

Transforming LED bulbs to cost-efficient UVB lamps to Combat Qatar's **Vitamin D Deficiency**



دولـــة قطــر • State of Qatar

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Big questions

Can regular light bulbs and sources of indoor lights be replaced with UVB light bulbs?

Importance of the research

Vitamin D is a vital micro-nutrient with significant implications for human health. It plays a pivotal role in facilitating calcium absorption, thereby contributing to bone health, and it also contributes to the proper functioning of the immune system. The primary source of vitamin D for humans is exposure to sunlight, wherein the skin synthesizes it upon interaction with sunlight, particularly ultraviolet B (UVB) radiation.

By understanding the importance we will continue to raise awareness about this important nutrient for human life.

Objectives of the research

- L. Explore the potential for ChatGPT to act as a future alternative to teachers.
- 2. Assess how effective ChatGPT is in facilitating learning among learners with varying abilities.



Suggested Solutions

- To address this concern, this research project explores an innovative approach: the conversion of standard LED (Light Emitting Diode) bulbs into costeffective UVB lamps. These modified lamps aim to provide an alternative means of vitamin D synthesis for Qatar's community, allowing them to access the benefits of vitamin D even when outdoor sun exposure is limited.
- Setting up restaurants where people can have exposure to UVB lights.
- A systematic health programme to check the vitamin-D deficiency specially in schools to raise the awareness and support healthy eating habits.

Selected Solution

By collecting data about the efficient LED bulbs and UVB bulbs and creating a cost efficient solution of replacement of regular light bulbs.

Qatar is a country with high income and strong economy, looking for innovative change at government level to maintain welfare of the learners.



Procedures

- Understanding and unpacking about deficiency of Vitamin D. To make sure learners get resourceful to address why there is a need of this particular vitamin and who is most vulnerable in society with
- Work towards innovative solutions to combat this problem.
- Conduct awareness program by the class as assembly or weekly activity to make other familiarise with the problem.
- Vit-D lunch box day celebration to raise awareness about food that has

Graphs / Charts



88% have some level of vitamin D deficiency

Results & Recommendations

To be established

Sharing

- Awareness campaigns.
- Innovative solutions
- School level programs.
- Community engagement.

References







