

Nutrition-Sensitive Extension



WORKBOOK

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Nutrition-sensitive extension

Pre-assessment

After reading through the module overview and introduction, complete the following pre-assessment in order to determine how experienced or comfortable you are with the topic of supporting nutrition via advisory services. You will be asked to complete a post-assessment after you have worked through the learning content. Rate your knowledge on the topics on a scale of 1 to 5 by circling the corresponding number.

| | Question | Self-assessment | | | | |
|---|---|-----------------|---|------|---|---|
| | | Low | | High | | |
| 1 | How confident are you in your ability to explain nutrition to others? | 1 | 2 | 3 | 4 | 5 |
| 2 | How confident are you in your ability to identify how local gender norms affect nutrition outcomes? | 1 | 2 | 3 | 4 | 5 |
| 3 | How capable are you of addressing nutrition in designing and delivering rural advisory services? | 1 | 2 | 3 | 4 | 5 |
| 4 | How well can you use your role(s) in extension to support food systems change that will improve human health and nutrition? | 1 | 2 | 3 | 4 | 5 |

Study unit 1: What is nutrition?

Session 1.1 The basics of nutrition

Activity 1.1 Individual activity: Personal reflection on food

A food diary is a detailed daily record of the food and drink someone consumes over a certain period of time. Think back to yesterday and try to remember what you ate from the time you woke up until the time you went to sleep. Sometimes it is easier to remember what you ate if you also recall where and with whom you ate your meals. Answer the questions below to create your own food diary.

What did you eat for breakfast, lunch or dinner?

Did you eat any food between these meals? If so, describe what you ate between meals.

What or who influenced your choices about the food you ate?

How does the diet you consumed yesterday compare to a recommended diet, like the Benin Food Guide?

If the foods you ate yesterday did not reflect a recommended diet, like the Benin Food Guide, what made it difficult for you to eat a healthy diet?

Activity 1.2 Individual activity: Important nutrients

Using the clues provided below solve the following crossword puzzle.

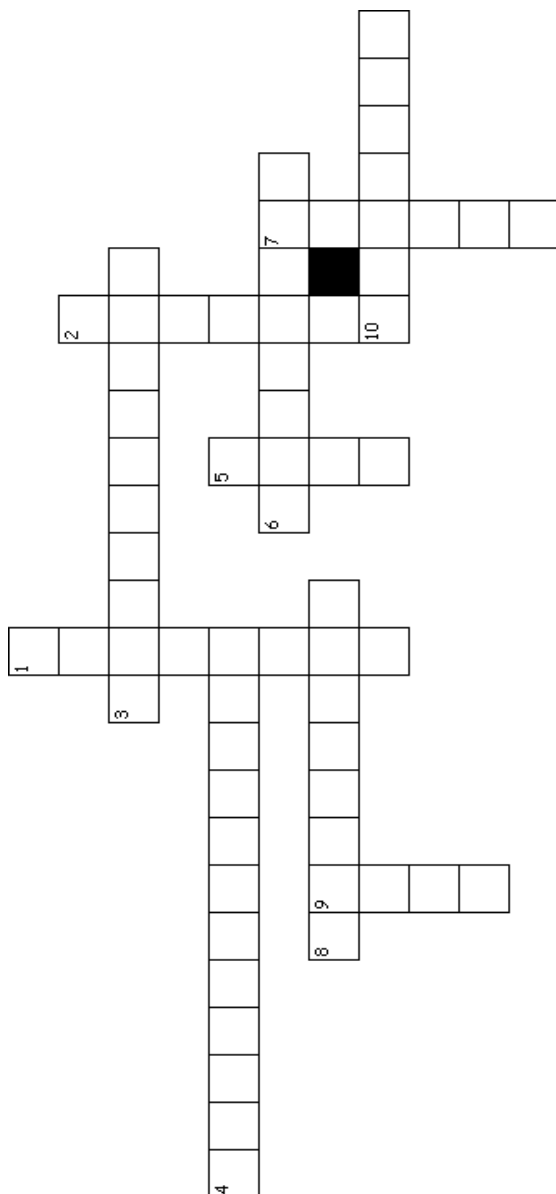
Across

3. Visual representations of food-based dietary guidelines. (10 letters)

4. A macronutrient that provides energy to the body to move and perform daily activities. (13 letters)
6. A vitamin that is important for wound healing. (8 letters)
8. A vitamin associated with eye health. (8 letters)
10. Bread, grains and rice. (7 letters)

Down

1. A macronutrient that helps to build muscle. (8 letters)
2. Cowpeas, kidney beans and black beans. (7 letters)
5. This mineral is important for growth and brain development. (4 letters)
7. Also known as Vitamin B3. (6 letters)
9. A mineral that helps to provide oxygen to cells. (4 letters)



Session 1.2 Nutrition for all - who needs what?

