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Effects of marketing mix strategies on intentions to purchase HIV self-test kits from pharmacies in Nairobi County

Beatrice Leboo
Strathmore Business School (SBS)
Strathmore University

EFFECTS OF MARKETING MIX STRATEGIES ON INTENTIONS TO PURCHASE HIV SELF-TEST KITS FROM PHARMACIES IN NAIROBI COUNTY

BEATRICE LEBOO

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DECLARATION

I declare that this research project has not been previously submitted and approved for a degree by this or any other University. To the best of my knowledge and belief, the dissertation contains no material previously published or written by another person except where due reference is made in the dissertation.

BEATRICE LEBOO

REG NO: MBA/111930/2018

Signature_____ Date_____

Approval

DR. NANCY NJIRAINI, PhD

LECTURER, STRATHMORE UNIVERSITY BUSINESS SCHOOL

Signature_____ Date_____

ABSTRACT

Given that private institutions issue 91% of pharmaceutical products in the country, they play a critical role in ensuring that HIV self-testing kits are distributed to the populace. To achieve this, pharmacies need to be advised to implement data-driven marketing initiatives. Establishing the impact of each of the 4Ps (product, price, place, and promotion) of the marketing mix would allow creation of a more effective marketing approach; such an approach would benefit multiple stakeholders of the pharmaceutical industry in Kenya. This research sought to fill the gap by examining each of the 4Ps of the marketing mix's impact on potential customers' purchase intentions. The study was premised on the theory of planned behaviour and the marketing mix theory. The study was grounded on a positive philosophy with a descriptive correlational design employed with quantitative data collected through questionnaires to address the objectives. The study population included the 1266 pharmacies listed in Nairobi County, with a sample of 295 pharmacies being considered in the study. The study pre-tested the study with 20 pharmacies that were not involved in the main study. Multiple linear regression was applied as the primary inferential analysis tool. The study was able to obtain an 80% response rate. The study found out that marketing mix strategies determine 15% of purchase intentions of HIV self-test kits. The study concluded that product, promotion, and price factors and age have a significant influence on customers' purchase intentions. The research concluded that place factors, gender, and education did not significantly influence customers' purchase intentions. The study recommends that pharmacies offer more customer-centric services such as after-sales counselling and, in partnerships with the government, create more self-test kits. The study was only limited to Nairobi County; hence there is a need for a broadened examination of acceptability of HIV self-testing kits in Kenya at large. This will help in driving the discussion on the self-test kits in the marginalized areas.

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LIST OF ABBREVIATIONS

AIDS	Acquired Immunodeficiency Syndrome
ELISA	Enzyme-Linked Immunosorbent Assay
HIV	Human Immunodeficiency Virus
HIVST	Human Immunodeficiency Virus Self-Test
NACC	National Aids Control Council
NASCOP	National Aids/STI Control Programme
PPB	Pharmacy and Poisons Board
PrEP	Pre-Exposure Prophylaxis
UNAIDS	United Nations Joint Programme on HIV/AIDS
WHO	World Health Organization

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CHAPTER ONE

INTRODUCTION

1.1 Background to the study

Globally, the concept of marketing is increasingly receiving attention as a useful and essential tool in corporate decision making (Aaker, 2014). The ever-expanding and the competitive market place is creating awareness of the need for marketing as a strategic tool for influencing consumer purchase decisions choices (Steenkamp, 2012). Therefore, investing in a good marketing team and strategy enhances a product's positioning and final selection as consumers' brand of choice. Marketers need to go past the variety of choice persuaders and instead focus directly on consumers to build a rapport and understanding of purchasing decisions (Kotler, 2013). The tenets of marketing, such as those encapsulated in the 4Ps of marketing (product, price, place, and promotion), can be used ubiquitously by organizations operating in different sectors, seeking to improve their outreach efforts, which is an indicator of a healthy organization. The study focussed on assessing the usefulness of the marketing mix and its impact on purchase intentions among health products; the Human Immunodeficiency Virus (HIV) kit was used as a case.

Chen (2018) reported that promoting the quality of marketing, pricing, and product/service significantly improves customer satisfaction, thus promoting product acquisition. This promotes their intention to use the product, and in some instances, results in the customer recommending the product to other users. Wu (2018) reported that all marketing mix components significantly improve customer loyalty to a particular product. The conclusions were that effective implementation of market mix strategies results in better purchasing decisions among customers. The new healthcare market has evolved; governments, employers, manufacturers, and suppliers have resorted to employing more customer-driven strategies. To remain competitive, it is necessary to restructure how healthcare organizations operate and how healthcare service is purchased and delivered. This is only possible through effective marketing (Hinson, Adeola, Limbu, & Mogaji, 2020).

Ravangard, Khodadad, and Bastani (2020) note that effective marketing strategies improve performance among hospitals and healthcare centres since they strongly influence a patient's choice of hospital. In England, it was noted that surgery success rates, hospital reputation, patient care level, pre and post patient access, sanitary standards, waiting time, and accessibility influence patients' selection (Coulter, Le Maistre, & Henderson, 2005). Mwangi

(2015) noted that staff competence, level of service provision, and a mix of marketing strategies improve performance among private clinics in Kenya. In Kenya, more individuals preferred to access HIVST kits from a health facility for accessibility reasons. In contrast, consumers in Malawi and Zambia preferred to have them delivered to their homes. Uptake was seen to flourish under community-based delivery in Malawi, especially among adolescents and women.

In the regional context, the importance of focusing on the contribution of the marketing mix to purchase Human Immunodeficiency Virus self-Test (HIVST) kits is exemplified in the World Health Organization's (WHO) HIVST report, which as a target, sought to increase the number of countries with national HIVST policies from 4 to 40 by 2018, including 15 African nations (Indravudh, Choko & Corbett, 2018). The low uptake of the product in the continent thus presents an opportunity in that an optimized marketing mix strategy would improve intention to purchase the kits, thus spurring improved public health and improved pharmacy financial performance (Nugroho & Irena, 2017).

From a local perspective, it is apparent that the private sector plays a crucial role in ensuring access to medication to the public. The push towards maintaining competitive business margins through the marketing of products – such as HIV testing kits – presents a two-fold benefit – adequate healthcare provision to the public and economic compensation for the private pharmaceutical retailers. This study sought to shed light on the most effective marketing mix strategies to be employed in the distribution of HIV self-test kits in Nairobi County by focusing on the 4Ps of marketing (product, price, place, and promotion) to be applied in pharmacies (Booms & Bitner, 1982).

Later additions to the marketing mix resulting in the 7Ps, including the addition of the aspects – participants, physical evidence, and process, though deemed useful, are centred on a service-orientation to marketing. The current study, as aforementioned, seeks to restrict its scope to the 4Ps to address the product-centred aspects of marketing with a suggestion of later studies encouraging a more service-centred orientation as encapsulated by the 7Ps of marketing. Arriving at insights on practical marketing mix approaches that positively impact purchase intention would allow for increased dissemination of the much-needed product and, to the pharmacies involved, improved financial bottom-lines.

1.1.1 Marketing mix strategies

As highlighted by Kotler and Keller (2006), marketing mix strategies are those variables that different companies utilize to influence customers' purchasing decisions. It primarily involves four main aspects – product, price, place, and promotion and are key in enabling the firm to develop strategies to attain a competitive advantage. According to Nugroho and Irena (2017), to create an effective marketing strategy that allows for enhanced purchase intention among consumers, the marketing entity must consider all these four aspects in concert. An effective marketing mix strategy is thus one that focuses on selling products by considering the impact of each of the elements of the marketing mix as relates to purchasing intention; the aspects of the more significant impact are preferentially addressed to achieve maximum impact on purchase intention.

This paper focuses on using the 4Ps of marketing as the basis through which an effective marketing strategy can be crafted to benefit the public and pharmacies. We sought to focus on the 4Ps due to the nature of the product; as Schultz (2001) observers, the advent of the 7Ps approach depicting the addition of the constructs, participants, physical evidence, and process, derived impetus from the shift to an interactive and more outward-facing marketing approach. The added constructs thus emphasize a service-rendering orientation. Given the product's nascency in the Kenyan market, the additional Ps, though appreciated as essential augmentations to the marketing mix, are deemed secondary to the more immediate 4Ps that speak to getting the product to the market. Thus, the researcher's view is that focusing on the additional 3Ps can form the basis for additional studies. Such studies would mirror the approach taken by Mumbi (2019) in the assessment of asset management companies in Nairobi – a service-focused study.

1.1.2 Product Factors

Product factors of the marketing mix can generally be assessed as entailing two depictions – the first involves the actual products (in a scenario where an entity offers multiple products). In contrast, the second involves the characteristics of the products under consideration (Kotler & Keller, 2009). As highlighted by Jobber (2004), a product line entails a unique product that is related to the basis of function and benefit deriving from their use. In the current study, the researcher sought to focus on a single product line – HIVST kits. The particular intention in assessing the HIVST kits' product factors is to assess the importance of the product aspects in light of the other three aspects of the 4P marketing mix – price, place, and promotion. In operationalizing the variable, the author focuses on the most notable aspects of the HIVST kits; aspects that are deemed drivers for the ready acceptance of the

product among consumers – the simplicity of use, confidentiality, and convenient access (Tshuma, 2018; Indravudh et al., 2018).

1.1.3 Price Factors

As highlighted by Peter (2007), the aspects of price go beyond the amount paid; the value ascribed to the product by both the buyer and seller is an essential determinant of the final price tag assigned to goods. The pricing factor is the most researched aspect of the marketing mix. This is particularly the case for the ongoing study, as the purchasing power of the target market, Africa, is generally understood to be low (Chang et al., 2019). In the current study, the pricing of goods as services was operationalized through considering the actual cost of the product, the relative cost of the product, for example, as compared to Enzyme-linked Immunosorbent Assay (ELISA) testing, which is a laboratory-based test, and the discounting of the price through vouchers (Change et al., 2019; Ng & Tan, 2013; Marlin et al., 2014). As highlighted by Ng and Tan (2013), the actual price may be prohibitive to many individuals who would otherwise want to purchase the kit.

1.1.4 Place Factors

Singh (2012) posits that the marketing mix's place factors speak to the distribution aspects involved; these, therefore, include both the transportation and delivery of goods and services to the respective recipients. Place factors, in light of the need to increase dissemination of HIVST kits, are thus apparent in that the product's adequate distribution would improve uptake among individuals seeking to know their HIV status. Singh (2012) further posits that place factors have a significant bearing on an organization's overall expenditure as they stipulate investment that must be spent in getting products to consumers. In this study, three main place factors are considered – distribution point, distribution channel, and locale (Indravudh et al., 2017; Choko et al., 2017; Tempalski et al., 2019).

1.1.5 Promotion Factors

As put forward by Evans and Berman (1994), promotion factors speak to the seller's efforts in the bid to favourably shape the perception of products as viewed by potential purchasers. In relating promotion factors to the current study's aim, active employment of promotion factors would increase the uptake of HIVST kits in the market as consumers' perception of the product would be centred on the utility to be achieved by purchasing the kit. Promotion aspects thus involve how information about products and services is channelled to and affects the potential purchaser. In this study, promotion aspects are assessed through the choice of

advertising avenue, frequency of advertisement, and nature of the message (Indravudh, Choko & Corbett, 2018; Paschen-Wolff et al., 2019; Huang et al., 2015).

1.1.6 Intention to purchase HIVST

The purpose of employing an effective marketing mix strategy is to increase the appeal of the product or service to the consumer in question. The increased apparent appeal would, in turn, result in an increased intention among consumers to purchase the advertised product; hence when acted upon, purchase intent would lead to the marketer's goal of increased sales. The dependent variable under consideration involves purchase intention for HIVST kits. Three aspects of the purchase are considered in this study – willingness to buy the kit, frequency of purchase, and purchase quantity. The rationale behind selecting these factors derives from the health necessity of purchasing the kit and the financial benefit of purchase to the clients; as Paschen-Wolff et al. (2019) observe, persons at risk of infection must engage in frequent testing. This would thus involve the purchase of the HIVST kits and the frequent purchase of the same.

