Desk Plants and Employee Morale

Introduction

In the fast-paced modern work environment, the question of how best to boost employee morale is a time-honored question for workers of all levels of a company. Whether you are an individual contributor or a manager, employee morale has a direct impact on both your performance and your team's performance. Variation in employee morale has long been tied to a large number of factors: workload, the average level individuals receive, the commute times, etc. Of interest, our group will be exploring a more physical factor which employers and employees have immediate control over: desk furniture and toys. This brings us to the research question.

Research Question

Does close range and visible exposure to a live desk plant improve employee morale within one week for those with a desk job?

We limit the experiment to one week since we wish to gauge the immediate effects of desk plants.

Treatment

The treatment our group will provide is the presence of one desk plant conspicuously placed on the subject's desk such that the plant is in close range and within the subject's line of site while the subject works at their desk. All plants used should be homogeneous in appearance, smell, and texture with no intrusive traits (e.g. not perfumed and has no ornate or otherwise distracting flowers). Those who receive a plant should be told that it is part of the experiment.

Experiment Design Concerns

Before I discuss how the experiment will be conducted, I must highlight some concerns which can impact our results. The primary concern is cross-contamination between our subjects. That is, if having desk plants provides some benefit to employee morale and if a treated subject sits near an untreated subject, the subject which did not receive treatment might be impacted by the presence of the plant on the treated subject's desk. Likewise, it is critical to mitigate the risk that those in the non-treatment group are made aware of the treatment via office gossip; informing

the non-treatment group of the treatment could directly change employee morale for both the treated subjects and untreated subjects.

Subject Selection and Randomization

In order to minimize the risk of cross-contamination, subjects should be selected such that no two subjects are within close proximity of each other. Furthermore, as a safety precaution, subjects should not have any allergies to the plants chosen for distribution. Subjects should also agree to be in the office for the trial days. We will also filter out subjects who currently have a desk plant or sit near a desk plant.

We can then consider clustering our subjects by floor if possible. We do this to reduce the possibility of our subjects discussing who did and who did not receive treatment (the desk plant) via breakroom gossip. Note that if we cluster our subjects by, say, floor, special attention needs to be paid to the possibility of accidentally introducing bias and confounding factors into our results with overly large clusters; there could be floor-wide trends which could influence our final results if there are not enough clusters to test with. Likewise, clustering by floor could introduce confounding factors such as unexpected parties which might artificially boost employee morale. As an alternative, we can consider clustering by supervisor rather than floor. Due to these issues, as previously stated, clustering should implemented with caution.

We should also consider blocking our results by office campus. We can reasonably expect building features and traits specific to local employees to directly impact the findings of our study.

With that, if clustering is used, each cluster within each block will be randomly assigned to either the treatment or non-treatment group. If clustering is not used, each subject within each block will be randomly assigned to the treatment or non-treatment group.

Subjects will be recruited at each researcher's place of work. We will need a minimum of 100 subjects for this experiment.

The Process

For our study, we will begin with an introductory questionnaire on each subject's morale. We will then distribute the office plant to the subjects receiving treatment. The plant will then remain on the desk for the duration of the trial period. At the end of the first work day, the third work day, and the final work day, each subject should fill out a questionnaire detailing how much time was spent at their desk and how their non-desk time breaks down (in meetings, at lunch, etc.). Any significant workplace events should be recorded in the daily questionnaire. At the end of the trial period, each subject will then complete a final, larger questionnaire. For the last questionnaire, we will present the subject with questions and statements regarding their current morale

alongside the usual questions about desk time and major daily workplace events. Note that the first and second questionnaire should take no more than 5 to 10 minutes of each subject's time so as to not damage morale.

We can also work with the supervisors to track the rate of work completed for each subject. This data would collected via a questionnaire distributed only to the subject's supervisors at the end of the week period.

Data Collection

The primary data collected will be in the form of two Likert scale questionnaires distributed during the treatment period. Subjects will be presented with a list of statements (e.g. "I feel like I am part of a team.") and will be asked the respond with a rating between 1 and 5. A 1 will indicate "strongly disagree" and a 5 will indicate "strongly agree." These questionnaires will be distributed at the start and end of the trial period. We will be looking for changes in our subject's responses and using the resulting data to estimate our treatment effects.

We will also be collecting secondary information on how long the subject is at their desk during the treatment period in order to gauge how much exposure to the treatment each treated subject had. In order to estimate desk time, we will inquire about non-desk time. Because we will be testing individuals in real office environments, we will want to know if our subject spends the majority of their non-desk time in work-related activities (e.g. meetings) or leisure (e.g. lunch breaks or exercise breaks). Small breaks will not be counted so as to not needlessly fatigue or demoralize our subjects. This data will be collected via the questionnaire but we do have the option of creating and hosting a time tracking site if required.

We will also ask subjects throughout the trial period if any major workplace events such as a party or public argument took place; we ask this to track potential confounding factors.

If we opt to collect data on rate of work, we will have a second questionnaire much like the main one dedicated to the subject's productivity. Similar to the first questionnaire, this questionnaire should be a Likert scale questionnaire. This second questionnaire will only be distributed to each subject's primary supervisor.

Secondary Outcomes, Covariates, and Conclusion

While we have no secondary outcomes we will test for, we will collect data on a number of covariates of interest. Notably, we are interested in collecting data about the amount of time a subject spends at their desk during the treatment period and how their time data breaks down. We are also interested in collecting data on whether any major workplace events took place during the treatment period and how those events might impact our final results. If we opt to

pursue the supervisor questionnaire, we will also collect some amount of data on worker productivity.

With this study, I aim to identify a potential tool employees and employers can use to at least temporarily boost morale. While an office plant might not mitigate the cause of low morale, any boost to the office atmosphere, no matter how small, can be welcome during trying and stressful times at any person's place of work.