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Introducing Nutrition Education to Preschoolers

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Introduction

There is a lack of nutrition education in preschool curriculum, which can lead to multiple health issues throughout childhood and possibly obesity later in life. By exposing preschool children to nutrition education, they can learn about the importance of eating healthy and making healthier eating choices. Therefore, I created a three-day lesson on nutrition for preschool students at the Seaside Children's Center in Seaside, California.

Needs Statement

It is crucial to introduce nutrition education to children as early as possible, and should be an integral part of all preschool curricula. According to the Centers for Disease Control and Prevention (2019), U.S children are receiving less than eight hours of required nutrition education each school year, which is far below the hours needed to affect behavior change. In order for nutrition education to make an impact on the children and their families, it should become an integral part of the curriculum. Research supports that the lack of nutrition education can be a major contributor to the increase in early health issues and childhood obesity (Rogers et al., 2015). There are many factors that contribute to the development of children's eating habits such as school, parents, and economic status. Each one plays its own role and can dramatically affect the kinds of foods that children choose and consume.

Early exposure of nutrition education to preschoolers can influence their eating habits. The first 5 years of life are a crucial window of development where the children are forming food preferences and eating habits (Joseph et al., 2015), and this is the perfect time to teach them about healthy eating habits and choices. By teaching them about nutrition we are encouraging

children to be their own advocates of the kinds of foods that they want to consume. Children at such a young age are obese and because eating habits are established by the age of three, it's important to begin promoting healthy eating habits as early as possible (Dissanayake, 2010). Attending preschool is a big milestone in a child's life and a significant portion of their day and meal times are often spent in school. For many children, preschool is the first place where they are exposed to foods and eating habits that may differ to the ones in their homes (Joseph et al., 2015) which makes it the ideal place to begin to introduce healthy food choices such as fruits and vegetables. One study collected data on a short-term nutrition education intervention program at a preschool and the results showed that after the program, there was a significant increase in the children's choice of a healthy snack over an unhealthy snack (Joseph et al., 2015). This shows that incorporating nutrition education into the preschool curriculum can help shape the children's eating habits for the better.

Although integrating nutrition education in the curriculum is a good start, it's not enough to fully make a change. According to Joseph's (2015) study, "It is estimated that children in child care are consuming only one third of a serving of fruits and one quarter of a serving of vegetables per day." (Joseph et al., 2015). Schools should teach about nutrition as well as be offering healthy snack choices and substitute some of the unhealthy lunch items like pizza and burgers and fruit juice for healthier alternatives. This will allow children to explore and try new foods as well as help them learn to identify between healthy and unhealthy food choices.

Another important factor that plays a role in children's poor eating habits is the family's social-economic status. According to Rogers et al, "children in the lower-income community reported substantially less physical activity, poorer nutritious food consumption, more

consumption of fried food and sugary beverages, and much more time watching television or playing video games" (Rogers et al. (2015). Low income families are more likely to consist of people of color and minority groups like African American's and Hispanic/Latinos. Low income families are more likely to have food insecurity which makes it harder for them to provide healthy foods for their children (Asfour et al., 2015). Low income families are also more likely to provide foods that are easy to get and that are cheap. According to a study on Latino parent's perceptions on healthy eating, parents expressed that healthy living is expensive and that healthy foods like organic foods with less preservatives were always more expensive (Ross et al.,2018). Another perception that parents have is that schools do not provide enough healthy food choices and its changing the way the children eat (Asfour et al., 2015). For many parents this is discouraging them from making healthy foods at home because they know their children won't eat it. By teaching nutrition education in preschool we are not only teaching children but also their families that making healthy eating choices is easier than they may think it is. Children should be exposed to new fruits and vegetables and feel motivated to try them.

Schools are an important part of a child's learning, but the family is a crucial source of education for them as well especially when it comes to learning and adopting eating behaviors. Parents are the biggest influences on their children's eating because they are who determine what food is available for their children. According to Joseph (2015), "children increased their consumption of FV's [fruits and vegetables] when parents' consumption increased, as well as when the availability of food in the house was high" (Joseph et al., 2015). Since parents are the ones who decide what food they make available at home the children would be more inclined to consume healthier foods if the parents offered them at home. The children would also be more

inclined to eat the healthy foods if they see their parents modeling behaviors like eating and enjoying eating healthy foods in front of their children. The foods that are available in children's homes can vary due to things like income, culture and family background, and that all contributes to the development of their food consumption preferences.

Given that the implementation of nutrition education at an early age can help promote healthier eating choices among the children and their families, I have created a three-day lesson on nutrition for a preschool class at the Seaside Children's Center in Seaside California.