Incidences of secondary testing have been reported by Indravudh, Choko, and Corbett (2018) in a study conducted in Kenya. The essence of the phenomenon is the passing of testing kits to associates of the purchaser, e.g., sex partners and clients (among commercial sex workers). The number of purchased kits would thus constitute the quantity of purchase as assessed in this study. Increased purchases, frequent purchases, and multiple purchases would increase the selling entity's financial earnings, hence achieving the purpose of the marketing mix strategy as employed by the retail pharmacies in question. Access to ST kits, cost, perception of the results, limited counselling, and link to care options have a high influence on the use of HIV ST kits (Izizag, et al., 2018). (Njau, et al., 2019), found that convenience, confidentiality, autonomy, ease of use, privacy, and couples HIV testing were among the factors that promote HIV ST kit uptake. Liu and colleagues posited that barriers to ST uptake include old age, poor education level, marital status, and lack of confidence in results of ST kits (Liu, et al., 2020).

1.1.7 Pharmaceutical sector in Kenya

The pharmaceutical industry in Kenya is the largest in Eastern and Southern Africa, catering to up to 50% of the region's demand (Murule, 2011). The industry is thus highly complex and regulated. Locally, the industry supplies up to 4,557 health facilities nationwide with an

approximate of 9,000 pharmaceutical products (Murule, 2011). These products are manufactured by 30 licensed manufacturers, which accounts for three-fifths of the region's – Common Market for Eastern and Southern Africa – manufacturers.

Private establishments control the bulk of the pharmaceutical industry in Kenya, with the proportion reported to be as high at 91%. This proportion places the onus of pharmaceutical-product provisions on such private facilities as retail pharmacies (World Health Organization, 2010). The main regulatory body of the industry is the Pharmacy and Poisons Board (PPB), which operates under the auspices of the Kenya Ministry of Health. However, there are efforts towards establishing the PPB as a semi-autonomous entity with a mandate defined independently of the Ministry of Health (World Health Organization, 2010). (Mugo, et al., 2017), attested to the feasibility of HIV ST kits in pharmacies in the Kenyan health sector due to the high demand witnessed in their study on uptake of HIV ST kits. Kenya has used several innovative methods to address the HIV pandemic, and pharmacies have been adopted as the main points of access for the ST kits, which the country introduced in 2017, besides door-to-door testing and targeted community-based testing. The Ministry of Health recognized the influence of pharmacies and launched the *Be sure* mobile app with all private pharmacies that have been authorized to sell the self-test kits within the country (Kenya, 2020).

1.2 Problem Statement

Tshuma (2018) reports an HIV infection rate of up to 800,000 new infections annualy (as of 2017) with the figure associated with the up to 25% of infected individuals who remain unaware of their status. In Kenya, the prevalence of HIV remains steady at 4.9% in 2017 and 2018; it is apparent that more needs to be done to combat the incidence of HIV (National AIDS Control Council, 2018). Private establishments control the bulk of the pharmaceutical industry in Kenya with the proportion reported to be as high at 91%; it is therefore evident that the mandate of applying the use of pharmaceutical provisions to combat the prevalence of HIV rests with such private facilities such as pharmacies (World Health Organization, 2010). The high prevalence of HIV among Kenya's urban centres necessitates effective marketing, which would promote widespread testing. To achieve effective distribution of HIV kits, pharmacies need to engage in practical marketing approaches to enhance the product's appeal among consumers (Mutugi, 2017). This study sought to determine how marketing mix influences purchase intention for HIVself-test kits.

Pharmacies have traditionally not engaged in mainstream advertising of products and services, as aggressive advertising has been viewed as unethical practice (Nick, 2015).

Nugroho and Irena (2017) revealed that to create an effective marketing strategy, one must consider aspects of the product, price, place, and promotion. Multiple authors have identified a positive influence between marketing strategy and an increase in sales (Gbolagade, Adewale, Adesola & Oyewale, 2013; Uche and Osumba, 2017; Pourhosseini & Shahrokh, 2013). Njau et al., (2019) noted that unlike other goods, which can be accessed at one's pleasure, health care products are only accessed when the user considers them necessary; and can only be accessed periodically. The publications put forward are crafted in such a manner as to infer the general effect of a marketing strategy as opposed to the particular relative impact of aspects of the 4P marketing mix. This minimal marketing mix-centred studies, given the reported efficacy of marketing mix strategies on purchasing products and services, point to a need for empirical studies; this study sought to address this gap. This study sought to determine the effect of marketing mix factors on purchasing HIVST kits in Nairobi County.

1.3 Research objectives

The study's main objective was to determine the effect of marketing mix factors on the intention to purchase HIVST kits in Nairobi County.

1.3.1 Specific Objectives

The specific objectives were;

i. To determine the effect of product factors on the intention to purchase HIV-self-testing kits in pharmacies in Nairobi County.
ii. To establish the effect of price factors on the intention to purchase HIV-self-testing kits in pharmacies in Nairobi County.
iii. To establish the effect of place factors on the intention to purchase HIV-self-testing kits in pharmacies in Nairobi County.
iv. To determine the effect of promotion factors on the intention to purchase HIV-self-testing kits in pharmacies in Nairobi County.

1.4 Research Questions

The main research question was the effect of marketing mix factors on purchase intention for HIVST kits in Nairobi County. The following were the specific research questions:

i. What was the effect of product aspects on the intention to purchase HIV-self-testing kits in pharmacies in Nairobi County?
ii. What was the effect of price on the intention to purchase of HIV-self-testing kits in pharmacies in Nairobi County?

iii. What was the effect of place aspects on the intention to purchase of HIV-self-testing kits in pharmacies in Nairobi County?

iv. What was the effect of promotion on the intention to purchase of HIV-self-testing kits in pharmacies in Nairobi County?

1.5 Scope of the study

The scope of this study is pharmacies operating in Nairobi County. The study's conceptual scope focused on how product, price, place, and promotion factors affect intention to purchase HIV self-testing kits. The study's theoretical scope was grounded on the theory of planned behaviour and the marketing mix theory. The study was conducted across pharmacies in Nairobi City County between March and April 2020. The study methodological scope was focussed on descriptive-correlational research design with quantitative techniques being utilized in the study.

1.6 Significance of the study

To the Kenyan Ministry of Health, the findings from this study will offer insight into how to combat HIV prevalence by employing methods to increase self-testing among the persons sensitive to privacy concerns. To academicians, this study offers insights into the effects of the 4Ps on purchase intention, filling the gap of the lack of information on marketing mix strategies as applicable to pharmacies in the country. To owners and operators of pharmacies in Nairobi County, findings from this study offer actionable information to enhance the financial propensity of the pharmacies by adopting effective marketing approaches.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter focussed on the body of research on the effectiveness of marketing and the theoretical foundations that underpin them. The chapter equally brought into perspective some empirical studies relating to the effectiveness of marketing mix strategies to provide more insights into the subject of study. Specific empirical findings on the applicability of the marketing mix aspects in HIV-ST marketing are also discussed herein.

2.2 Theoretical framework

According to Kothari (2004), a theoretical framework is a set of adequately argued ideas aimed at elucidating a phenomenon through the stipulation of variables and the principles that link the variables to one another. It is a gathering of linked concepts based on established empirical findings. The study was anchored on two theories, namely; the Theory of Planned Behaviour and Marketing Mix Theory.

2.2.1 Theory of Planned Behaviour

The theory of planned behaviour was first put forward by Ajzen (1991) as an extension of Ajzen and Fishbein's (1980) theory of reasoned action. The distinguishing feature of the two theories is perceived behavioural control as an explanatory variable affecting intention to perform actions, and subsequently, behaviour. As noted by Ajzen (1991), the premise of the theory is that the intention to perform behaviours of different kinds can be predicted with a high level of accuracy, based on the attitude towards the behaviour, subjective norms about the behaviour, and perceived behavioural control that one has. Ajzen (2011), in a later assessment of the validity of the model in predicting action, observed that empirical findings conducted following the theory serve to support the legitimacy of the approach.

However, Ajzen (1991) appreciates the model's insufficiency as pertains to the individual's overall actions. In particular, Ajzen (1991) acknowledged that the missing inclusion of past behaviour infringes on the authority of findings emanating from applying the theory. This shortcoming notwithstanding, Ajzen (1991) points to the strong evidence provided by empirical studies as a valid justification for continued application of the theory in understanding and predicting behaviour. This theory is thus of importance to the current

study as the author anticipates that an understanding of the marketing mix elements and their impact on purchase allows for higher ratings of behavioural controls.

The proven validity of the Theory of Planned Behaviour has resulted in its use in understanding, predicting, and changing human social behaviour (Ajzen, 2012). (Kim & Chung, 2011), found a direct relationship between experience and consumer values and intention to purchase organic personal care products. (Chi & Yang, 2009), found significant relationships between brand awareness, perceived quality, and brand loyalty with purchase intention and concluded that high levels of brand awareness, through promotion and advertising strategies, increase brand loyalty. After product acquisition, through experience, a customer can evaluate the product and develop a sense of perceived quality that determines the intention to purchase. Its accuracy notwithstanding, various criticisms have been raised about its applicability in assessing behaviour across different contexts. A notable critique has been the role of subconscious effects on the behaviour of individuals. In particular, the growing importance of psychological influences on individuals' behaviour has been shown to bear influence both on the attitude of individuals and their future behaviour (Ajzen, 2012). However, this has been explained away by acknowledging that each individual is influenced directly by the social systems in which they exist. Another valid criticism is the lack of consideration of personality traits' role in shaping behaviour (Ajzen, 2011). Given the differences that the five major personality categorizations impose on intention and behaviour, it is apparent that personality traits present as intervening variables in predicting actions of individuals based on their attitude, social norms, and behavioural control.

Thus, it is noteworthy that the theory, though useful in the current study, is not considered a sure-fire predictor of behaviour. More specifically, an accurate understanding of the contribution of the various elements of the marketing mix does not automatically result in the crafting of more effective customer-reaching strategies. However, it is apparent that the gains to be achieved in shaping both attitude and behavioural controls, as a function of a better understanding of the contribution of the various elements of the marketing mix, are worth investigating. This theory allows for the analysis of psychological models of behavioural decision-making. It helps determine how social norms impact a customer’s decision to purchase a product or service. Although TPB has been used to explain customer behaviour, it has not been used to test customers' behaviour to make the purchase and repurchase decisions regarding HIV ST testing kits. Therefore, this study sought to gain this value of improved understanding of the contribution of the 4Ps to intention to purchase, as a conduit to the improved attitude of the impact of the marketing mix and the improved behavioural control.

2.2.2 Marketing Mix Theory

According to Kotler and Keller (2006), the Marketing Mix theory was coined by Borden, referring to the different marketing decision variables used in the marketing of different goods and products. The theory is still used today to make crucial decisions that lead to a marketing plan's execution. The idea of a marketing mix theory is to organize all aspects of the marketing plan around the target market's habits, desires, and psychology (Goi, 2009). This theory proposes that after assessing the market, it is paramount that the firm chooses a strategy oriented towards satisfying customer demands while remaining competitive. This orientation considers marketing as it applies to the theory of the "4 Ps." The first P is a product and takes into account its design, features, and competitors.

The second P, price, is a factor that can be adjusted to manage demand, to determine profit margin, and to drive market share. Promotion is the third P. It seeks to find which media to engage in making the right people aware of the product's benefits, and which slogans, tag lines, and logos will resonate with the target market. Placement, the fourth P, determines where and how potential customers can access the product. Young people may want to browse, buy, and pay online. Others may prefer the personal service of a trained salesperson (Kotler & Keller, 2006).

Later, Dolan (2000) proposed a four Cs classification, a more consumer-oriented version of the four Ps that attempts to fit the movement from mass marketing to niche marketing. The Cs represent; consumer, cost, communication, and convenience.

Firstly, a company only sells what the consumer wants explicitly to buy. So, marketers should study consumer wants and attract them one by one with something he/she wants to purchase. Secondly, price is only a part of the total cost to satisfy a want or a need. The total cost considers, for example, the cost of time in acquiring a good or a service, a cost of conscience by consuming that, or even a cost of guilt. It reflects the total cost of ownership. Many factors affect the cost, including but not limited to the customer's cost to change or implement the new product or service and the customer's cost for not selecting a competitor's product or service (Cravens & Piercy, 2006).

