FEED THE FUTURE
The U.S. Government's Global Hunger & Food Security Initiative

Integrating Gender and Nutrition within Agricultural Extension Services

TAJIKISTAN

Report on Workshop
May 15-17, 2017

Report prepared by Agata Kowalewska and Elizabeth Wood (University of Florida)

USAID
FROM THE AMERICAN PEOPLE

INGENAES
Integrating Gender and Nutrition within Agricultural Extension Services

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www.ingenaes.illinois.edu

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Contents

Introduction

Integrating Gender and Nutrition within Agricultural Extension Services (INGENAES) is funded by the United States Agency for International Development (USAID). The University of Illinois at Urbana-Champaign is the prime awardee, and partners with the University of California-Davis, the University of Florida, and Cultural Practice, LLC.

INGENAES is designed to assist partners in Feed the Future countries (www.feedthefuture.gov) to:

- Build more robust, gender-responsive, and nutrition-sensitive institutions, projects and programs capable of assessing and responding to the needs of both men and women farmers through extension and advisory services.
- Disseminate gender-appropriate and nutrition-enhancing technologies and access to inputs to improve women's agricultural productivity and enhance household nutrition.
- Identify, test efficacy, and scale proven mechanisms for delivering improved extension to women farmers.
- Apply effective, nutrition-sensitive, extension approaches and tools for engaging both men and women.

WHAT

A three-day INGENAES-sponsored workshop **"Nutrition, Behaviors, and Health: Food and Water"** designed to provide knowledge about nutrition, health and WASH, uses for theoretical frameworks, and skills-based activities that focus on applying relevant information to practice for translation to priority populations through extension activities. During the different workshop sessions, participants learned to do the following tasks.

Nutrition

- Name four groups and macronutrients, and give examples of foods (locally available) representing each group.
- Name and give examples of micronutrients
- List main roles of the six groups of nutrients in the body
- Link common nutritional deficiencies to food sources available in Tajikistan.
- Describe how cooking and preservation method are modified to reduce nutrient loss.
- List common food safety issues and methods of alleviating the problems.

Health/WASH

- Explain the importance of hand hygiene and keeping water safe.
- Recognize routes of fecal contamination within the household.
- Describe how social, behavioral, environmental, and biological factors contribute to specific individual and community health outcomes.
- Identify basic theories, concepts and models from a range of social and behavioral disciplines that are used in public health research and practice.

When: May 15 - 17, 2017

Where: TAWA Qurghonteppa Office

Qurghonteppa, Tajikistan

Who: 26 participants (see list in Appendix A)

Tajikistan – 26

Sponsors: Feed the Future INGENAES project
USAID Tajikistan Agriculture and Water Activity

Pre/Post Test Scores

Participants completed a pre and posttest to measure the learning experience throughout the workshop. Pre and post mean scores from participants were compared for the 10 items and an N of 21 was used. The pre and posttest questions were created based off the ten objectives for the course. As illustrated below, the mean scores increased for each item (with the exception of one) on the posttest signifying an improved understanding of health and nutrition upon completion of the workshop as perceived by the participants who provided useable data. A paired t-test of the scores indicate a 1.619 point average improvement overall from the pre to posttest and is statistically significant. As indicated below, the largest increase in knowledge occurred with food safety information that is crucial in maintaining health and hygiene.

1. Are potatoes and noodles both good sources of carbohydrates?
    - **a. True**
    - b. False

    Pre Mean Score = 0.83 Post Mean Score = 0.95 Mean Difference = +0.12

2. To absorb mineral iron from plant foods what other food should we eat at the same meal?
    - a. Food that is good source of victim A such as apricot or sweet potato.
    - **b. Food that is good source of victim C such as tomatoes or peppers.**
    - c. Food that is good source of iodine such as milk.

    Pre Mean Score = 0.58 Post Mean Score = 0.38 Mean Difference = -0.19

3. What is the temperature range when bacteria in food grow at the fastest rate?
    - a. 15 to 70˚C
    - b. 0 to 50˚C
    - **c. 5 to 60˚C**
    - d. 30 to 40˚C

    Pre Mean Score = 0.13 Post Mean Score = 0.76 Mean Difference = +0.63

4. Fruits such as strawberries and dark green vegetables such as broccoli are good source of vitamin C.
    - **a. True**
    - b. False

    Pre Mean Score = 0.82 Post Mean Score = 0.95 Mean Difference = +0.13

5. Proteins are more important in building body parts and protecting that body from illness than fats.
    - **a. True**
    - b. False

    Pre Mean Score = 0.83 Post Mean Score = 1.00 Mean Difference = +0.17

6. What can be a safe alternative for soap if soap is not available?
    - a. Olive oil
    - **b. Wood ash**
    - c. Hair spray

d. None of the above

Pre Mean Score = 0.67 Post Mean Score = 0.90 Mean Difference = +0.23

7. What is the minimum amount of time to wash your hands?
   a. 10 – 15 seconds
   b. 5 – 10 seconds
   c. 15 – 20 seconds
   d. 20 – 30 seconds

