

**Market Research of Sitagliptin: Analyzing Market Dynamics and
Brand Perception**

Guided By

**Dr. Saurabh Kumar Banerjee
Dean and Associate Professor
School of Pharmaceutical Management
IIHMR UNIVERSITY, JAIPUR**

Submitted by

**Koushik Ghosh (0311)
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In Pharmaceutical Management
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**INDIAN INSTITUTE OF HEALTH MANAGEMENT
RESEARCH**

1, Prabhu Dayal Marg , Near Sanganer Airport , Jaipur, India

Email: iihm@iimr.edu.in URL: www.iihmr.edu.in

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KOUSHIK GHOSH

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DECLARATION BY STUDENT

I, Koushik Ghosh Enrolment No. IIHMR-U/02/2021-23/0311 hereby declare that this dissertation titled Market Research of Sitagliptin is the bonafide record of my original research work. I declare that it has not been submitted to any other University or institution for the award of any degree of diploma. Information derived from the published or unpublished work of other as been duly acknowledged in the text

Name of the Student

Koushik Ghosh

Date:

CERTIFICATE

This is certify that Koushik Ghosh in partial fulfilment of the requirements for the IIHMR University, Jaipur has successfully completed his internship at Jiyonwall Pvt. Ltd under mentor Dr.Sourabh Kumar(IIHMR UNIVERSITY) During the Feb 22nd ,2023 to June 19th ,2023

Place:

Date:

Sign: Dr.Sourabh Banerjee

Associate Professor

IIHMR UNIVERSITY

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Thank You.

Sincerely,

Koushik Ghosh

Roll no. – 0311

Abstract

The market research conducted on sitagliptin, a widely used medication to control type 2 diabetes. The study explores key aspects related to sitagliptin, including market size, competition, growth drivers, limitations, and future prospects.

By this research we get to know that a dipeptidyl peptidase-4(DPP-4) inhibitor has gained market acceptance significantly from the beginning. In the global market sitagliptin has steady growth to prevent the type-2 diabetes in world wide. Due to unhealthy food, abnormal lifestyle and by the aging population increasing the demand of the anti-diabetic medication. By the study we can see the major competition between the major pharmaceutical companies about manufacturing & marketing of sitagliptin products.

Presence of generic manufacturer in the market increase the competition between the manufacturer and providing the cost effecting medicine for patients.

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Chapter 1

1.1 Introduction

The type-2 diabetes prevention in worldwide is a serious healthcare challenge for the healthcare industries. The increasing rate of metabolic disorders the main cause is genetic history and the unhealthy lifestyle and food consumption. Therefore we need effective drug to control or manage diabetes. To lower the risk complication and to control the diabetes sitagliptin has become the top choice between the doctors and patients. Several types of important factors must be considered for conducting a good and comprehensive market research. The first step to identify and assessing the current market environment is to judge the wideness of type-2 diabetes, the demographics of the affected population and the total market size of the type-2 diabetic drugs. Pharmaceutical firms can forecast future demand and estimate the potential market share that Sitagliptin would capture just by comprehending the scope and growth of the market. For determining Sitagliptin's market position, it is essential to evaluate the competitive landscape. There are multiple notable competitors in the DDP-4 inhibitor class, such as Saxagliptin, Linagliptin and Vigagliptin. It is possible to gain insight into the competitive dynamics and pinpoint areas where Sitagliptin can set itself apart by evaluating competitor's market shares, pricing plans, promotional initiatives, and clinical outcomes. Understanding the efficacy, safety, and tolerability profiles of these medications becomes essential for assisting healthcare professionals in making well-informed prescription decisions. This is where comparative studies and real-world evidence come into play. Determining market trends and new business opportunities is also essential for Sitagliptin's future development. Examining the Sitagliptin market access and adoption across various geographies as well as the potential for novel therapeutic innovations in the management of diabetes are all part of the analysis. Market research and Analysing them is very important for Sitagliptin for successfully penetrate in the market. Finding opportunities for improvement and optimization is made easier by analysing current marketing campaigns, sales force effectiveness, and digital marketing activities. New opportunities for involvement and education have been opened up by the introduction of digital health technology and the growing significance of patient-centric methods. Companies can use this information to create customized marketing plans that will effectively reach patients and healthcare professionals, resulting in maximum market penetration and brand awareness. This research attempts to determine the leading Sitagliptin brands offered in West Bengal in addition to studying the Sitagliptin market as a whole. Researchers can determine which brands of Sitagliptin are

most frequently prescribed and estimate their market share relative to other Sitagliptin brands by examining sales data, market surveys, and conducting interviews with healthcare professionals and patients. This report offers insightful information on brand perception, market competition, and market growth prospects.

Market research must include important factors including consumer perception and satisfaction. Patients will be interviewed and surveyed as part of this study to understand about their opinions, preferences, and experiences with sitagliptin and its many brands. In order to measure user satisfaction, feedback on the product's efficiency, side effects, convenience, and affordability will be obtained. It is possible for pharmaceutical companies and doctors to address potential issues and to provide better patient care by utilizing this information.