Thirdly, promotion is deemed manipulative and from the seller whereas communication is cooperative. The buyer creates a dialogue with the potential customers based on their needs and lifestyles; it represents a broader focus. Communications can include advertising, public relations, personal selling, viral advertising, and any form of communication between the organization and the consumer (Hu, 2012).

The marketing mix theory is of pertinence to the current study as it provides the four dimensions – product factors, price factors, place factors, and promotion factors – that operationalize the marketing aspect of the distribution of HIVST kits, thus indicating the influence of marketing on performance in terms of consumption of the kits. The conceptualizations of the entails of the various dimensions serve to shed light on the specific, measurable parameters that constitute the dimensions, hence shaping the data collection tool's construction to be used in the study. Later constructs to the model, such as participants as posited by Booms and Bitner (1982), are not included in the current assessment. They are less mainstreamed in marketing rhetoric focussing on the distribution of goods, as evidenced in the subsequent empirical review of the literature. The marketing mix theory is concerned with decisions that relate to the products that will be made available and at what price and in which location. The same product may receive additional promotion in different places, and it is the manager's responsibility to consider all these factors. The theory was relevant in the study. It explained the selection of the predictor variables (marketing mix) and supported the examination of the variable's impact on intention to purchase HIV self-test kits.

2.3 Empirical Studies

The purpose of this section is to provide an exposition of extant literature about the topic of study. This study thus centres on Product Factors, Price Factors, Place Factors, and Promotion Factors and their association to purchase. The section is thus subdivided to address each of the variables.

2.3.1 Intention to purchase

Das (2014), in defining purchase intention, define the construct as a customer-initiated effort to buy a product or a service. Thus, it is apparent from the two definitions that purchase intent speaks to a consumer's conscious endeavour to exchange value to secure a product or a service intentionally. Purchase intention is a plan to buy a good or service and is dependent on expectations and experience with the product after the initial purchase Suppose a customer expects to be satisfied with a product, then their intention to purchase in high. Given that the current study focuses on the sale of a product, a customer's intention is assessed as the willingness to position him/herself in a purchasing role within a retail pharmacy with the intention being to gain ownership of a testing kit (Swapna, 2019).

Mahmoud, Ibrahim, Ali, and Bleady (2017), in assessing the construct of purchase intent in green marketing, operationalize the variable through intention to purchase in future, intentional seeking out of products with a positive environmental impact, comparison of products on account of environmental impact, and perpetuated purchase of environmentally friendly products. Thus, the study applies the concept of purchase intent as applicable to the specific products under sale and concerning topic under assessment – environmental (green) marketing. In a different study assessing purchase intent as pertains to the purchase of cars, Khan and Rahman (2014) assess purchase intention as entailing the buyer's intention to recommend the purchase to others, buy for oneself, and buy for family and friends. From the two studies mentioned above, it is apparent that the intention to purchase is assessed as a function of the study's context and the interest of the researcher.

Three aspects of the purchase are considered in this study – willingness to buy the kit, frequency of purchase, and purchase quantity. The rationale behind selecting these factors derives from the health necessity of purchasing the kit and the financial benefit of purchase to the clients. Willingness to purchase the kit would result in increased sales for the pharmacies, and as a result, improved public health through increased awareness of HIV status. The frequency of testing, likewise, would achieve the same end for both pharmacies and public health. Finally, the purchased quantity, as with the study by Khan and Rahman (2014), addresses aspects of the purchase or other individuals, which in the case of the current study entailed the purchase of kits for the purchaser's sexual partners.

2.3.2 Product Factors and Intention to Purchase

Backwell, Miniard, and Engel (2006) define the product involved in purchase as the total benefits that the purchaser gains in exchange for value. Therefore, this definition, when focusing on an actual product such as medication, would include both the physical attribute of the drug and the intended effect that is to be achieved through the consumption of the drug. Simplicity aspects speak to the ease of use and interpretation of results. In contrast, confidentiality entails the user's ability to access test results independently without other persons' knowledge. This concern is particularly important in compromised healthcare-provider privacy protocols (Indravudh et al., 2018). In summary, convenience concerns stem from the need to access testing facilities without visiting a healthcare facility.

Regarding the quality of the product, Nugroho and Irena (2017) state that this aspect of the product entails the product's ability to fulfil customer needs. This second definition thus goes

beyond the traditional aspect of the various characteristics of the product in question. Instead, it starts with the consumer's need as the primary concern in assessing the utility of the product. As presented by Kotler and Armstrong (2016), a further elaboration on quality subdivided product factors into two main categories – performance quality and conformance quality. The first involves the ability of the product to meet the needs of the user. In contrast, the second aspect involves the product's ability to meet the pre-set standards of the manufacturer.

This dual depiction of product factors thus serves to accommodate both Nugroho and Irena (2017) and Blackwell, Miniard, and Engel's (2006) definitions of the product; emphasis on performance factors speaks to Blackwell, Miniard, and Engel's (2006) focus on product characteristics. In contrast, focus on conformance speaks to Nugroho and Irena's (2017) focus on utility. This study focuses on Kotler and Armstrong's summative description of product factors as entailing the product features that confer a competitive advantage to a particular product. These features include both functionality of the product and the brand identifiers. This approach is useful to the current approach as it allows for comparison of the aspects of the HIVST kits compared to the traditional test kits.

Product strategy refers to all the products a firm sends to the market. Products can be classified into two tangible and intangible products (Kotler, 2005). It is made up of multidimensional entities and benefits received by customers. Product factors consist of elements such as packaging, branding, labelling, and product attributes that are of good quality, style, features, and design (Kotler & Keller, 2009). A product is made up of concepts; brand, product line, and product mix. A brand is a unique item offering represented by using a name, symbol, design, packaging, or some combination of these intended to make them unique from those of its rivals. A product line is a set of unique products related in terms of the same functions and benefits they provide. The product mix strategy is a completely comprehensive set of products marketed by the firm (Jobber, 2004). Technology advancement has opened new channels of marketing products providing consumers with a good quality product to choose from. This is due to the high rate of competition resulting from easy access since the product information can be accessed easily (Ramirez, Parra-Requena, Ruiz-Ortega, & Garcia-Villaverde, 2018).

Spyrelis et al. (2017) assess the uptake of HIVST in Braamfontein and Soweto, Johannesburg, South Africa. Qualitative data were collected from 118 respondents in 16 focus group discussions grouped by gender, age (20-34 and 35-49), and HIV status. Data

were analyzed through content analysis. Confidentiality, the reduced number of clinic visits, and the choice on whether to have counselling or not were found to be the chief advantages. The aspect of confidentiality involved purchasing the kit and conducting the test at home without interaction with the hospital staff and other patients. Most respondents, particularly males, were most concerned about the absence of counselling, which they found to be a potential cause of suicide. However, this was disproved in the US by Campbell and Klein (Campbell & Klein, 2006). They further posit that the importance of product characteristics in HIVST marketing plays a pivotal role in uptake. The inherent confidentiality of HIVST and the confidentiality involved make it a better product than clinical testing. The option of counselling over the phone was also impersonal by some respondents, mostly male. These findings, therefore, indicate that aspects of convenience, reduced clinic visits, and choice of counselling can be used to operationalize the product aspect of the marketing mix.

Tshuma (2018), in a study conducted in Zimbabwe, focuses on HIVST oral kits that appeal to users. The study employs an exploratory design with interviews used as the main data sources. Participants were females aged between 18 and 39, and a thematic analysis approach was used to assess the data. Among the main product factors deemed essential in the drawing, purchasers' interest was the privacy and confidentiality associated with the product. As was the case in the study by Spyrelis et al. (2017), the aspect of confidentiality relates to the ability to covertly conduct tests without interaction with medical staff and other patients. Essentially, users were able to conduct the tests in the comfort of their homes. Other additional factors included the simplicity of use, the lack of pain (as the test was based on oral fluids), curtailed travelling (to distant health institutions) for testing, and the unsupervised testing process, which allowed for increased autonomy and empowerment in the testing process. Therefore, this study provides product factors that would serve to operationalize the product aspect of the marketing mix. The study contacted female respondents only and used interviews as the main data sources, while this study employed questionnaires in data collection.

Indravudh *et al.* (2018), who focussed on persons aged between 16 and 25, living in Malawi and Zimbabwe, posit that there is a significant lack of trust in the healthcare system. This lack of trust results in HIVST kits being perceived as a flexible, less expensive alternative to traditional testing such as ELISA based. In relating this finding to the HIVST kit and marketing mix, it is apparent that the kit's distribution, would have implications on the uptake of the product. Aspects of autonomy, control, confidentiality, and respect are also presented

as important factors in determining HIVST kits' uptake among the population. The respondents in this study focused on 16-25-year olds, while the current study did not specify their age.

Figueroa, Johnson, Verster, and Baggaley (2015) studied attitudes and acceptability on HIV self-testing among key populations. The study relied on data from the World Bank in high-income countries. The findings show that the level of support offered, convenience in purchase and usage, availability of counselling, and accuracy of the product determined the acceptability of self-testing. However, the study does not specifically examine the marketing-mix practices utilized, which is the focus of this research.

Njau, Covin, Lisasi, Damian, Mushi, Boulle, and Mathews (2019) conducted a systematic review of qualitative evidence on factors enabling and deterring uptake of HIV self-testing in Africa. The study reviewed stakeholders, policymaker, care provider, and patient attributes on various factors. The study noted that privacy, confidentiality, convenience, ease of use, and opportunity to test determined self-testing kits' uptake. The study is based on a review of analytical literature, while this study considered responses from participants within pharmacies in Kenya.

2.3.3 Price Factors and Intention to Purchase

Concerning relative pricing of the product, a higher price than that associated with traditional methods may not be in keeping with the value attributed to the product as assessed by the consumer; this observation is in keeping with Peter's (2007) elucidation on price perception. The price factor of the marketing mix is the most commonly appreciated aspect of marketing. This is because most initiatives aimed at inspiring higher purchase frequency from consumers generally centre on the lowering of prices; this is particularly true for consumer goods. Kotler and Armstrong (2016) define the price factor as one involving the money or value that a consumer willingly exchanges to secure a product or a service. This depiction is of particular importance as it broadens the aspect of service beyond consideration of monetary compensation and instead introduces the aspect of value. Price would thus involve, as an example, both the money that is to be exchanged and the time that a consumer would spend in securing the product in question. Price refers to the value of a good or service perceived by the seller and the buyer (Peter, 2007).

Employing a defined price planning approach entails considering all aspects of the products; these include tangible and intangible factors, purchase terms, and the non-monetary exchange of goods and services. Price is the only element in the marketing mix that produces revenue; the others produce costs. Price balances demand and supply because it makes the buyer and

the seller agree on a certain value for goods and services (Peter, 2007). Price is a marketing mix criterion and should be applied together with the target market, product mix, services, and competition. Price should also include all the costs, real and implied. Factors such as demand, competition, distribution channels, internal environment, and public authorities influence the price setting (Woodward, 2004).

Lastly, concerning discounting, Chang et al. (2019) and Marlin et al. (2014) highlight the lowering prices through vouchers like by partnering with larger outlets may allow for pricing incentives that may lead to higher dissemination of kits. The importance of understanding pricing factors about purchasing intent stems from the need to increase the product's uptake by optimizing the pricing apparatus. Considering the contribution of each of the aspects mentioned to consumers' overall purchase intention would thus serve to result in a more impactful marketing mix strategy.

Ng and Tan (2013), in a study conducted in Singapore, highlight that most (87.4%) persons at risk of HIV infection and those infected would purchase HIVST kits if the option were availed to them. Of those that chose to participate in the oral fluid-based rapid tests, 94.9% were likely to recommend the test to peers. This finding, therefore, highlights the propensity of the approach in ensuring widescale testing for the condition. However, most notably and pertinent to the current study was the cost concerns put forward by respondents. Only 28% were willing to pay a USD 15 to purchase the kit. This study lends credence to another conducted in Seattle, where only 42% of respondents indicated that they would pay USD 20 for the kit. In the same study, 13% indicated that they would only use the kit if available at no cost (Ng et al., 2012). The authors further posit that price sensitivity would likely be higher in developing countries as the financial constraints experienced in such countries are much greater, limiting the financial resource that can be directed towards purchasing the kits. Therefore, the inference from this study is that the amount charged for the kits, particularly in Africa as elaborated upon by Chang et al. (2019), would present as a significant determinant of respondents' willingness to purchase the HIVST kits.

