

Preferences for Statements and Narratives about Fish Consumption among Women of Childbearing Age: Minnesota Focus Group Results

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Table of Contents

Table of Contents	2
Introduction.....	3
Results	4
Statement Preferences.....	5
Preferences for Statements in Set 1.....	6
Preferences for Statements in Set 2.....	9
Preferences for Statements in Set 3.....	11
Preferences for Statements in Set 4.....	16
Summary of Responses to Statements.....	18
Narrative Analysis.....	19
Narrative 1:.....	19
Analysis.....	19
Favorable Reactions to the Story	20
Unfavorable Reactions to the Story	21
Narrative 2:.....	22
Analysis.....	23
Favorable Reactions to the Story	23
Unfavorable Reactions to the Story	24
Narrative 3:.....	26
Analysis.....	26
Favorable Reactions to the Story	27
Unfavorable Reactions to the Story	28
Summary of Narrative Analysis	29

Introduction

Five focus groups were conducted in Minnesota in September 2014 with women between the ages of 18 and 50 who ate fish at least occasionally. The purpose of the focus groups was to determine how women of childbearing age in northern Minnesota respond to fish consumption materials. The groups were conducted in Duluth (residents within city limits), Duluth-Rural (residents of area surrounding city), Ely, Hibbing, and Two Harbors. The number of women participating in each group ranged between 4 and 11.

The focus groups had two primary components:

(1) Women were presented with a list of 18 statements (organized into 4 groups) describing either reasons to eat fish or reasons to follow Minnesota's fish consumption guidelines. They were asked to organize each group of statements from those that they thought were most likely to encourage them to eat fish or follow the guidelines to those that they thought were least likely to encourage them to eat fish or follow the guidelines. Each participant was asked to explain the reasons for her most preferred statement and her least preferred statement; although participants may have had positive or negative reactions to multiple statements, only the most and least preferred were discussed.

The specific questions used to elicit responses in the focus groups were:

- Which statements would make it most likely for you to continue to eat fish/follow the guidelines? What is it about the statements that would make it more likely for you to continue to eat fish/follow the guidelines?
- Which statements would make it least likely for you to continue to eat fish/follow the guidelines? What is it about the statements that would make it less likely for you to continue to eat fish/follow the guidelines?

(3) Focus group leaders distributed three narratives (stories about individuals designed to communicate fish consumption advice) to the participants and asked them a series of questions to understand their positive and negative reactions to each story. The specific questions asked were:

- What came to your mind as you read this story?
- What do you think about the main character in this story?
- Does this story sound familiar to you? Why or why not? OR
- Have you ever had feelings or thoughts similar to those described in the story? Tell me about that.

Discussions were recorded and transcribed.

The focus group data in the transcripts were separated by question. Next, responses from each question were joined across all five focus groups in a single worksheet to be coded.

The coding procedure took place in three stages. In the first stage, the transcripts were simply read in entirety. In the second stage, initial “codes” were assigned to the comments women made to explain their reactions to statements or narratives. Each code reflected the reasons women provided for either liking statements or narratives, or disliking statements or narratives. The final stage of coding involved refining the coding system by clarifying the codes and ensuring that all excerpts assigned the same code were conceptually related. The final product of the coding procedure was a set of cohesive codes, which was used to categorize all relevant data from the focus groups.

Results

The results of the analysis of statement preferences is presented first. The analysis of narrative preferences follows.

Statement preferences. The results of the statement preference analysis are organized according to each of the four sets of statements about which women were asked. The two most preferred statements and two least preferred statements are presented for each set of statements about which women were asked. In the statement sets that contained only 3 statements (statements 7 – 9 and statements 16 – 18), only the single most and least preferred statements and associated justifications are offered.

Narrative analysis. Reactions to the narratives are analyzed and reported in 3 sections corresponding to the 3 narratives. We discuss both favorable and unfavorable reactions to narratives. We discuss the primary reasons for these reactions and present representative focus group excerpts to illustrate them.

Statement Preferences

Statements were presented to focus group participants in four sets:

Statement Set #1:

- Statement 1: Eating fish is the best way to get healthy omega-3 fats.
- Statement 2: Eating fish that has omega-3 fats while pregnant may help during fetal brain and eye development.
- Statement 3: Eating fish that has omega-3 fats may lower the risk of heart disease in adults.
- Statement 4: Fish are generally low in saturated fats.
- Statement 5: Benefits outweigh risks if women eat fish low in mercury and other contaminants.
- Statement 6: Children of women who eat lower mercury fish every week when they are pregnant have been found to do better developmentally.

Statement Set #2

- Statement 7: Our bodies can't make EPA and DHA and they are generally not found in other foods.
- Statement 8: DHA is a building block of the brain and eyes.
- Statement 9: Pregnant moms and breastfeeding moms can eat fish to give DHA to their babies.

Statement Set #3

- Statement 10: Women who follow the guidelines get the health benefits of fish with very little risk to themselves or their children.
- Statement 11: Women who follow the guidelines get the health benefits of fish with few risks.