1.2 Mechanism of Action-

“Incretins like GLP-1 and GIP are activated by DPP-4 and released over the day and increase in response to meals as part of glucose homeostasis. Sitagliptin's inhibition of DPP-4 delays this process. Reduced incretin inhibition results in an overall improvement in blood glucose management, as seen by a drop in glycosylated haemoglobin (HbA1c), and increases insulin production and decreases glucagon release in a way dependent on glucose concentrations”. (Rev)

1.2.1 PHARMACOKINETICS-

Absorption: “Sitagliptin is rapidly absorbed by oral administration, with peak plasma concentrations achieved within 1 to 4 hours. Food has little to no effect affect in its absorption, Therefore it can be taken with or without meals.” (Gallwitz, January,2007)

Distribution: “Sitagliptin has a moderate volume of distribution, indicating that it distributes well throughout the full body. It is approximately 38% bound to plasma proteins, primarily albumin.”

Metabolism: Sitagliptin undergoes minimal metabolism in the liver. The primary metabolic pathway involves the enzyme cytochrome P450 (CYP) 3A4, resulting in the formation of an inactive metabolite. However, this metabolic pathway contributes to a small extent to the overall elimination of sitagliptin, with the majority of the drug being excreted unchanged.

Elimination: Sitagliptin is primarily eliminated through renal excretion. Approximately 87% of a dose is excreted by the urine, with only a little fraction

(<1%) being eliminated by faeces. approximately 8 - 14 hours is the half-life of Sitagliptin.

1.3 Use

“To control high glucose level in the blood, sitagliptin is used to take with healthy food and a proper exercise routine daily. It mainly used by the patients with type 2 diabetes. It helps to control the blood glucose level in body also helps to avoid renal disfunction, glaucoma, limb amputation, damages of nerves .If blood sugar level is control by patients it also helps to reduces the chances of heart attack, stroke etc. The incretins level in blood improved by the uses of sitagliptin as per doctor consultation.”

1.4 Indication

Sitagliptin is indicated as an adjunct to proper and healthy diet and daily exercise to improve glycaemic control in adults with type 2 diabetes. A history of pancreatitis or type 1 diabetes cannot be treated with this medication

1.5 WARNING

During the use of sitagliptin sometimes may increase the risk of the pancreatitis (inflammation of pancreas). This is sometimes fatal and can be severe.

1.6 Benefits of Sitagliptin

Effective blood sugar control: Sitagliptin helps regulate blood glucose levels by inhibiting the enzyme responsible for breaking down incretin hormones. This results in increased insulin secretion and reduced glucagon release, leading to improved blood sugar control in patients with type 2 diabetes.

Lower risk of hypoglycaemia: Unlike some other diabetes medications, Sitagliptin has a lower risk of causing hypoglycaemia (low blood sugar) when used as monotherapy. This reduces the potential complications associated with hypoglycaemia.

Weight neutrality: Sitagliptin is considered weight-neutral, meaning it does not generally cause weight gain or weight loss. This can be advantageous for patients who are already struggling with weight management.

Convenient dosing: Sitagliptin is available in oral tablet form and is typically taken once daily. This simple dosing regimen improves convenience and adherence to treatment for patients.

Well-tolerated: Sitagliptin is generally well-tolerated with a favorable safety profile. Common side effects are usually mild and include headache, upper respiratory tract infection, and gastrointestinal symptoms.

Cardiovascular benefits: Some studies have suggested that Sitagliptin may have cardiovascular benefits, such as reducing the risk of major cardiovascular events in patients with diabetes and established cardiovascular disease.

Combination therapy: Sitagliptin can be used as monotherapy or in combination with other diabetes medications, providing flexibility in treatment options and allowing for individualized patient management.

It is important to note that the specific benefits and suitability of Sitagliptin may vary depending on individual patient factors. Consultation with a healthcare professional is necessary to determine the appropriate treatment approach for each patient.

1.7 Common Side effects-

Headache

Nausea

Runny nose

Sore throat

Cough

Diarrhoea

Dizziness

CHAPTER 2

2 Literature Review

The incretin effect reduces in type 2 diabetes, resulting in decreased insulin production. The hormone GLP-1, which is crucial for controlling blood sugar levels, is quickly broken down by the enzyme DPP-4. DPP-4 functions are restricted by sitagliptin, prolonging the time to active GLP-1. By stimulating the production of insulin and lowering the release of glucagon, this aids in lowering or stabilising blood glucose levels. (Holst, July, 2019)

“Sitagliptin improved the glycaemic parameters HbA1c, fasting glucose, and postprandial glucose in clinical studies in patients with type 2 diabetes in monotherapy in doses of 100 mg and 200 mg given once daily in a 24-week study. In addition to fasting glucose (17.1 mg/dL and 21.3 mg/dL), HbA1c was dose-dependently reduced by 0.79% (100 mg/d) and 0.94% (200 mg/d)”. (Gallwitz, April, 2007)

“Sitagliptin and DPP-4 inhibitors in general address a novel multimodal principle of action in type 2 diabetes. By preserving stimulated circulating plasma levels of incretin hormones, insulin secretion is stimulated under hyperglycaemic conditions and glucagon secretion is suppressed. Therefore, this novel therapeutic principle addresses not only insulin secretion and insulin resistance, as is the case with previously used oral anti hyperglycaemic agents but type 2 diabetes therapy also meets unmet needs”. (Gallwitz, January, 2007)

“When DPP-4 is inhibited, complete GLP-1 tube attention increase to those seen in the stimulated state following a meal. Other peptides, similar as glucose-dependent insulinotropic peptide (GIP), pituitary acetylcholine-releasing polypeptide (PACAP), and gastrin-releasing peptide (GRP), are also inactivated by DPP-4 via enzymatic fractionalization in addition to GLP-1, which has a veritably high affinity for DPP-4 as a substrate. Glucose homeostasis is also maintained by some of these peptides.” (Sharma, et al., March, 2019)

