STA305 Mini Project Notes

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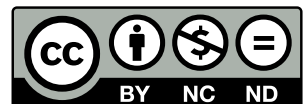
1   First Discussion

Background: Females nowadays really care about their lower leg hairs.

Our topic will be "If you shave hair, it comes back thicker." An experiment needs to be carried out with realistic situation and plan. The target population for our experiment design will be the hair on the lower leg of female populations within the age group of 15-50 in the world because males and upper age groups tend not to shave their leg hairs mostly, the sample can be 100 females with different races (sample size). The experimental unit will be the female selected for sample purposes of our experiment. Different treatment for two groups (2 groups):

- Treatment Group: Females shave their left lower leg hairs using the razor; Shave at the beginning of each month, the test lasted for a quarter measure the thickness.

- Control Group: Females do not shave right leg hair.

Note that treatment groups and control groups are identical in every possible way, except for the treatment. I.e., minimize the confounding variables.

Thickness: Subjectively measured by the researcher.

Variables during the experiment: response variables will be a dummy variable that whether the shaved leg hair becomes thicker than the not shaved one, the independent variables will be a ... The response variable is an Objective Response (If we do measurements). The nuisance variablle includes: Gender, with levels of males and females; Races, with levels of Black, Caucasian, Asian, Hispanic, etc. The experiment lies under a Between-Subjects design since we only decide about if the experimental unit shaves or not.

We plan to take this experiment as a repeated measure design. The nuisance variables might occur in the experiment has:

- Sleeping hours

- Vitamin consumption

- Diet habits

Principles of the experiment:

- Control: They all have great health conditions, no extra nutritions intake. Shave once at the beginning of the month, without body lotion. Using the same brand razor.

- Blocking: We will treat age groups as our blocks, races.

- Randomization: Since these females may have different eating habits, we will use the randomization.

- Replication: Treatment Level: We take many participants in the treatment group, Experiment Level: We can replicate the entire experiment in other regions.

1.1 Blinding, by Jiaqi Bi & Lanruo Li

Single blinding

Our participant is going to know whether he/she is about to take the treatment, i.e., shave their hairs. However, our researchers that are going to measure the thickness will not know whether the participant has shaved hairs before or not because the measurement is a subjective measures, such that if they know the treatment beforehand, it might affect their judgments.

1.2 Balance, by Lei Cao & Le Shen

Our experiment is balanced since there are two treatment groups in our experiment, one treatment group will shave their left lower leg hair and the other control group will not. Shave their right lower leg.

1.3 Control & Treatment Group, Mengyu Lei, Yirun Mao

We consider the group of "shaving the left lower leg hair" to be the treatment group as it is the fundamental of this experiment, and we consider the group of "not shaving the right leg hair" to become the control group to contrast the data between these groups. Because we would like to measure their difference of the thickness. In this experiment, we do not need the placebo since our measurement will be subjective.

1.4 Limitation

1. We cannot control the male sex hormone in each female, females have different thickness from their births.

2. Different genetic heredity for each female.

3. Not sure if they have shaved before or not.

2 Final Draft

Background: Test the effect of the treatment on the thickness of the hair between shaved group and non-shaved group.

Objective: Test whether the hair becomes thicker after shaving.

Limitation: Before the experiment, we cannot control their nutritions intake that it may lead to some biased results.

3 Reminders

Office hours: Thursday 9:30-10:30AM EDT (Toronto Time)

3.1 Work Assign

~~**Deadline: 8:30PM Wed. (Toronto Time); 8:30AM Thur. (Beijing)**~~

~~**Meeting before office hour: 8:00AM Thurs. (Toronto Time); 8:00PM Thurs. (Beijing)**~~

PPT First Draft (At least all pages needed to be filled), Deadline: Sat. Jul.17 11:00PM

PPT Final Draft, Deadline: Sun. Jul. 18 8:00PM

Video Recordings, Jul. 18 8:00PM-11:00PM

Deadline of Entire Mini Project Group Work: Before Monday!