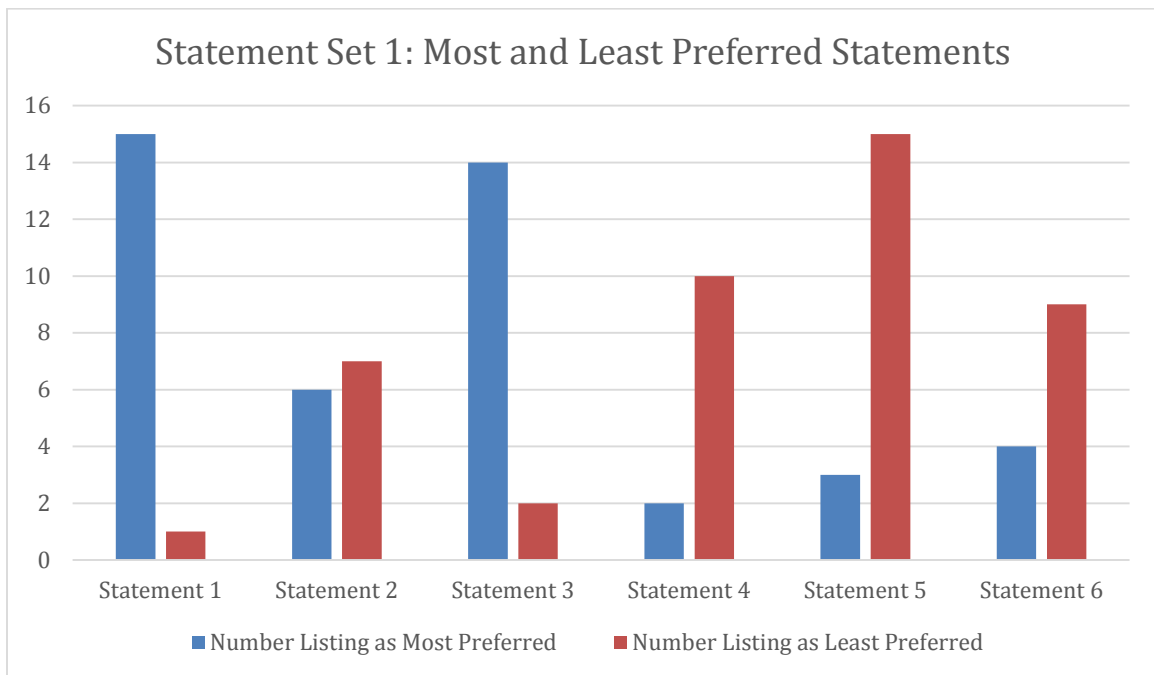
- Statement 12: Women who follow the guidelines are less exposed to contaminants found in some fish.
- Statement 13: Women who follow the guidelines avoid eating fish high in contaminants.
- Statement 14: Women who follow the guidelines know which fish are low in contaminants.
- Statement 15: Our bodies eliminate mercury over time. Women who follow the guidelines will keep mercury in fish from building up to harmful levels in their bodies.

Statement Set #4

- Statement 16: Women who follow the guidelines reduce their risk of being exposed to contaminants found in some fish.
- Statement 17: Women who follow the guidelines know how to make healthier choices about which fish to eat.
- Statement 18: Women who follow the guidelines are able to eat fish safely.

Preferences for Statements in Set 1

Statements 1 through 6 offered reasons for eating fish. The two most preferred statements were 1 and 3, while the least preferred statements were 5 and 4.



Most Preferred Statements

Statement 1: Eating fish is the best way to get healthy omega-3 fats.

The code most commonly used to classify the reasons women offered justifying their selection of this statement as most preferred was “information on health/nutrients.”

- ***Information on health/nutrients***: This code was assigned in the majority of cases to explain preference for statement 1. This code was assigned when women explained their interest in receiving information about either ways fish consumption could enhance their health or important nutrients like omega-3s that are found in fish. Representative comments include:
 - *“Well, I guess that would be most important for me right now. I'm not pregnant either, so it's what is healthiest for me at this point in my life.” – A woman from Hibbing, MN*
 - *“I know that eating fish is the best way to get healthy omegas, but I do take a liquid fish oil supplement every day, too. Cuz I don't eat a whole lot of fish and so I know that's important.” – A woman from Duluth, MN*

Statement 3: Eating fish that has omega-3 fats may lower the risk of heart disease in adults.

The vast majority of women who selected statement 3 as their most preferred explained their selection was in large measure due to personal experience with heart disease. We used the code “information on avoiding chronic health conditions” to classify these reasons.

- ***Information on avoiding chronic health conditions***: This code was applied to statements that linked important nutrients found in fish with lower risk of health conditions. In many cases, women referred to personal experience with heart conditions.
 - *“#3 because my dad died of a heart attack so there's some heart disease in my family. And just women in general tend to have a higher risk of heart disease so that's important to me.” – A woman from Duluth, MN – Rural*

- *“I have heart disease in the family so that one resonates. And like she said, it's very specific and that jumped out at me the most.” – A woman from Ely, MN*

Least Preferred Statements

Statement 5: Benefits outweigh risks if women eat fish low in mercury and other contaminants.

Codes used to classify comments from women justifying their selection of this statement as least preferred included “information about contaminants” and “vague or confusing message.”

- ***Information about contaminants***: In this category of responses, women explained that they simply were not concerned about contaminants, or the risks from consuming contaminants were not large enough to warrant concern.
 - *“Mercury poisoning... it's a low risk. If you're eating fish only a couple times a week, it's not a big deal. Probably eat more teflon than you do mercury, you know? You know how it is on the bottom of your pan there.” – A woman from Two Harbors, MN*
 - *“I'm not as concerned with contaminants, I guess. I feel like it's more hype, a lot of hype, I guess.” – A woman from Hibbing, MN*
- ***Vague or confusing message***: In this case, women explained they were confused by the message content or wording.
 - *“And #5 I put last just because it seemed kind of vague, like didn't really have any effect on whether or not I'm going to eat fish.” – A woman from Duluth, MN*

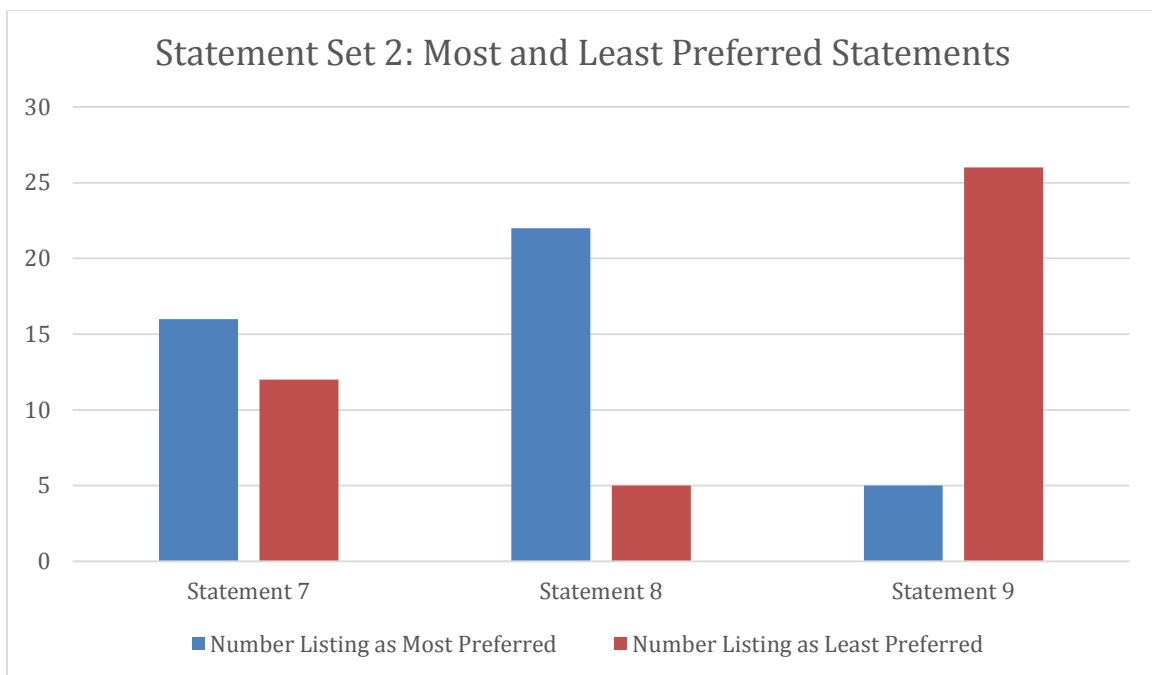
Statement 4: Fish are generally low in saturated fats.