“Seventy-five percent of an oral dosage is excreted mostly through the kidneys, while the remaining portion is metabolised by the cytochromes CYP 3A4 and CYP 2C8. During clinical trials, no pharmacological interaction was seen between sitagliptin and other anti-hyperglycaemic medications, including those used by diabetics.” (Gu, et al., 2020)

OD doses of 50–200 mg/d of sitagliptin result in plasma concentrations of the drug of >100 NM and a 24-hour DPP-4 inhibition of 80%. As a result, postprandial GLP-1 concentrations are 2-3 times higher when it is physiologically active and intact. All of the studies that were completed had excellent outcomes, and hypoglycaemia episodes or other severe side effect was observed in the control groups. Whether taken alone or in studies that combined it with metformin or thiazolidinediones (TZDs), sitagliptin did not cause hypoglycaemia.. (Gallwitz, January,2007)

Numerous clinical trials Shows the efficacy rate of sitagliptin in improving diabetes control. Studies have shown that sitagliptin effectively reduces haemoglobin A1C (HbA1c) levels as a single drug or in combination with other anti-diabetic drugs. The drug's mechanism of action, inhibiting DPP-4, increases the concentration of active incretin hormones, resulting in enhanced insulin secretion and reduced glucagon levels. (Green, et al., Aug,2008)

Kluger et al.'s review emphasizes the positive impact of sitagliptin on glucose homeostasis in patients with type 2 diabetes. The study focuses on sitagliptin mechanism of action, which involves increasing insulin secretion while reducing glucagon release, resulting in improved glycaemic control and lower blood glucose levels. (Aaboe , et al., 2009)

AK Mohiuddin market research analysis examines the demand for sitagliptin in the management of type 2 diabetes. The study highlights an increasing trend in the use of sitagliptin, indicating a rising demand for this medication in the market due to its proven efficacy and benefits in controlling blood sugar levels. (Mohiuddin)

Market analysis provides insights into sitagliptin prominence in the global anti-diabetic drug market. The study highlights sitagliptin as a major contender in the market, emphasizing its market share and its impact on the overall landscape of anti-diabetic medications worldwide. (march ,2023)

Manikin's study focuses on the favourable market trends of sitagliptin. The research highlights the medication's efficacy in managing diabetes, its favourable safety profile, and its convenient once-daily dosing regimen, all of which contribute to its positive market reception among healthcare professionals and patients. (al, 2019)

Rita Mohan, Dallumal's market research report discusses the competitive landscape of the sitagliptin market. The study reveals the presence of strong competition, with multiple pharmaceutical companies offering generic versions of sitagliptin, which influences market dynamics and pricing strategies. (Rita Mohan Dallumal, et al., may 18,2015)

CHAPTER 3

3.1 Research Objective

Primary objective: Market Research of sitagliptin

Secondary Objective:

- To study the sitagliptin market , practice pattern of sitagliptin in West Bengal
- To find out the top brands of sitagliptin & it analyse to the market share of sitagliptin other brands.

Scope of the study –The major scope of this study is too know what is to find out the market of sitagliptin brand and doctor preferences

3.1.1 Research Question

- What is to find out market of sitagliptin brand and doctors preferences?
- What are the major drug is used in Type 2 Diabetes?

3.2 Research Methodology

Study Design: Descriptive Study

Sampling: Non- Probability Convenient sampling

Sample Size: Respondents: During the Visited 85 Doctors and 170 respondents filled questionnaire.

Sample Population: General Physician, Consultant physician, diabetologist.

Sample Area: West Bengal (Kolkata, Durgapur, Asansol)

Study duration: Feb 20th to May 19th, 2023.

CHAPTER 4

4.1 Result & Discussion

The report of the information examination, the interpretation, and the summary of the findings are presented in this section. As evidenced by the research methodology, illuminating measurements were used in the examination. In order to help clients visualise the results, recurrence tables with feature charts and pie graphs were constructed.

Question 1. Do you prescribe any other molecule drug instead of the sitagliptin?

Inference: In this graph represent that nearly 48% of the respondents said "yes" when asked if there are other drugs that can be prescribed instead of sitagliptin. This suggests that there are indeed alternative medications available and about 32% of the respondents answered "maybe," indicating that there might be alternative drugs, but it's uncertain or requires further evaluation. Approximately 20% of the respondents answered "no," suggesting that they believe there are no other drugs that can be prescribed as an alternative to sitagliptin.

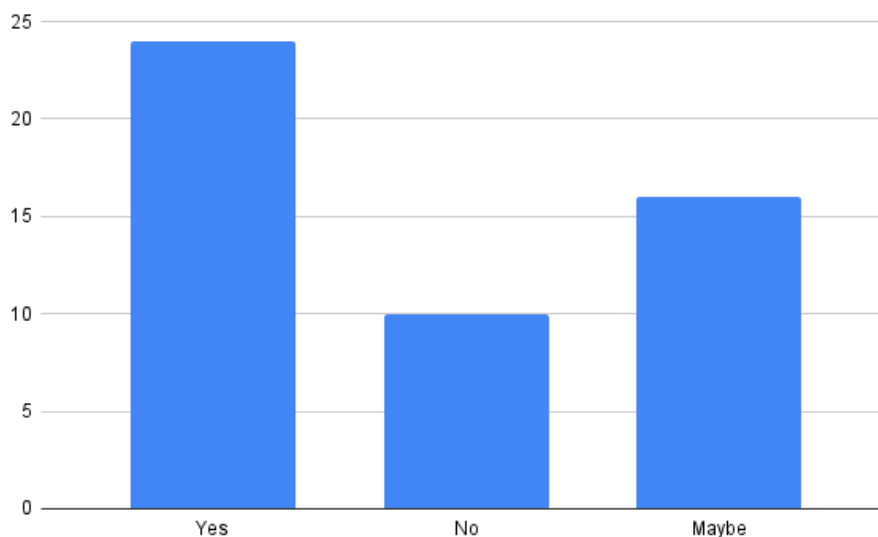


Fig: 1

Question 2. Which sitagliptin brand do you prefer?

