

# The Effect of Proximity on Friendships

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This study was conducted to test the effect of proximity on friendship. Twenty subjects, ranging from ages 18 to 19, participated in the survey via a link sent to their email. Subjects were asked to state the location of where they lived on campus, the location of where up to three of their closest friends lived, and whether or not they believe proximity plays a role in with whom they become friends. The results of this study reported that proximity plays a significant role,  $p = 0.0068$ , in with whom participants establish friendships.

## How Much Does Proximity Influence Friendships?

Think back to your closest childhood friend. The one with whom you played on the playground at recess, explored with in your backyard, and invited to birthday parties and sleepovers. This friend may still be the friend with whom you discussed your first date, tossed your cap with at graduation, and plan on asking to be in your wedding. Close friendships such as these often involve being responsive to one another's welfare in terms of providing support and inclusion, and receiving such care by expecting, seeking, desiring, and needing responsiveness from the other person (Tennen, Suls, & Weiner, 2013).

On the other hand, maybe that particular childhood friend moved away or attended a different college than yourself. And despite promises to always stay in touch, the friendship ultimately fizzled out. Unfortunately, it is not uncommon for friendships to come to an end and it happens for a variety of reasons. There is a limit to the number of close friendships one can obtain because individuals cannot be responsive to all people's needs, and they do not need everyone to be responsive to their needs (Tennen, Suls, & Weiner, 2013). People generally have a few strong close friendships and many weaker acquaintanceships.

As it turns out, there may be an explanation for just how people become friends and that helps to determine whether or not they remain friends. Roger Martin (1974) hypothesized that freshman students would form friendships primarily within close residential proximity at the University of Saskatchewan. 120 subjects were interviewed and asked to list the five people with whom they most frequently dined and visited (Martin, 1974). His results indicated that freshman do tend to select friends based on proximity, with a significant proportion of freshman friends living in the same hall as one another (Martin, 1974). Studies such as these suggest that residence halls may indeed be an important factor in the development of freshman student relationships at colleges simply because students are more likely to become friends with the other students living near them than any other students.

Cadiz-Menne, and Sinnett (1971) also found similar results in their study at Kansas State University. The researchers asked students here to name whom they would choose as friends and helpers out of everyone, including both students and faculty, at the college. They found that the importance of proximity on friendships, in descending order, included the same room, rooms close to one another, the corridor, and all other possible choices (Cadiz-Menne & Sinnett, 1971). One idea that these researchers suggest though, is that “it may be too threatening to consciously reject a roommate with whom some intimacies must be shared” (Cadiz-Menne & Sinnett, 1971, p. 30). In other words, friendships that develop amongst individuals living close together may actually be a result of fear of making enemies with those individuals, seeing as these are the people with whom you have the most contact.

Even in studies conducted in nursing homes, proximity was found to influence friendships. However, “distance is thus not a severely limiting factor. Privacy is, in fact, a greater problem than distance” (Jones, 1975, p. 151). Basically, because many patients in nursing homes have a tendency to have limited mobility and independence, roommates typically develop less personal relationships due to private situations to which each are exposed. In this particular study, Jones interviewed approximately 200 patients across 17 nursing homes. He asked the patients to name as many other patients as they could and then answer questions about them such as how long had they lived there, were they married, what did they do for a living, etc. (Jones, 1975). From this data, the researcher found that patients living in the same room or within a distance of 2 rooms experience 84 positive social linkages compared to 104 positive social linkages amongst patients living more than 2 rooms apart (Jones, 1975). Furthermore, patients living within 2 rooms of one another experience 44 negative social linkages compared to 24 amongst those living more than 2 rooms apart (Jones, 1975).

Studies such as these suggest that proximity may have such a large effect on friendship due to convenience. It is simply easier and more convenient to develop a friendship with someone who lives

down the hall versus with someone who lives 20 minutes away by car. However, there is more to the effect of proximity than just convenience. Take the mere exposure effect for instance. The mere exposure effect is a psychological phenomenon whereby individuals develop a preference for something merely because they are familiar with it (Hansen & Wanke, 2009). "Repeated exposure to a stimulus can make people like this stimulus better" (Hansen & Wanke, 2009, p. 161). In 1973, Saegert, Swap, and Zajonc conducted a study in which numerous subjects participated in what they believed was a sort of taste testing experiment. While subjects were rotating from station to station where they were tasting various liquids, the researchers had manipulated how often subjects would come into contact with one another. At the end of the study, after rating how well they liked each liquid, subjects then rated how well they liked the other subjects. The researchers found that subjects tended to have higher opinions of the other subjects with whom they saw more often, even though the researchers ensured there was no interaction among any of the subjects.

