

Internship Report

Submitted



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By

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INTERNSHIP REPORT

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Topic: Clinician perception on factor influencing towards usage of therapeutic nutritional powder

Introduction

Therapeutic proteins are a class of medications that include protein-based drugs engineered to replicate or modify naturally occurring human proteins. These proteins are essential for various physiological functions and can be used to treat a wide range of diseases. The advent of biotechnology has enabled the production of genetically engineered proteins, which has revolutionized medicine.

Proteins are large, complex molecules made up of long chains of amino acids. These chains fold into specific three-dimensional shapes that determine the protein's function in the body. The sequence of amino acids in a protein dictates its structure and biological activity. This structure-function relationship is crucial for the therapeutic effectiveness of protein-based drugs.

Objective of Internship

- **Identify Key Factors:** To identify the key factors that clinicians consider when choosing therapeutic nutritional powders for their patients.
- **Evaluate Perception:** To evaluate clinicians' perceptions of the efficacy, safety, and patient acceptance of therapeutic nutritional powders.
- **Analyse Usage Patterns:** To analyse the patterns of usage of therapeutic nutritional powders among different specialties and clinical settings.
- **Understand Decision-Making:** To understand the decision-making process of clinicians when prescribing therapeutic nutritional powders to their patients.

Key Activities/Projects Undertaken Other than Dissertation

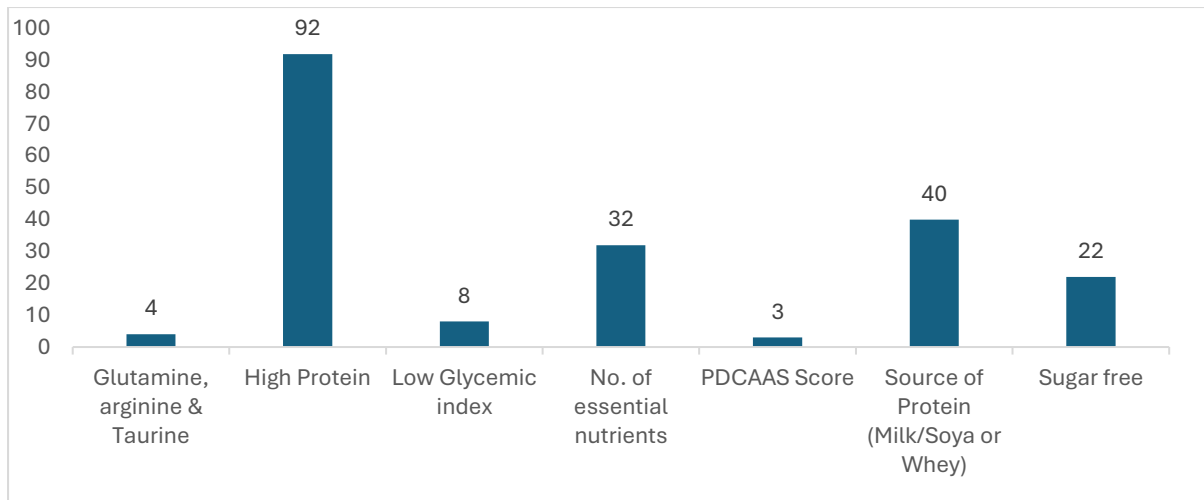
Research

Market Analysis: Conducted survey of 201 doctors of different specialties in 3 hospitals of Jaipur.

-Mahatma Gandhi Hospital

-Eternal Hospital

-Fortis Hospital



Key Learnings from the Dissertation

- **Low Carbohydrate Content:** Emphasize the importance of choosing protein powders with minimal carbohydrate content, especially for patients with specific dietary needs (e.g., diabetes, low-carb diets).
- **Low Sugar Content:** Stress the need for protein powders with low sugar content to avoid unnecessary calorie intake and potential blood sugar spikes.
- **Cost-Effectiveness:** Highlight the need for affordable options to ensure that patients can maintain consistent use without financial strain.
- **PDCAAS Score:** Explain the significance of the PDCAAS score, which measures the protein quality based on the amino acid requirements of humans and their ability to digest it. A higher PDCAAS score indicates a higher-quality protein source.

Suggestions to educate Doctors on PDCAAS

- **Educational Sessions and Materials:** Organize seminars or webinars to explain the importance of protein quality, carbohydrate, and sugar content in protein powders.
- **Provide educational pamphlets or digital resources** that summarize key points about PDCAAS and its relevance to patient health.
- **Comparison Charts:** Create comparison charts that showcase various protein powders, highlighting their carbohydrate and sugar content, cost, and PDCAAS scores. This visual aid can help doctors make informed choices quickly.
- **Case Studies and Examples:** Share case studies demonstrating the positive outcomes of prescribing high-quality, low-carb, and low-sugar protein powders.
- **Include examples** where patients benefited from protein powders with high PDCAAS scores, illustrating the practical benefits.

CONCLUSION

The purpose of the research was to find out the influence on the decisions of the doctor when prescribing therapeutic nutritional powders. The focus was on the importance of protein

digestibility corrected amino acid score (PDCAAS) as an indicator of protein quality compared to factors such as high protein content, certain amino acids (glutamine, arginine and taurine), without sugar composition. and low glycaemic index. Using both descriptive and inferential statistical analyses, we gained insight into physicians' priorities and trends in prescribing these dietary supplements.

Importance of PDCAAS Score

The PDCAAS score became an important factor in how clinicians make decisions. This rating, which assesses the protein quality and digestibility of every food item, is crucial in clinical nutrition due to its impact on patient results. Clinicians place great importance on a high PDCAAS score as it guarantees the nutritional powder's protein is top quality, offering all necessary amino acids in the correct proportions for optimal health.

High Protein Content

While the PDCAAS score is critical, the overall protein content of nutritional powder also has an important impact on doctors. A high protein content is crucial for maintaining and restoring muscle mass, supporting metabolic functions and accelerating recovery processes. Doctors prefer a high protein intake, especially in patients who require a higher protein intake due to conditions such as sarcopenia, cachexia or severe burns. Statistical analyses have shown that high protein content is often considered together with PDCAAS scores. Doctors seek a balance between quantity and quality and ensure that patients receive adequate amounts of high-quality protein. The nutritional powder is designed to meet both short-term protein needs and long-term health benefits from high-quality protein consumption

Inclusion of Specific Amino Acids

The presence of specific amino acids like glutamine, arginine, and taurine also plays a crucial role in a physician's decision-making. Every amino acid has a specific function in aiding patient well-being and healing: -

- Glutamine
- Arginine
- Taurine

Sugar-Free Formulation and Low Glycaemic Index

The lack of sugar and low glycaemic index in the powders also play a major role in doctors' recommendations. Sugar-free products and low-glycaemic options play a vital role in managing metabolic conditions like diabetes, obesity, and insulin resistance