

File S2. Questionnaire

Section 1 : Sociodemographic characteristics :

1. Gender
 - a) Male
 - b) Female
2. Age group
 - a) 18-29
 - b) 30-39
 - c) 40 - 49
 - d) 50-59
 - e) >60
3. Area of Residency
 - a) Beirut
 - b) South
 - c) North
 - d) Mount Lebanon
 - e) Bekaa
4. What is your highest Education level achieved?
 - a) Primary school
 - b) High school
 - c) University degree (Bachelor)
 - d) University degree (Masters)
 - e) Technical degree
5. In the past 6 months have you or any one you know experienced one of the following: diarrhea, vomiting, fever, stomach cramps, nausea
 - a) Yes
 - b) No
6. What is the total monthly income of your household?
 - a) <1000000 L.L
 - b) 1000000 – 3000000 L.L
 - c) 3000000 – 5000000 L.L
 - d) >5000000 L.L
7. How do you rate your food safety knowledge?
 - a) Excellent
 - b) Good
 - c) Weak
8. From where do you get your food safety information?
 - a) Social media

- b) Internet
- c) Family or friends
- d) TV
- e) University
- f) I don't have any source of information

Section 2: Knowledge about the risks associated with the consumption and safe handling of raw meat

1. Do you know that people can get seriously sick and die from eating contaminated food?
 - a) Yes
 - b) No
 - c) I don't know
2. Do you know what food poisoning is?
 - a) Yes
 - b) No
 - c) I don't know
3. Do you know which population is more susceptible to food poisoning?
 - a) Children under 5 years' old
 - b) Elderly
 - c) Immuno-compromised individuals
 - d) All
4. In your opinion can food get contaminated at:
 - a) Market
 - b) Home
 - c) Both
5. The consumption of raw meat could pose serious economic losses to consumers
 - a) Yes
 - b) No
 - c) I don't know
6. Form of cross contamination (transfer of microorganism) that could happen due to bad practices or bad storage conditions:
 - a) From contaminated raw meat to other ready-to-eat food
 - b) From a sick individual to raw meat
 - c) Both
 - d) I don't know
7. Can raw meat dish that looks and smells fresh make you sick?
 - a) Yes
 - b) No
 - c) I don't know
8. Does freezing ($<-18^{\circ}\text{C}$) prevent the growth of pathogens on raw meat?
 - a) Yes, but it doesn't kill it
 - b) No
 - c) I don't know

9. The only way to ensure that you won't get food poisoned due to raw meat is
- a) Cook it at an appropriate temperature
 - b) Freeze it
 - c) I don't know
10. What is the optimal temperature for storing raw meat?
- a) $\leq 4^{\circ}\text{C}$
 - b) $>4^{\circ}\text{C}$
 - c) I don't know
11. Regular washing of hands reduces the risk of contamination
- a) Yes
 - b) No
 - c) I don't know
12. Raw meat can be kept at room temperature for
- a) Less than 2 hours
 - b) 2-4 hours
 - c) More than 4 hours
 - d) I don't know
13. During a long electricity cutoff, what should you do with your stored raw meat?
- a) Check its internal temperature and discard it if $>4^{\circ}\text{C}$
 - b) Keep it anyway
 - c) I don't know
14. How long can you store raw meat in the fridge before consuming it?
- a) 3-5 days for most raw meat/ 1-2 days for ground meat and organ meat (ex: liver)
 - b) 3-5 days for all
 - c) 5-7 days for all
 - d) I don't know
15. Do you know that some pathogens on raw meat can lead to kidney failures, sepsis, bloody diarrhea, and even death?
- a) Yes
 - b) No
 - c) I don't know
16. Parasites that could be found in raw meat dishes
- a) *Toxoplasma gondii*, that can lead to abortion in pregnant women
 - b) *Trichinella spiralis*, that can lead in severe cases to various nervous disorders
 - c) A and B
 - d) Parasites are not found in meat
 - e) I don't know
17. Hepatitis A virus that can cause liver inflammation can be found in raw meat dishes
- a) Yes
 - b) No
 - c) I don't know

18. *Helicobacter pylori* a bacterium that can cause peptic ulcer disease and gastritis can be transmitted through raw meat dishes
- a) Yes
 - b) No
 - c) I don't know
19. *Salmonella* bacteria that infect the intestinal tract can be found in raw meat dishes
- a) Yes
 - b) No
 - c) I don't know
20. *E. coli* O157: H7 can cause serious illness in humans by producing toxins that can severely damage the lining of your intestines and kidneys. Can you get this bacterium from eating raw meat dishes?
- a) Yes
 - b) No
 - c) I don't know
21. Campylobacteriosis (most common cause of bacterial diarrhea and can cause stunting in children) could be transmitted through raw meat dishes
- a) Yes
 - b) No
 - c) I don't know
22. Do you have any information on the consequences of antibiotic resistant bacteria that could be transmitted through food-raw meat?
- a) Yes
 - b) No
 - c) I don't know
23. Can contamination happen in unclean grinding machine?
- a) Yes
 - b) No
 - c) I don't know
24. Do you know that traditional ways of preparing raw meat dishes are more dangerous than modern ways?
- a) Yes
 - b) No
25. Do you know that the longer the preparation time the more it is likely to contaminate the meat?
- a) Yes
 - b) No
26. Is there any food safety law/ efforts in Lebanon that protects you as a consumer?
- a) Yes
 - b) No
 - c) There is a law but it is not implemented
 - d) I don't know