Inference: It seems that Siaglide is the most preferred sitagliptin brand among the respondents, with 62% of individuals expressing a preference for it. This indicates that a majority of people in the surveyed group favour Siaglide when it comes to sitagliptin medication. Januvia and Janumet were mentioned as preferred brands by 14% & 12% each. This suggests that a smaller but still significant proportion of respondents have a preference for these specific Sitagliptin brands. The remaining 12% of respondents did not mention Siaglide, Januvia, or Janumet as their preferred brand. Instead, they expressed a preference for other sitagliptin brands like Zita, Istavel, and Istamet.

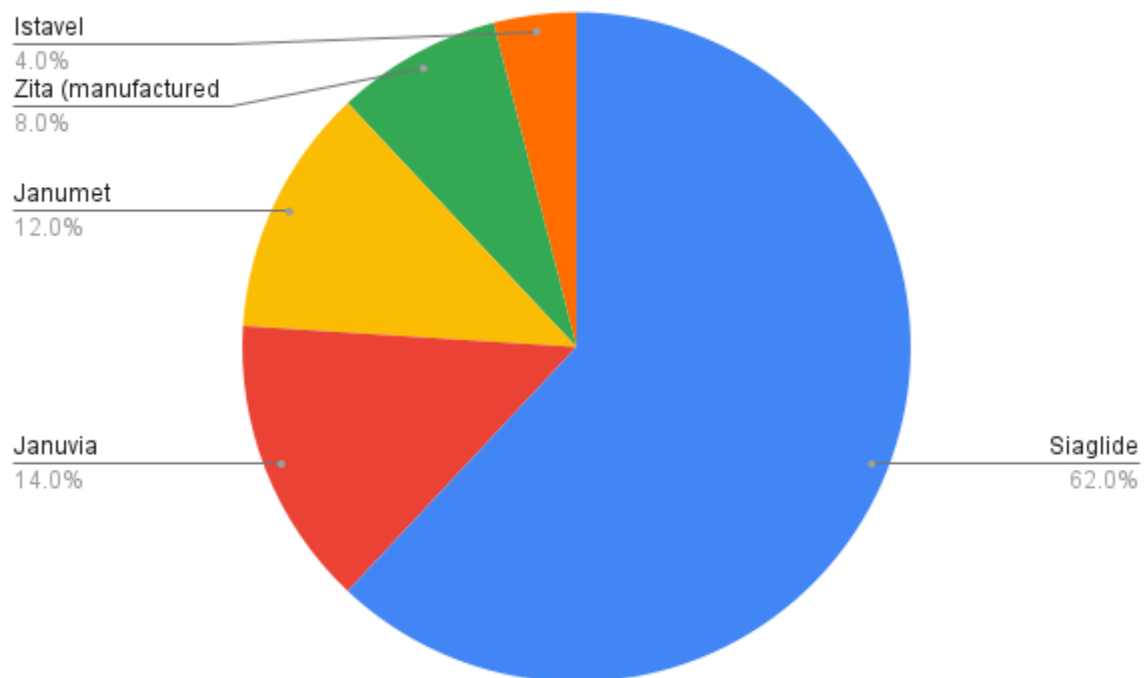


Fig: 2

Question 3. Severity of the side effect of the sitagliptin observed by the doctors?

Inference: According to the study the gathered data represent that most of the doctors (48.6%) have observed moderate side effects in patients by Sitagliptin. 40% of doctors observed mild side effects and 11.4% severe side effects are

observed. according to the study, sitagliptin is a safe drug, with a majority of patients experiencing mild to moderate side effects.

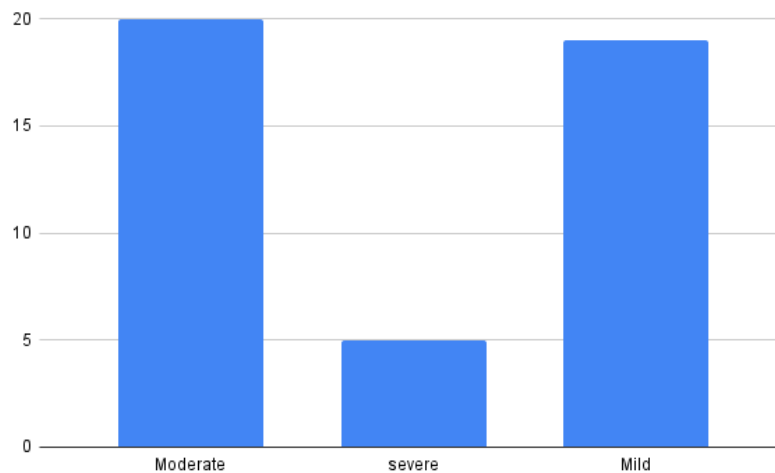


Fig: 3

Question 4: Would you recommend Sitagliptin as a first-line treatment option for patients with type 2 diabetes?