In general, the likelihood of a relationship, contact frequency, and strength of social relationships declines with distance. Most types of relationships, especially those characterized by frequent interactions, occur more often within one mile of an individual's place of residence than further away (Preciado, Snijders, Burk, Stattin, & Kerr, 2012). Individuals have to be more proactive in seeking opportunities for socializing with those who live more than 20 miles away than with those living closer (Preciado et al., 2012). The development of modern technology has helped to transform the effect that proximity has on friendships, however it has not completely destroyed it. So let us think back to our closest childhood friends with whom we may or may not still be acquainted. While people have a tendency to believe age and maturity strongly influence the termination of friendships, it turns out that proximity is actually one of the largest indicators of the friends individuals make and keep.

As a college student myself, I believe that I have witnessed the significance of proximity on developing friendships. I had to work much harder to establish a friendship with three girls who lived in

a different dormitory from myself than they did with each other simply because they lived in such close proximity. Therefore, I have decided to test my hypothesis that freshman students are more likely to have friend that live in the same residence hall/dormitory as themselves. To determine this, I sent an email to randomly selected freshman students at Hanover College. In the email, I asked them to fill out the attached short survey. In the survey, they were asked to state the location of where they lived and the locations of where up to three of their closest friends lived.

## **Method**

### **Participants**

Participants in this study were recruited via an email containing a link to the survey. They were randomly selected from the student email directory, but limited to those whose emails indicated they were first year students. Participants in the study were limited to first year students in order to eliminate the possibility that they live in close proximity by choice. 20 total subjects participated in this study by completing the survey. 60% were female and 30% were male. Ethnicities included Caucasian, American, and multiracial. Ages ranged from 18 to 19 with the average age being 18.5 years.

### **Materials**

Survey: The first page of the survey contains the informed consent form. On the second page, participants are asked to state their age, gender, and ethnicity. A multiple choice question allows participants to select the specific residence hall, or off-campus location, in which they live. Three additional similar multiple choice questions allow participants to select the specific location of where up to three of their closest friends live. The last question is an essay style text box where participants answer whether or not they feel proximity plays a role in with whom they become friends. The third page contains the debriefing form and also a comment box that allows participants to leave comments about the study if they so desire.

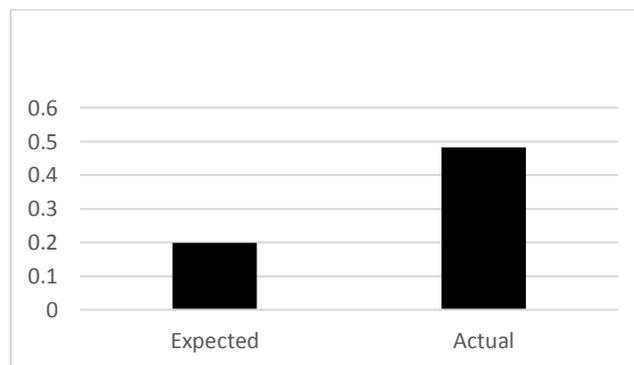
### **Procedure**

Freshman students at Hanover College completed this survey through an email link via Google Forms. After reading the informed consent form, participants answered basic demographic questions as well as selected the location of where they live and the locations of where up to three of their closest friends live. At the conclusion of the survey, the participants read a debriefing form after submitting their form, were given the opportunity to leave comments in a comment box, and then submitted the survey.

