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Author's Statement

I originally wrote the following paper for the course 85-221 Principles of Child Development. This course was taught by Professor Sharon Carver, who has both academic and personal perspectives on child development, since she is also the director of CMU's Children's School. The course aims to introduce the study of developmental psychology and how it is affected by historical and cultural contexts. The goal of this assignment was to apply concepts from three approaches that exist within developmental psychology - Piaget's stages, language development, and information processing - to a practical situation parents may face in real life: talking about difficult topics such as food insecurity with their children. This topic felt meaningful to me since my family had financial struggles as I was growing up, which I was aware of, but didn't really know why since it wasn't talked about much. As with other sciences, knowledge for knowledge sake is cool! But for me, the larger value of psychology lies in its potential to help people in some way, and I think using research to guide our interactions with others is one way of applying this principle.

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Introduction

When raising children, parents often face difficult decisions about how to discuss various complicated issues with their children. Imagine, for example, your child coming home one day and telling you about how their friend always comes to school early for free meals because they can't eat breakfast at home. Then your child asks a question you might not be sure how to answer: "Why do some people not have enough food at home?"

As of 2019, about 10.5% of people in the U.S. were faced with food insecurity, so it's not unlikely for a child to encounter someone in this kind of situation (Hayes, 2021). However, explaining why this happens isn't so simple. While poverty (which itself is a complex issue) is the most common cause, food insecurity has many different influencing factors and obstacles to potential solutions, so parents might not know how to explain it appropriately to their children.

This scenario is just one example of how understanding child development can have real, useful applications in people's everyday lives. Over the past century, scientific research in the field of developmental psychology has made great strides in proposing several milestones and mechanisms of development in children. Milestones, which describe what changes occur at what ages, are useful because they help guide our understanding of what children of different ages can meaningfully understand. Mechanisms, which describe how changes occur, help determine the best ways to facilitate children's learning. Knowledge of these changes can guide how someone might best answer a question about food insecurity differently for a child who is 5, 9, or 13 years old.

Explaining Food Insecurity: Children at 5

For a 5-year-old child, a parent could answer a question about food insecurity by simply saying: "Sometimes people don't have enough money to buy all the good food they need at the grocery store."

A 5-year-old child would be in Piaget's preoperational stage of development (Siegler et. al, 2020). Children in this stage are generally egocentric, meaning they may have trouble seeing things from another person's perspective or understanding that things don't always have something to do with them. This, combined with their limited ability to form accurate causal inferences, could lead them to believe that external issues are somehow their fault. For example, a 5-year-old child faced with understanding food insecurity may incorrectly believe that the fact that they took too much dessert caused someone else to not have enough food. In this case, mentioning a real cause of the issue – not having enough money – can help the child see that it's not their fault. Preoperational children also struggle to consider more than one variable at a time, so they probably wouldn't understand a more in-depth explanation of the causes of food insecurity.

At 5 years old, children have mostly mastered language but still have limitations regarding their level of vocabulary, complex grammar, and ambiguous language. With this in mind, my example uses simple vocabulary that the child would know and a grammatically simple sentence to ensure that the child would understand. I avoided using any metaphors or words with double meanings, as children of this age have difficulty balancing multiple possible meanings and using context clues to figure out which interpretation is correct. Such complexity is confusing because of these children's limited working memory and limited ability to consider multiple variables or perspectives.

Additionally, a 5-year-old child would have a limited attention span, which is one

concern affecting their understanding as described by information processing theories.¹ To accommodate for attention limitations at this age, an explanation is best kept relatively short. Another thing to keep in mind due to their limited attention is checking for understanding. A young child might seem to be paying attention without deeply processing what you're saying, so it's helpful to ask them to explain the concept back to you during a conversation. Although it's often good to relate new concepts to their existing knowledge, a 5-year-old likely wouldn't have much experience with things like money and hunger to build on.

Explaining Food Insecurity: Children at 9

By the time a child is 9 years old, the best way to explain complex issues would be very different than for a 5-year-old. Instead, a good potential answer to a question about food insecurity would be: "Usually when someone doesn't have much food at home it's because their parents can't afford it. This could be because they are currently having trouble getting a job, or their job doesn't give them enough money to pay for all the things they need. This doesn't apply to most people, and it's not something our family will need to worry about, but lots of people struggle with not having enough to eat." This kind of explanation takes into account a 9-year-old's improved cognitive and language capacities as well as their continued limitations.