Inference: For patients with type 2 diabetes, sitagliptin is a first-line treatment option that 54.3 percent of specialists may want to recommend, while 31.4 percent of specialists stated that their recommendation would depend on the patient's health. In any case, 14.3% of specialists demonstrated that they might want to make an alternate suggestion. These discoveries underscore the numerous perspectives and elements that medical care suppliers consider while choosing whether or not to utilize Sitagliptin to treat type 2 diabetes.

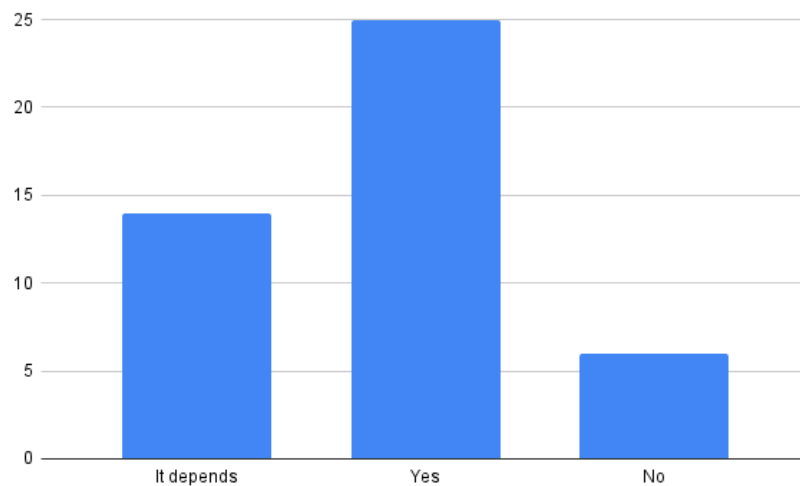


Fig: 4

Question 5: Any significant side effects or adverse reactions with the use of Sitagliptin in your patients?

Inference: By the gathered information based on the research we can conclude that a little more than half of the doctors (54.3%) have not encountered significant side effects or adverse reactions with the use of Sitagliptin in their patients. On the other hand, about 45.7% of doctors have seen significant side effects or adverse reactions. This means that while most doctors haven't observed major issues, a notable number have noticed such reactions.

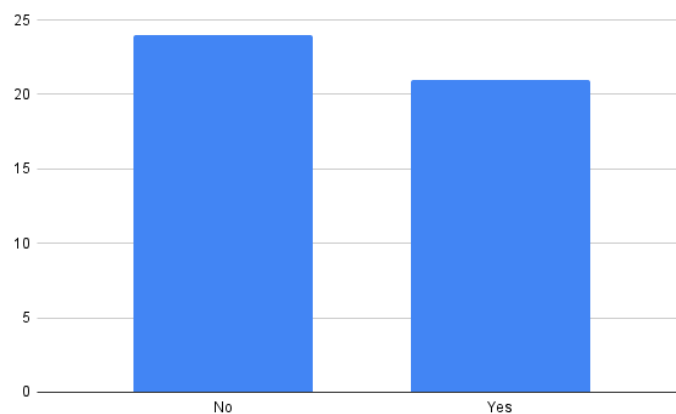


Fig: 5

Question 6: Rate the effectiveness of Sitagliptin in managing blood glucose levels in your patients?

Inference: According the responses from the doctors we can conclude that most doctors (60%) find Sitagliptin to be very effective in managing blood glucose levels in patients with type 2 diabetes. Additionally, a significant number of doctors (26.8%) consider it somewhat effective. However, a small percentage of doctors (9.1%) believe it is not very effective.

These findings suggest that Sitagliptin has a positive impact on controlling blood sugar for many patients. It is viewed as highly effective by most doctors, which is encouraging. However, it's important to remember that individual responses may vary, and some patients may not experience the desired effectiveness with Sitagliptin.

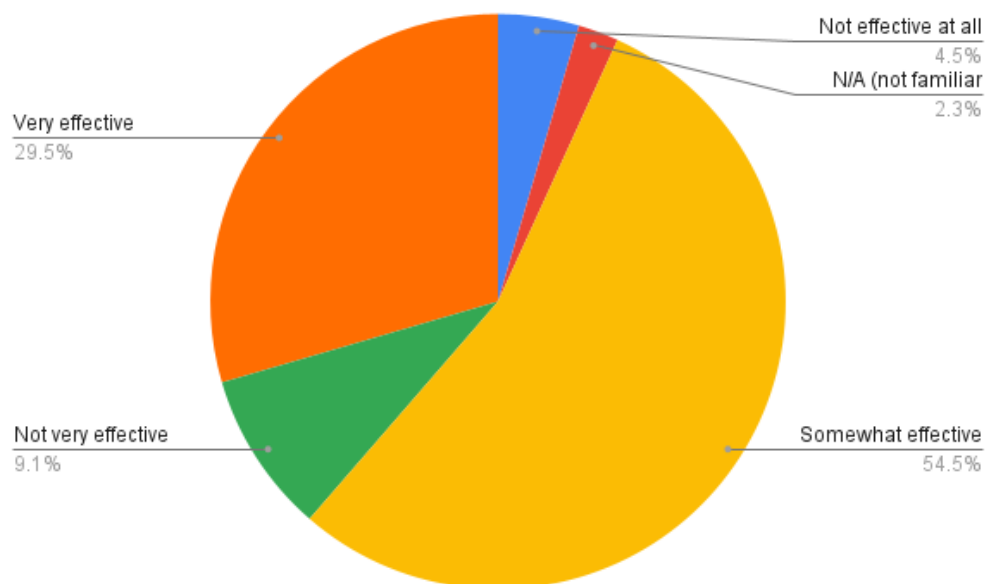


Fig: 6

Question 7: The most common side effects or adverse reactions are observed after consuming Sitagliptin by patients.

