

Science Education Collection

# Observational Research

URL: <http://www.jove.com/science-education/10048>

## Overview

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If you want to know how someone thinks or feels, you can ask that person questions. Another approach is to observe how the person is acting or look for indicators of how they acted in the past. While observations may seem revealing, it isn't always easy to know if they are truly accurate. For instance, you may see a person smiling and assume they are happy, when in reality they are annoyed and merely being polite.

The purpose of science is to move beyond an individual's own views of the self because they are inherently skewed by that individual's expectations, previous experience, personal biases, motivations, emotions, *etc.* While a person may have unique insight into one's self, these insight may not accurately represent reality. Put more simply, what a person says, does not always match up well with what they actually do. For this reason, researchers should incorporate a variety of measures (*e.g.*, asking participants to report how they feel, but also observing actual behavior) in order to more accurately capture how the person truly feels.

This video demonstrates a correlational design where researchers measure students' homesickness in two distinct ways: (1) a homesickness scale, and (2) by observing how the student has decorated his or her dorm room.

Psychological studies often use higher sample sizes than studies in other sciences. A large number of participants helps to ensure that the population under study is better represented, *i.e.*, the margin of error accompanied by studying human behavior is sufficiently accounted for. In this video, we demonstrate this experiment using just one participant. However, as represented in the results, we used a total of 63 participants to reach the experiment's conclusions.

## Procedure

### 1. Define key variables.

1. Create an operational definition (*i.e.*, a clear description of exactly what a researcher means by a concept) of homesickness.
  1. Homesickness is the distress and functional impairment caused by an actual or anticipated separation from home and people and things you're familiar with. (<http://wellbeing.rice.edu/homesickness/>)

### 2. Lead participant through informed consent, which is a brief description of the research and a sense of the procedure.

1. Inform participant that they will be asked to complete several questionnaires and then will be asked to allow researchers to look at their dorm room.

### 3. Give participant a packet that includes the homesickness scale (Figure 1) and several other questionnaires.

#### Homesickness Scale

To what extent is each of the following true of you?

Not at All    1    2    3    4    Extremely

- \_\_\_ 1. I can't help thinking about my home.
- \_\_\_ 2. I can't concentrate on my work because I'm always thinking about home.
- \_\_\_ 3. I visit home as often as I can.
- \_\_\_ 4. Thinking about home makes me cry.
- \_\_\_ 5. I dream about my friends at home.
- \_\_\_ 6. If I ever went home for the weekend I wouldn't want to come back
- \_\_\_ 7. I get really upset when I think home.
- \_\_\_ 8. I can't concentrate on my work.
- \_\_\_ 9. I feel empty inside.
- \_\_\_ 10. I am drawn towards people who come from my hometown.

**Figure 1. Homesickness Scale.** This questionnaire was adapted from Archer *et al.*<sup>1</sup>

1. The extra questionnaires serve as distractors so the participant does not know the true purpose of the study.

2. Have participants fill out the scales, with extra attention paid to the homesickness scale.

#### 4. Have two observers visit participant in his or her dorm room to log observations of homesickness.

1. These two observers are different from the researcher who administered the surveys so that no bias is present from the survey results.
2. Observers ask the participant for permission to look around the room.
3. Observers look for evidence of homesickness, which includes: pictures of parents, family, friends from home; clothing from their high school vs. college; high school yearbook; and a low presence of university logos/paraphernalia. Observers log these observations on their clipboards.
  1. Ask participant to open drawers/closets and to clarify, for observers, who appears in pictures.

#### 5. Debrief.

1. Explain that the true nature of the study is to determine if homesickness is evident by looking at a student's dorm room. Tell participants that the surveys, other than the homesickness scale, served as distractors in the research so that they would not know what the observers were looking for in their dorm rooms.
2. Remediate risk by referring participant to the counseling center if they are experiencing any homesickness.

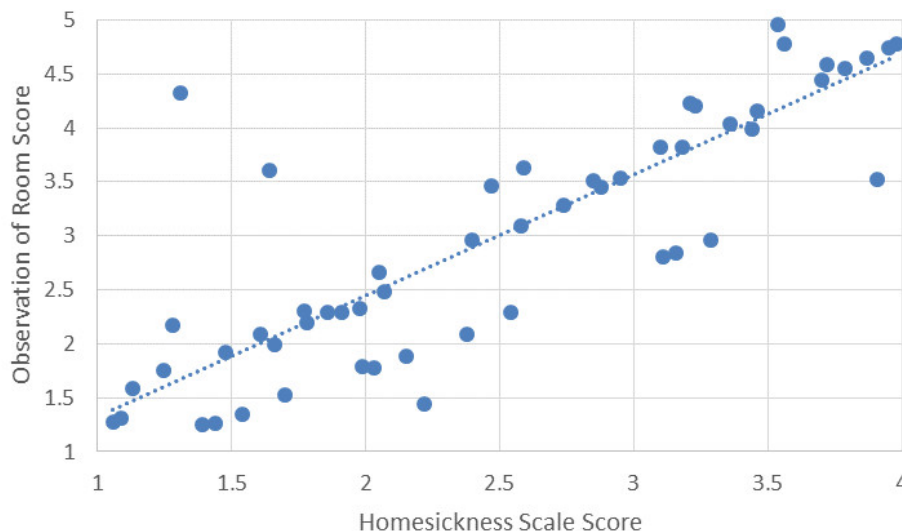
#### 6. Analyze the data.

1. Score the homesickness scale survey completed by participants.
2. Observers discuss/review their notes and then score participants on a 1-7 scale (ranging from 'not at all homesick' to 'extremely homesick').
  1. These same two observers are used to observe all participants' dorm rooms to ensure that the scoring is consistent.

### Results

After collecting data from 63 people, a correlation was performed between the participants' score on the homesickness scale and the observer's score of their room to determine if a visual inspection of a student's room can indicate their degree of homesickness (**Figure 2**). The results indicate that participants who scored higher on the homesickness scale had more indicators of homesickness in their dorm room.

The results of this study are similar to another study by Gosling and colleagues, which showed that individuals' offices and living spaces were good indicators of their personality.<sup>2</sup>



**Figure 2. Correlation between Homesickness Scale and dorm room observation scores.**

### Applications and Summary

This correlational study shows that a person's behavior, even something as simple as how they decorate their room, can indicate how they feel (*i.e.*, how homesick they are).

Using observations of another person to infer that person's feelings or thoughts can be difficult. However, research has found evidence that we can be accurate in our observational inferences. A study in *Psychological Science* found that observers could accurately infer personality characteristics from a person's Facebook profile.<sup>3</sup>

## References

1. Archer, J., Ireland, J., Amos, S., Broad, H., & Currid, L. Derivation of homesickness scale. *British Journal of Psychology*. **89** (2), 205-221. doi:10.1111/j.2044-8295.1998.tb02681.x (1998).
2. Gosling, S. D., Ko, S., Mannarelli, T., & Morris, M. E. A room with a cue: Personality judgments based on offices and bedrooms. *Journal of Personality and Social Psychology*. **82** (3), 379-398. doi:10.1037/0022-3514.82.3.379 (2002).
3. Back, M. D., Stopfer, J. M., Vazire, S., Gaddis, S., Schmukle, S. C., Egloff, B., & Gosling, S. D. Facebook profiles reflect actual personality, not self-idealization. *Psychological Science*. **21** (3), 372-374. doi:10.1177/0956797609360756 (2010).