Most participant explanations for their low ranking of this statement were classified with “information about saturated fats.”

- **Information about saturated fats:** Women explained that they did not have to worry about saturated fats or that their diet was healthy and saturated fats were not a concern for them.
 - *“Then #4 is fish are generally low in saturated fats. That's really not that important to me.” – A woman from Duluth, MN – Rural*
 - *“And #4 because I don't usually have fried fish. I usually do baked. I just try to cook it in a healthier way.” – A woman from Duluth, MN*

Preferences for Statements in Set 2

Statements 7 through 9 also described reasons for eating fish. This series of statements had to do with specific nutrients found in fish, like EPA and DHA. With only three statements in this set, only the single most preferred and the least preferred statements are reported. The most preferred statement was 8, while the least preferred statement was 9.



Most Preferred Statement

Statement 8: DHA is a building block of the brain and eyes.

The codes most commonly used to classify the reasons women offered to justify their selection of this statement as their most preferred in the question set included “Information on brain and eye benefits” and “Information on health/nutrients.”

- ***Information on brain and eye benefits***: This type of rationale was most common, cited the majority of the time by those who preferred statement 8. This code was assigned when women mentioned their appreciation of the information on brain and eye benefits in the message. Interestingly, the message was interpreted by some women as describing the benefits possible for their baby during pregnancy or early childhood development, while other women interpreted the message as describing brain and eye development benefits that the women themselves stand to receive.
 - *“#8 most important cuz it is a very good promoter for brain and eye development which are important.” – Woman from Duluth, MN – Rural*
 - *“#8 being the first one. I put it up there because I know DHA is important for your brain, specifically.” – Woman from Hibbing, MN*
- ***Information on health/nutrients***: In several cases, this code was assigned when women explained their preference for receiving information about ways fish consumption could enhance their health more generally:
 - *“Those amino acids are important for keeping our health of our eyes and our brain and they actually help with depression and things like that, supposedly, too. There's a whole bunch to that.” – Woman from Two Harbors, MN*

Least Preferred Statement

Statement 9: Pregnant moms and breastfeeding moms can eat fish to give DHA to their babies.

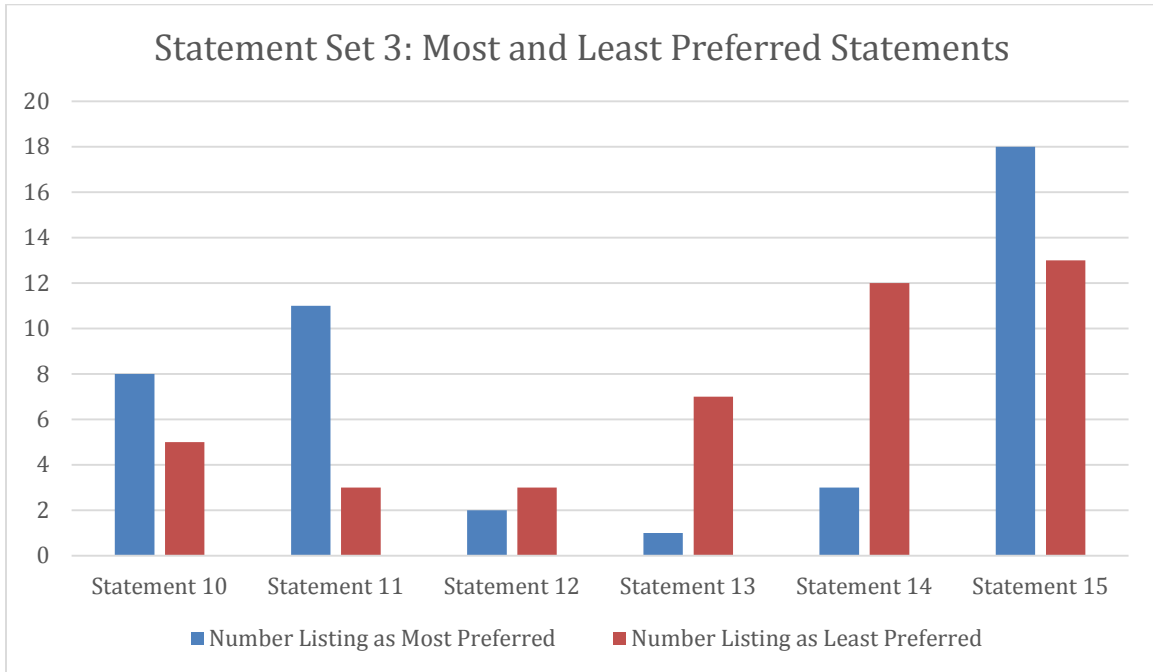
The codes that were most commonly during the analysis to explain women's selection of this statement as least preferred included "Lacked relevance," and "Lacked evidence for claims."

- **Lacked relevance**: This code was assigned when women argued that the information in the statement was less relevant to them for one reason or another. This type of justification was observed approximately 20 times in the focus group data.
 - *"I picked #9 last because when I was pregnant and breastfeeding, I didn't change the amount of fish that I ate. I just kinda ate the same amount as I do normally which wasn't very much. So then, I just took a DHA supplement anyways... guess it wasn't too relevant cuz being pregnant or not doesn't change the amount of fish I eat." –Woman from Duluth, MN*
 - *"Again, it doesn't affect me personally or a whole lot of people I know, if I'm looking at overall health for myself and my family, it's just not really relevant." –Woman from Ely, MN*
- **Lacked evidence for claims**: This code was assigned when women supported their selection of a statement as least preferred with the lack of evidence for the facts stated in the message.
 - *"I feel like it's chronological so if you said, you know, great I can give DHA to my baby, why does that matter? Like I feel like you need this information first before you could draw that conclusion. If you have the eight and seven first, then it makes nine important, but nine without that other information is kind of irrelevant. Not irrelevant, that's not a good word, but it doesn't – it's not as important." – Woman from Duluth, MN*

Preferences for Statements in Set 3

Unlike statements 1 through 9, which described reasons for eating fish, statements 10 through 15 described reasons for following fish consumption guidelines. This set of statements mentions outcomes of following the

guidelines. Interestingly, statement 15 was the most preferred choice but also the least preferred choice. The two most preferred statements were 15 and 11, while the two least preferred were 15 and 14.