Theory of Development

According to Piaget's Theory of Cognitive Development, preschool-aged children, between two and seven years of age, are in the preoperational stage of cognitive development. During this stage, children are egocentric. Egocentrism refers to "a child's inability to understand that another person's views or opinions may be different than their own." (Clarke, 2019). This limitation means that children at this age think that everyone thinks as they do, and can't be expected to relate to others in a thinking manner. Given that they are egocentric, it is likely that if they come across a food item that they haven't had or don't recognize they may not fully understand that the other people eat different foods that they do. The preoperational stage of development is also when children learn best through the use of symbols and colors (Huitt & Hummel, 2003). In order to help the participants understand the activities, I will be using books with lots of pictures and colors, as well as colorful activities. For example, one of the activities is primarily focused on sorting the different fruits and vegetables into the correct color category. Their language and vocabulary are quickly growing as well (Huitt & Hummel, 2003). Learning

the names and colors or the different fruits and vegetables will help their vocabulary grow as well as their knowledge of nutrition.

Consideration of Diversity

Two issues of diversity of the participants are ethnic diversity and age. Although the school is diverse, I noticed that the classroom that I will be teaching in is primarily Latino. Ten out of the fifteen children in the classroom are Hispanic/Latino, one child is Asian, one is Caucasian, one is African American, and two are of Middle Eastern backgrounds. The second issue of diversity is age. I am teaching children that are 3 and 4 years old, which is only a portion of the age for the entire school. The Seaside Children's Center shares the building with an Elementary school, which means that the age of the children varies.

Two issues of diversity in the content are language and food choices. My lessons will be in English primarily, so the students have to be able to understand English. Even though the students are primarily from a Latino background they are able to communicate and understand English. The second issue of diversity involves food choices that will be used in the activities. The group that I will be delivering my lessons to have different family backgrounds and cultures, therefore I will try to incorporate foods from different cultures into my curriculum to try and make it more inclusive. I want to incorporate foods that the children eat and are familiar with but I also want to find new fruits and vegetables that they may not even know exist to peak their curiosity.

Learning Outcomes

I intend to provide three, 25-minute nutrition lessons in a preschool classroom at the Seaside Children's Center.

By the end of the project, the students will:

1. be able to identify two different fruits or vegetables of different colors.
2. be able to sort healthy foods from unhealthy foods.
3. be able to identify one benefit of eating healthy.

Method

Day 1

The first thing I did was introduce myself to the children. Then I explained to them that I was going to teach them about healthy eating and why it's important to eat healthily. I then asked someone to raise their hand and tell me what a vegetable was and what a fruit was. Once we established a definition, I explained that a vegetable grows from the ground and fruits mostly grow on trees and have seeds. I then told them that I would be reading them a story before doing an activity together. I then read them the book titled *Oliver's Fruit Salad* (French, 1998). As I read them the book, I asked them to help me point out the different colored fruits that they saw in the book. After reading the book, I mentioned how important it was to eat fruits and vegetables of all different colors just like Oliver did in the book. They then proceeded to form a circle around the carpet, and I handed out a picture card with a fruit or vegetable to each child. Each child took a turn telling me what the name of the item on their card was and to place it into the circle of the appropriate color. See Appendix A. The sorting activity took 15 minutes to complete and to close off the activity I thanked them for being such good listeners and handed out fruit-shaped stickers.

Day 2

I began day two by asking the children if they remembered what a fruit and a vegetable was. I then explained that eating fruits and vegetables is good for our bodies because they give us the nutrients that we need to grow strong. I then read them the book titled *Eating Well* (Gogerly & Gordon, 2012). While I was reading the story I pointed out a couple of food items and asked them if they thought it was a healthy food item or not. After reading the book, I showed them the activity board and told them that the little boy in the center of the board was named Timmy and that he needed help sorting out food into "healthy" and "sometimes okay" categories. I then made sure to tell them that eating the foods that were on the "sometimes okay" side of the board are still okay to eat but not every day or it could make them feel sick. We then spent the next 15 minutes sorting the different foods into the two categories. See Appendix B. I ended the activity and I thanked them for being such good listeners and handed out stickers.

Day 3

For day three I will remind them of the story, I read last week and that the character James decided to substitute healthy foods for the sweets and junk food that he was eating because he wanted to be strong like his dad and because all of the junk food made his stomach feel really sick. Then I will read them the book titled, Why Should I Eat Well? (Llewellyn, 2005). After reading the story, they will have a group discussion about the reasons why eating healthy is important and why it's good for our health. I will write down the children's answers on the whiteboard. The children will then be divided into two tables and will have an opportunity to taste some fruits of each color of the rainbow. To end this activity, I will once again thank them for being good listeners and for participating and I will hand out some stickers.

