

THE SCIENCE OF SELF-CONTROL

39

(1) What is the most important characteristic a person can possess that will guarantee them success in life? Can there be only one trait that ensures success? Not likely, but if you could have one trait to help you be successful would you pick self-control? Self-control seems quite a boring characteristic to have, but you will be amazed at how powerful this little trait can be.

(2) In the 1960s and 1970s, Walter Mischel and Ebbe B. Ebbesen of Stanford University conducted what is now famously known as the “Marshmallow Experiment”. The original purpose of this test was to see when self-control and the ability to delay gratification developed in children. Delaying gratification means that though there is something very rewarding in front of you, you choose to delay having it because delaying will gain you a greater reward in the end. Giving in to instant gratification means that you choose the immediate, but less valuable reward, over the delayed but better reward.

(3) A common example would be choosing to play a video game when you get home from school instead of completing an assignment due for school the next day. The video game is immediately fun and therefore instantly rewarding. It’s harder to tell yourself that you should do the assignment first to ensure that it gets done and that there will be time to play the video game after you’ve completed the assignment. For this, you have to be able to delay gratification (postpone playing the game) for a more important reward (completing the assignment on time and getting a good mark later) even if the more important reward isn’t as enjoyable or fun immediately.

(4) In the case of the marshmallow experiments, over 600 children from the ages of 4 to 6 years old were tested to see if they could delay gratification for a greater reward. Each child was seated by themselves in a room at a table. An adult placed a marshmallow on a plate in front of them. The child was told that the adult would leave the room and return after 15 minutes and if the child resisted eating the marshmallow on the plate, they would be given an additional marshmallow as a reward. What do you think these children did?



(5) The marshmallow experiment revealed three types of responses. Some kids ate the marshmallow on the plate as soon as the adult left the room. Some kids tried to distract themselves from eating the marshmallow but could not wait the entire 15 minutes before they gave up. The third group of kids successfully distracted themselves for 15 minutes and gained another marshmallow.

(6) By themselves, these results are not too significant, but when combined with follow up studies done on these children years later, the findings are remarkable. The studies revealed that the subjects who showed the most self-control as children became adults who achieved higher SAT scores and higher educational attainment, had lower levels of obesity, better responses to stress, better decision making skills, better marriages, were happier in their careers and had better social skills as reported by their parents.

(7) Interestingly, MRI (magnetic resonance imaging) studies on the adult brains of these subjects revealed distinct patterns of activity. The prefrontal cortex, which is responsible for decision making and inhibiting inappropriate behaviors, was more active in the group that showed the most ability to delay gratification. The ventral striatum, which is responsible for processing rewards and addictive behaviors, was more active in the group that showed the least ability to delay gratification.

(8) If self-control is related to future success, then it is important to figure out how to promote more self-control and self-regulation in young people. However, what if you suspect

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that you would have been the kind of kid who couldn't resist eating the marshmallow? Does that mean that you are doomed? No. All it means is that kids for whom self-control comes easily are lucky and have an advantage, but these kids are not the majority and studies have shown that the ability to delay gratification can increase with age and more importantly, with practice.

(9) Better habits can be formed by people for whom self-control does not come naturally. A habit is any behavior that when performed repeatedly enough, becomes a routine that no longer requires as much energy or self-control to maintain. For example, the habit of always

doing your homework when you get home from school. For the first couple of weeks it will be difficult to maintain this behavior, but after a month of repeating this behavior, a habit will develop. Many behaviors require around 30 days to become habit, after which time, there is less need to exert self-control as an automatic routine develops. Indeed, more studies are indicating that the lack of self-control around things like eating junk food or excessive cell phone use aren't just simple cases of a lack of self-control, they are cases of bad habit formation. The good news is that research around habit formation indicates that bad habits can be replaced by good ones.

Article Questions

- 1) If you were 5 years old, how do you think you would have performed in the marshmallow test?
- 2) In the follow up studies to the marshmallow test, the children who could delay gratification the longest had more success as adults. List the types of successes they had.
- 3) If you want to become a professional basketball player one day you will need to delay gratification in many ways to be successful. Describe three ways you will need to exercise self-control/delayed gratification and why these would be necessary to achieve your goals.
- 4)
 - a) Imagine that someone you know (it could be yourself) has a difficult time giving their full attention to a lesson because they are checking their cell phone during class. They have tried to exert self-control but find themselves giving into instant gratification most of the time. Why do you think it's difficult to resist this temptation?
 - b) If someone wanted to develop a good habit that would prevent them from checking their cell phone, what do you propose they could do and how long should they do it for and why?