Inference: Based on the collected data from the practitioner the graph shows that -

Around 30.2% did not experience any side effects.

Roughly 20.9% experienced hypoglycaemia

Around 18.6% experienced headaches.

Approximately 4.7% experienced skin rash or itching.

About 7.0% experienced stomach pain.

Around 11.6% experienced nausea.

Approximately 7.0% experienced diarrhoea.

These numbers represent the percentage of people who reported experiencing these specific side effects or adverse reactions. It's important to remember that these figures may vary depending on the specific medication or treatment under consideration.

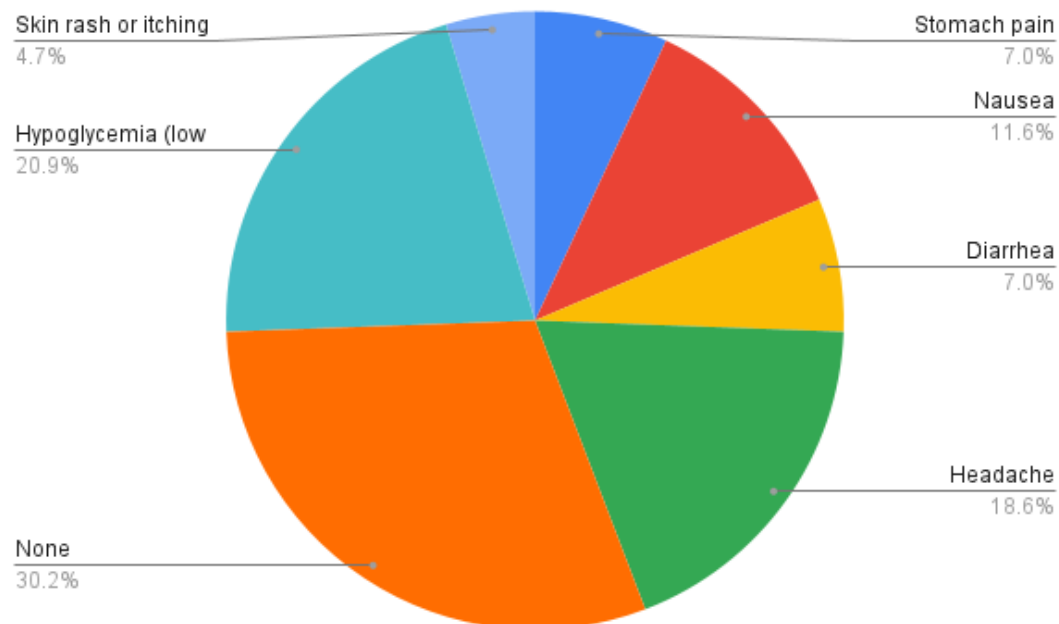


Fig: 7

Question 8: Affordability of the Sitagliptin?

Inference: In the Kolkata, Durgapur, and Asansol region, the affordability of Sitagliptin is perceived positively. A substantial majority of doctors and patients, around 60%, consider it to be very affordable. Furthermore, a significant portion of respondents expressed that the affordability of Sitagliptin falls within the categories of neutral or somewhat affordable. This indicates that Sitagliptin is generally accessible and reasonably priced in the mentioned areas, as per the feedback received from healthcare professionals and patients.

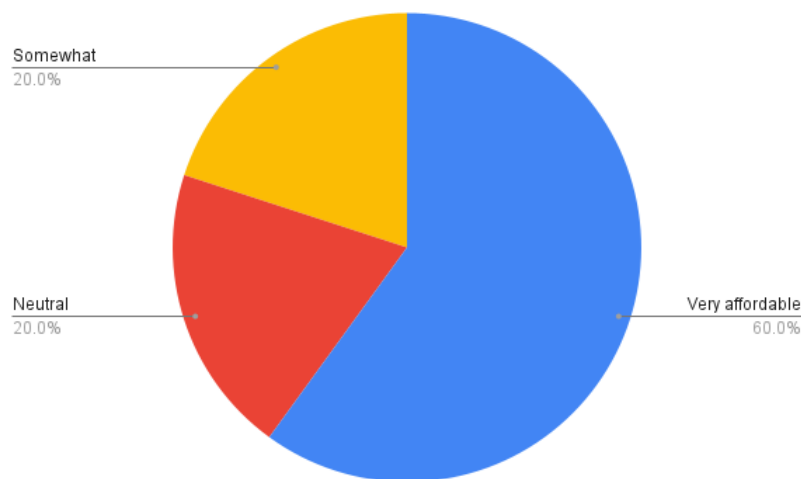


Fig: 8

Question 9: Are there any specific challenges or barriers you face in prescribing Sitagliptin or managing patients with diabetes?

Inference: According to feedback from healthcare professionals, several specific challenges and barriers can arise when prescribing Sitagliptin and managing patients with diabetes. One notable challenge is promoting patient adherence and compliance to the prescribed Sitagliptin regimen, as non-adherence can significantly impact the effectiveness of treatment. Additionally, the cost of Sitagliptin and inadequate insurance coverage pose barriers, potentially restricting access to the medication for certain patients. These financial considerations can create difficulties in ensuring that patients receive the necessary treatment. It is crucial for healthcare professionals to address these challenges and work towards finding solutions to optimize patient outcomes in diabetes management.