Results

The first learning outcome was that the children would identify two different fruits or vegetables of different colors. I believe this learning outcome was fully met. After I read the book, *Oliver's Fruit Salad* (French & Bartlett, 1998), we had a brief discussion about why it is so important to have fruits and vegetables of all colors of the rainbow. Thirteen out of the 14 students were able to successfully name the vegetable/fruit item on their card and sort it into the correct color without any help. One child could not identify the item on his/her card, but after explaining what summer squash was the child was able to sort it into the yellow category without any more assistance. After the initial round, every child received a second card and this time 100% of the children named and sorted the cards correctly.

The second learning outcome was that the children would be able to sort healthy foods from unhealthy foods. Before the activity, I read them the book called *Eating Well* (Gogerly & Gordon, 2012) to give the children some examples of healthy and unhealthy foods. This learning outcome was also fully met. For this activity, each child received two picture cards with a food item and they were each going to have to clip the picture to either the healthy or sometimes okay side of the cardboard circle. See Appendix B. Nine out of the 10 children were able to correctly place the food items into either the healthy or sometimes okay category without any assistance. One child had a card with the picture of chicken nuggets, and when I asked him to place it in the category he thought it belonged he clipped it onto the "healthy" side. As soon as that happened the rest of the children told him chicken nuggets were not healthy and coached him until he clipped it under the "sometimes okay" side. The two sides of the activity were originally labeled as "healthy" and "unhealthy" but the teacher of that classroom preferred me to change the labels to "healthy" and "sometimes okay". Due to the change of wording, I believe it created confusion

for the children because there was not enough clear distinction between the categories. Also, since some of the food items they were sorting were items like burgers and pizza and chicken nuggets which are food items that they may be consuming on a regular basis, they may have been confused as to where to sort them. Although one child did not initially sort his card correctly, after coaching, he was able to successfully meet the learning outcome.

The third learning outcome was that the children will be able to identify one benefit of eating healthy. I believe this learning outcome was partially met. After I read the book *Why Should I Eat Well?* (Llewellyn & Gordon, 2005), I asked them to name some of the benefits of eating healthy. Out of ten children, only five participated. Three out of the five children gave me a benefit and two out of the five children gave me a consequence of not eating healthy. See Table 1 for their responses. The low participation could be due to the way I posed the question to them. I asked them, "What are the benefits of eating healthy?" and I think I should have used a different word instead of "benefit" to avoid the children's confusion. Since not all of the children participated, I do not consider this learning outcome fully met.

Discussion

I believe this project was successful. The children with whom I worked grasped the concepts easily and were engaged throughout my project. The children seemed to enjoy my project and learned a lot. The purpose of my project was to teach children about the importance of eating healthy and I think my project did work. The three learning outcomes were that by the end of the project, the students would be able to indicate two different fruits and/or vegetables of different colors, be able to sort healthy foods from unhealthy foods and be able to identify two benefits from eating healthy. The first learning outcome was fully met and every child was able

to successfully name and sort two fruits and/or vegetables into their correct color category. The second learning outcome was also fully met. Every child was able to correctly sort two foods into either the healthy or sometimes okay category, and although one child did not sort one of his food items correctly on the first try, with the help of his classmates he was able to fix it so I consider this learning outcome fully met. The third learning outcome was only partially met. Due to the low participation that I had for this activity, I could not assess whether all of the children met the learning outcome. However, the children who did participate were able to name at least one benefit of eating healthy and since the responses were only from part of the class I considered this learning outcome partially met.

Since the children that I worked with were in the preoperational stage of Piaget's Theory of Cognitive Development, they learn best through the use of symbols and colors. I made sure to point out that fruits and vegetables are all different shapes, sizes, and colors and I used the concept of eating a rainbow to teach the children the benefits that eating healthy has on our bodies. They enjoyed sorting all the fruits and vegetables into the correct color categories. This stage is also a time for vast vocabulary growth and by introducing vegetables that they may have never heard of I helped them expand their vocabulary.

In terms of diversity, I think that I included everyone. I could have included the use of bilingual materials in order to make sure that every child fully understood the concepts. I also realized that the foods that I used in my activities were what is most commonly consumed here in the United States. Although every child lives in this state and knew what all of the foods were, they each had different cultural backgrounds which means the foods that they may be consuming on a regular basis were not accurately represented in my activities.