Section 3: Attitude towards the risks associated with raw meat and safe meat handling

1. Using gloves is important in reducing the risk of food contamination

- a) Agree
 - b) Disagree
 - c) I don't know
2. Preventing contamination is your responsibility
- a) Agree
 - b) Disagree
3. Visual inspection is enough to determine if the food is safe
- a) Agree
 - b) Disagree
4. Separate raw meat from ready-to-eat food to prevent cross contamination
- a) Agree
 - b) Disagree
5. Your purchasing habits (places where you buy your meat, ex: meat stored in fresh air outside a butcher shop...) affects food safety
- a) Agree
 - b) Disagree
6. People with high risk of contamination (children under 5 years old, elderly and immunocompromised individuals) should not consume raw meat
- a) Agree
 - b) Disagree
7. Washing raw meat is an essential step
- a) Agree
 - b) Disagree
8. Adding vegetables/spices to your raw meat at home could lead to cross-contamination
- a) Agree
 - b) Disagree
9. Bacteria found on raw meat are not harmful
- a) Agree
 - b) Disagree
10. Mincing the meat at home could have lower risk of contamination than buying already chopped and minced raw meat.
- a) Agree
 - b) Disagree
11. Currently, how confident are you in the safety of raw meat in Lebanon?
- a) Very confident
 - b) Confident
 - c) Neutral
 - d) Unconfident
 - e) Very unconfident
12. Who do you think is responsible to for keeping the food safe?
- a) Government

- b) Consumer
 - c) Market/ butcher shop
 - d) All
13. Do you prefer to buy raw meat for consumption imported or local?
- a) Imported
 - b) Local
 - c) Both
14. When you buy ground raw meat at the store or butcher shop, do you mind if they use grinding machine?
- a) Yes
 - b) No
15. Why do you favor traditional preparation of raw meat?
- a) Taste
 - b) Habit
 - c) Texture
 - d) I don't
16. Where do you prefer to buy your raw meat before processing it further at home?
- a) Market
 - b) Butcher shops
17. Why do you prefer butcher shops?
- a) Trust
 - b) Cleanliness
 - c) Convenience
 - d) Price
 - e) Quality
 - f) Other
18. Why do you prefer markets?
- a) Trust
 - b) Cleanliness
 - c) Convenience
 - d) Price
 - e) Quality
 - f) Other
19. What is your favorite raw meat dish?
- a) Kibbeh
 - b) Kaffta
 - c) Liver
 - d) All
20. If you are aware of the risks associated with the consumption of raw meat would you refrain from eating it?
- a) Yes
 - b) No

- c) I don't know

Section 4: Practices that could increase the risk of foodborne infection

1. How often do you eat raw meat dishes per week?
 - a) Not every week
 - b) Once per week
 - c) More than once per week
2. During your supermarket shopping, when do you buy raw meat?
 - a) The first thing I buy is raw meat
 - b) The last thing I buy is raw meat
 - c) I don't follow any order
3. Do you use a thermometer while cooking the meat?
 - a) Yes
 - b) No
4. Do you prepare and handle raw meat while you are sick?
 - a) Yes
 - b) No
5. Do you wear gloves while preparing your food?
 - a) Yes
 - b) No
6. Do you wash your hands before and after handling raw meat?
 - a) Yes
 - b) No
7. After preparing raw meat, how do you clean your kitchen counters?
 - a) Using water
 - b) Water, then detergent
 - c) Water, then sanitizer
 - d) Detergent, then water, then sanitizer
8. Do you check the temperature of your refrigerator often during the day?
 - a) Yes
 - b) No
9. Where do you store your raw meat in the refrigerator?
 - a) Upper shelf
 - b) Middle shelf
 - c) Lower shelf
10. After the crisis, did you aim for meat with lower prices?
 - a) Yes
 - b) No
11. How do you defrost frozen meat?
 - a) In the microwave
 - b) Leave it on the kitchen counter until defrosted

- c) Under running water
 - d) Leave it in the refrigerator one night before.
12. Would you offer raw meat to children and the elderly in your household?
- a) Yes
 - b) No
13. Do you prepare your own raw meat dishes and/ or eat them at a restaurant?
- a) Yes
 - b) No
14. How likely are you to eat raw meat dishes outside your home/ restaurant?
- a) Very likely
 - b) Likely
 - c) Neutral
 - d) Unlikely
 - e) Very unlikely
15. If you prepare raw meat dishes (kibbeh) at home, do you use:
- a) Traditional way using hammer and stone
 - b) Mechanical modern machines
 - c) I don't prepare at home
16. If you use traditional wats, does your mortar (mdakka) and pestle (tabblich/ journ) have any cracks?
- a) Yes
 - b) No
17. How long does it normally take you to prepare a raw meat dish (kibbeh)?
- a) 30 minutes or less
 - b) 30 minutes to 1 hour
 - c) 1-2h
 - d) More than 2h
18. Do you look for food safety certificates in the market or shop where you buy your meat?
- a) Yes
 - b) No