


Supplements

Food safety knowledge and practice and its relationship with literacy: The case of rural women in Iran

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Supplementary 1: Food safety knowledge questions and answers

Question	Best answer	Number of best answer	Percentage of best answer
CLEANING FOOD			
How should you wash fresh fruits and vegetables to keep you from getting food poisoning?	Hold under cool running water	285	75
How should dishes be washed to prevent food poisoning?	Hand wash them and rinse right after the meal and then let them air-dry	306	80.52
Which is an acceptable way to clean a cutting board or counter after it is used for raw meat?	Wash with hot soapy water, rinse with water, then rinse with bleach	206	54.21
How should kitchen counters be cleaned to prevent food poisoning?	Wash with hot soapy water, rinse and wipe with a bleach solution	204	53.68
What is the best way to wash your hands?	Run water, moisten hands, apply soap, rub hands together for 20 seconds, rinse hands, dry hands	297	78.15
Washing hands after changing a diaper:	Decreases the chance of food poisoning	328	86.31
When the kitchen counter should be washed and disinfected?	Immediately after each use and when used for other types of food	172	45.26
How often the kitchen sink should be cleaned and disinfected?	Every day	281	73.94
KEEPING FOOD SEPARATE			
If you have a cut or sore on your hand, what should you do before you prepare food for your family?	Put a bandage on the sore and wear a glove	232	61.05
Where is the best place to store raw meat in the refrigerator?	On the top shelf	266	70
Putting raw meat in a separate bag (away from other food items) before placing it in the grocery cart?	Decreases the chance of food poisoning	285	75
When preparing food, you should wash your hands after touching which of these?	Cell phone or home telephone	360	94.73
The best time to buy frozen food when you purchase it?	At the end of the purchase, before returning home	272	71.57
COOKING FOOD			
To prevent food poisoning, how long should leftover soup be heated?	Until it is boiling hot	289	76.05
CHILLING FOOD			
Your electricity went off in your freezer and the meat, chicken, and fish thawed and felt warm. What should you do to prevent food poisoning?	If they cannot be immediately consumed, throw them away	166	43.68
Your child is going to be eating 2 hours after you cook a meal. How should you keep the meal safe before your child eats it?	Store it in the refrigerator and reheat it when the child is ready to eat it	232	61.05
Which food needs to be refrigerated to prevent food poisoning?	An open can of beans	302	79.47
What is the safest way to cool a large pot of hot soup?	Put the soup in a clean shallow pan and refrigerate right Away	194	51.05
How long can you store cooked hamburger and chicken in the refrigerator to eat later?	3-4 days	153	40.26
How long can you store raw hamburger and chicken in the refrigerator to eat later?	1-2 days	253	66.57
It is safe to give an infant a bottle of baby formula that has been out of the refrigerator for longer than 2 hours?	False	294	77.36
Refrigeration eliminates harmful germs in food.	False	189	49.73
If a leftover food looks and smells good, it is still safe to eat.	False	213	56.05

Question	Best answer	Number of best answer	Percentage of best answer
FOODS THAT INCREASE RISK			
Eating which of these foods will increase a person's risk of food poisoning?	Baked potato that was left on the counter overnight	213	56.05
Undercooked chicken and raw eggs can cause the disease?	True	191	50.26
It is safe to use raw eggs in recipes that will not be cooked.	False	145	38.15
GROUPS AT INCREASED RISK			
Which foods will likely cause food poisoning for pregnant women, infants, and children?	Undercooked eggs	168	44.21
Which of these people will likely get sick from harmful germs in food?	Pregnant women and older people (age 60 and over)	236	62.10

Supplementary 2: Food safety behavior questions and possible answers with the frequency of answers