Pre Mean Score = 0.21 Post Mean Score = 0.62 Mean Difference = +0.41

8. How can human or animal feces be transmitted?
   a. Flies
   b. Fingers
   c. Food
   d. All of the above

Pre Mean Score = 0.79 Post Mean Score = 0.81 Mean Difference = +0.02

9. The Socio-Ecological model uses a multi-level approach to addressing health needs within a population.
   a. True
   b. False

Pre Mean Score = 0.79 Post Mean Score = 1.00 Mean Difference = +0.21

10. A cervical cancer screening is an example of what kind of prevention?
    a. Primary
    b. Secondary
    c. Tertiary
    d. None of the above

Pre Mean Score = 0.08 Post Mean Score = 0.19 Mean Difference = +0.11

Follow-Up Activities

A three month post-test (See Appendix B) will be used to collect data from the participants regarding retention of main ideas and their use of the workshop information in their respective fields. The data will be collected by TAWA office, by September 31, 2017 approximately three months after the training. In addition, open-ended inquires may be sent to document the integration of learned skills and tools into agricultural programs especially by Feed the Future implementing partners in Tajikistan.

Lessons Learned/Recommendations

- One translator for a three-day workshop can be overwhelming; therefore, such an intensive experience requires the utilization of at least two translators fluent in the local language and familiar with the technical vocabulary of the workshop topics.
- The workshop had full support of TAWA office including the use of a well-equipped conference room, personnel fluent in English, Tajik, and Russian; and the use of a copier machine and Wi-Fi. In any other situation it may be beneficial to hire an in-country, local coordinator who can provide logistical support including renting an appropriate venue, organizing any demonstrations, and be able to follow up after the training.
- Each session was longer than anticipated due to translating and a very engaged group of participants, therefore, it was impossible to share some information with the participants due to limited time. Subsequently, we would recommend that if the number of participants is more than 10 and translation is necessary, it would be beneficial to prepare material only for half of the dedicated time and leave the other half for translation and possible questions.
- One of the more difficult parts of the workshop, as with any, was to corral participants in a timely manner after the short breaks or meals. Creating a game or a reward system that generates desire among participants to be back promptly is a potential solution.
- Closing the workshop with a session about misconceptions and myths was an appropriate topic to bring about concerns and questions that may have not been vocalized during the earlier sessions. Misconceptions tend to combine many different aspects and problems of any discipline; consequently, it could be applied to different topics and fields. However, we strongly recommend facilitators to put in place a flexible end time for this session due to the variations in misconceptions, taboos, and/or myths in a region.

Selected Workshop Photos

Final session of the workshop

Standing on the left Dr. Elizabeth Wood, University of Florida and translator, Mahinahon Suleymanova (Tajikistan), on the right.
Photo by A. Kowalewska

First session during the pretest.
Photo by A. Kowalewska

Dr. Atoev, THNA nutritionist and medical professional, participates in a discussion about medical complications related to inappropriate nutrition during pregnancy. Photo by A. Kowalewska

Madian Hakimova (left), TAWA home economist, participating in a cooking demonstration. Agata Kowalewska (right), UF faculty, preparing cabbage "C" salad. Photo by E. Wood

One of the dishes prepared during the cooking demonstration. The cabbage “C” salad turned into a meal by adding potatoes and nuts. Photo by E. Wood

APPENDIX A: List of Workshop Participants

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APPENDIX B: Workshop Outline

Nutrition, Behaviors and Health: Food and Water

For Extension Field Staff

May 15-17, 2017 Qurghonteppa/TAWA Office, Tajikistan

Workshop Outline

Review workshop objectives.

Nutrition

1. Name four groups and macronutrients and give examples of food (locally available) representing each group.
2. Name and give examples of micronutrients
3. List main roles of the six groups of nutrients in the body
4. Link common nutritional deficiencies to food sources available in Tajikistan.
5. Describe how cooking and preservation method are modified to reduce nutrient loss.
6. List common food safety issues and methods of alleviating the problems.

Health

7. Explain the importance of hand hygiene and keeping water safe.
8. Recognize routes of fecal contamination within the household.
9. Describe how social, behavioral, environmental, and biological factors contribute to specific individual and community health outcomes.
10. Identify basic theories, concepts and models from a range of social and behavioral disciplines that are used in public health research and practice.

MAY 15, 2017 – Monday

2 coffee/tea breaks in the morning and afternoon

8:30 am **Welcome and workshop overview**

9:00 am **Knowledge pre-test**

9:15 am **Session 1: Basic Nutrition** (Agata)

Nutrition and food – Discussion about nutrients and food, meaning of food

Lecture introducing groups of nutrients - Division of nutrients into macro and micro nutrients.

Activity - nutrients in traditional Tajik foods (What nutrients are on the plate in front of you?)