If I had to do this project again, I would make sure to incorporate more bilingual materials. I would make sure that all of the picture cards had both the English and Spanish names for the different fruits and vegetables. The classroom where I executed my project was predominantly Hispanic/Latino, but they were all proficient enough in English that everyone was able to participate and learn the concepts even though my curriculum was all in English. Something else that I would change in my curriculum would be the clear distinction of healthy vs. unhealthy foods. The teacher in that classroom preferred that I use the term "sometimes okay" instead of unhealthy and it created confusion for some of the children. Lastly, I would change the activity for day 3 and make it more interactive and fun. I noticed that having a group discussion with the preschoolers did not really work for me. I did not get as much participation as I would have liked and I think it was partially due to confusion about the question. I think they would have participated more if it would have been a worksheet or even some kind of activity that required them to get up and move around.

References

Asfour, L., Natale, R., Uhlhorn, S., Arheart, K. L., Haney, K., & Messiah, S. E. (2015). Ethnicity, household food security, and nutrition and activity patterns in families with preschool children. *Journal of Nutrition Education and Behavior*, *47*(6), 498–505. https://doi.org/10.1016/j.jneb.2015.07.003

Clarke, J. (2019, June 29). Do You Have an Egocentric Person in Your Life? Look for These Signs. Retrieved from https://www.verywellmind.com/what-does-it-mean-to-be-egocentric-4164279.

Dissanayake, A. (n.d.). Promoting Healthy Eating in Children - Amy Dissanayake, 2010. Retrieved from https://journals.sagepub.com/doi/pdf/10.1093/innovait/inp210.

French, V., & Bartlett, A. (1998). *Oliver's fruit salad*. Hachette Children's Books.

Gogerly, L., & Gordon, M. (2012). *Eating well*. London: Wayland.

Huitt, W., & Hummel, J.. (2003). Piaget's Theory of Cognitive Development. Retrieved from https://www.scirp.org/(S(oyulxb452alnt1aej1nfow45))/reference/ReferencesPapers.aspx?ReferenceID=1976623.

Joseph, L. S., Gorin, A. A., Mobley, S. L., & Mobley, A. R. (2015). Impact of a short-term nutrition education child care pilot intervention on preschool children's intention to choose healthy snacks and actual snack choices. *Childhood Obesity*, *11*(5), 513–520.

Llewellyn, C., & Gordon, M. (2005). *Why should I eat well?* Hauppauge, NY: Barrons.

Nutrition Education in US Schools. (2019, August 21). Retrieved from https://www.cdc.gov/healthyschools/nutrition/school_nutrition_education.htm.

Rogers, R., Eagle, T. F., Sheetz, A., Woodward, A., Leibowitz, R., Song, M., … Eagle, K. A. (2015). The Relationship between Childhood Obesity, Low Socioeconomic Status, and Race/Ethnicity: Lessons from Massachusetts. *Childhood Obesity*, *11*(6), 691–695. doi: 10.1089/chi.2015.0029

Schoeppe, S., & Trost, S. G. (2015, September 28). Maternal and paternal support for physical activity and ... Retrieved from https://www.researchgate.net/profile/Stephanie_Schoeppe/publication/282313746_MaterNal_and_paternal_support_for_physical_activity_and_healthy_eating_in_preschool_children_A_cross-sectional_study/links/561b180608aea8036722ba1c/Maternal-and-paternal-support-for-physical-activity-and-healthy-eating-in-preschool-children-A-cross-sectional-study.pdf.

Taverno Ross, S. E., Macia, L., Documét, P. I., Escribano, C., Kazemi Naderi, T., & Smith-Tapia, I. (2018). Latino parents' perceptions of physical activity and healthy eating: At the intersection of culture, family, and health. *Journal of Nutrition Education and Behavior*, *50*(10), 968–976. https://doi.org/10.1016/j.jneb.2017.12.010

Table 1

List of the children's responses to the question "What are the benefits of eating healthy?"

Child 1	We grow strong
Child 2	We run fast
Child 3	We have more energy
Child 4	Gives us Spots/ acne
Child 5	We get sick

Appendix A


YEL
GR
BL
PURPL
WHITE
Peach
Kiwi
Broccoli
Raisins
Lemon
Blackberries
Coconut
Red Bell Pepper
Peas
Avocado

Appendix B


Healthy
Sometimes
Okay
Fruit Salad
Carrots
Apple
Bananas
Fries
Ice cream
Pizza
Cheese Burger
Hot dog
Soda
Cookies
Chicken Nuggets
Cupcake
Salad
Oatmeal
Eggs
Yogurt
Milk
Peas
MILK