

Psychological and Physiological Effect in Plant Growth and Health by using Positive and Negative Words

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Abstract - By answering the question “Do words effect plant growth” we carried out our study to test the hypothesis that Positive and Negative words and environment can affect plant growth and health. Two *Epipremnum aureum* plants were taken. The first plant was growing in a negative environment where it was cursed while growing. The second plant was grown in a positive environment, and it was praised while it was growing. Several growth parameters were measured, including the germination rate, plant height, and leaf size. In addition, the health status was measured by leaf colour, stem and spots. Plant growth was observed continuously for four weeks. The results showed that positivity in the environment and words had a significant positive effect on plant growth. Plant seeds under the influence of the positive words had a higher germination rate, and these plants grew taller, larger, and healthier than that in negative environment.

Index Terms - *Epipremnum aureum* plant, positive and negative words, health, growth, germination rate, plant height, leaf size, leaf colour, stem and spots.

INTRODUCTION

There was a lady who talked to her plants while watering the, she used positive phrases like “You’re Beautiful”. Her garden was really beautiful. In 1984, sadly she died unexpectedly, and the plants missed their friend, so they started to die eventually. (Prezi,2016)

Plant growth and geographic distribution are greatly affected by the environment. If any environmental factor is less than ideal, it limits a plant's growth and/or distribution. Either directly or indirectly, most plant problems are caused by environmental stress. In some cases, poor environmental conditions (e.g., too little water) damage a plant directly. In other cases, environmental stress weakens a plant and makes it more susceptible to disease or insect attack. Environmental factors that affect plant growth include light, temperature, water, humidity, and nutrition.

Other than environmental factors there was one more factor that we added in our study for plant growth was negative and positive interactions without plants.

Words have power. They encourage, heal, comfort, criticize, hurt; it all depends on whether you choose to use them for good or evil. They affect adults, children, and plants alike. There are some interesting studies out there that explored the possibility of sound affecting plant growth and health.

Solomon Islands consist of six major islands and over 900 smaller islands in Oceania lying to the east of Papua New Guinea and northwest of Vanuatu. There is a famous myth that when natives of Solomon Islands want to cut down an enormous tree that seems difficult to chop down, they perform a special kind of curse. According to the myth, the people of Solomon Islands yell and say negative things, at the top of their voices, to the trees. As a result of this negative energy, the tree dies and falls to the ground in some days (Daily Times, 2018).

There are many studies and experiments done on plants in which the same plants were placed in three separate rooms. In one room kind words were spoken, in the second harsh words were spoken and in the third room, there was pin-drop silence. The results showed that the plants which were exposed to kind words grew a little more than the other two.

Another study was done by Ikea, 2018 by performing a social experiment on various plants. Strange as this might sound, the 30-day trial produced some fascinating results. The campaign was intended to raise awareness around bullying. In the trial, two of the company’s own plants were placed in a school setting. Here, the plants were subjected to two identical environments in all respects. All except for one thing, that is. One plant was played voice recordings of comforting and complimentary words. The other was constantly abused by harsh words. After the 30 days were finished, the ‘bullied’ plant showed unmistakable

signs of wilting, while the complimented plant seemed to flourish.

SIGNIFICANCE OF THE STUDY

Study was to explore effect of spoken words in growth and health of plant and to show how negative and positive interaction along with the environment result in plant growth. This study has shown how positive interaction and environment with plant result in plant growth and health and how negative or cursed words deteriorate the plant growth and health. The significance of this study lies in its approach to exploring the phenomenology of the interaction between Plants and words, and this is discussed.

This study will add to the knowledge on the benefits of interacting with plants and how positivity helps its growth and health and help fortify current hypotheses.

This study is significant to practice because if we can understand more clearly the ways in which interaction with plants by using constitutive words can increase its growth, we may also show new ways that how positive words can alter the expression of genes, strengthening areas in our frontal lobes and promoting the brain's cognitive functioning in humans and motivate them and help them to live a life with positive outlook.

AIMS/OBJECTIVES

The objective of this research is to explore the power of positive and negative words and how it effects the plant growth and health.

SAMPLE OF THE STUDY

Two *Epipremnum aureum* plants were taken for the study.

The reason for taking this plant was because of its survival rate, we can plant it any season time also it can grow in direct or indirect sunlight, so it was easier to measure the growth without much disturbance from external environmental factors. Also, it purifies the air by removing airborne pollutants.

According to a Research done National Center for Biotechnology Information *Epipremnum aureum* also has a psychological benefit as it reduces stress & anxiety. Keeping *Epipremnum aureum* plant at home energizes & reduces stress in human beings. While conducting the research we also felt whenever we

were interacting with the plant, we felt relaxed and less anxious about our work throughout the day.

TOOLS AND TECHNIQUE

Two *Epipremnum aureum* plants were used to explore the effect of positive and negative words in plant growth and health.

We used positive words in one plant and negative words in other plant. Growth of both the plants were measured by keeping in my many parameters like- apt environmental conditions, germination rate, plant height, and leaf size.

Health status was measured by leaf colour, stem and spots, and after four weeks results were compared.

PROCEDURE

Two pots of *Epipremnum aureum* plant were taken and kept in identical environmental condition.