What will be covered: micro/macro nutrients, portions, review of food groups

12:00 pm **Lunch break**

1:00 pm **Session 2: Basic Water, Sanitation and Hygiene** (Liz)

Mini-lecture – Introducing appropriate handwashing techniques after different points of contact (latrines, handling small children, handling livestock)

Activity – Tracing hand hygiene contact using turmeric spice powder and shaking hands.

3:00 pm **Session 3: Behavioral Change Theories** (Liz)

Lecture – Introduction of behavioral change theories that can be utilized in messaging or other interventions (socio-ecological model, trans-theoretical model, COM-B model, health belief model).

Activity – Identify any TAWA messaging that has been created using a behavioral theory and why it was used.

4:30 pm **Reflection**

5:00 pm **Adjourn**

MAY 16, 2017 – Tuesday

8:30 am **Session 4: Plate method** (Agata)

Lecture: How to compose a nutritious meal using plate method. Complementary proteins. How to help with digestion, absorption, and hydration.

Activity: Creating a meals using plate method.

10:00 am **Tea and coffee break**

10:15 am **Session 5: Crops in promotion** (Agata)

Lecture: Information collected about twenty crops of TAWA's focus by the survey conducted in February 2017. Nutritional value of each group with direct effect on health, methods of cooking and preservation to encourage nutrient retention.

Activity: Adding the crops to a meal – continuation with the plate method.

12:00 pm **Lunch Break**

1:00 pm **Session 6: Food safety** (Liz and Agata)

Lecture – Food and kitchen preparation, cooking, storage, serving and eating in the environment that promotes health. For example: keep hot food hot, keep it covered when storing, and be aware of the order of foods cooked.

Activity – How to solve safety issues using case studies.

2:30 pm **Coffee break**

3:00 pm **Session 7: Health Promotion Programs** (Liz)

Lecture – Explain strategies for implementation and evaluation of health promotion programs or interventions.

Activity – Create a health promotion program using an increased number of Khatlon Province residents at a healthy weight as the health outcome.

4:30 pm **Reflection**

5:00 pm **Adjourn**

May 17, 2017 – Wednesday

2 coffee/tea breaks in the morning and afternoon

8:30 am **Session 8: Cooking Demonstration**

Changing texture changes flavor

Adding flavor with herbs not salt and oil

Cooking "new" foods – broccoli, okra, Brussel sprouts, and sweet potato

12:00 pm **Lunch Break**

1:00 pm **Session 9: Misconceptions and health consequences**

Discussion: Misconceptions and myth that affect health and malnutrition – information collected during FGDs February 2017.

4:30 pm **Post-test of knowledge**

5:00 pm **Adjourn**

APPENDIX C: Three Month Posttest

Nutrition, Behaviors and Health: Food and Water

(3 month posttest)

1. Are potatoes and noodles both good sources of carbohydrates?
    a. True
    b. False
2. To absorb mineral iron from plant foods what other food should we eat at the same meal?
    a. Food that is good source of victim A such as apricot or sweet potato.
    b. Food that is good source of victim C such as tomatoes or peppers.
    c. Food that is good source of iodine such as milk.
3. What is the temperature range when bacteria in food grow at the fastest rate?
    a. 15 to 70˚C
    b. 0 to 50˚C
    c. 5 to 60˚C
    d. 30 to 40˚C
4. Fruits such as strawberries and dark green vegetables such as broccoli are good source of vitamin C.
    a. True
    b. False
5. Proteins are more important in building body parts and protecting that body from illness than fats.
    a. True
    b. False
6. What can be a safe alternative for soap if soap is not available?
    a. Olive oil
    b. Wood ash
    c. Hair spray
    d. None of the above
7. What is the minimum amount of time to wash your hands?
    a. 10 – 15 seconds
    b. 5 – 10 seconds
    c. 15 – 20 seconds
    d. 20 – 30 seconds
8. How can human or animal feces be transmitted?
    a. Flies
    b. Fingers
    c. Food
    d. All of the above
9. The Socio-Ecological model uses a multi-level approach to addressing health needs within a population.
    a. True
    b. False
10. A cervical cancer screening is an example of what kind of prevention?
    a. Primary
    b. Secondary
    c. Tertiary
    d. None of the above

11. In your work did you use any information about the macronutrients in foods presented at the Nutrition and Health workshop?
    a. If "yes", in what way_____
    b. If "no", how will you be able to use it? _____
12. In your work did you had to explain why it is important to wash hands?
    a. If "yes", in what situation? _____
    b. If "no", how will you be able to use it? _____
13. In your work did you use the plate method to tech about creating meals?
    a. If "yes", in what situation _____
    b. If "no", how will you be able to use it? _____
14. In your work did you had to explain when and where toxins of botulism may be present?
    a. If "yes", in what situation? _____
    b. If "no", how will you be able to use it? _____
15. What health promotion programs did you participate in since January 2017?

    _____
16. If there was another workshop about nutrition and health what topics will be useful for you to learn about? _____