Chocolate and blood pressure

Scientist:

What is the aim of the study?

The aim of the study was to establish a link between blood pressure and cocoa concentration in chocolate.

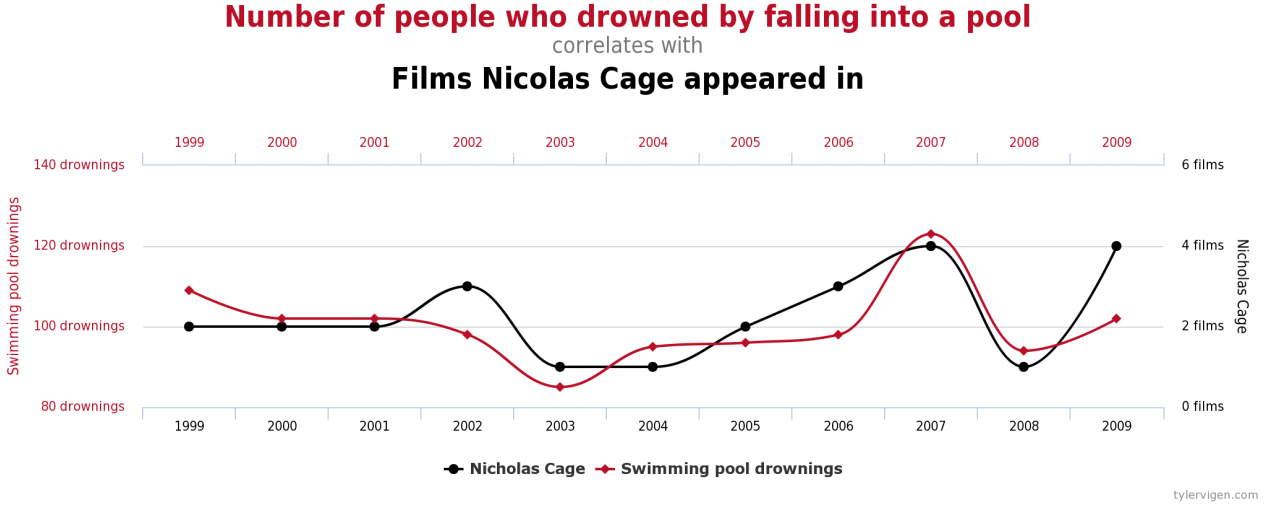
What procedure was used?

36 participants were divided into 3 groups of 12. Participants in the control group (white chocolate) were given 50g of white chocolate every day for 4 weeks; participants in the 2 experimental groups (milk and dark chocolate) were also given, every day, 50g of milk and dark chocolate, respectively. The blood pressure of all participants was measured every day from a week before the start of the experiment to a week after the end of the experiment, meaning it was measured on a daily basis for a total of 6 weeks.
All participants were of the same gender, were part of the same age group, and had similar fitness levels

What are the trends in the results? / Are there any correlations?

It was clear from the results that the participants in the experimental groups saw their blood pressure decrease between the start and the end of the experiment (the dark chocolate group more than the milk chocolate group). However, for the control group, there was no change in blood pressure between the start of the end of the experiment.
Correlation does not imply causation! There might be a third variable influencing the results, but the results shown would seem to show that chocolate that is more highly concentrated in cocoa has a greater and more beneficial impact on blood pressure.

Ice cream sales and murder rates are positively correlated, that is, when ice cream sales go up, so do murder rates. However, ice cream doesn't *cause* murder. It turns out, both ice cream sales and increased homicide rates have a third variable in common: **heat**. When temperatures rise, ice cream sales increase. Unrelated to the ice cream, summer heat also causes murder rates to increase.



What are the consequences of the study?

There could be consequences on the way health professionals deal with high blood pressure. It might also lead to the creation of new drugs.

Are there any possible improvements?

There could have been more participants involved in this study.

Peer Reviewer:

Is the study relevant to the journal?

Yes, it is relevant, because the journal publishes articles on the health effects of sweets and chocolate is a sweet, which appears to have an effect on health.

Does it fit the criteria of the Journal of Sweetology?

No, it does not fit all the criteria. That is, it is relevant and useful to the general public but it is arguably not original and new research. Grassi *et al* had already established the health benefit of dark chocolate on blood pressure.

Would someone be able to replicate the study?

There is some information missing. For example, we know that all the participants were of same sex but we do not know the sex of those participants. Dark chocolate might affect men and women's blood pressure differently, so we need to know exactly if they conducted the experiment with men or women. The same thing is true of the age of the participants…

Could something be added or improved?

The result section does not give very detailed information. We would need to see more than just a bar chart.

Anything else that you might want to ask the scientist?