The Ministry of Health Family Health Card, which consisted of the recommended complementary feeding practices currently used by HEWs to promote complementary feeding at family level, was used during AEWs training. In addition complementary feeding promotion section of the Infant and Young Child Nutrition (IYCN) Training Material for AEWs was used as a reference. The IYCN training material was developed for AEWs to integrate complementary feeding into their existing work program. Eight AEWs from the three kebeles were trained and orientation was given regarding how to communicate complementary feeding messages to care givers.

During the follow up study the researcher also conducted a half day meeting with AEWs to follow up their progress and experiences in the past three months. During follow up meetings the researcher gave refresher orientation of AEWs with the key message and jointly discussed means to solve the different kind of challenges they were experiencing during the course of the three months period. Newly transferred AEWs were oriented during these meetings and the MoH Family Health Card was given to them so that they could provide consistent messages with other AEWs.

Intervention Type
Behavioural

Primary outcome(s)
1. Nutrition status of the infant, measured by weight-for-age z- score and height-for-age z-score at 3rd, 6th, 9th and 12th month
2. Weight of infant, was measured in gms at 3rd, 6th, 9th and 12th month
3. Length of infant, measured in cm at at 3rd, 6th, 9th and 12th month
4. Variety of food eaten, measured by dietary diversity score measured by 24 hours recall at 3rd, 6th, 9th and 12th month
5. Frequency of meals, measured in frequency of feeding per day at 3rd, 6th, 9th and 12th month

Key secondary outcome(s)
N/A

Completion date
31/03/2015

Eligibility

Key inclusion criteria
All infants in the eligible age group (6 - 12 months)

Participant type(s)
Other

Healthy volunteers allowed
No

Age group
Child

Lower age limit
6 Months

Upper age limit
12 Months

Sex
All

Key exclusion criteria
1. Infants with acute malnutrition currently on therapeutic feeding program
2. Chronically sick infants such as infants on tuberculosis, mentally retarded and currently known HIV status and on ART
3. One of the siblings in a family with twin infant

Date of first enrolment
01/03/2014

Date of final enrolment
30/03/2015

Locations

Countries of recruitment
Ethiopia

Study participating centre
World Vision Ethiopia
Addis Ababa
Ethiopia
3330

Study participating centre
Wonchi Woreda
South West Shewa zone
Oromia region
Chitu
Ethiopia
-

Sponsor information

Organisation
University of the Western Cape

ROR
https://ror.org/00h2vm590

Funder(s)

Funder type
Not defined

Funder Name
Investigator initiated and funded

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary
Not expected to be made available