

Testing the Placebo Effect (With Chocolate)!

1 Introduction

Our probability experiment is about proving the existence of the placebo effect. This is an effect which cannot be attributed to the properties of the placebo itself (the taste of the chocolate in this experiment), and therefore must be due to a person's belief about the placebo (the chocolate brand). Our group did this through a fun experiment that we were sure people would be happy to participate in. We gave our participants two identical pieces of chocolate and told them one was a Cadbury Dairy Milk, and the other a Woolworths Home Brand chocolate, to see which one people preferred. A drink of water was provided in between each chocolate so it was harder for them to tell that they were the same. After they had tasted both chocolates, we asked them which they preferred. We were open to giving them time to think and not persuading them to benefit or influence our results. Once we had their opinion, we would get the next person and repeat it one by one.

2 Hypothesis

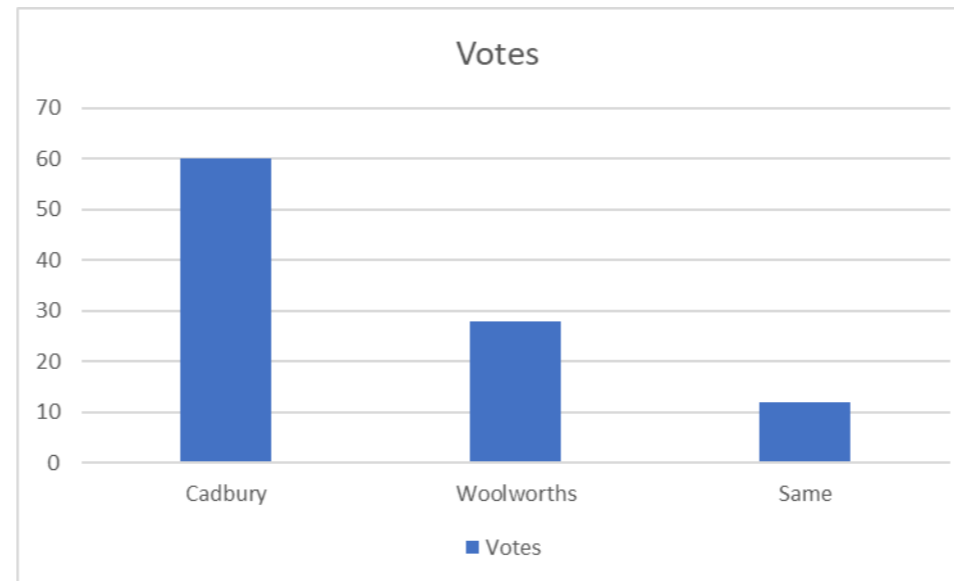
If we give people two of the same pieces of identical Cadbury chocolate and tell them one is a Woolworths Home Brand piece and one is Cadbury, they are more likely to choose the more well-known brand (Cadbury) due to the 'placebo effect'.

3 Data Collection Method

We collected our data through a face-to-face experiment (a primary form of data collection) questioning people from the years 7-12, in which we gave them two identical chocolates but told them one was a Woolworths Home Brand and the other a Cadbury Dairy Milk. When testing, we did it one by one because when people are together, they may be influenced by other people's choices which could make our results biased. We tested this theory and had 3 people do it at the same time and they all chose the same chocolate.

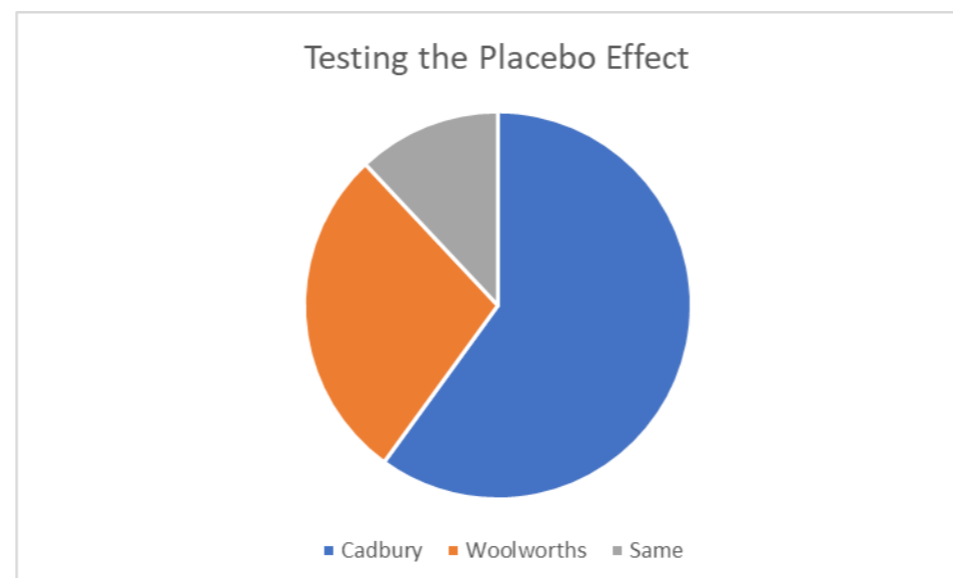
4 Raw Results

	Cadbury	Woolworths	Same
Votes	60	28	12



5 Graphing Data

The Bar Graph (pictured above) and Pie Chart (shown below) were selected to display this data because they provide an excellent visual representation of the data. Other types of graphs can be misleading, so they may be used in advertising to make a product look better.



6 Data Polishing

Originally, we planned to ask 125 people, but due to some students influencing others and some students not wanting to participate, we had to eliminate some of our results which coincidentally left us with a very round 100 results.

7 Flaws in our methods

We had a few flaws in our method, which included not alternating the order of the chocolates (we told each person the first chocolate was Cadbury and the second was Woolworths) and not questioning everyone on the same day. These are flaws because people who have already had the chocolate could tell others which one, they chose and this may sway their opinion, leading to flaws in our data.

8 Analysis

We found that our hypothesis was correct as our data showed 60% of students chose what they thought was the Cadbury chocolate, 28% chose what they thought was the Woolworths chocolate and only 12% chose both or thought they were the same. From our sample of 100 students, 88% believed that the two chocolates were not the same which suggests the placebo effect exists.