Nine-year-olds fall into Piaget's concrete operational stage of development (Siegler et. al, 2020). This stage is characterized by improved logical reasoning and limited systematic conclusion skills. Another characteristic of this stage is an interest in procedures and details. For that reason, this answer includes more details about why food insecurity happens to help

¹ In this context, "information processing theories" refers to the body of research and theorists that focus on the structure of the cognitive system and specific mental processes used by children.

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children of this age form a deeper understanding of the issue and satisfy their interest in details. However, children at this stage still haven't developed the capacity for abstract reasoning like those in older stages, so I didn't include much discussion of greater societal issues or hypothetical scenarios. Nine-year-olds are also likely to have fears about these kinds of problems affecting them, even if this is unlikely in reality, and they have learned that some things are irreversible. Reassuring them that their family is secure enough to always have access to food can help assuage these fears. Including the word "currently" is meant to indicate to them that dealing with food insecurity isn't permanent or hopeless.

As a child ages, parents can begin using somewhat more advanced vocabulary and sentence structure to explain things to their children, which helps provide a deeper understanding. Unlike the explanation directed at a 5-year-old, this example includes longer sentences with multiple clauses. The vocabulary is kept relatively simple, but it isn't as restricted. A 9-year-old can also now understand words that may have multiple meanings, such as "apply" and "trouble" (meaning 'experiencing difficulty' as opposed to 'being in trouble'). Information processing theories posit that at age 9, children will have more life experience and greater consideration of others, so I included some information about how common food insecurity is. This is also another way to provide the kinds of details that children in the concrete operational stage like to know. Additionally, the improved attention and memory of 9-year-olds allows for a longer explanation than one designed for younger children.

Explaining Food Insecurity: Children at 13

At the age of 13, children are starting to become teenagers and gain the ability to understand difficult concepts at an adult-like level. Therefore, parents could give a longer 5

explanation of food insecurity, such as: "Your friend is probably dealing with something called food insecurity, which is when someone doesn't have access to enough nutritious food at home. This usually happens because of people not being able to afford adequate food for various reasons. These include unemployment, having a low-paying job, or having a lot of other costs that aren't optional, like medical costs or high rent. You don't have to worry about these things happening to our family because your [other parent] and I have saved up extra money to prepare for them. However, lots of people do struggle with this issue. If you notice that somebody doesn't seem to have enough food, you might be able to help by offering them food or telling an adult who can refer them to resources like food banks or government programs meant to help people in these situations."

Thirteen-year-olds have progressed into Piaget's final stage of development, the formal operational stage, in which children have become capable of higher-level abstract thinking (Siegler et. al, 2020). They can consider perspectives and experiences from the lives of other people, like the situations that may cause food insecurity that were included in this explanation. Their ability to imagine possibilities may also lead to the emergence of fears of similar things happening to them, but these fears are more realistic than those of younger children. This is why I included reassurance that they won't have to face food insecurity along with a reason why this won't happen (e.g. reassurance that their family is financially prepared).

There aren't really any age-related language limitations for a thirteen-year-old. However, just like when explaining an unfamiliar topic to an adult, it's still best to avoid overly technical or uncommon vocabulary. There also isn't much age-related restriction to working memory or processing capacity at this point, which is a concern for younger children emphasized by information-processing theories. Because adolescents are beyond such

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processing limitations, I was able to use a longer and more in-depth explanation to try to give the most accurate depiction of food security. At the end of this explanation, I included some ways that a child may be able to help people facing food insecurity. This serves two purposes. The first is to make it seem more likely that help will be given to those who need it and instill the value of helping others. The second is to appeal to the child's sense of independence suggested by information-processing theories, since children of this age like doing things on their own and don't want to feel like there's nothing they can do.

Conclusion

Piaget's detailed descriptions of different developmental stages tended to be the most useful for providing guidelines of what children can and can't understand, as well as for providing guidance about children's potential fears for their safety upon hearing about difficulties in others' lives. Language theories and information processing theories were more helpful for determining general qualities of the provided explanations, such as length, vocabulary and grammar complexity, and level of detail. In these ways, knowledge generated by research under these theories is immensely useful for developing explanations that are truthful and useful, but also cater to the particular needs and limitations of different children. However, there is some further advice I believe is important for explaining issues to children of all ages that wasn't particularly highlighted by any of these three theories, which is to be aware of our biases and how we express our emotions. Children can pick up on and learn these things quickly even if someone's emotional messages are unintended.

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