First pot named Jerry was kept in a good environmental condition where there was adequate sunlight and water and was surrounded by other plants. Along with this we used to interact with that plant at least an hour and said all the positive words like 'Seeing you blossom makes us happy', 'Be healthy', 'We love you' keeping our voice low pitched and very softly. We had our evening tea with the plant and did exercise and created an environment of loved and joy. On the other hand, second plant named Tom was kept in the same open space with adequate sunlight, water facility but was kept isolated from other plants. We visited that plant only for few minutes and used cursed words like 'Useless plant', 'You are stupid', 'Do no bloom' with high pitched voice and with lot of aggression.

Whenever we talked to Jerry our plant with positive words, we made sure to transfer all our positive energy into it along with made it feel loved and accepted. However, plant Tom was receiving all the hatred and convey our negative energy towards it and made him perceive neglected and abhorred.

We keenly observed both the plants every day and measured their performance for 30 days by comparing both plants with the different parameters we had.

We first compared the growth aspect of the plant by looking at the germination rate of both the plants that which plant germinated early and noted our observation, then we observed how much height they

have gained, and which plant is taller, then we compared the leaf size of the both the plants.

After we analyse the health angle of the plant by correlating leaf colour of the plants that which plant has greener leaves, which plant has frail stem and which has stronger stem, and lastly which plant has more spots or patches.

The results showed that there were significant differences in the growth and health level of both the plants. Both plants changed their shape but there was drastic change in both the plants. The findings suggest that the Jerry our plant with positive thoughts outgrow Tom plant with negative thoughts.

Looking at the growth aspect, germination rate of Jerry (plant which was loaded with constructive thoughts) was significantly higher than Tom (plant which was bombarded with negative words). Jerry attained more height than Tom and the dimension of leaf was large in Jerry as compared to Tom.

Focusing on the health of the plants, Jerry was much more healthy and greener than Tom. Our plant Jerry with positive outlook had stronger stem juxtapose the stem of Tom which was frail and fragile. Even Tom had more yellow spots in its leaves than Jerry.

Finally, the literature review also reveals that positive interaction with plants can be beneficial for their growth. The inclusion of intensity with our positive and negative words somehow adds to the growth and shrinking of the plant.

When we speak, the sound waves not only carry the message spoken but also create an impact on the person on the receiving end. At times, this impact lasts forever. If it is sweet, it can boost a person's energy and bring out his good side. The problem occurs when the words uttered are poisonous. They become a parasitic plant that resides inside that person and his life gets stuck in that point of time and same happened with the plants as well.

A Japanese scientist and water researcher Dr Masaru Emoto has revealed that thoughts and vibrations effect the molecular structure of water. After studying water for many years through high-speed photography of water crystals and by the use of MRA, a vibration measuring device to record emotional vibrations in humans, Dr Emoto observed that water reacts to the sound vibrations.

The water crystals formed beautiful geometric shapes when words of love and gratitude were spoken near the water. But when evil words were uttered near

another sample of water taken from the same source the crystals smashed and turned into destructed shapes.

CONCLUSION

The finding of this research show that plant to which we talked positively and used encouraging words grow's beyond compared to the plant to which we talked negatively and used discouraging words.

It was observed that the plant Jerry enjoyed the company of other plants and when we interacted with the plant and encouraged him to grow, he felt warm and accepted, which depicts a positive energy exchange between us and the plant. On the other side when we cursed plant Tom negative energy was transferred to the plant and it did not bloom that much, and its growth stuck at a point.

Just like plants type of words can also affect human beings. There have been many experiments that have attempted to prove the power of positive or negative words on our environment. Studies are still being conducted and will inevitably gain more prominence among conventional scientists as the results are documented more and more. It simply cannot be denied that humans, animals, and plants are affected by such influences—at least to some degree. The power of your words, thoughts, and feelings could be much.

Lastly, by researching more in this topic we can gain more insight on the psychology of plant. Research can also be conducted on the impact of positive energy and negative energy on human growth and development.

REFERENCE

- [1] Borchard, T. J. (2018, January 28). Words Can Change Your Brain. Psych Central. <https://psychcentral.com/blog/words-can-change-your-brain-2#1>.
- [2] How Does Negative Energy Affect Plant Growth? prezi.com. (n.d.). <https://prezi.com/p/1ykq3ymqyyf-/how-does-negative-energy-affect-plant-growth/?frame=18f05362d1bc7656f64db25a4e4ce2a3ee6b96f5>.
- [3] The science behind power of words. Daily Times. (2018, September 13). <https://dailytimes.com.pk/297417/the-science-behind-power-of-words-2/>.

- [4] Shepherd, R. (2018, May 9). IKEA Experiment Shows How Negativity Can Stop Growth and People Can Learn from It. LADbible. <https://www.ladbible.com/community/interesting-ikea-experiment-shows-how-negativity-can-stop-growth-20180509>.
- [5] Hassan, A., Qibing, C., Yinggao, L., Tao, J., Li, G., Jiang, M., Nian, L., & Bing-Yang, L. (2019, August). Psychological and physiological effects of viewing a money plant by older adults. *Brain and behavior*. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6710203/>.
- [6] Sunil Bagai. (2018, May 21). The Effect of Spoken Words: Experiments Using Compliments Vs Insults. Sunil Bagai. <http://sunilbagai.com/effect-spoken-words-experiments-using-compliments-vs-insults/>.