Activity 1.3 Individual activity: Commonly used nutritional indicators

Using the clues provided to look for the words hidden in the block below. (7)

1. When someone weighs more than what is considered normal for their age, height and build.

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2. people have a high risk of developing Type 2 Diabetes.

3. (a) is a form of (b)..... malnutrition characterised by sudden, drastic weight loss caused by inadequate dietary intake.

3. Long term malnutrition that causes reduced growth rates, especially in children.

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5. When someone weighs less than what is considered normal for their age, height and build.

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6. Long term or constantly recurring.

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|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H | S | K | D | A | O | M | A | A | U | N | D | E | R | W | E | I | G | H | T |
| L | B | A | Y | W | L | J | X | A | D | C | Q | H | B | A | F | Y | N | L | C |
| L | Q | G | E | D | B | X | H | M | W | A | S | T | I | N | G | O | P | E | E |
| A | D | F | L | B | O | H | W | P | T | M | F | K | T | I | Y | M | L | G | J |
| X | G | U | Y | M | B | F | P | O | E | U | Z | D | U | T | Z | X | V | G | H |
| C | W | U | C | K | S | X | I | C | H | R | O | N | I | C | N | M | P | M | N |
| J | K | G | X | Z | P | T | M | G | F | G | I | W | X | Z | L | Z | T | Q | C |
| S | J | A | X | U | Z | O | N | N | L | Q | Y | L | Z | B | T | W | A | Z | V |
| O | V | E | R | W | E | I | G | H | T | V | H | P | K | O | V | T | G | D | N |
| D | K | N | E | M | C | S | H | W | L | N | V | N | O | T | T | S | Z | S | O |
| N | Q | N | E | F | Y | N | Q | Z | Q | O | L | W | F | D | T | H | H | P | V |
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| K | C | V | J | E | V | J | F | O | B | E | S | E | K | V | L | A | U | W | J |
| E | N | R | Z | V | I | A | N | V | M | K | W | A | C | U | T | E | N | F | D |
| B | T | N | F | V | S | T | U | N | T | I | N | G | L | S | Z | L | V | H | P |
| L | U | I | A | L | J | O | L | Z | H | P | V | O | H | F | G | L | P | P | I |
| U | D | W | E | R | R | D | W | O | X | O | G | K | R | L | T | I | T | Z | R |
| P | Q | D | R | O | U | D | X | A | D | W | Y | L | V | G | X | T | A | K | C |
| F | N | S | P | J | N | I | A | X | W | Q | P | K | Y | B | V | S | H | H | S |
| Q | D | P | V | C | W | E | S | P | O | Q | J | W | B | Q | U | I | I | V | Z |

Session 1.3 Motivating people to make healthy choices

Activity 1.4 Group activity: Helping people to make better food choices

Together with two or three of your colleagues, study the following scenario and then answer the questions below.

In a low-income community, two labourers working at a medium size farm attended an information session on nutrition hosted by their local extension service. After the session they approach

several extension professionals and asked the following question:

"We are lucky. We can afford to eat three meals of maize a day. Why should we change the way we eat?". The extension professionals gave the following replies:

Reply 1:

That is not a good diet for an active adult man!

Reply 2:

If you eat like that, you will not be healthy. Do you want to be healthy or risk your health?

Reply 3:

If you eat like this, you will have low immunity and that will lead to opportunistic infections.

Reply 4:

Eating like that will give you kwashiorkor!