Questions	Answers	Frequency	Percent	Questions	Answers	Frequency	Percent
Where do you usually buy fruits?	-vendors -weekly market -packed* -in bulk -my own production	69 110 17 181 3	18.2 28.9 4.5 47.6 0.8	How do you carry meat and chicken?	-apart from other purchased food* -along with other purchased food	351 29	92.4 7.6
Before eating fruit, what would you do?	-wipe with a clean cloth - wash with water* - peeling with a knife	13 340 27	3.4 89.5 7.1	How do you usually use meat and chicken?	-fresh* -frozen	239 241	62.9 37.1
Where do you usually keep fruits for long-term preservation?	-refrigerator -at ambient temperature -frozen*	296 20 64	77.9 5.3 16.8	If you want to buy frozen meat, whether you check it to be frozen?	-yes* -no	32 348	8.4 91.6
If some part of the fruit is damaged, what do you usually do?	-throw them away* -use the intact parts	133 247	35 65	Do you wash red meat and chicken before cooking or freezing?	-yes* -no	28 352	7.4 92.6
How do you usually buy vegetables?	- washed and chopped -in bulk - washed and packed*	25 277 78	6.6 72.9 20.5	Where do you keep cooked meat?	-in refrigerator -in freezer* -at ambient temperature	207 170 3	54.5 44.7 0.8
How do you usually wash vegetables?	-normal wash - soaking and scrubbing - soaking, disinfecting and rinsing*	40 82 258	10.5 21.6 67.9	How much time do you take to consume or freeze meat after buying?	-Immediately* -A few hours after purchase	338 42	88.9 11.1
If you do not eat fresh vegetables, how do you keep them?	-dried -frozen -keep in refrigerator* -out of refrigerator	45 263 68 4	11.8 69.2 17.9 1.1	For how many meals do you usually cook meat?	-one meal* -two meals -three meals -more than three meals	232 81 40 27	61.1 21.3 10.5 7.1
If you freeze vegetables, how do you usually do it?	-in small packages suitable for any meal* -together in a great package	201 179	52.9 47.1	How do you freeze meat?	-in small packages suitable for any meal* -together	253 127	66.3 33.4
Do you use cutting board for chopping vegetable?	-yes* -no	143 237	37.6 62.4	Do you usually use the same cutting board for meat and other foods?	-yes -no*	170 210	44.7 55.3
Where do you usually buy meat and chicken?	-butcher shop -packaged in shop* -produce by myself	301 16 63	79.2 4.2 16.6	When buying dairy products, do you usually see the expiration date?	-yes* -no	377 3	99.2 0.8
When using frozen meat, how do you defrost?	-hold underwater -place at room temperature -put in the refrigerator the night before* -put in oven	53 224 101 2	13.9 58.9 26.6 0.5	For how many days do you usually consume unpacked milk?	-one day at room temperature -three days at refrigerator -two days in refrigerators -one day at refrigerator*	6 38 76 260	1.6 10 20 68.4
To what extent do you permit meat to be cooked?	-well done -medium -regular*	72 46 262	18.9 12.1 68.9	After opening the packaged dairy products, where do you keep them for future use?	-at room temperature -in refrigerator*	4 376	1.1 98.9
Where do you keep foods that include meat?	-in refrigerator -in freezer* -at ambient temperature	125 240 15	32.9 63.2 3.9	If you produce cheese by yourself, do you usually use boiled milk?	-yes* -no -I do not produce by myself	131 11 238	34.5 2.9 62.6