Chang et al. (2019) investigated price and marketing's role in the uptake of HIV self-testing kits in Zimbabwe. The authors distributed various vouchers (one of five) redeemable for the self-testing kits to individuals selected at random in Zimbabwe. The sample considered was 3996 participants. Along with the vouchers, participants were also given two places to collect the kits and one of four promotional messages options. Some received only a private message, while others received one about the availability of early treatment. Some received

both and the rest none. The study's target population was adults, and special attention was given to priority populations, such as those who never had a kit before, men, and rural residents. Data were analyzed by logistic regression. Demand was found to decrease with a price increase. This effect was more pronounced in rural than urban areas, in men than women, and those aged under 25 than older respondents. The study's focus on rural areas and young adults makes its findings differ from the current study. The effect of promotional messages on-demand was not statistically significant.

Most studies that have assessed pricing factors concerning HIVST kits centre on the product's total cost as the determining factor, for example, Ng and Tam (2013) and Chang et al. (2019). In a study conducted in Korea, Lee et al. (2018) assessed the likelihood of persons opting for the HIVST kits over traditional testing approaches, such as ELISA-based methods. Findings from the study indicate that finger-stick kits (such as those considered in the study) were considered more costly than ELISA. Specifically, whereas the former was priced at USD 1.61, the latter cost USD 3.38. Therefore, the relative costs of the testing tool are a potential significant determinant of the likelihood of uptake and particularly so among developing nations. The inference from this study is that aside from the product's actual cost, it may be necessary to consider the relative cost as a potential driver in constructing an appropriate marketing mix.

In further underlining the possibility of employing vouchers as a price reduction approach in disseminating HIVSTs, Marlin *et al.* (2014) proposed a partnership with larger brands – in this case, Walgreens – to ensure wide reach, brand familiarity, and confidence among clients. The authors observed that 20-30% of new HIV infections in Los Angeles occur as a result of unrecognized HIV status; hence such programs as that employed in the study would serve to address a major public health concern in the state. A total of 641 vouchers were distributed, and the study further featured community-based organizations' involvement that facilitated awareness campaigns. A descriptive approach was employed in assessing study findings. Results indicated that the voucher program was associated with an increased awareness of HIV infection among the affected population. Additionally, findings also revealed that those affected were more likely to seek out medical assistance as an outcome of the product. Voucher programs aimed at reducing costs to purchasers were thus deemed useful in enabling the distribution of the HIVST kits.

In a study in Botswana, Moyo, Mokgatle, and Madiba (2017) examined the opinions about and acceptability of HIV self-testing amongst students at the Institute of Health Sciences-Lobatse. The study utilized focus group discussions and in-depth interviews in the data collection process. The study noted that confidentiality, privacy, convenience, cost of self-test kits, and flexibility influenced the acceptability of HIV testing self-kits. However, the study did not examine the effect of promotional practices on the acceptability of the kits. Harichund and Moshabela (2018) studied the acceptability of HIV self-testing in sub-Saharan Africa. The study reviewed extant literature and indicated that there was a 22.3%-94% acceptability of HIV self-testing. The study notes that the high costs of the kits, lack of incentives, and income diversity influenced the HIV self-testing acceptability. The study, however, did not determine the purchase intentions of HIV self-test kits in Kenya.

Strauss et al. (2018) examined HIV testing preferences among long-distance truck drivers in Kenya. The research adopted a discrete choice experiment, with 305 participants being considered in the study. The study utilized conditional logit models in the analysis and indicated that offering the test kits free of charge and preferred product delivery was key to utilization. However, the study did not consider the perspectives of medical professionals, which is the focus of this research.

2.3.4 Place Factors and Intention to Purchase

Creswell (2009), in an aggregative description of place factors, as pertains to goods, defines the factors as entailing the territory within which the product is sold. As conceptualized by the author, the territory includes aspects of location, locale, and sense of place. The location represents the distances involved in accessing the product under sale. This distance is a direct indicator of the ease by which the product access. Locale, the second aspect of the location, connotes the immediate surroundings of the product in the sense of tangible aspects of the place of sale. In the current study, aspects of locale would include considerations on the pharmacy site in question, e.g., whether it is located near a shopping centre or a park and the implications of this immediate surrounding on the purchase intention of the consumer.

In Zimbabwe and Malawi, the yield in administering kits through health facilities is hampered by a lack of trust in the institutions. This, therefore, underlines the importance of using the right distribution avenues for kits. Addressing challenges in place factors would thus serve to increase uptake of the product among the populace. About the channel of distribution, Choko et al. (2017) point out that using women as a conduit for the kits, allowed

for increased dissemination of the products; this, therefore, points to a need for assessment of the channel used in availing kits for purchase by the populace.

Regarding locale, Tempalski et al. (2019) put forward that an area's underlying demographics play a role in determining the uptake of products. Selling products in the right place may thus be essential in increasing the uptake of the products. As listed in appendix III, there are a total of 1266 pharmacies in Nairobi County (PPB, 2019). All the listed pharmacies operate under the auspices of the Pharmacy and Poisons Board. They are required to adhere to set regulations about the dissemination of medication to the public. The location of these factors thus relates to the marketing mix's place factors in that their locale affects consumer accessibility. This location aspect is assessed in the current study by considering both aspects of location, locale, and sense of place (Creswell, 2009).

Lamb, Hair, and McDaniel (2011) further emphasize the need to ensure that products are availed to clients at the right time. As a place factor, timeliness allows for the consumption of a product's benefit by a needing client. This aspect is of particular importance in the marketing of seasonal products in that a lack of consideration of the influence of time may prove to make or break for the success of the product. Concerning the current study, the timeliness of delivery of a product is associated with the location of the pharmacy selling the kits used in testing for infection. An ideal location would allow for the timely purchase of the kit. For instance, the location of a store near a busy night recreation centre featuring night clubs may serve to avail the testing kits to individuals likely to engage in sexual activity. Similarly, the location of a pharmacy next to the university may serve the same function.

Place factors, also referred to as distribution factors relate to the transporting of services delivery to the consumers (Strauss, 2006). The distribution channel is very important, as determined by the company size and product nature (Strauss, 2006). Place attributes also include decisions on whether to sell directly to the consumer or use intermediaries such as wholesalers and retailers. Cost is the determining element when setting on the distribution system. Effective distribution planning entails setting up a systematic distribution decision-making process; this process is critical to the effectiveness and general cost of operating a business (Baron, 2003). The distribution channel needs to be frequently monitored and designed to withstand fluctuations in the market and reduce system problems as a result of challenges by having smart transportation and stock holding in the market place (Chaffey 2002).

Tempalski et al. (2019) conducted a study investigating the role of place in the uptake of HIV testing among people who inject drugs (PWID). Data was collected from the USA National HIV Behavioral Science repository from 19 metropolitan areas among self-reported HIV-negative people. Data were analyzed through multivariate logistic regression, with the following variables: healthcare enforcement, socio-demographic composition, and economic position. These were compared against past-year testing. The sample size was 7477. It was found that higher household income was significantly associated with higher uptake of HIV testing (economic position). Areas with more women than men (socio-demographics) also showed higher odds of testing (81% higher odds where sex ratio was >= 1.05% compared to areas of equal sex ratio). Results of area correctional expenditure (healthcare enforcement) varied by race, having a positive relationship with past-year testing among black individuals, which was not evident among white individuals. These findings, therefore, show the importance of place in the uptake of HIV testing; different areas have different uptake depending on gender ratio, household income, and expenditure towards testing, a factor influenced by race. The study involved people who inject drugs, while the current study contacted pharmaceutical professionals.

Choko et al. (2017) investigated the effectiveness and challenges women face when delivering HIV test kits to their male partners. The study was carried out in Malawi. The population was women in ante-natal care. The research involved cluster-randomized sampling. Data were collected through interviews of 20 women and six focus group discussions. Content analysis was used to analyze the data. However, the data itself was hypothetical as no actual kits were issued. Findings indicated that this testing method was more appealing to both men and women than for the men to have to go to get tested at a facility. Men, however, expressed a need to be able to test alone before testing with the partner. Another general theme was that participants felt that an incentive of about $2 would increase uptake, and preferred being contacted via phone call rather than text messages for reminders. This study shows how place (location and delivery) influences the uptake of HIV self-test kits. It may also speak to price aspects, showing that an incentive by the government may increase uptake.

Agot, Masters, Wango, and Thirumurthy (2018) investigate the dynamics of using women as a secondary channel to deliver HIVST kits to their male partners. The study was carried out in Kisumu, Kenya. Participants were women in antenatal care units (ACUs) in hospitals and female sex workers. The study involved 265 participants who completed the follow-up

interviews. Other selection criteria were that they had to be aged between 18 and 35, with at least one sexual partner and without risk of violence from their partners. The questions involved assessing the incidence of violence in the follow-up period, which chi-square tests used to determine whether this had happened in the twelve months prior. After training on the use, the women were given HIVST kits (5 for sex workers and 3 for ACU women) and followed up for three months to report on use. The majority (75% among female sex workers) of the interviewees gave their partners the HIVST kits. It was also found that gender-based violence did not increase significantly during the follow-up period. Similar results were arrived at in South Africa, Malawi, Zambia, and the USA. This paper underscores delivery through partners as an effective way to avail HIVST kits to sexually active men.

Chang, Matambanadzo, Takaruza, Hatzold, Cowan, and Sibanda (2019) analyzed the effect of prices, distribution strategies, and marketing on-demand for HIV Self-testing in Zimbabwe. The study utilized a randomized clinical trial among 4000 adults. Findings indicate that increase in pricing of the kits substantially contributed to a decline in demand for HIV self-test kits. The study noted a high demand for test kits in urban areas with increased distribution, while free distribution strategies are critical to demand self-tests. However, the research failed to examine promotional strategies as a determinant of the purchase intention of HIV self-test kits.

Mugo, Michelini, Shangala, Hussein, Graham, de Wit, and Sanders (2017) conducted a feasibility study on the uptake and acceptability of oral HIV self-testing among community pharmacy clients in Kenya. The study collected primary data from staff working within five pharmacies in Nairobi County and determined that uptake was high among repeat patients within the health clinics. The study noted that the convenience of the HIV self-test kits and appropriate pricing is feasible measures to ensure uptake of the kits. The study, however, did not look at other facets of mixed marketing, such as promotional factors.

2.3.5 Promotion Factors and Intention to Purchase

Wirtz and Lovelock (2016) opined that promotion efforts are put in place to present a value proposition to the client. This proposition is intended to persuade consumers to act on the offer at hand by shaping their beliefs, attitudes, attention, and depictions of the product. According to Kotler and Armstrong (2016), promotion involves the communication channels put in place to promote the value of the product as perceived by the consumer. Eight main tools are considered in promotion – public relations and publicity, advertisement, sales

promotion, events and experiences, online marketing, direct and database marketing, personal selling (e.g., word of mouth), and mobile marketing.

The avenue of advertisement speaks to the choice of media, e.g., text messages or social media. In contrast, the frequency of advertisement pertains to the number of messages vis-à-vis interlude between receipt of messages. In conclusion, the nature of the message speaks to the point of emphasis on the message. For instance, a message may paint HIVST kits as a trendy fad or a matter of life and death (Huang et al., 2015). The aggregated effect of these three factors thus serves to inform the prominence of the factor as perceived by potential consumers of the products.

The choice of a promotion avenue is thus dependent on the product at hand and the context within which the product is sold. For instance, a product that is mostly disseminated to consumers through an online platform is more likely to rely on mobile and online marketing tools that are primarily sold through a local convenience store. In assessing the applicability of the eight communication channels in light of Wirtz and Lovelock's (2016) assertion that promotion efforts are aimed at changing the perception of the consumer, it is apparent that entities looking to improve the purchase intention of their clients must keenly consider the avenues used in outreach. Concerning the current study, the choice of online marketing, given the tech-savvy nature of the targeted population – sexually active young adults – may serve to be more productive than face-to-face personal messages may be. The anonymity involved in online marketing may also serve as an added advantage in securing the targeted demographic's privacy.