Question 10: The Influence of Pharmaceutical Medical Representative Interaction on Prescribing Habits for Sitagliptin

Inference: The importance of pharmaceutical Medical representative interaction in shaping prescribing habits for Sitagliptin varies among doctors. While some doctors find these interactions essential and informative, others rely more on evidence-based guidelines and scientific literature. Understanding the range of perspectives regarding the importance of Medical representative interaction can help pharmaceutical companies refine their communication strategies and provide doctors with the information they need to make informed prescribing decisions, but the survey results clearly indicate that visits from medical representatives have an impact on how doctors prescribe different Sitagliptin brands. The interactions with representatives influence their prescription behaviour and show a preference towards the different Sitagliptin brand. This means that the information and materials provided by the representatives play a role in shaping the doctors' decisions to prescribe Sitagliptin. It's important to be aware that this influence may introduce a bias towards prescribing Sitagliptin brand over other treatment options.

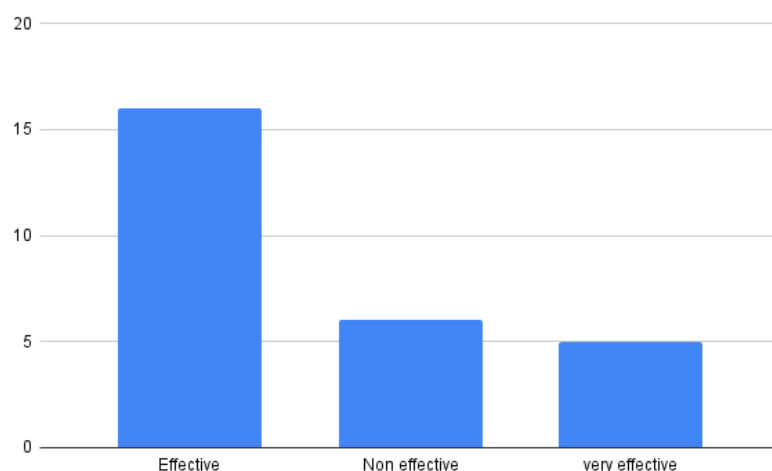


Fig: 10

Question 11: Are there any specific educational programs or resources that have positively influenced the prescription behaviour for Sitagliptin?

Inference: according the study there are specific educational programs and resources organized by the pharmaceutical companies that have positively influenced the prescription behaviour of healthcare professionals for Sitagliptin.
Example

Continuing Medical Education (CME) programs: CME programs focused on diabetes management and treatment options, including Sitagliptin, can provide

doctors with up-to-date information, clinical evidence, and guidelines. These programs help improve knowledge and understanding, leading to informed prescribing decisions.

Sponsored educational initiatives: Pharmaceutical companies often develop educational initiatives and resources to support healthcare professionals in understanding and prescribing their medications, including Sitagliptin. These resources may include online portals, webinars, educational materials, and scientific publications that offer in-depth information on Sitagliptin's mechanism of action, clinical trials, and real-world evidence.

Question 12: How frequently do you prescribe Sitagliptin to your patients? (Please specify the approximate percentage of your patients)

Inference: Based on the data collected, the frequency of Sitagliptin prescription among healthcare professionals varies. Among the respondents, 18.2% indicated that they prescribe Sitagliptin to less than 10% of their patients. Another 18.2% reported a prescription rate of 10% to 25% of their patients. Similarly, 18.2% of healthcare professionals prescribe Sitagliptin to approximately 26% to 50% of their patients. Interestingly, a significant portion of respondents, 31.8%, reported prescribing Sitagliptin to a substantial number of their patients, with rates ranging from 51% to 75%. A smaller percentage, 13.6%, stated that they prescribe Sitagliptin to more than 75% of their patients. These findings demonstrate varying levels of utilization of Sitagliptin among doctors.

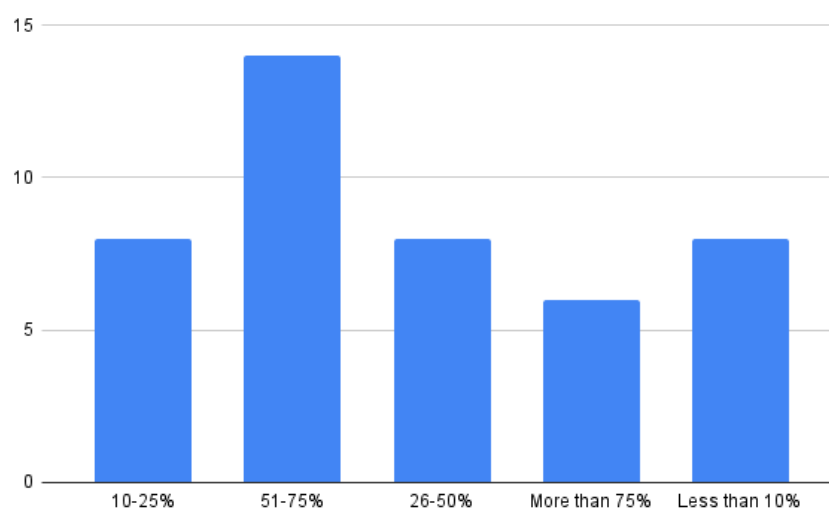


Fig: 12

Question 13: Duration of sitagliptin medication.