Reply 5:

Eating this way you risk poor health, poor mental and physical growth, illness and death. If you want to have good physical and mental growth, enough energy and weight and a strong immune system, you need to eat better. (FAO. 2017. Education for Effective Nutrition in Action. The ENACT Course - Student's version. Rome." <http://www.fao.org/3/a-i4952e.pdf>)

1. Discuss what you think of these replies and use the table below to indicate whether they are incorrect, too general or not very motivating, or have too much technical information and are too hard to understand.

| Reply | Comment |
|-------------------------|--------------------------------------|
| <i>Example: Reply 1</i> | Too general and not very motivating. |
| Reply 2 | |

| Reply | Comment |
|---------|---------|
| Reply 3 | |
| Reply 4 | |
| Reply 5 | |

2. As nutrition educators, you need to take care not to use complicated terms that people may not understand. Using the table below, see if you can replace these technical terms with descriptions that are easier to understand.

| Technical term | Easier term or description |
|-------------------------------------|----------------------------|
| <i>Example: Suffer from disease</i> | Get sick |
| Strong immune system | |
| Opportunistic infections | |
| Adequate physical energy | |
| Macronutrients | |

| Technical term | Easier term or description |
|-------------------------------|----------------------------|
| Inhibited nutrient absorption | |

3. Based on these guidelines, what would your own answer be to the two labourers who eat three maize meals every day?

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Summative assessment: Unit 1

Theoretical assessment

Answer the following questions in your own words.

1. Define the following terms (10)

a. Macronutrient (2)

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b. Micronutrient (2)

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c. Stunting (2)

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d. Wasting (2)

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e. Obese (2)

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2. Match the nutrients and food groups in Column A with the descriptions in Column B. (6)

| Column A | Column B |
|-------------------------|--|
| 1. Fruit and vegetables | a. Provides energy and protects certain organs. |
| 2. Vitamin K | b. Helps protect the body from diseases. |
| 3. Vitamin C | c. A fat soluble vitamin |
| 4. Minerals | d. A water soluble vitamin |
| 5. Dairy | e. Supports nerve functions and helps regulate heartbeat |
| 6. Fats and oils. | f. Supports bone growth |

3. Name 3 factors that determine a person's nutritional needs. (3)

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4. Briefly discuss the difference between food-based dietary guidelines and food guides. (4)

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5. List and briefly discuss the 3 elements that determine nutritional status. (6)

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6. Different life stages have different nutritional needs. Briefly explain why infants, young children and pregnant women are more vulnerable to malnutrition? (4)

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7. Food choices are sometimes affected by how a person sees themselves, or how they think others see them. Using an example, explain how these perceptions can affect food choice. (4)

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8. A person's diet and the food that they choose to eat is affected by many factors.

a. Briefly explain external factors affecting food choice. (4)

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b. Name 4 factors that affects people's food choices. (4)

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Total: 45 marks

Study unit 2: Ways that agriculture can impact nutrition

Session 2.1 Understanding food systems

Activity 2.1 Individual activity: Food systems, diets and nutrition

Read the following scenario then respond to the questions to reflect upon how food systems influence diets and nutritional status.

Mr Otieno and Mrs Otieno are a young couple who farm a parcel of land in the country. They have two young children, ages 6 and 2, and Mrs Otieno is three months pregnant with her third child. Every year, the family grows maize and groundnuts on the same small, rainfed plots. The family consumes the field crops and relies on the small income they earn from raising chickens and goats to purchase fresh fruits and vegetables at the local market. The chicken's eggs, goats' milk and fresh meat are sometimes consumed by Mr Otieno and the children, but Mrs Otieno always ensures that her husband and oldest son get enough food to eat before she and her daughter are served.

For the past two years, the community where they live has suffered from severe rains. Heavy rains washed away seeds and drowned the small plants that did survive. The family sold their flock of chickens to purchase more seed, but the seed did not germinate. Mr Otieno does not think yields will last for more than six months. The granaries – made of mud and thatch – were damaged in the rains. Mr Otieno and Mrs Otieno have been storing the field crops on the floor of their small kitchen, where it has been exposed to rodents and insects.

The rains also damaged the roads, making them impassable to the traders who used to travel to the family's rural community to sell fruits and vegetables at market. What little fruits and vegetables the family can find are expensive. Mrs Otieno knows fruits and vegetables are important for her children's health and nutrition, so she will start working in her neighbor's fields to earn the extra money needed for these nutritious foods.

Use the table below to respond to the following two questions related to the Otieno family's situation.

