What's Your Study? Model of Each Activity

You are to complete only 1 activity for this assignment.

Activity 1

Research Report 1- Immunotherapy Targets Common Cancer Mutation

1) Can cellular immunotherapy target the most common cancer mutation?
2) The tumor infiltrating lymphocytes will target and kill the cancer mutation. (RAS)
3) The study used on patient with multiple tumors for the study.
4) The patient was a volunteer with multiple cancerous tumors in the body. The patient was adequate.
5) The independent variable is whether or not they put the lymphocytes into the tumor.
6) The dependent variable is how the tumor responds.
7) The human body attacking the tumor itself is the only extraneous variable identified.
8) The extraneous variable was controlled by cutting the tumors out of the body after 2 weeks.
9) The control group is the tumor that did not receive the lymphocytes.
10) The subject had multiple tumors, so the tumors were just chosen randomly on which one would get the lymphocytes and which would not.
11) The method of observation was adequate in testing the hypothesis, however, since they only tested on one human being it is not enough evidence.
12) There was no evidence of bias in the procedure.
13) The conclusions are based on accurate measurements and reporting of data.
14) The conclusions are warranted, because it was obvious the lymphocytes attacked the one tumor, because it was so much smaller than it originally was.

Summary-The experiment was to test whether cellular immunotherapy would target the most common cancer mutation or not. The experiment used one patient that had multiple cancerous tumors on their body. They started by injecting laboratory grown lymphocytes into one of the two tumors. After two weeks they removed both of the tumors. The measured how much the tumors had changed. The one that did not get the lymphocytes got a little bigger, whereas the one that did get lymphocytes shrunk in size. The results show that the lymphocytes were able to target and attack the RAS cancer gene.

Research Report 2- Aging and the sense of smell

1) Do older people have a worse sense of smell than younger people.
2) The sense of smell gets worse with age.
3) The study population was 880 people from Australia. There were 440 people 45 years and younger, 440 people 60 years and older.
4) The sample was randomly picked within the age groups, and it was adequate.
5) The independent variable were the smells.
6) The dependent variable was whether they could smell the difference in the smells or not.
7) Other smells were included as extraneous variables.
8) In the experiment everyone ended up going into the same room so it would smell the same for them all.
9) There is no control group in the experiment.
10) Subjects were randomly picked for the experiment, and assigned to the experimental groups based on age.
11) The method of observation was adequate to test the hypothesis.
12) There was no evidence of bias in the procedure.
13) The conclusions were based on self-reported information. There would be no reason to lie so the information would be adequate.
14) The conclusions are valid because the experiment was an adequate experiment, there were no unreasonable variables, and there was no bias. It was obvious that the older age group had a harder time smelling the differences than the younger age group.

Summary-The experiments purpose was to test whether old people had a worse sense of smell or not. The experiment used two age groups with a total of 880 Australians. The age groups were 45 years and younger, and 60 years and older. Each group at 440 people. Each person in the groups had two smells and was asked whether they could smell the difference between the two. The older group had a harder time being able to smell the difference, whereas the younger group was easily able to smell the difference. Based on the evidence in the experiment, the conclusion would be that the sense of smell does worsen with age.

Learning-Tabloids aren’t a reliable source of information. Inaccurate research reports could give readers the wrong message, and spread false information.

References


Activity 2 - Create Your Own Study

1) How does vision affect one’s balance?

2) **Article 1** - Vision plays an important role on a human being’s balance. Eyes are a major key in functioning balance within the human body. The eyes of a human being make the environment look stable and they focus on object while the body is moving. People with worse vision who do not wear glasses have a worse sense of balance than those who do wear glasses.

**Article 2** - The eyes are part of the vestibular system, which is one of the main systems that effect and maintain balance. Poor vision makes for a weaker vestibular system, which in turn decreases balance. Good vision allows for you to understand where your body is relative to the environment surrounding you. With poor vision the brain is not as effective in understanding the information it receives through the eyes, so it is harder to maintain balance.

3) Vision will have a positive correlation with balance.

4) I think I will find out that in general people with poor vision will find it harder to balance. I believe my results will turn out that way because of the articles I have read about the topic.

5) The hypothesis will be tested through an experiment. The experiment will test 100 people. The people will be selected randomly. Each person will go through two trials. The first trial will be to stand on one leg, reach down and touch the ground with their eyes open. The second trial will be to stand on one leg, reach down and touch the ground with their eyes closed. The results of the experiment will be based on self-reported information from the participants. The independent variable is vision. The dependent variable is balance.

6) 83 out of the 100 participants reported that it was harder to bend down on one leg while blind folded.

7) The graph shows that the majority of the participants reported that they had worse balance with a blindfold on.
8) The results are 82 participants felt it was harder to balance while bending down on one leg to touch the ground. 18 participants felt as if they weren’t affected. The results of the experiment would support the hypothesis which states balance is affected by vision.

9) If I were to redo the study, I would use a different way to test balance. I would have someone walk in a straight line being blind folded, and not being blind folded. Having them walk in a straight line I would be able to measure the difference between being blind folded and not being blind folded.

10) By creating this study, I learned how to better use the scientific method, how vision affects balance, and how to create an accurate study using a variety of participants.

References