A business marketing communications strategy is also the promotional mix. It is made up of a mix of such factors as advertising, personal selling, sales promotion, brand management, product placement, and public relations tools, among others. Most companies apply this promotional mix element to increase sales revenue (Strauss, 2006). A reduction in income is an outcome of poor application of the best marketing mix. All the promotional mix elements have strengths and weaknesses, and it is the company management's responsibility to determine the most effective promotion mix element that will increase sales revenue states (Blythe, 2006). Choosing the most appropriate avenues to promote products' use is thus of pivotal importance in the marketing mix.

In a 2015 study conducted in Los Angeles, Huang *et al.* (2015) report that the choice of advertising media is of particular significance in determining the uptake of HIVST kits, kits used to self-test for HIV infection through serological or saliva-based self-test. The importance of finding the most effective approaches to achieve widespread testing was

highlighted by the fact that in the United States of America, 25% of men who have sex with men are HIV positive yet unaware of their status. The study involved placing an advertisement in a social networking site (Grindr) and requiring those that followed links to self-register to deliver a test kit through Walgreens vouchers, vending machines, or U.S. Mail. Findings indicated that 11,939 individuals followed the link, and 334 self-test kits were requested, and of these, two individuals reported their status as positive and sought additional medical attention. These findings, therefore, indicate that social media can be used as an effective marketing communication approach in reaching infected individuals.

Indravudh, Choko, and Corbett (2018) conducted a study on the delivery of HIVST, focusing on technology, policy, and evidence. The study shows that in 2017 a subsidy for governments was affected by donor intervention, reducing the price of OraQuick HIVST to $2 in 50 LMICs. This had the potential to reduce prices. A WHO HIVST recommendation in 2016 increased the number of countries with national HIVST policies from 4 to 40 by 2018, including 15 African nations (Indravudh, Choko & Corbett, 2018). There was variation in preferred delivery. More individuals preferred to access HIVST kits from a health facility for accessibility reasons in Kenya, whereas in Malawi and Zambia preferred to have them delivered to their homes. Uptake was seen to flourish under community-based delivery in Malawi, especially among adolescents and women.

Paschen-Wolff *et al.* (2019), in a recent study focusing on the systematic review of interventions that promote frequent HIV testing, conducted an assessment of 10 studies employing different interventions. Among the assessed factors included text messages, community-based testing, self-test-centred promotion, and rapid-testing-emphasizing intervention. The efficacy of these interventions was assessed based on their ability to increase the frequency of testing for the ten studies' various participants. Findings indicated that the most efficacious intervention involved text messaging. Notably, those who received text messages tailored to them (including name) resulted in the most responses. The frequency of issuance of text messages was not considered a nuisance by those that received them. This study offers twofold utility – it allows for comparison of interventions, and secondly, it provides a new dimension on promotion factors, that of the frequency of promotions. The use of interventions, such as text messages, may be considered a nuisance if overused. Therefore, it is necessary to assess the impact of this factor – frequency of promotion – as a possible determinant of purchasing intention.

2.4 Research Gaps

Multiple authors posit a positive influence between marketing mix strategy and increased sales (Gbolagade, Adewale, Adesola & Oyewale, 2013; Uche and Osumba, 2017; Pourhosseini & Shahrokh, 2013). The publications put forward are crafted in such a manner as to infer the general effect of a marketing strategy as opposed to particular relative effects on aspects of the 4Ps marketing mix. This shortage in marketing mix-centred studies, given the reported efficacy of marketing mix strategies on purchasing products and services, points to a need for empirical studies; this is the first gap that the study sought to address. In pushing products to clients (as opined in the push and pull theory), it is paramount to accurately understand their perceptions to accurately market goods and services (Onkvisit & Shaw, 2009).

The findings from the current study addressed the gap of products' inefficiency marketing strategies due to a lack of evidence linking the 4Ps and purchase intent. More pertinent to the proposed study is that current studies on HIVST products centre primarily on achieving maximum distribution of the kits with little or no regard for the implications of distribution from private pharmacies that act as conduits of the products the public. This lack of focus on retail pharmacies presents as a third gap that the study seeks to address. The need to assess HIVST kits' distribution is more pronounced in Kenya, given that 91% of the distribution of pharmaceutical products centres in the private sector (World Health Organization, 2010).

Getting private facilities to champion the use of HIVST, as a national health target, would thus have to be matched with a value proposition for private investors in healthcare. This study further addresses the gap of a lack of private-facility-focused studies on marketing mix and product distribution related to HIVST kits. This study serves to fill the mentioned gaps by providing an approach for the effective constitution of a pharmacies' marketing mix; finally, the findings offer practical, actionable evidence of an effective approach to constructing a marketing mix applicable in promoting the use of HIVST kits among pharmacies in Nairobi – a pivotal segmentation of pharmacies in the country as it caters to the urban population. A summary of various gaps is shown in the table below

Table 2.1 Summary of Research Gaps

Author	Title	Findings	Research Gap
Figueroa, Johnson,	Attitudes and acceptability on	Findings show that convenience in purchase	The study, however, does not specifically

Verster, and Baggaley (2015)	HIV self-testing among key populations	and usage determined the acceptability of self-testing	examine the marketing-mix practices utilized. The current study reviewed how 4Ps influence purchase intention.
Mugo, Michelini, Shangala, Hussein, Graham, de Wit, and Sanders (2017)	Uptake and acceptability of oral HIV self-testing among community pharmacy clients in Kenya	The study notes that convenience inaccessibility of the HIV self-test kits and appropriate pricing is feasible measures to ensure uptake of the kits	However, the study does not look at other facets of mixed marketing, such as promotional factors. The current study examined the influence of promotional factors.
Njau, Covin, Lisasi, Damian, Mushi, Boulle, and Mathews (2019	Qualitative evidence on factors enabling and deterring uptake of HIV self-testing in Africa	The study notes that privacy, confidentiality, convenience, ease of use, and opportunity to test determined the uptake of self-testing kits	The study is based on a review of analytical literature while this study considered responses from participants within pharmacies in Kenya The current study was premised on participants in Nairobi, Kenya.
Strauss et al. (2018)	HIV testing preferences among long-distance truck drivers in Kenya.	Results indicate that offering of the test kits free of charge and utilization of preferred product delivery was key to utilization	The study, however, does not consider the perspectives of medical professionals, which is the focus of this research The current study

focussed on pharmacy employees as the unit of observation.

2.5 Conceptual Framework

The study's main aim is to assess the effect of marketing mix factors on purchase intention for HIVST kits in Nairobi County. To achieve this, the researcher sought to establish the effects of each of the 4-Ps of the marketing mix on the potential client's intention to purchase the kits. The relationship between the variables is depicted in figure 2.1.

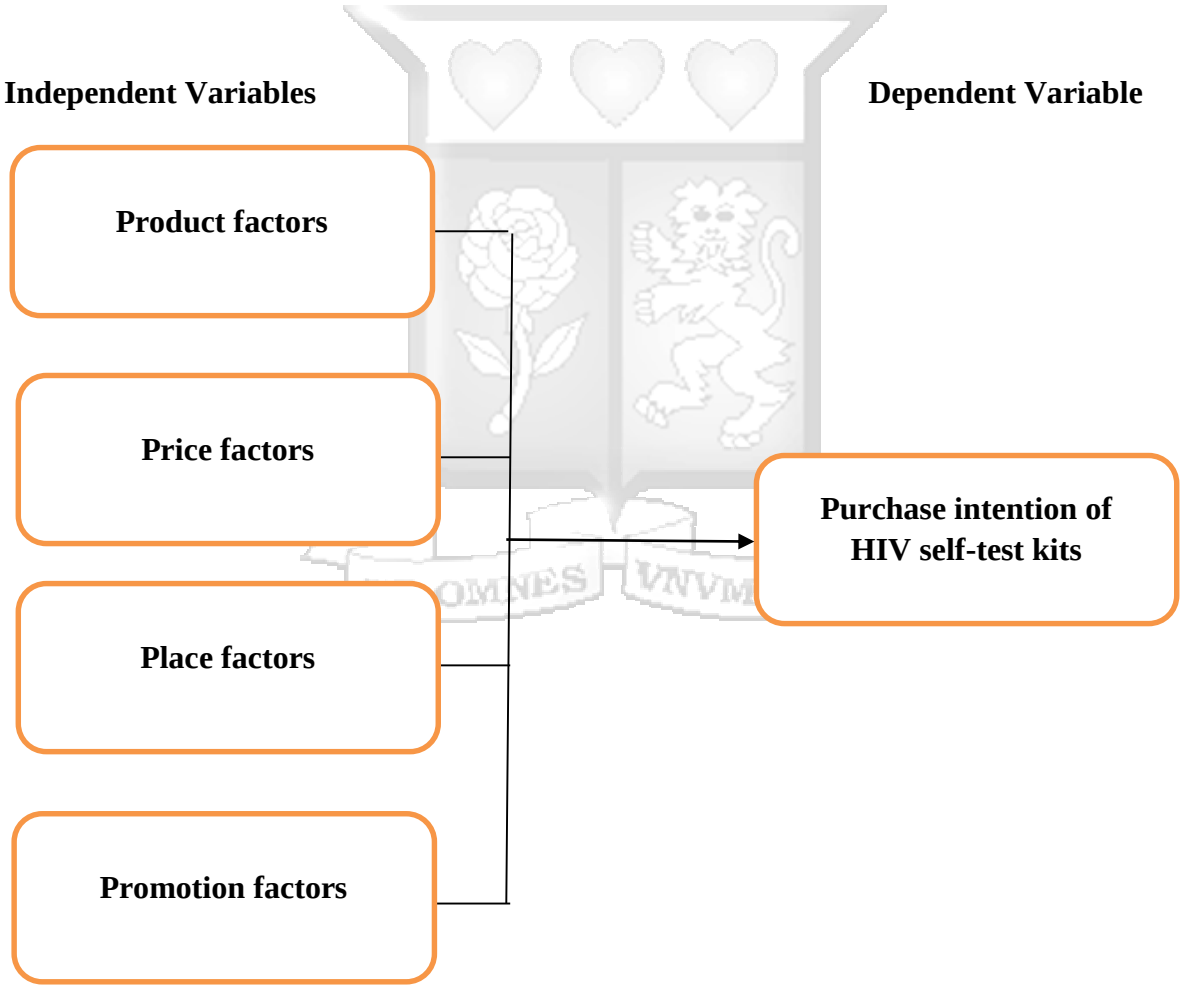

Figure 2.1 Conceptual Framework
Source: Author (2020)

2.6 Operationalization of variables

The other literature has provided insights into the entrails of the constructs under assessment in this study. Table 2.2 provides a detailed description of the various variables considered in the study, the sub-variables used in operationalizing them, the measurement approach used in assessing them, and the source from whence their constitutions are derived.

Table 2.2 Operationalization of Research Variables

Variable	Indicators	Data analysis	Literature
Purchase Intention	• Willingness to buy • Frequency of purchase • Purchase quantity	Descriptive analysis and inferential analysis	(Paschen-Wolff et al., 2019; Choko and Corbett, 2018)
Product Factors	• Simplicity of use • Confidentiality • Convenient access	Descriptive analysis and inferential analysis	(Tshuma, 2018; Indravudh et al., 2017).
Price factors	• Actual cost • Relative cost • Discounts	Descriptive analysis and inferential analysis	(Change et al., 2019; Ng & Tan, 2013; Marlin et al., 2014).
Place factors	• Distribution point • Channel of distribution • Location of sale	Descriptive analysis and inferential analysis	(Indravudh et al., 2017; Choko et al., 2017; Tempalski et al., 2019).
Promotion factors	• Advertising avenue • Frequency of advertisement • Nature of message	Descriptive analysis and inferential analysis	(Indravudh, Choko and Corbett, 2018; Paschen-Wolff et al., 2019; Huang et al., 2015).

