

Synopsis for Dissertation Submitted



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Title- Consumer Behaviour Analysis in Various Novel Drug Delivery System.

Introduction:

Recent technological developments, creative medication delivery strategies, and a better comprehension of consumer behaviour have all contributed to a substantial shift of the pharmaceutical and healthcare industries. Among these developments, Novel Drug Delivery Systems (NDDS) have become a crucial topic of attention with the goal of improving therapeutic treatments' effectiveness, safety, and patient compliance. The examination of consumer behaviour in connection to these innovative technologies is becoming more and more important as the pharmaceutical business develops.

NDDS is an umbrella term for a variety of cutting-edge methods intended to enhance medication delivery and efficacy. These consist of several controlled-release methods, liposomes, nanoparticles, transdermal patches, and microneedles. Compared to conventional drug administration techniques, each of these approaches has special advantages such increased bioavailability, tailored distribution, and less adverse effects.

In addition to being scientifically and technically challenging, the development and use of these systems also heavily depend on user adherence and acceptability.

In order to comprehend consumer behaviour in the context of NDDS, one must look at the intricate interactions between many elements that affect how patients see, accept, and make use of these cutting-edge delivery systems. These characteristics include socioeconomic position, cultural influences, psychological determinants, demographics, and past medical and pharmaceutical experiences. Researchers may better understand consumer preferences, motivations, and potential obstacles by examining these components; this knowledge can then be used to inform the design and promotion of NDDS, improving patient outcomes.

In NDDS, patient education and communication techniques are also evaluated as part of the consumer behaviour analysis. Effective communication of the advantages and appropriate use of novel drug delivery systems is crucial for fostering positive consumer attitudes and behaviors.

Research Question-

"How do consumer perceptions of safety, efficacy, cost, and adherence influence their behavior towards various Novel Drug Delivery Systems (NDDS)?"

A Comprehensive Review"

Objective-

Understand Consumer Perception and Awareness:

Investigate the level of awareness and understanding among consumers regarding different NDDS.

Analyze the factors influencing consumer perception of NDDS.

Evaluate Safety Concerns and Efficacy:

Assess consumer concerns about the safety and potential side effects associated with NDDS.

Evaluate consumer trust in the efficacy of NDDS compared to traditional drug delivery methods.

Analyze Cost Implications:

Examine consumer sensitivity to the cost of NDDS.

Explore how cost influences consumer decisions and preferences for NDDS over conventional drug delivery systems.

Investigate Adherence and Compliance:

Study consumer adherence to medication regimens involving NDDS.

Identify barriers to adherence and factors that enhance compliance with NDDS.

Hypothesis

1. **Primary Hypothesis:** Consumers exhibit different behavior and preferences towards various NDDS based on perceived safety, efficacy, cost, and adherence factors.
2. **Secondary Hypothesis:** Socio-demographic factors (age, gender, income, education) significantly influence consumer preferences and behavior towards NDDS.

Rationale

The development and adoption of Novel Drug Delivery Systems (NDDS) have revolutionized the pharmaceutical industry by enhancing drug efficacy, improving patient adherence, and reducing side effects. Understanding consumer behavior towards these advanced drug delivery methods is crucial for their successful market penetration and widespread use. This study aims to analyze the factors influencing consumer preferences and behavior, providing valuable insights for pharmaceutical companies to tailor their products and marketing strategies effectively.

Methodology

Research Design

A mixed-methods approach will be used, combining quantitative surveys with qualitative interviews to gather comprehensive data.

Target Population

Consumers who have used or are aware of NDDS, including transdermal patches, inhalers, drug-eluting stents, and nanoparticle-based delivery systems.

Sampling Method

A stratified random sampling method will be employed to ensure representation across different demographic groups.

Data Collection Tools

1. **Quantitative Surveys:** Structured questionnaires will be distributed to collect data on consumer preferences, perceived safety, efficacy, cost, and adherence.
2. **Qualitative Interviews:** Semi-structured interviews will be conducted with a subset of survey participants to gain deeper insights into their behavior and preferences.

Intervention

No direct intervention will be applied in this observational study. However, educational materials about various NDDS may be provided to participants to ensure they have a basic understanding of the systems being studied.

Data Collection

Quantitative Data

1. **Survey Distribution:** Online and offline distribution methods will be used to reach a diverse population.
2. **Survey Content:** Questions will cover demographic information, awareness and knowledge of NDDS, perceived safety, efficacy, cost considerations, and adherence behaviors.

Qualitative Data

1. **Interview Process:** Conduct in-depth interviews with selected participants to explore their attitudes, beliefs, and experiences with NDDS.
2. **Interview Guide:** Develop a guide to ensure consistency across interviews while allowing flexibility to probe deeper into specific areas of interest.

Data Analysis

Quantitative Analysis

1. **Descriptive Statistics:** Analyze demographic data and distribution of responses.

2. **Inferential Statistics:** Use regression analysis, ANOVA, and chi-square tests to identify significant factors influencing consumer behavior.

Qualitative Analysis

1. **Thematic Analysis:** Identify common themes and patterns in interview transcripts.
2. **Triangulation:** Combine quantitative and qualitative findings to validate results and provide a comprehensive understanding of consumer behavior.

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