Questions	Answers	Frequency	Percent	Questions	Answers	Frequency	Percent
What do you do when you need ground/minced meat?	-prepare ground/minced meat for a meal*	196	51.6	If you use local cheese, are you sure it is safe?	-yes*	198	52.1
	-keep in refrigerator for some meals	23	6.1		-no	182	47.9
	-keep in freezer for some meals	16	42.4				
How do you usually obtain milk?	-traditional and local	135	35.5	How do you usually use milk?	-raw	1	0.3
	-industrial form*	40	10.5		-boiled*	379	99.7
	-produce by myself	205	53.9				
Where do you usually obtain cheese?	-traditional and local	40	10.5	How do you usually obtain bread?	-cooking by myself	71	18.7
	-industrial form*	285	75		-buy from bakery*	299	78.7
	-produce by myself	55	14.5		-use packed bread	10	2.6
Where do you usually obtain yoghurt?	-traditional and local	107	28.7	How do you keep bread after buying?	-buy and use daily*	141	37.1
	-industrial form*	70	18.4		-keep in covered form in refrigerator	37	9.7
	-produce by myself	203	53.4		-keep in covered form in freezer	194	51.1
					-keep out of refrigerator	8	2.1
Where do you usually obtain buttermilk?	-traditional and local	54	14.2	For how many days do you obtain bread?	-three days and more	180	47.4
	-industrial form*	158	41.6		-two days	48	12.6
	-produce by myself	168	44.2		-one day*	152	40
When buying dairy products, do you usually check the packed and appearance?	-yes*	376	98.9	Do you see fumes from hot oil when frying?	-yes	256	67.4
	-no	4	1.1		-no*	124	32.6
Do you usually use uncooked or burned bread?	-yes	8	2.1	What type of chicken egg do you usually obtain?	-traditional (local)	281	73.9
	-no*	372	97.9		-industrial*	99	26.1
What brand of rice do you usually use?	-Iranian*	309	81.3	How do you obtain chicken egg?	-packed eggs*	36	9.5
	-Foreign	71	18.7		-bulk eggs	64	16.8
					-single egg	280	73.7
Where do you keep cooked rice?	-at room temperature	28	7.4	If you buy packed chicken eggs, do you consider expiration date?	-yes*	376	98.4
	-in refrigerator	300	78.9		-no	6	1.6
	-in freezer*	52	13.7				
For how many times is it likely to happen to re-warm cooked rice for use?	-one time	112	29.5	Where do you usually keep chicken egg?	-in refrigerator	359	94.5
	-two times	19	5		-at room temperature	21	5.5
	-three times and more	3	0.8				
	-I cook for one meal*	246	64.7				
Do you usually eat very cooked (burned) rice?	-yes	91	23.9	For what time do you obtain chicken egg?	-one day*	218	57.4
	-no*	289	76.1		-some days	127	33.4
					-some weeks	35	9.2
Where do you usually obtain cooking oil?	-tradition and local	7	1.8	How do you cook chicken eggs for direct use?	-well cooked*	214	56.3
	-at weekly market	12	3.2		-medium	166	43.7
	-produce by myself	16	4.2				
	-buying industrial and packed oil*	345	90.8				
Where do you usually keep cooking oil?	-in warm place	6	1.6	Do you usually wash chicken eggs before use?	-yes*	232	61.1
	-in dry and cool place*	331	87.1		-no	148	38.9
	-I do not care	43	11.3				
What type of cooking oil do you most use?	-vegetable oil*	367	96.6	How do you usually obtain fish?	-bulk	363	95.5
	-animal oil	13	3.4		-packed and clean*	17	4.5

Questions	Answers	Frequency	Percent	Questions	Answers	Frequency	Percent
How many times do you use an amount of specified cooking oil for frying?	-one time* -two times -three times and more -until ending the oil	223 105 26 26	58.7 27.6 6.8 6.8	How do you usually carry bought fish?	-in plastic bags along with other foods -in plastic bags separate from other foods*	12 368	3.2 96.8
If you buy packed fish, do you usually consider expiration date?	-yes* -no	373 7	98.2 1.8	How do you defrost frozen fish?	-putting under water -putting in refrigerator* -putting at the room temperature -putting in microwave	108 103 169 0	28.4 27.1 44.5 0
What type of fish do you usually use?	-fresh* -canned -frozen	279 74 27	73.4 19.5 7.1	How do you usually cook fish?	-water steam cooking* -boiling water cooking -frying -barbecue	62 5 280 33	16.3 1.3 73.7 8.7
How do you usually freeze fish?	-completely without cleaning and purging -purging without cleaning -purging and cleaning* -I do not freeze	16 1 360 3	4.2 0.3 94.7 0.8	When you clean and grind up fish, do you usually use the same cutting boards and tools that you use for other foods?	-yes -no*	175 205	46.1 53.9
How long time it might usually take to use or freeze the fish after buying?	-as soon as possible* -some hours after buying	334 46	87.9 12.1	How do you freeze cooked fish?	-along with other foods -separate from other foods*	47 333	12.4 87.6
If you freeze fish, how do you do?	-in small package for daily use* -altogether	269 111	70.8 29.2				

* Best answer

Mean= 37.21, Standard deviation= 4.91, Minimum=16, Maximum=48