2.7 Chapter summary

The previous discussion has shed light on the two theories considered for the study – planned behaviour and marketing mix theory. Empirical studies, both from the broad sense of the marketing mix concerning purchase intent and explicitly related to the HIVST kits' marketing, have also been presented in the chapter. The gap is research emanating from a scarcity of studies on the particular impact of the marketing mix's specific aspects as relates to purchase intention was identified. As observed from studies assessing intention to purchase, the specific aspects related to the topic under study and the stakeholders' interests under observation; it is with this understanding the variables in the study have been operationalized as indicated in section 2.6.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the techniques employed to gather information to be used to respond to the four research questions outlined above. It summarizes the research strategy, a report of the research devices, and a description of the various data collection procedures. The data analysis approach, research quality aspects, and ethical considerations are further highlighted in this section.

3.2 Research Philosophy

Research philosophy outlines the way data of certain phenomena should be gathered and analyzed (Saunders, Lewis, & Thornbill, 2012). According to Sekaran and Bougie (2010), research philosophy can be divided into three categories, namely positivism, interpretivism, and realism. This study adopted a positivism research philosophy. Collins (2010) indicates that positivism philosophy subscribes to the view that only factual knowledge gained through observation through the senses, including measurement, is reliable. Therefore, in positivism studies, the researcher's roles are limited to data collection and interpretation in an objective way (Creswell, 2014). The paradigm assumes that social reality cannot be influenced; it is measurable and has an external reality. It further combines deductive logic and empirical observation to estimate human behavior (Williams, 2007). This study involved collecting and converting data into numerical form to enable statistical calculations and ensure conclusions are drawn from reliable information and had more than one hypothesis.

3.2.1 Research Design

A research design is an arrangement of conditions for gathering and analyzing data to interpret and address the aim of a research initiative (Sekaran & Bougie, 2016). The current study employs a descriptive-correlational design as the researcher sought to assess the relationship between variables (Novikov & Novikov, 2013). The design was selected since it allows for establishing an association between study variables using quantitative techniques. Specifically, the influence of each of the 4Ps on purchase intention was assessed. The 4Ps of marketing are considered as the independent variables affecting the purchase intention of customers.

3.3 Population and Sampling

3.3.1 Target Population

The population of this study is the staff working in the sampled pharmacies in Nairobi County. This is because these individuals have had direct contact with customers and have a

clear understanding of the factors that influence consumers' intention to purchase HIV ST kits. For consistency, we administered the questionnaire to the superintendent pharmacist or pharmaceutical technologist or, in their absence, the most experienced staff in each pharmacy. As reported by the Pharmacy and Poisons Board (PPB), there are 1266 pharmacies in Nairobi County.

3.3.2 Sampling Design and Sample Size

A random sampling approach was applied to select the target sample pharmacies from which data were solicited. As explained by Kazimierczuk, Zawadzka, and Koźmiński (2009), random sampling allows for the increased authority of findings by allowing each item in a sampling frame of equal representation in the final sample. This approach is thus suitable for the study the researcher sought to generalize findings to pharmacies in the county. In the current study, a random number generator was used to assign numbers to each of the pharmacies in the population. The assigned numbers and their represented pharmacies were arranged from smallest to largest.

The sample size was calculated using the following finite population correction formula:

$$z\text{^}2 * p(1-p)/\ (1+\ ((z\text{^}2 * p(1-p)/e\text{^}2\ N)$$

Where

N = size of population (1266)

p = population reliability (or frequency estimated for a sample of size n), where p is 0.5, which is taken for all population

e = margin of error considered as 5% for 95% confidence level

z = value for the selected alpha level (at 0.05 level of significance), Z is 1.96

$z\text{^}2 * p(1-p)$= 384.1568

$1+\ (\left(z^2 * \frac{p(1-p)}{e^2 N}\right) = 1.303443918$

384.16/ 1.303443918 = 294.7269 hence 295 respondents.

The study applied random sampling in selecting the research respondents, and a list of sampled pharmacies is included in the Appendices.

3.4 Data Collection Instruments

Data was collected through a structured questionnaire. The questionnaire was divided into six main sections. All sections queried the various variables under considerations – product factors, price factors, place factors, promotion factors, and purchase intention. The five sections addressing the variables contained Likert scales assessing ratings on the various sub-variables of the study.

3.5 Data Collection Procedures

The questionnaire was distributed through the use of research assistants. These were required to apply a drop-and-wait approach in soliciting responses from the sampled pharmacies. The assistants offered clarification of the questions issues and confirmed that they were sourced from the appropriate respondents. As Jones, Murphy, Edwards, and James (2008) observe, questionnaires allow for collecting standardized data from a large sample size with comparatively less expenditure and added convenience than alternative approaches like interviews. Likert Scales were used to collect the quantitative data; hence the data was ordinal (Novikov & Novikov, 2013).

3.6 Research Quality

Research quality was ensured through ensuring that validity and reliability concerns are addressed in the study. The study conducted pilot tests across 7% (N=20) of the sampled pharmacies, but their findings were not included in the final dataset.

3.6.1 Validity Tests

Kothari (2004) points out that validity in research addresses multiple factors; construct validity involves confirmation that a research tool assesses what it is intended to assess. This was ensured through ensuring that the operationalization of variables was informed by literature. However, to test for validity, a pilot study was conducted with 20 respondents from the population. The pilot study concerning validity allowed for confirmation for the included question's aptness in assessing the desired constructs. This was achieved by requiring respondents to comment on the level of understandability of the included questions.

3.6.2 Reliability Tests

According to Shuttleworth (2008), reliability refers to a research procedure's replicability with consistency in findings. Concerning the reliability test, data emanating from the pilot study was assessed using Cronbach's alpha. This was computed for each of the scales following the collection of the data. As Bland and Altman (1997) observed, a rating of 0.7

and above would indicate sufficient reliability of the scale in question. The Cronbach alpha coefficient was used to define the instrument's reliability in this research since it is a good indicator of samples' unidimensional and internal consistency.

Table 3.1 Reliability Results

Variable	Cronbach's Alpha	N of Items
Product factors	.827	4
Price factors	.785	4
Place factors	.740	5
Promotion factors	.815	4
Purchase intention	.790	4

The above results show the reliability analysis output from the pilot study among 7% of the sample firms (295 pharmacies). The findings show all the study constructs had a Cronbach Alpha of above 0.7, which is deemed sufficient to be utilized as the primary study's research instrument.

3.7 Data Analysis and Presentation

The statistical package SPSS was used to compile and analyze data. The completed questionnaires were analyzed for completeness and consistency. The data collected was summarized, edited, coded, and classified into various categories according to the respondents' answers. Descriptive statistics were used to determine central tendency measures such as mean scores and dispersion measures, such as variance and standard deviation. The descriptive analysis was selected since it offers a clear method of summarizing and presenting the analysis of Likert scale statements. Subsequently, an ordinary least squares (OLS) regression model was applied in inferring the relationships between the various variables. OLS regression was chosen as the researcher sought to assess the relationship between the dependent and independent variables by testing for linear associations in the data (Hayes & Matthes, 2009). As a prerequisite to the regression, correlation tests and diagnostic tests were run to assess the association and linear regression assumptions.

The data analysed was presented in the form of tables, frequencies, and percentages. The regression equation that was applied is as follows:

$$\boldsymbol{Y = \beta 0 + \beta 1 X1 + \beta 2 X2 + \beta 3 X3 + \beta 4 X4 + \varepsilon}$$

Whereby Y = Purchase intention

X1 = Product factors

X2 = Price factors

X3 = Place factors

X4 = Promotion factors

B0 = constant of regression

ε = error term

β0 β1 β2 β3 and β4 are the regression equation coefficients for each of the variables discussed.

3.8 Ethical Considerations

Legal and ethical considerations embody the standards and norms for which proper research is supposed to be aligned. It entails considerations of acceptable and unacceptable behaviour throughout the research process (Bryman, 2012). First, this study ensured that participation was voluntary with informed consent from the participating pharmacies and respondents. Respondents were informed on the purpose of the study as being for academic purposes only. Besides, the researcher ensured confidentiality and anonymity of study participants are maintained, and respondents were aware that they could exit during the process.

The researcher also obtained a study approval from relevant authorizing bodies from the University Ethical Board. The researcher further sought authorization for the study from the National Commission for Science Technology and Innovation (NACOSTI) and an authorization letter from the Strathmore University Business School. Lastly, any works of authors used or cited in this study were adequately acknowledged using a standard referencing system, and no plagiarism was exercised in the study. The information provided by the respondents was treated with the utmost confidentiality.

CHAPTER FOUR

PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

This chapter is critical in the research process as it aids in presenting the results of the study. The chapter presents the results drawn from the analysis in line with the themes of this study. The chapter presents the background information, descriptive results, correlation results, the regression results, and the summary of the chapter.

4.2 Background Information

The study sought to determine various demographic facets of the participants of the research. The analysis of the participant's demographic information is presented in this section.

4.2.1 Response Rate

This study aimed to obtain responses from 295 pharmacies. The study obtained a response from 80% (N=236) of the participants, with only 20% of the participants not taking part in the study. Creswell (2014) posits that obtaining a response rate of above 60% is considered good for quantitative analysis and inferences made of the population are viable. The study thus considered the response adequate for analysis and presentation of findings.

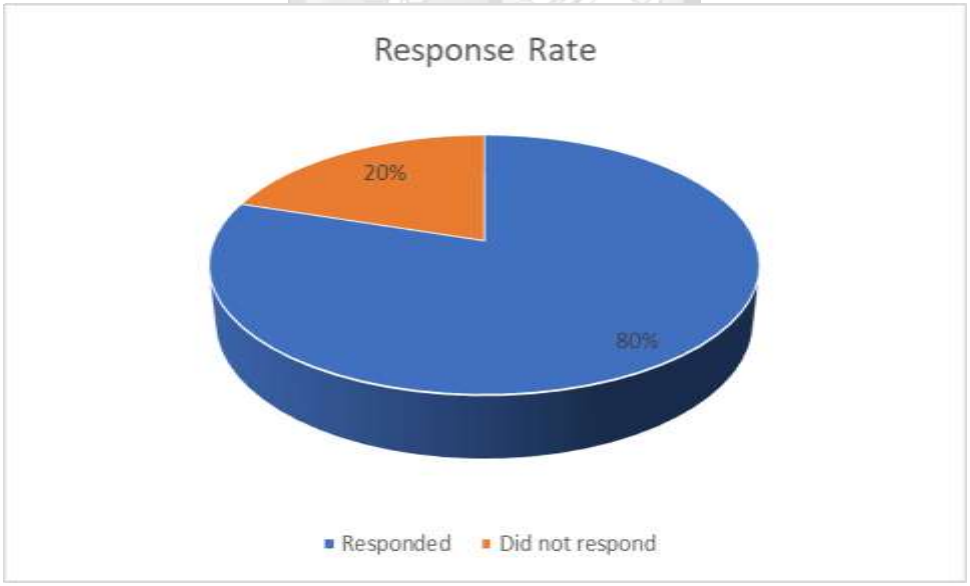

Figure 4.1 Response Rate

4.2.2 Participants Gender

The study sought to establish the gender composition of the personnel in charge of pharmacies participating in this study. The study is as shown in table 4.1 below.

Table 4.1 Gender of Respondents

	Frequency	Percent
Male	124	52.5
Female	112	47.5
Total	236	100.0

The findings above indicate that the majority of the participants, 53% were male officers, while 48% of the participants were female. These results indicate that the composition of health system personnel is almost evenly distributed across the participating pharmacies.

4.2.3 Participants Age Level

The research focussed on establishing the age distribution of the respondents by age.

The findings are presented using frequencies and percentages, as indicated below.

Table 4.2 Age of Respondents

	Frequency	Percent
18-25 years	37	15.7
26-35 years	56	23.7
36-45 years	58	24.6
45-55 years	73	30.9
56-65 years	8	3.4
66 and above	4	1.7
Total	236	100.0

Findings of the analysis show that most of the respondents (31%) were 45-55 years, 25% were of the age 36-45 years, and 24% were of the age 26-35 years, while 16% of the participants were of age 18-25 years. This shows that the workforce within pharmacies in Kenya is well-diversified in terms of the age of the staff.