Identify factors related to each function of the food system, which could affect the diets and nutrition of this household. Then, describe how these factors may affect the family's diet and nutritional status.

| Functions of food systems | Factors related to each function | Impact on family diet and nutritional status |
|---------------------------|----------------------------------|--|
| Food production | | |

| Functions of food systems | Factors related to each function | Impact on family diet and nutritional status |
|---|---|---|
| Food handling, storage and processing | | |
| Markets and trade | | |
| Consumer demand, food preparation and preferences | | |

3. How do these gendered activities affect nutrition within a household?

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Summative assessment: Unit 3

Theoretical assessment

Answer the following questions in your own words.

1. Fill in the missing words. (5)

Nutrition-sensitive actions aim to improve the underlying causes of poor (a)____. As an extensionist, you can aim to increase the production of more (b) _____and nutritious foods that people do not eat enough of and that address local nutrient (c)____. These foods typically include (d)____crops like orange-fleshed sweet potato and iron-rich beans; animal husbandry for (e)_____, eggs and meat; fruits, vegetables and legumes. By supporting farmers and other value chain actors to produce more of these foods, they will become more available.

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2. Explain what is meant by nutrition-sensitive agriculture. (4)

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3. Discuss 2 examples of nutrition-sensitive actions an extension professional can take to improve the underlying causes of poor nutrition. (8)

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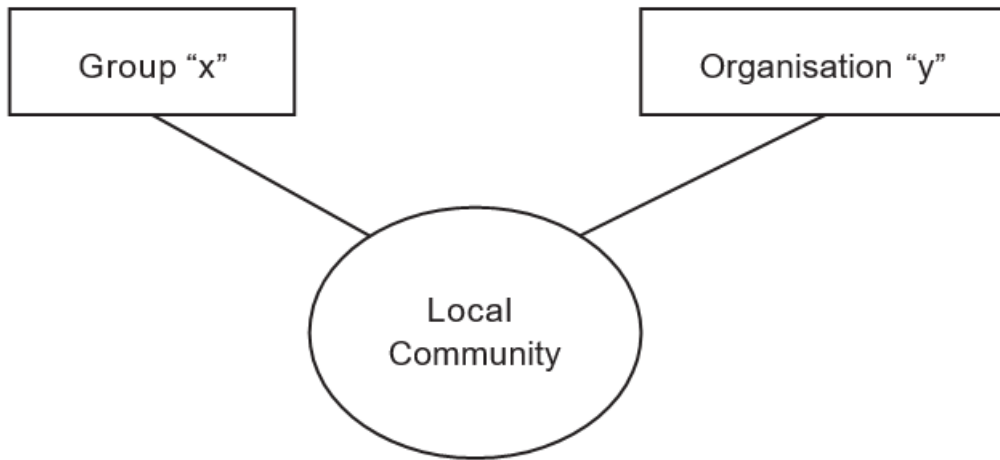
Total: 17 marks

Study unit 4: Establishing partnerships across sectors for better nutrition

Session 4.1 Partnerships and collaborations

Activity 4.1 Individual activity: Reflection on Partners and Collaborators

1. Many people or groups usually operate in intervention communities. Think of all the individuals, groups and organisations in the local area where you work that interact directly or indirectly with the community and develop a diagram showing all the relationships at the local levels where you work (start with the template below). Label the various role players as either being positive or difficult relationships (this information is just for you).



2. For those relationships that you labelled as difficult, think about what they want or need and what you want and need in a potential collaboration. Using the principles of negotiation, state in clear terms how you would approach one organisation or person with whom you have a difficult relationship.

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Total: 16 marks

Post-assessment

Now that you have gone through the learning content, complete the following post-assessment.

| | Question | Self-assessment | | | | |
|---|---|-----------------|---|------|---|---|
| | | Low | | High | | |
| 1 | How confident are you in your ability to explain nutrition to others? | 1 | 2 | 3 | 4 | 5 |
| 2 | How confident are you in your ability to identify how local gender norms affect nutrition outcomes? | 1 | 2 | 3 | 4 | 5 |
| 3 | How capable are you of addressing nutrition in designing and delivering rural advisory services? | 1 | 2 | 3 | 4 | 5 |
| 4 | How well can you use your role(s) in extension to support food systems change that will improve human health and nutrition? | 1 | 2 | 3 | 4 | 5 |

Answer: Learner's own answer

Global Forum for Rural Advisory Services (GFRAS) is about enhancing the performance of advisory services so that they can better serve farm families and rural producers, thus contributing to improved livelihoods in rural areas and the sustainable reduction of hunger and poverty. Rural advisory services help to empower farmers and better integrate them in systems of agricultural innovations.