Most Preferred Statements

Statement 15: Our bodies eliminate mercury over time. Women who follow the guidelines will keep mercury in fish from building up to harmful levels in their bodies.

There were two general explanations women gave as to why they chose this statement, including “Information on body removing contaminants” and “Clear/straightforward information.”

- ***Information on body removing contaminants***: This was the most common response from women who selected statement 15 first. In their justification, women explained their interest in the information about the body’s ability to remove contaminants. Sample quotes are offered below:
 - *“#15 because, yeah, it was clear and said that even if you get the mercury, it's going to leave your body if you don't get too much.” – Woman from Ely, MN*

- *“Um, it's good that our bodies eliminate it over time... It's good that it can – you can eliminate it from your body.” – Two Harbors, MN*
- **Clear, straightforward information:** Comments that were assigned this code explained the selection of first choice for statement 15 due to the clear, straightforward nature of the information. A sample quote is offered below:
 - *“It was the easiest for me to understand. All of 'em kinda got confusing.” – A woman from Ely, MN*

Statement 11: Women who follow the guidelines get the health benefits of fish with few risks.

This statement explains that women who follow the guidelines will receive benefits with low risks. Among the explanations women offered for their preference for this statement, women explained interest in such factors as “Information about benefits of fish,” “Information on following guidelines,” and “A positive message.”

- **Information about benefits of fish:** This type of response was the most common from women who selected statement 11 first. Quotes were assigned to this category when women explained their preference for information that emphasized what they stood to receive from fish consumption versus what they stood to lose. Sample quotes are offered below:
 - *“My thought was similar. They're all kinda one and the same. I put #11 first because... I love the taste of fish but most of the reason I eat it is because of the health benefits. So I want those benefits with few risks.” – Duluth, MN*
 - *“And #11 just because it gets the health benefits with the few risks.” – Woman from Duluth, MN-Rural*
- **Information on following the guidelines:** This code was applied when participants mentioned liking the connection made in the statement between following the guidelines, and their likelihood of receiving benefits or avoiding risks.

- *"#11 just kind of seems like a natural choice for me. I can't really say specifically, but it's just like if you're following the guidelines and you know the health benefits of fish and you're educated, you're going to have fewer risks." – A woman from Duluth, MN*
- **Positive message:** This code was assigned in two cases where women mentioned liking the positive emphasis in statement
 - *"I chose #11 – cuz #11-14 all sounded pretty similar but #11 seemed the most positive out of those five." – A woman from Duluth, MN-Rural*

Least Preferred Statements

Statement 15: Our bodies eliminate mercury over time. Women who follow the guidelines will keep mercury in fish from building up to harmful levels in their bodies.

The comments explaining dislike for this statement were assigned the codes "Information on body removing contaminants" or "Information about contaminants."

- **Information on body removing contaminants:** This code was assigned to the majority of comments from women in focus groups about their reason for selecting this statement last. Women expressed skepticism about the body's efficacy in removing contaminants, or general distrust of the message. Sample quotes are offered below:
 - *"And then #15, I don't think that – I thought that mercury didn't really go – get out of your body over time. I'm not really sure about that, but I thought not, so I'm kind of skeptical of that statement." – Woman from Hibbing, MN*
 - *"And then for the least one, I didn't like #15 because I don't think that's true. I don't think our body does eliminate mercury over time. I think it's one of those that stays with you. Where if it does, it's over a long period of time from what I've read and where I've caught fish." – A woman from Duluth, MN*

- **Information about contaminants:** In this category of responses, women explained that they simply were not concerned about contaminants, or the risks from consuming contaminants were not large enough to warrant concern. A sample quote is offered below:

- *“And then I picked #15. I just don't like to hear about mercury, I don't know, it just sounds – I don't know, the fact that your body is trying to eliminate it all the time, it just sounds like I'd rather not think about it, I guess.” – A woman from Duluth, MN-Rural*

Statement 14: Women who follow the guidelines know which fish are low in contaminants.

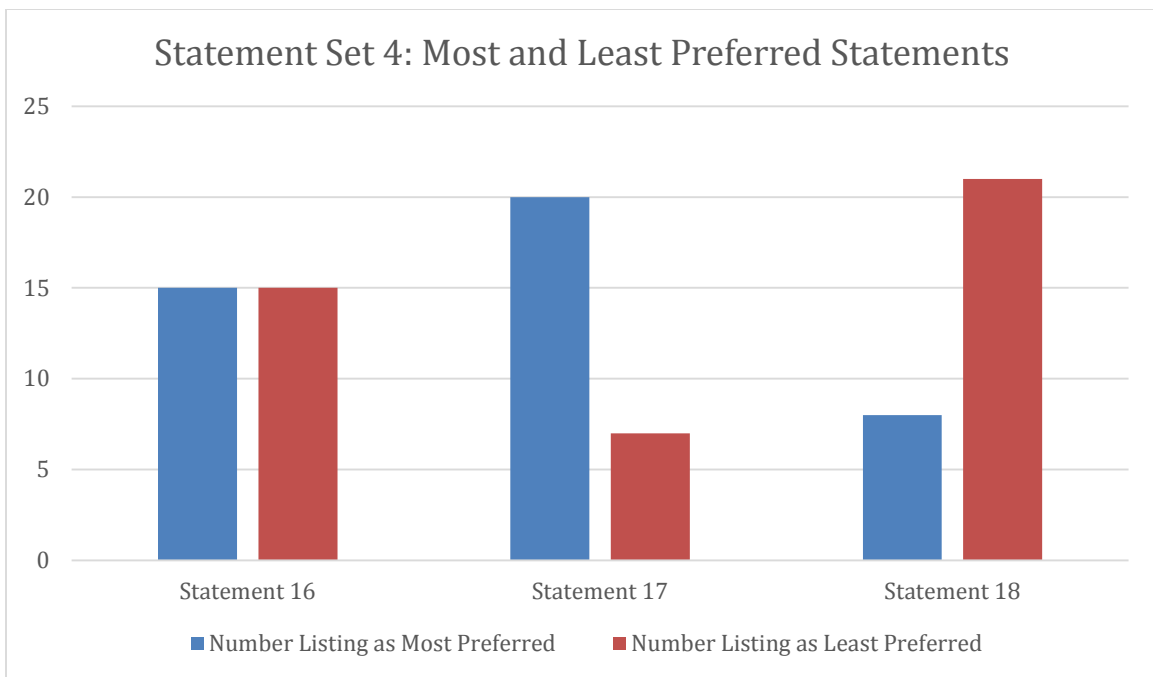
Two categories of justification for selecting this statement were classified as “Information on following the guidelines” and “Information about contaminants.”