Inference: According to the graph, among the patients, 36.0% indicated that they have been using Sitagliptin for a period of 6 months to 1 year. Another percentage was not specified for the usage duration of 1 year to 2 years. However, 34.0% of Patients using Sitagliptin for more than 2 years. These findings suggest that a significant portion of the patients have been utilizing Sitagliptin for a considerable period, indicating a level of familiarity and experience with the medication. It also highlights the potential trust and confidence placed in Sitagliptin over an extended duration of use.

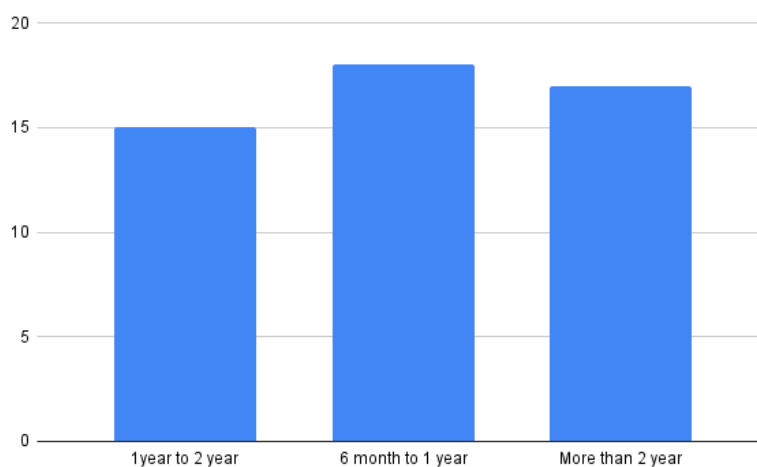


Fig: 13

Question 14: On the scale of 1 to 5 rate your recommendation of sitagliptin for type 2 diabetes?

Inference: The poll clearly shows that there is a favourable tendency to suggest Sitagliptin to those who have type 2 diabetes. On a scale of 1 to 5, a substantial majority of respondents said that they were likely to advise Sitagliptin to people with type 2 diabetes by giving it a likelihood of 4. This may indicate that medical professionals think Sitagliptin is a good option for treating the issue. The willingness to recommend Sitagliptin is evidence of its perceived efficacy and advantages, possibly indicating trust in the drug's ability to help patients



Inference: Sitagliptin tends to be seen as being fairly expensive in comparison to other diabetic drugs, according to the information supplied by patients. A sizable portion of patients (24.3%) feel it to be extremely costly, and almost two-thirds of patients (64.9%) think it is pricey. Only a lower percentage of people (10.8%) think Sitagliptin is inexpensive. These results suggest that many patients may find it difficult to afford Sitagliptin, which may make it more difficult for them to select this medicine for their diabetic treatment. A drug's cost should be considered when choosing a therapy since it impacts a patient's access and compliance.



CHAPTER 5

5.1 CONCLUSION

According to the market research study, 85 specialists and 170 respondents are participated in the qualitative study in West Bengal (Asansol, Kolkata, and Durgapur), offering significant insights into the Sitagliptin market and well-known brands. The goal of the study was to discover the suggested best treatment options for people with type 2 diabetes. The study's conclusions show that 48% physicians frequently suggested type 2 diabetic patients use Sitagliptin. Siaglide, Janumet, Januvia these brand has reputation for being successful option for treating Type 2 diabetes. It was discovered that Janumet and Siaglide were the most often recommended brands among the professionals polled. Where Siaglide is first preference for 62.0% respondents and januvia is preferred 14% of respondents. This may indicate that medical practitioners have faith in the effectiveness and applicability of these treatments for their patients. Janumet OD and Siaglide.

This study is important because it illuminates the preferences and suggestions of doctors, allowing for a better knowledge of the state of type 2 diabetes care in West Bengal today. Additionally, it adds to the corpus of knowledge about the efficacy and acceptance of particular Sitagliptin brands, assisting patients and healthcare professionals in making educated treatment choices. These results can be built upon by additional research and ongoing projects to raise the calibre of care given to people with type 2 diabetes in the surveyed area.

5.2 LIMITATION

While the mentioned research provides valuable insights, it is important to acknowledge some limitations that may impact the interpretation and generalizability of the findings. Here are six limitations that should be considered:

Limited sample size: The study relied on a relatively small sample size of 55 experts from West Bengal. The findings may not fully represent the diversity of opinions and practices across a larger population.

Geographical specificity: The research focused exclusively on experts located in West Bengal. Therefore, the findings may not be applicable or representative of other regions or healthcare settings, limiting the generalizability of the results.

Potential bias in doctor selection: The process of selecting the doctor for participation in the study might introduce bias. It is possible that certain perspectives or opinions were overrepresented or underrepresented, impacting the overall findings.

Lack of patient perspectives: The research solely relied on expert opinions, without directly considering the perspectives and experiences of patients. This absence of patient input may limit the understanding of the practical implications and patient satisfaction related to the use of Sitagliptin brands.

Absence of comparative analysis: The study did not compare the effectiveness or outcomes of different Sitagliptin brands directly. Without a comparative analysis, it is challenging to ascertain which brand might be more superior in terms of efficacy or safety.

Ethical and Privacy Concerns: Market research must adhere to ethical guidelines and protect participant privacy. However, there may still be concerns regarding the collection, storage, and usage of sensitive personal and medical information, which may impact participant trust and response rates.

Non-Response Bias: Non-response bias can occur if a significant number of participants decline to participate or fail to respond to the research survey or interview. This can introduce potential bias if those who choose not to participate have different characteristics or perspectives compared to those who do participate.

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