

The Candy Test: Controlling Impulses

¹ A little, 4-year-old boy is alone in a room sitting at a table staring at a piece of candy. He has to make a decision. If he can wait until his teacher returns in a few minutes, she will give him two pieces of candy. But if he can't wait and decides to eat the piece that is in front of him, he won't get a second piece when she returns. Amazingly, what he decides to do (eat the one piece now or wait and get a second one in a few minutes) can help us predict the type of grades he will get in high school, whether or not he will graduate from college, what his health will be like when he is an adult, and whether or not he'll get a divorce in the future.

² In his book, *The Marshmallow Test*, the author Walter Mischel discusses his studies concerning willpower and the amazing effect it has on people's everyday life. (By the way, "marshmallow" is a piece of candy that looks like a small, puffy, white pillow.)

³ His famous studies involved 4-year-old children. The experiments took place at a pre-school attached to a college campus. At this pre-school, there was a monitoring room with one-way glass windows through which researchers could watch children in a play area or in special small research rooms.

The children could not see into the monitoring room.

⁴ For the study, one child was brought into a research room, which the researcher told him/her was "the Surprise Room" and that they were going to play some games. The child sat at a small table that had a bell on it.

⁵ Before starting the experiment, the researcher wanted to make sure the child felt that he/she could trust him. The researcher stepped out of the room, the child rang the bell, and the researcher immediately returned so that the child could see how to get the researcher to return.

⁶ Then the "game" began. First, the child selected a sweet that s/he liked, for example, a cookie, piece of chocolate, marshmallow etc. At the small table, next to the bell, the researcher put a small tray with two of the sweets (e.g. two cookies) in one corner and one piece (e.g. one cookie) in the other corner. There was nothing else on the table or in the room, including no toys.

⁷ Let's say that the child was "Alice," and she chose cookies as her reward. The researcher told Alice that she had a choice.

She could eat the one cookie immediately, or if she waited, she could have the two cookies. Then the researcher told Alice that he would leave the room. If she decided to eat the one cookie, she should ring the bell, and he would return and she would only get the single cookie. But if she could avoid ringing the bell until the researcher returned, she could eat the two cookies.

⁸ The researchers secretly observed each child. Interestingly, some children rang the bell before the researcher had left the room so that they could eat the one cookie immediately. Others waited a while before ringing the bell, and still others did not ring the bell at all and waited until the researcher returned (sometimes up to 20 minutes later).

⁹ In his book, Mischel, describes what some of the children did while waiting for the researcher to return. One child, Inez, stared at the cookies for 10 seconds. Then she suddenly reached for the bell but quickly stopped herself. Then she held her finger over the bell almost touching it and then started laughing. She continued to tease herself this way and then whispered, “No, no” as if to stop herself from ringing it. After 20 minutes, the researcher returned,

and Inez triumphantly received the two cookies.

¹⁰ Other children distracted themselves in various ways. One of them moved his chair away from the table and tipped it back and forth against a wall making loud bangs and stared at the ceiling. Other children carried on a monologue with themselves. One boy “played” with the bell by picking it up and holding it above himself without ringing it. Then he moved it as far away from himself as possible.

¹¹ However, most of the kids were only able to wait an average of less than three minutes before they rang the bell and ate the one piece of candy. Only about 30% of the children were like Inez, who was able to keep herself from eating the candy until the researcher returned.

Follow-up Research

¹² Here is what is amazing about this research. Between 1968 and 1974, the research included more than 550 children. Over the years, every decade, the researchers contacted these preschoolers, their parents and teachers when they were in high school, when they were in their 20s and

later in their lives. They did that in order to do follow-up research.

¹³ The researchers found that when these children were in high school, the ones who had had more self-control (i.e. the high-delayers) were able to concentrate better on their studies; they were better able to handle frustrating situations; they were more intelligent and confident.

They had the higher the SAT scores (a high school test for college entrance) and had better social skills during their teenage years. The children who couldn't wait (low-delayers) tended to have more behavior problems in high school.

¹⁴ When high-delayers (the children who could wait) were adults, they were less likely to become addicted to drugs; they were able to reach a higher level of education and had a more healthy body weight. They were also better able to keep close personal relationships and solve interpersonal problems. And they were less likely to suffer from depressions.

The Ability to Delay

¹⁵ Mischel, the author of *The Marshmallow Test*, and his research colleagues wanted to know how these pre-schoolers were able to

make themselves wait when they really wanted to eat the one piece of the reward; in other words, he wanted to understand how they were able to *control their impulses*. If they could find this out, it could help people figure out how to stop engaging in bad activities like smoking, over-eating or even playing video games instead of studying.

¹⁶ In one experiment, the researchers had children participate in two different conditions. In one, the children chose their reward (e.g., the piece of candy), and the researcher put the pieces on a plate in front of the child. In the second condition, they covered the reward, so the child could not see it.

¹⁷ As you probably guessed, it was much easier for the children to wait when the reward was covered. In fact, the ones who could see the reward waited on average less than a minute, but the ones who couldn't see it waited almost ten minutes.

¹⁸ Mischel observed that the children who were able to distract themselves were better able to control their impulse to take the candy. Some did this by covering their eyes or sang songs, created games with their hands and feet, played with their toes like

they were piano keys or closed their eyes and tried to go to sleep.

¹⁹ In one experiment, the researchers suggested the children think of some “fun thoughts” while waiting and even helped them think of some happy thoughts. Those children were able to wait more than 10 minutes even when they could see the candy.

²⁰ In another experiment, the researcher told the children before he left the room, “If you want to, you can pretend that the candy is not real, but just a picture; just put a frame around them in your head, like in a picture.” In this situation, the children were able to wait six minutes.

²¹ Also, children were much better at waiting when the researcher told them to imagine that the marshmallows were puffy clouds floating in the air rather than delicious candy.

²² Mischel came to the conclusion that children can better control their impulses if they can distract themselves. He believes that parents and teachers can help children and their students learn techniques for doing this. Children who have more willpower

will feel that they have more control over what happens to them. As a result, they will be more optimistic and have more success in the future. According to Mischel, “Once you realize that willpower is just a matter of learning how to control your attention and thoughts, you can really begin to increase it.”