- **Information on following the guidelines:** This code was applied where participants mentioned the uncertainty about what the guidelines were. This was the most commonly observed code in the justifications for statement 14 being least preferred.
 - *“And then the rest are really similar but again, I think the guidelines are so nebulous that I don't know whose guidelines? What guidelines? That manufacturers guidelines? Or the government guidelines? Like guidelines don't mean, I don't trust any guidelines. I just do what I feel I am more educated to do, based on what I read because I don't trust anybody's guidelines but my own for my own family so guidelines don't mean anything to me, personally, on anything.” – A woman from Duluth, MN*
 - *“#14 was my least and, um, basically just that guidelines thing, really, I don't know anything about the guidelines so it didn't – it wouldn't stick out to me, I wouldn't care about any of those other statements cuz it doesn't tell me anything.” – A woman from Ely, MN*
- **Information about contaminants:** In this category of responses, women explained that they simply were not confident in information about contaminants.

- “# 14, I wasn't real sure. Still not really knowing which fish, exactly, are high in mercury, how do we know for sure?” – *A woman from Duluth, MN-Rural*

Preferences for Statements in Set 4

Statements 16 through 18 also described reasons for following fish consumption guidelines. This set of statements included text that mentions the importance of following guidelines to either avoid risk, or to obtain a certain benefit. Women often noted the similarity in of these statements and described the difficulty of choosing among the options due to the similarity. With only three statements in this set, only the most and least preferred are reported. The most preferred was statement 17 while the least preferred was statement 16.



Most Preferred Statement

Statement 17: Women who follow the guidelines know how to make healthier choices about which fish to eat.

The comments from women justifying their choice of statement 17 as most preferred were categorized as showing interest in “Information on healthy choices” and “Information on following the guidelines.”

- **Information on health/nutrients:** This code was assigned in the majority of cases to explain preference for statement 17. This code was assigned when women explained their preference for receiving information about ways fish consumption could be most healthy.
 - *“I chose #17 first because I think if I knew the healthier choices, personally, that would make me want to eat fish more and I guess I never really think about it, you know. I just eat what I want to eat.” – A woman from Two Harbors, MN*
 - *“I chose #17 because the reason I eat fish is for the benefit, so I want to know how to make those healthier choices.” – A woman from Duluth, MN*

Least Preferred Statement

Statement 16: Women who follow the guidelines reduce their risk of being exposed to contaminants found in some fish.

Two primary types of justifications for selecting this statement last were identified: “Information about contaminants” and “Information about following guidelines.”

- **Information about contaminants:** In this category of responses, women explained that they simply were not particularly concerned about contaminants. This type of comment was observed most frequently among responses to selecting statement 16 last. Sample quotes are offered below:
 - *“#16 I put last. I guess I'm not as worried about the risks, and it was worded a little bit ambiguously... ‘being exposed to contaminants found in some fish.’ So are the contaminants only in some fish? Or you'd only know how to reduce risk with certain types of fish? I don't know.” – A woman from Duluth, MN*
 - *And #16 because, honestly, that's exposed to contaminants thing is really getting annoying.” – A woman from Two Harbors, MN*
- **Information about following the guidelines:** This code was applied in instances where women mentioned confusion about the guidelines, which guidelines the message was referencing, and what they

suggested as far as fish consumption. This was observed among several women explaining their low preference for this statement. Several sample quotes are offered below:

- *“And then #16, ‘women who follow the guidelines reduce their risk of being exposed to contaminants found in some fish.’ It goes back to my guidelines; I don't know whose guidelines. I don't believe that's true or not true. It depends on what guidelines you follow. I think a lot of the manufacturer guidelines you would not be reducing your risk to contamination found in fish so this just gets hung up on the guidelines.” – A woman from Duluth, MN*

Summary of Responses to Statements

Given that messages were presented to focus group participants in sets, we are unable to evaluate which of the 18 statements were most and least preferred overall. However, certain types of rationales for liking or disliking particularly messages emerged repeatedly and are worth noting:

- Women often responded favorably to more positive messages that emphasized particular benefits.
- Responses to messages were influenced by personal experience and the perceived relevancy of messages. For example, women who had family histories of heart disease were more likely to respond favorably to messages about heart disease. Women who did not perceive fats or contaminants as a concern to them, were less likely to respond favorably to messages about fats or contaminants.
- Messages that were perceived as more clear and straightforward were more favorably perceived.
- Some women responded favorably to information that was new and novel to them. However, others distrusted new and novel information specifically because it was inconsistent with what they already believed.

Narrative Analysis

Narrative 1:

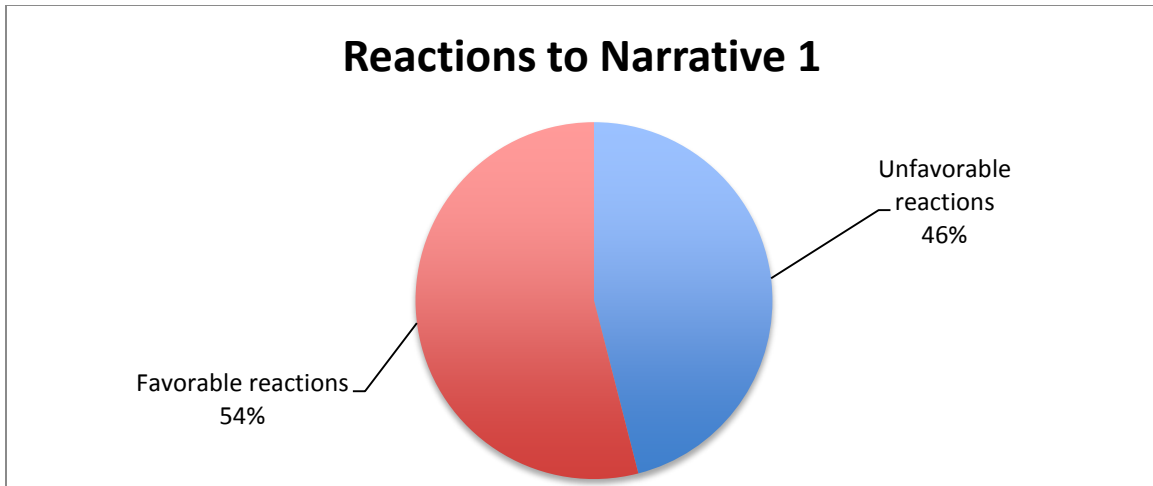
Melanie, from Duluth, Minnesota, was very excited to become pregnant with their first child. Since she and her husband John had been trying to get pregnant, she had made a strong effort to cook healthy meals for her family. While she and John have always loved fishing, Melanie stopped eating any fish when she became pregnant because she had heard that mercury and other fish contaminants can hurt a baby's development.