## Results

As subjects submitted their responses to the survey, the data was entered into a spreadsheet. In order to make any conclusions about the data, I calculated the probability that the subject would befriend other individuals living in the same residence hall just by chance. I titled this percentage the 'expected value'. To calculate this percentage, I first divided the total number of students living in the place of residence that the subject listed by the total number of students on Hanover College's campus. I then multiplied that number by three, which was the amount of friends listed by the subject. I then compared this expected value to the actual percentage of friends the subject listed as living in the same residence hall. This value I titled the 'actual value'. To calculate the actual value, I divided the number of friends the subject listed as living in the same residence hall as themselves by the total amount of friends the subject listed. These two values, expected and actual, were calculated for each individual subject and then entered into a paired t-test.

Figure 1 shows the average expected value compared to the average actual value for all of the subjects in this study. As shown, the average actual value is much higher than the average expected value, implying that proximity plays a role in establishing friendships. After running the paired t-test, the results indeed proved to be significant,  $t(-3.076) = -0.2824$ ,  $p = 0.0068$ . Thus, proximity does have an effect on friendship.



*Figure 1.* Results of paired t-test. This figure illustrates the average expected and actual values for all subjects.

## Discussion

When I myself was a freshman student here at Hanover College, I felt that I had to work much harder to establish friendships with those who lived outside of my dormitory than those who lived in the same dormitory. In my own experience, I had found that it is not at all uncommon for students to be close friends with their roommates and the other students living in the rooms close to them. Because of this, I wanted to conduct a study to help determine whether or not my feelings had any empirical backing. I found that many other studies concluded just what I had expected: proximity has an effect on the establishment of friendships.

Proximity could have this effect on friendship for a variety of reasons. For instance, based upon the Mere Exposure Effect, individuals may have a tendency to befriend others living near them simply because psychology has shown people develop a preference for those with which they are most familiar. On the other hand, individuals may have a tendency to befriend those living near them for fear of making enemies of those other individuals. Seeing as these are the people with whom you have the most contact, it would probably be wise to not make enemies of them. Still yet, it may just be more convenient to befriend the individuals who live the closest. People have to make more of an effort to maintain friendships with individuals who live further away. Similar to the saying "out of sight, out of mind", it is easier to let friendships with individuals living further away dwindle than with those who live close.

Though the results of my study showed that proximity has a significant effect on friendships, there are a few limitations upon which could be improved. One limitation was the transparency of my hypothesis. In this study, the only questions subjects were asked to answer was their place of residence, their friends' places of residence, and whether or not they believed proximity played a role in with whom they established friendships. Because these were the only questions asked of subjects, it was very easy for subjects to determine what I was studying. While I do not believe this study was an instance in

which knowing the hypothesis would influence responses, there is always a possibility that it could have. The fact that I had to drop the data from two of the subjects was a second limitation. I had not anticipated that more than one student who did not live on campus would participate in this study, but two of the subjects lived off campus. As a result, their data had to be dropped because I could not make any assumptions about how close their friends who they listed as living off campus as well lived to them.

If I were to conduct this study again, I would exclude students who do not live on campus. While students who commute to campus are still active members of the campus community, I do not want to include them in this particular study because these students will not generally be residing in a location with friends. I would also change the question that asks subjects whether or not they believe proximity influences their friendships. While reading these responses did provide interesting perspectives, it was not relevant to the paired t-test I ran to determine if the results were significant. It may also be beneficial to ask a few more questions that still pertain to friendships, but that do not pertain to where the friends live. For instance, I could ask subjects to state their friends' favorite colors, hometowns, and location of residence on campus. This could make the survey appear to be more about how well they know their friends.

In terms of future directions, this study I conducted, as well as other similar studies, can provide insight to college administrators who work in Residence Life. This data shows that roommate pairing may indicate with whom freshman students become best friends and it may be more beneficial for students if housing selection is not completely random after all. Resident Assistants should also make note of how important creating a positive residence hall atmosphere can be in establishing friendships amongst neighbors, particularly with freshman students.

In conclusion, the results of my study support my hypothesis that proximity has an effect on the establishment of friendships. Regardless of whether the reason is because individuals fear making enemies of those they live near or because it is simply easier to be friends with those seen more often,

the closer two people live to one another, the more likely the two of them are to become friends.

Proximity also helps indicate whether or not individuals will maintain their friendship. Unfortunately, the likelihood of friendships decline with distance. Thus, if a childhood friend is suddenly moving away and you want to stay friends with him/her, consider moving as well.

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