

# CHAPTER I

## INTRODUCTION

### 1.1 Background of the Study

Sleep is very important for children's growth, helping them develop mentally, emotionally, and physically. However, many children face sleep problems like difficulty falling asleep, waking up during the night, or not sleeping enough. These issues can affect their daily life, including how well they focus, behave, and stay healthy. Because of this, many parents are looking for safe, natural ways to help their children sleep better.

Valerian root is a plant that has been used for a long time to help with sleep and relaxation. Studies suggest that valerian root may improve sleep quality and help people fall asleep faster by calming the brain. Studies have shown that valerian root works better than a placebo for improving sleep problems and is as effective as the drug oxazepam. It helps reduce anxiety and promotes calmness by interacting with certain receptors in the brain (GABAA receptors). When used for a long time, valerian root has been found to improve sleep quality without affecting a person's thinking or memory (Gromball et al, 2014). However, it's not always easy to give children herbal remedies. Traditional forms like teas or capsules may not taste good or be easy for kids to take. Gummy supplements, on the other hand, are a popular way to deliver vitamins and other health aids to children because they are easy to eat and taste good. By creating valerian root in gummy form, parents can give their children a safe, controlled dose that is also enjoyable.

The steeping method used for this product involves carefully processing valerian root to obtain its active compounds, primarily those that contribute to its calming and sleep-enhancing properties. The process begins by cleaning and drying the root to preserve its quality. Then, a solvent extraction technique is often used, where the root is soaked in a suitable solvent, such as water, to draw

out its essential nutrients and active ingredients. These include valerianic acid and other compounds that interact with the brain's GABAA receptors, promoting relaxation. Once the extraction is complete, the liquid extract undergoes further purification to remove any unwanted substances, leaving behind a concentrated form of the valerian root's beneficial compounds. The extract is then carefully measured and incorporated into the gummy formulation. This method ensures that the final product retains the natural benefits of valerian root, while making it easy and enjoyable for children to consume.

## **1.2 Objectives of the Study**

The Objectives of this study are following below:

1. To introduce valerian roots and help children improve their sleep quality and fixes sleeping disorder.
2. To identify the acceptability of valerian root gummies among children and parents in terms of taste, convenience, and ease of administration.