One Saturday early in her pregnancy, Melanie ran into her neighbor Julie, who was visibly pregnant with her second child. Julie mentioned that she was cooking walleye for her family that evening. Melanie was surprised – she loved walleye but had stopped eating it since she became pregnant. Julie responded that she had done some research and learned that fish are a great source of omega-3 fatty acids, which are very important for a baby's development. She said that while some types of fish do contain contaminants like mercury, Minnesota's Safe Eating Guidelines provided information about which fish to eat and how often.

Melanie went home and checked it out herself - she and John were excited to learn that they could eat many of the fish that they loved and offer benefits to the baby! Eight months later, Melanie gave birth to a healthy baby girl, and while it seems like almost everything in their life has changed, they can continue to enjoy eating fish together.

Analysis

This story describes a woman's hesitation to eat fish during her pregnancy until she encounters her neighbor who tells her about the evidence that fish is healthy for pregnant women. Among the women in the focus groups, slightly more than half made favorable remarks about the narrative (54%), with the remainder unfavorable comments (46%).



Favorable Reactions to the Story

There were several different types of favorable reactions from focus group participants. Favorable reactions received three primary codes, including 1) agreement with the story, 2) admirable character qualities, and 3) personally relevant storyline. Codes and supplementary quotes are offered below:

- ***Agreement/liking***: This code was assigned to participants who indicated agreement with the plot of the story or character actions, or simply restated events in the story to explain why they liked the story.

Sample quotes are offered below:

- *“I feel like it shows that the more educated, in this case Melanie, but the more educated we are, the healthier choices we can make for ourselves and our family” – A woman from Duluth, MN (Rural)*
- *“She was given information that fish aren't healthy for her and then she was provided with the real information so she probably looked it up on-line and got misinformation” – A woman from Two Harbors, MN*

- ***Admirable character qualities***: This code was assigned to comments that described likeable qualities in the character. Some of the adjectives used by participants included “smart” and “cautious.” Another

reason comments were coded in this manner was if the participant mentioned appreciating that the character was focused on protecting her family. Sample quotes are offered below:

- *“Well, it's smart enough to do your own research instead of just taking somebody else's word for it” – a woman from Hibbing, MN*
- *“Well, Melanie, you know, had heard one story and that's what she was sticking with until she learned something from somebody else and went and researched it herself and found she didn't have to be as worried as she was. So that was good for her and her family” – A woman from Duluth, MN (Rural)*
- **Personally relevant storyline:** This code was assigned when women explained the story was somehow familiar to them, or they explained added meaning from the story due to their personal experience.

Sample quotes are offered below:

- *“Yeah, I hear it, you know, with friends and everything else, too. I mean the story is very familiar because that's what people do that happened a lot and even working in clinics where people come in because they heard this or they heard that so it's a very familiar story” – A woman from Duluth, MN*
- *“I feel like I kind of relate to Melanie. I've had two kids. The first one was in Nebraska and the doctor there was more on don't eat fish while you're pregnant. We didn't have a lot of local cod, great fish there” – A woman from Duluth, MN (Rural)*

Unfavorable Reactions to the Story

Most unfavorable reactions were coded as either 1) relying on word of mouth/failure to do research or 2) unrealistic characters actions. Codes and supplementary quotes are offered below:

- **Character relied on word of mouth:** This code was assigned when focus group participants voiced dislike for how the character relied on the word of mouth from her neighbor as to how to behave, and also the failure to do research and be prepared before her child arrived. Sample quotes are offered below:

- *“I would definitely do some research then, but I'm not going to just stop eating it altogether based on what somebody else has to say. I guess, I don't know, if I was to do the research and, you know, it pretty much clearly explained why it was bad or why you shouldn't eat it, then I might reconsider like, oh, ok, instead of having it once a week, maybe once a month or once every two months while I'm pregnant. But I wouldn't just stop eating it altogether” – A woman from Ely, MN*
- *“It just seemed odd she made this healthy effort to cook healthy meals but didn't do this research and got it from her neighbor and then did some research. Kind of conflicting” – A woman from Duluth, MN*
- **Unrealistic character actions:** This code was assigned when participants indicated that actions were unrealistic, and specifically, in response to this narrative, represented irrational fear about fish consumption. A sample quotes is offered below:
 - *“In moderation. If you're eating some type of fish like every meal of every day, then you might have a problem just in general. Um, yeah, and I think that Melanie is a little paranoid” – A woman from Duluth, MN*

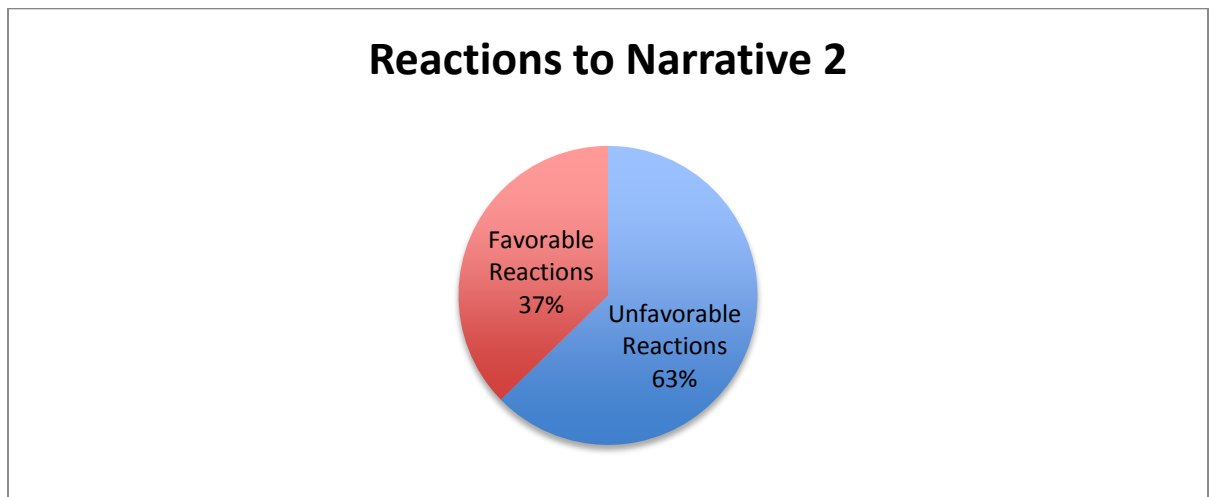
Narrative 2:

Sarah and her husband Nick got married four years ago and live in Two Harbors, Minnesota. Recently they decided that they wanted to start a family, and after a few months Sarah learned she was pregnant! Nick works flexible hours and loves to cook fish he catches, but he stopped bringing fish home after Sarah got pregnant because he was concerned about mercury and the baby's health. One night, when Sarah and Nick were watching the news, they saw a story about guidelines for healthy fish consumption among women of childbearing age, issued by the Minnesota Department of Health. The story described the health benefits of including fish as part of a balanced diet during pregnancy. Nick was relieved that he could cook their favorite fish like perch. Eight months

later, after a safe, and relatively easy pregnancy, Nick and Sara are so glad they have a healthy, happy baby and grateful that they heard the fish consumption guidelines when they did.

Analysis

This story describes a husband, responsible for preparing meals for his pregnant wife, learns fish is not healthy for women, then stops bringing back fish he catches like he once did. The couple refrains from eating fish until they learn of the healthiness of fish for pregnant women on the television. Among the women in the focus groups, slightly more than one third made favorable remarks about the narrative (37%), with the remainder two thirds unfavorable comments (63%).



Favorable Reactions to the Story

There were two codes that were observed most commonly, including 1) admirable character qualities, and 2) personally relevant information. Codes and supplementary quotes are offered below:

- ***Admirable character qualities:*** This code was assigned to comments that described likeable qualities in the character. Some of the adjectives used by participants included “smart” and “cautious.” Another reason comments were coded in this manner was if the participant mentioned appreciating that the character was focused on protecting her family. Sample quotes are offered below:

- *“I think that it was cute that Nick got concerned for Sarah and the baby's health and stopped bringing fish home. It was kind of his fatherly instincts, you know” – A woman from Hibbing, MN*
- *“They are conscientious. I mean, they want what's best for their kids” – A woman from Duluth, MN (Rural)*
- **Personally relevant storyline:** This code was assigned to nearly two thirds of the positive comments. This code was assigned when women explained the story was somehow familiar to them, or they explained added meaning from the story due to their personal experience. Sample quotes are offered below:
 - *“I guess that was me when I was younger but not like so much recently. I guess when I was younger” – A woman from Two Harbors, MN*
 - *“Yeah, absolutely, I think it's just part of having children is that you do want to do what's best for them and research everything and if you find one anecdotal thing, it kind of tends to be magnified sometimes in your brain because of hormonal changes in your body and then it might spin out of control sometimes for people and they think, oh, I can't do this. I can't safely do this or I can't safely do that” – A woman from Duluth, MN (Rural)*

Unfavorable Reactions to the Story

There were three primary unfavorable reactions from participants. The most commonly observed unfavorable reaction to the narratives were coded as 1) unrealistic character actions, 2) content that was not personally relevant, and 3) unclear cause and effect. Codes and supplementary quotes are offered below:

- **Unrealistic character actions:** This code was assigned when participants indicated that actions were unrealistic. A number of comments coded as unrealistic in response to Narrative 2 centered on the role of the husband in this story. Sample quotes are offered below:
 - *“All the men in our family, in my family, wouldn't really care. They wouldn't really know enough, they'd leave it up to the woman of the house to make all the health and diet decisions so for me, it didn't like hit home or anything because my husband is kind of clueless when it comes to – during*

the whole pregnancy and whatever. He wasn't one of those worriers” – A woman from Two Harbors, MN

- *“And I think the thing that stuck out for me was like they weren't necessarily on the same page. Like neither of them had really done some research – like he had heard that it wasn't good but neither of them really looked into it or talked to their OB about it. Like you just cut out this, you know, this out of your diet without even really understanding. And, yeah, the research says different things, but you need to figure out what's best for you and what you're comfortable with instead of just like stopping, not really knowing all the facts” – A woman from Duluth, MN*

- **Content was not personally relevant:** This code was assigned when focus group participants explained the story was not something they had personally experienced or events that might be relevant to their personal experience. Sample quotes are offered below.

- *“It seems it has a lot to do with being pregnant. That's kind of the whole thing. For me, I've never been pregnant, so –” – A woman from Duluth, MN (Rural)*
- *“I just know where I'm getting my food, I guess, so like, I feel like that's not an issue because I'm not getting my food from – shipped from who knows where – where they dump sewage in the oceans and stuff like that. I don't have to worry about that, but I guess I never have researched the levels of mercury in Minnesota lakes either” – A woman from Hibbing, MN*

- **Unclear cause and effect:** This code was assigned when women indicated the story jumped to conclusions about fish consumption being important during pregnancy yet failed to provide sufficient causal evidence. Sample quotes are offered below:

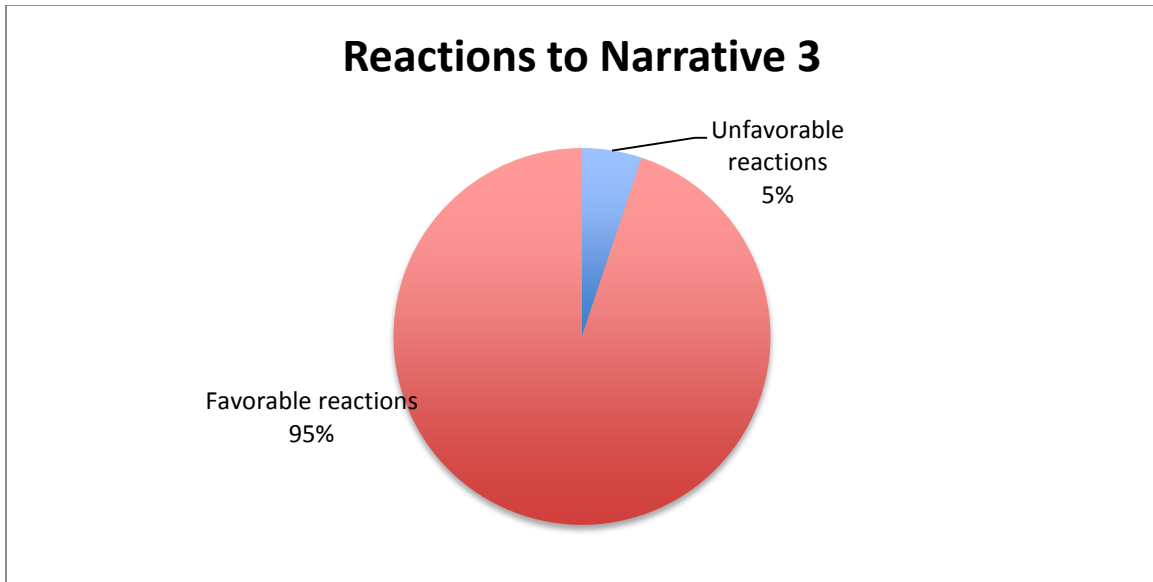
- *“I don't get the cause and effect either. I mean, your baby could be healthy if you ate fish everyday, I don't know. Did it have anything to do with it?” – A woman from Duluth, MN*
- *“It just makes me think, what if they didn't have a healthy baby? Would they have thought maybe the fish wasn't healthy to eat?” – A woman from Duluth, MN (Rural)*

Narrative 3:

Kristy and her husband Nathan recently moved back to their hometown of Virginia, Minnesota. Now married for several years, the couple was excited to try to have a baby. A baby is a big change, so Kristy began doing her homework on healthy exercise and nutrition for women hoping to conceive. Kristy came across an article on the internet about fish consumption guidelines for women of childbearing age. The article explained that, although many women avoid fish during pregnancy, there is strong evidence that eating fish during pregnancy is important for her baby's development. Skeptical, Kristy explored several fish consumption guidelines, like the Minnesota Department of Health and found this report to be well supported. In truth, Kristy was relieved; crappie is one of her favorite foods! The next month, Kristy discovered she was pregnant. Kristy and Nathan decided they would try to eat a variety of low-mercury fish during her pregnancy. The couple was grateful, and happy to have found the helpful guidelines.

Analysis

This story describes a woman and her husband who carefully plan to have a baby, and incorporate fish into their diet after doing their research on healthy fish consumption during pregnancy. There were overwhelmingly favorable reactions to this narrative, with nearly all comments being coded as favorable (95%), while only several negative (5%).



Favorable Reactions to the Story

There were two primary codes observed among the data, including 1) proactive character, and 2) personally relevant story. Codes and supplementary quotes are offered below:

- ***Admirable character qualities – Proactive character:*** This code was assigned to nearly two thirds of favorable comments. The code was assigned to comments that described likeable qualities in the character. The specific quality that came up again and again in response to this story was that focus group participants appreciated that the character did her research and was prepared for her pregnancy, as opposed to having to receive information about fish consumption from a neighbor. Sample quotes are offered below:
 - *“She seemed much more smart about it. She researched it on her own, she didn't just, you know, she might have heard one thing but she did her own research on it and went to a lot of different sources.” – A woman from Duluth, MN (Rural)*
 - *“Um, I liked this one probably the most so far. Yeah, I liked that she does research, it's kind of my thing, too, and I like that they decided they would – well, I like that she learned that there's*

obviously a variety of lower mercury fish out there so she learned that and --" – A woman from Hibbing, MN

- **Personally relevant storyline:** This code was assigned to approximately one third of the positive reactions to Narrative 3. This code was assigned when women explained the story was somehow familiar to them, or they explained added meaning from the story due to their personal experience. Sample quotes are offered below:

- *"When I was pregnant, that's kind of what – when I was handed that brochure at my doctor's office, I kind of looked at it, looked at the guidelines, and realized that I would never eat that much fish to push me over, you know, say you could have two tuna sandwiches a day and if I ate three I wasn't gonna freak out, you know, I mean I just knew I was never gonna get that much fish but I did, you know, get the information, I looked at it, did my own research and realized then the rest of the time I didn't really worry about what I was eating cuz I knew I wasn't gonna eat fish every meal, every day to get to the point where I would have to be worried about anything if there were ever any worries" – A woman from Duluth, MN*
- *"I guess it kinda seems like how like my husband and I would probably work together, I'd say like, oh, my gosh, I heard this and we would probably, you know, be like little, you know, Google and something like that and figure out, oh, you saw this but I saw this that said this and I don't know, it just seems like I could probably relate to this story cuz that's probably how I would go about it more likely than the first two" – A woman from Duluth, MN (Rural)*

Unfavorable Reactions to the Story

There were two comments coded as unfavorable and "unrealistic." Sample quotes are outlined below:

- **Unrealistic story:** Both unfavorable codes were assigned this category, for citing that the events seemed unrealistic. The two quotes are outlined below:

- *“I just, I mean, I kinda feel like, you know, they do mention the Minnesota Department of Health Guidelines in here, and I almost feel like, to me, I almost feel like they're creating an unnecessary worry and stress for pregnant women when they're already worried and stressed. So for women to have to be worried about where they eat their fish, where it was caught, where it, you know, I just, I don't know, to me, um, you know, the clinic I worked at, we ended up just – we stopped handing out those brochures because it was creating too much. We were getting phone calls about, oh, my gosh, like I said, I had three tuna sandwiches this week and I was only supposed to eat two, am I gonna be ok? It's like, I don't know, I just feel that these guidelines are just kinda putting false fear into people” – A woman from Duluth, MN*
- *“I just can't imagine the majority of the people eating this much fish. I mean, I think all of us being highly intelligent women and being familiar with fish and eating fish, we're gonna think about it more than like the average people so I guess in my mind I think about our younger generation and the amount of processed foods they eat, thinking that it's ok to drink Monster drinks and, you know, Red Bull when you're pregnant” – A woman from Duluth, MN*

Summary of Narrative Analysis

Although all three narratives elicited some positive and negative reactions, the response to narrative 3 was overwhelmingly positive. The responses to the other two narratives were mixed with narrative 1 perceived more favorably than narrative 2.