4.2.4 Participants Education Level

The study sought to analyze the educational attainment of the participants of the study. The findings of the research areas presented in Table 4.3 below,

Table 4.3 Education Level of Respondents

	Frequency	Percent
Diploma level	192	81.4
Undergraduate-level	40	16.9
Masters level	4	1.7
Total	236	100.0

The study results note that the majority of the participants, 81%, had attained diploma-level education, 17% had attained undergraduate level education, 2% had attained masters level education. These findings are vital as they show that participants have attained formal health education, which is key to obtaining quality responses that can be reliable in solving the study problem.

4.3 Descriptive Analysis

The summary of the participant's responses was analyzed using descriptive statistical measures such as sum, means, and standard deviation. The results were presented in tables in line with the objectives of this study. The study respondents were presented with various statements on the market mixing strategies and HIV-Self tests kits' purchase intention. The study utilized 5-point Likert scale questions, and the responses on each statement were reviewed using descriptive analysis; and the findings are presented in this section.

4.3.1 Product Factors

The first independent variable examined the product factors associated with HIV Self Testing kits, and the responses obtained are presented in the table below.

Table 4.4 Product Factors Descriptive

	N	Mean	Std. Deviation
The ease of use of the HIV self-testing kit is an important factor in marketing the kit	236	4.2373	.74580
The ability to conduct HIV tests in private is an important reason for considering the kit's purchase.	236	4.2585	.87332
The convenience of accessing the kit through a local pharmacy is important to consumers	236	4.1864	.85501

The availability of product information on usage and medical risk is important to consumers.	236	4.1610	.85523

The results above show that there was agreement among participants that ease of use of the HIV self-testing kit is an important factor in marketing the kit as noted by a mean of 4.2373 and a variation of .74580, indicating moderate dispersion in responses. Concerning the ability to conduct HIV tests in private is an important reason in considering the purchase of the kit, the respondents agreed, as shown by a mean of 4.2585. Concerning the convenience of accessing the kit through a local pharmacy, there was agreement among respondents, as shown by a mean of 4.1864 and a deviation of .85501. The study's findings also show that respondents agreed that the availability of product information on usage and medical risk is important to consumers, as indicated by a mean of 4.161 and a deviation of .85523.

4.3.2 Price Factors

The second predictor variable examined the price factors associated with HIV Self Testing kits, and the responses obtained are presented in the table below.

Table 4.5 Price Factor Descriptive

	N	Mean	Std. Deviation
The price of the kit is an important motivating factor in the customer's in choosing to buy the kit	236	3.8814	1.04511
The pricing of the product as compared to other testing approaches is an important determinant of purchase	236	3.5975	1.18278
The possibility of discounts and vouchers is an important factor for customers	236	3.6229	1.16589
The availability of the product at an incentivized price by the government cost is vital to its utilization within the public	236	3.5805	1.04264

The kit's price is an important motivating factor for customers choosing to buy the kit; there was agreement among participants, as shown by a mean of 3.8814. Concerning the product's pricing compared to other testing approaches, there was agreement among respondents as indicated by a mean of 3.5975 and a deviation of 1.18278, showing high variation in responses. The results show agreement that the possibility of discounts and vouchers is an important factor to customers as noted by a mean of 3.6229. On the availability of the product

at an incentivized price by the government cost is vital to its utilization within the public. There was an agreement, as shown by a mean of 3.5805, with a dispersion of 1.04264.

4.3.3 Place Factors

The third independent variable examined the place factors associated with HIV Self Testing kits, and the responses obtained are presented in the table below.

Table 4.6 Place Factors Descriptive

	N	Mean	Std. Deviation
The place of purchase (e.g., hospital or pharmacy) is an important determinant of incentive to purchase	236	4.0042	.97412
The person from whom the device has received the product (e.g., through a partner or a community health worker) is or can be important in considering purchasing the product	236	3.2712	1.25587
The purchase (form a nearby store or from a pharmacy near work) would be an important factor in considering buying the product.	236	3.6949	1.04786
The availability of the product through online medical retailers is vital to the product purchase	236	3.3559	1.11107
The confidentiality offered at the pharmacy during purchase enhances product utilization	236	3.5381	1.05721

The respondents of this study agreed that the place of purchase (e.g., hospital or pharmacy) is an important determinant of incentive to purchase as indicated by a mean of 4.0042 and moderate variation shown by the standard deviation of .97412. Concerning the person from whom the device has received the product (e.g., through a partner or a community health worker) is or can be important in considering purchasing the product, there was neutral agreement among participants, as shown by a mean of 3.2712. The findings show that the purchase (form a nearby store or from a pharmacy near work) would be an important factor in considering buying the product as shown by a mean of 3.6949 and a variation of 1.04786. The product's availability through online medical retailers is vital to the product purchase; there was moderate agreement across the participants as indicated by a mean of 3.3559. These responses further show agreement that the pharmacy's confidentiality during purchase enhances product utilization as indicated by a mean of 3.5381.

4.3.4 Promotion Factors

The fourth independent variable examined the promotion factors associated with HIV Self Testing kits, and the responses obtained are presented in the table below.

Table 4.7 Promotion Factors Descriptive

	N	Mean	Std. Deviation
The media used to advertise the kit would be an important determinant of one's purchase of the product	236	3.5720	.99739
How frequently a customer comes across advertisements media would be an important factor as customers consider purchasing the kit	236	3.7924	1.02069
The nature of the message (e.g., emphasizing urgency versus emphasizing convenience) is an important factor in determining a customer's choice to purchase the kit	236	3.7881	1.14000
The adoption of social networking in raising awareness on the kits is critical to the purchase intentions within the public	236	3.7669	1.06027

The study's responses show an agreement among respondents that the media used to advertise the kit would be an important determinant of one's purchase of the product as indicated by a mean of 3.5720 and a deviation of .99739. The study also notes agreement among respondents that viewing advertisements media would be an important factor as customers consider purchasing the kit as noted by a mean of 3.7924. The research shows that the nature of the message (e.g., emphasizing urgency versus emphasizing convenience) is an important factor in determining a customer's choice to purchase the kit as indicated by a mean of 3.7881 and a dispersion of 1.14. Concerning the adoption of social networking in raising awareness on the kits, it is critical to the public's purchase intentions as denoted by a mean of 3.7669 and dispersion of 1.06027.

4.3.5 Customer Intention to Purchase

The dependent variable for this research sought to analyze the customer's intentions to purchase HIV self-test kits. The results of the analysis are indicated in table 4.8 below.

Table 4.8 Purchase Intention Descriptive

	N	Mean	Std. Deviation
Most customers would be willing to purchase the product	236	3.9534	.91904
Most customers are aware of product usage and medical information	236	3.6653	1.04892
Most customers would be willing to purchase the product frequently	236	3.4958	1.12419
Customers at the store have referred their friends and families to purchase the product	236	3.3983	1.11195
Most customers would be willing to purchase more than one kit to distribute to a partner or loved ones	236	3.3475	1.16237

These findings indicate that most customers are willing to purchase the product, as shown by a mean of 3.9534 and a deviation of .91904. The study further notes that most customers are aware of the product usage and medical information, as indicated by a mean of 3.6653 and dispersion of 1.04892. The results show moderate agreement that customers would be willing to purchase the product as indicated by a mean of 3.4958 frequently. The study further notes moderate agreement that customers at the store have referred their friends and families to purchase the product, as shown by a mean of 3.3983. The findings further indicate moderate agreement that customers would be willing to purchase more than one kit to distribute to a partner or loved ones, as indicated by a mean of 3.3475 and a deviation of 1.16237.

4.4 Diagnostic Analysis

The research sought to examine the linear regression assumptions using both collinearity statistics and normality tests. The collinearity tests sought to establish if there is any interdependency among the independent variable of the research. The results are shown below;

Table 4.9 Collinearity Results

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Product Factors	.924	1.082

	Price Factors	.749	1.335
	Place Factors	.716	1.396
	Promotion Factors	.757	1.321

a. Dependent Variable: Purchase Intention

The above collinearity statistics are presented using both tolerance values and variance inflation factors. According to Allison (1999), the standard rule is that tolerance values should be above 0.4, and variance inflation factors should be below 10. The study results show that all the predictor variables had tolerance values of above 0.4 and variance inflation factors below ten, thus indicating no serious multicollinearity problems.

The research further conducted the normality test. The test aims to establish if the data being utilized in the research is from a normally-distributed sample. This helped in attaining the minimum assumptions for inferential tests to be conducted, and the findings of the normality statistics are shown below;

Table 4.10 Normality Results

	Shapiro-Wilk		
	Statistic	df	Sig.
Intention to purchase	.865	235	.113
Product factors	.945	235	.110
Price factors	.890	235	.140
Place factors	.915	235	.114
Promotion factors	.935	235	.125

The study relied on the Shapiro-Wilk tests since the number of observations was less than in 2000. The research results indicate that all the research variables had a significant value above .05, which indicates that the data was normally distributed.

4.5 Correlation Analysis

The research sought to examine the association between the independent variables and the dependent variables of the research. The study relied on a Pearson correlation analysis using a two-tailed test.

Table 4.11 Correlation Results

		Purchase Intention
Product Factors	Pearson Correlation	.170**
	Sig. (2-tailed)	.009
	N	236
Price Factors	Pearson Correlation	.291**
	Sig. (2-tailed)	.000
	N	236
Place Factors	Pearson Correlation	.222**
	Sig. (2-tailed)	.001
	N	236
Promotion Factors	Pearson Correlation	.260**
	Sig. (2-tailed)	.000
	N	236

*. Correlation is significant at the 0.05 level (2-tailed).

The study sought to determine the association between product factors and purchase intention of HIV Self-Test kits. The findings indicate a positive and significant association, as indicated by a *p-value = .170, sig = .009<.05*. Njau et al. (2019) found that product delivery's privacy and accuracy were associated with the acceptability of HIV self-tests kits in Kenya.

The research further examined the effect of price factors on the purchase intention of HIV Self-Test kits. The results indicate a statistically significant and positive effect of price factors on customer purchase intention *p-value = .291, sig = .000<.05.* The third study variable sought to establish the effect of place factors on HIV Self-Test kits' purchase intention in Kenya. The findings indicate a positive and significant effect of place factors on customer purchase intention *p-value = .222, sig = .001<.05.* Chang et al. (2019) concluded that utilization of distribution strategies was positively related to the demand for HIV self-testing kits.

The study sought to determine the association between promotion factors and purchase intention of HIV self-test kits. The findings indicate a positive and significant association

between promotion factors and customer purchase intention, as indicated by a *p-value = .260, sig = .000<.05*.

4.6 Regression Analysis

The research's general objective was to analyze the relationship between marketing mix strategies and the purchase intention of HIV Self-Test kits. The study adopted the OLS regression analysis, and the findings are presented below.

Table 4.12 Regression Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.388[a]	.150	.124	3.47512

a. Predictors: (Constant), Education, Promotion Factors, Gender, Product Factors, Price Factors, Age, Place Factors

The regression summary above shows the magnitude of the relationship between the predictor variables and the dependent variable. The findings show that 15.0% variations in the customer purchase intention are determined by the marketing mix strategies, education, age, and gender of respondents (demographic factors). The study sought to establish the statistical significance of the study variables, and the findings of this analysis are shown below.

Table 4.13 ANOVA Summary

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	486.949	7	69.564	5.760	.000[b]
	Residual	2753.437	228	12.076		
	Total	3240.386	235			

a. Dependent Variable: Purchase Intention

b. Predictors: (Constant), Education, Promotion Factors, Gender, Product Factors, Price Factors, Age, Place Factors

The ANOVA analysis findings show that there is a statistically significant relationship between marketing mix strategies, demographic factors, and purchase intentions. The results show that the model utilized was statistically significant, as indicated by *f-value = 5.760, sig-value = .000<.05.*

The study further sought to determine the regression model's beta coefficients, and the study results are as indicated.

Table 4.14 Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	8.706	1.963		4.436	.000
	Product Factors	.142	.097	.095	2.653	.002
	Price Factors	.222	.081	.194	2.731	.007
	Place Factors	.037	.073	.037	.499	.618
	Promotion Factors	.179	.088	.143	2.034	.043
	Age	.585	.217	.190	2.695	.008
	Gender	-.012	.464	-.002	-.025	.980
	Education	-.689	.351	-.141	-1.963	.051

a. Dependent Variable: Purchase Intention

The resulting regression model was as indicated;

$$\boldsymbol{Y = 8.764 + .142X1 + .222X2 + .037X3 + .179X4 + 1.963}$$

The study's findings show that a unit change in product factors will result in a .42 change in the purchase intention, as indicated by sig-value **= *.002<.05***. The results of the research show a statistically significant effect of price factors on purchase intention. A unit change in price factors will result in a .222 change in the purchase intention, as indicated by sig-value **= *.007<.05***. The study's findings show that a unit change in place factors had a coefficient of .037, which was statistically insignificant sig-value **= *.618>.05***. The results of the research show a statistically significant effect of promotion factors on purchase intention. A unit change in promotion factors will result in a .179 change in the purchase intention as indicated by sig-value **= *.043<.05***. The findings also indicate that age has a statistically significant effect on purchase intention (Sig = .008<.05), which indicated that a change in age by a unit would lead to a 0.585 change in the purchase intention. The results also indicated that gender did not have a significant influence (Sig = .980>.05), and education did not have a significant influence (Sig = .051>.05) on the customer purchase intention.

4.7 Chapter Summary

This chapter aimed to present the findings of the research. The study was conducted across 236 pharmacies within Nairobi City County. The study was able to obtain sufficient response adequate for statistical analysis. The research notes that 15% of purchase intentions' variations are predicted by the marketing mix strategies and demographic factors adopted within the pharmaceutical firms.

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

This chapter focused on the summary, discussions, conclusions, and recommendations drawn from this research. The chapter further focused on the limitations of the research and the suggestions for further research. The presentation within this chapter is in line with the research variables.

5.2 Summary

The marketing strategy should enable firms to concentrate their limited resources towards opportunities that offer the greatest positive impact on their brand equity towards realizing enduring competitive advantage. Marketing influences are a combination of strategies and tactics calculated to appeal to consumers and motivate them to buy, leading to strong brand choice. It is from this understanding that marketing scholars and practitioners developed the concept of the marketing mix. This research aimed to determine the relationship between marketing mix strategies and the purchase intention of HIV self-test kits. The study focused on the product factors, price factors, place factors, and promotion factors and how they influence the purchase intention. The research was grounded on the theory of planned behaviour and the marketing mix theory. The study reviewed several empirical studies that were key in expounding on the gap of the analysis.

The study was grounded on a positivism research philosophy with a descriptive correlational research design being utilized. The study sample participants were drawn from pharmacies operating within Nairobi City County. The study utilized a structured research questionnaire with the instrument presented among 295 pharmacies. The study results show a response rate of 80%, with the majority of the respondents being male staff members within the pharmacies. The study further shows that over 68% of the respondents were above 35 years, with over 81% of the participants having attained above a diploma-level degree. The study utilized descriptive statistics to summarize the responses obtained, and inferential analysis techniques were utilized to determine association and relationship between research variables.

5.3 Discussion of Results

The study aimed to determine the relationship between marketing mix strategies and purchase intention of HIV self-test kits. The findings of the study showed the existence of a positive and significant relationship between marketing mix strategies (product factors, price factors,

place factors, and promotion factors), demographic factors (age, gender, and education) and purchase intentions (R^2 =.150, *Sig = .000<.05*).

5.3.1 Product Factors

The study notes that the ease of use and the privacy accorded by the HIV self-test is vital to determining the marketing and purchasing of the kits. Nugroho and Irena (2017) in the same vein contend that the quality and the ability of the product to fulfil customer needs is key to purchase intentions. Spyrelis et al. (2017) also found out that the ability of the HIV self-test kits to meet the confidentiality and privacy needs of the consumer is essential to product usage. The study results show that convenience in the accessibility of the kits and availability of critical information to the usage and inherent risks is considered critical by consumers. Tshuma (2018) contends that the privacy and accessibility of the product have been key in enhancing the appeal of self-test kits in Zimbabwe. Figueroa, Johnson, Verster and Baggaley (2015) also notes that the accuracy of the product and convenience in purchase significantly determines the usability of the HIV self-test kits.

5.3.2 Price Factors

The findings of the study have shown that the pricing of the product in comparison to other testing approaches is a significant predictor of purchase. These findings are consistent with Ng and Tan (2013) found out that the divergence in the prices of self-test kits was positively associated with their demand among patients. Chang et al. (2019) support this notion by noting that the costs of purchase significantly determined the willingness to purchase the self-test kits. The study also notes that the availability of discounts and vouchers can help in stimulating product purchase. Further, rolling out incentives by the government to the public is vital to the purchase and utilization of the product. These results are in tandem with Marlin *et al.*, (2014) who contends that offering vouchers helps to reduce the pricing for the self-test kits, which is key to a product purchase. Harichund and Moshabela (2018) note that incentivization in the product purchase can contribute to the acceptability of the HIV self-testing in Sub-Saharan Africa.

5.3.3 Place Factors

The responses obtained in this study have indicated that the location of purchase is vital to driving purchase intentions. Similarly,Lamb, Hair and McDaniel (2011) notes that, timeliness in the availing of the product enhances the usage levels. Tempalski et al. (2019), similarly note that place factors are critical determinants of uptake of HIV testing uptake among

diversified communities. Further, the convenience and privacy accorded during the purchase process are key to purchase intentions. Choko et al. (2017) also contend that the place factors and type of contact between the health worker and patient are integral in determining the uptake of HIV self-testing. The study also notes that the availability of the product through online retailers is considered to be moderately integral in determining purchase decisions. Chang, Matambanadzo, Takaruza, Hatzold, Cowan and Sibanda (2019) posit that utilization of diversified channels of distribution can help in driving the demand for test kits. Mugo, Micheni, Shangala, Hussein, Graham, de Wit and Sanders (2017) acknowledges that convenience inaccessibility is essential in driving uptake of HIV self-test kits.

5.3.4 Promotion Factors

The research notes that increased advertisements of the product through various media platforms are important for driving purchase intentions. Wirtz and Lovelock's (2016) acknowledges that promotional efforts are aimed at improving customer perception. This, coupled with online marketing, will help in driving customer choices. The findings of the study further show that the nature of the message portrayed vis a vis the convenience of the testing keys is fundamental to growth in purchases. Huang *et al.*, (2015), in their study, indicated that the choices of advertising media and content are essential for the uptake of HIV self-test kits. The study also notes that raising awareness through social networking sites is essential in increasing the purchase intention within the public. In their research, Paschen-Wolff et al. (2019) posits that reliance on electronic messaging can help promote frequent HIV testing.

5.4 Conclusions

The study found out that marketing mix strategies have a positive and significant relationship to purchase HIV self-test kits in Kenya. The research revealed that product factors have a significant influence on customers' purchase intentions. The study notes that ease of usage and the privacy accorded by the kits significantly improve purchase intentions. The research concludes that the convenience and availability of product information are critical to purchase intention.

The research found out that the kit's pricing and offer discounts within pharmacies are essential to customers. The study found out that incentivizing the product would lead to an increase in utilization. The study found out that the place factors did not significantly influence the customers' purchase intentions.

The research concluded that promotion factors do have a significant influence on the customers' purchase intentions. The study concluded that online retailing of the products offer confidentiality is important in driving purchase intentions. The research concludes that the nature of the message represented in advertising media and social networking strengthens purchase intentions. The study concluded that the age of the respondents was a significant predictor of purchase intentions. The research also showed no statistically significant effect of gender and education on the purchase intention for HIV self-test kits.

5.5 Recommendations

To the management of the pharmaceutical firms, the study recommends that the institutions must introduce new measures that can help drive growth in purchase intention among customers. The research recommends that the pharmacies develop customer-centred strategies to create awareness of the usability and the benefits of the self-test kits to drive purchase intentions. The study further recommends that pharmacies introduce counseling programs for both on-site and off-site HIV self-testing by consumers. This will help in enhancing the acceptability of the uptake of the self-test kits. Further, about the perception of confidentiality and privacy, the study recommends that pharmacies should suggest that patients involve their partners in self-testing as this will help avoid potential fears of accepting self-testing.

To policymakers, the studies recommends that with the acceleration in the introduction of self-testing kits in urban areas, the Ministry of Health, in collaboration with other stakeholders, should stimulate discussion on the awareness of the self-test kits and create a positive environment for their acceptability across the country. The research recommends that policymakers within the health sector improve the demand for HIV self-test kits by increasing the production of the kits and improving the supply chain to ensure they are available countrywide and pricing is regulated.

5.6 Limitations of Research

The study was limited only to Nairobi City County, which constrains the study findings' generalizability in other marginalized areas in the country. Further, the study was limited to examining responses obtained from Pharmacy superintendents, Pharmacists, and Pharmaceutical technologists; hence there is a need for inclusion of the voices of the consumers purchasing the product within the country. Customer interviews would have provided greater insight into the relationship between purchase intentions and various marketing strategies.

5.7 Suggestions for Further Research

The study suggests that further research should be conducted to examine the Consumer-centric factors influencing the purchase intention of HIV self-test kits in Kenya. The study further suggests that research should consider government measures being adopted by county governments towards increasing self-testing within the country.

REFERENCES

Aaker, D. (2014). *Aaker on branding: 20 principles that drive success*. Morgan James Publishing.

Agot, K., Masters, S. H., Wango, G. N., & Thirumurthy, H. (2018). Can women safely distribute HIV oral self-test kits to their sexual partners? Results from a pilot study in Kenya. *Journal of acquired immune deficiency syndromes* (1999), 78(5), e39.

Ajzen, I. (1991). The theory of planned behaviour. *Organizational behaviour and human decision processes*, *50*(2), 179-211.

Ajzen, I. (2012). The theory of planned behaviour. *Handbook of Theories of Social Psychology: Volume 1*, (July), 438–459. https://doi.org/10.4135/9781446249215.n22

Ajzen, I., & Fishbein, M. (1980). Understanding attitudes and predicting social behaviour. Englewood Cliffs, NJ: Prentice-Hall.

Allison, P. (1999). *Multiple Regression: A Primer*. Pine Forge Press.

Baloglu, S., & Uysal, M. (2012). Market segments of push and pull motivations: A canonical correlation approach. *International Journal of Contemporary Hospitality Management*, *8*(3), 32-38.

Booms, B.H. and Bitner, M.J. (1982), "Marketing Strategies and Organization Structures for Service Firms", in Donnelly, J. and George, W.R. (Eds), Marketing of Services, American Marketing Association, Chicago, IL.

Bland, J. M., & Altman, D. G. (1997). Statistics notes: Cronbach's alpha. *Bmj*, *314*(7080), 572.

Brem, A., & Voigt, K. I. (2009). Integration of market pull and technology push in the corporate front end and innovation management—Insights from the German software industry. *Technovation*, *29*(5), 351-367.

Bryman, A., & Becker, S. (2012). Qualitative research.

Campbell, S., & Klein, R. (2006). Home testing to detect human immunodeficiency virus: Boon or bane? *Journal of Clinical Microbiology*, 44(10), 3473–3476. doi:10.1128/jcm. 01511-06

Chang, W., Matambanadzo, P., Takaruza, A., Hatzold, K., Cowan, F. M., Sibanda, E., & Thirumurthy, H. (2019). Effect of Prices, Distribution Strategies, and Marketing on Demand for HIV Self-testing in Zimbabwe: A Randomized Clinical Trial. JAMA

network open, 2(8), e199818-e199818.

Chaffey, D. (2002). *e-Marketing excellence: The Heart of eBusiness*. Butterworth-Heinemann.

Chen, H.-J. (2018). What Drives Consumers' Mobile Shopping? 4ps or shopping preferences? *Asia Pacific Journal of Marketing and Logistics*.

Chi, H. K., & Yang, d. Y. (2009). The Impact of Brand Awareness on Consumer Purchase Intention: The mediating Effect of Perceived Quality and Brand Loyalty. *The journal of International Management Studies*, 4.

Choko, A. T., Kumwenda, M. K., Johnson, C. C., Sakala, D. W., Chikalipo, M. C., Fielding, K., ... & Corbett, E. L. (2017). Acceptability of woman-delivered HIV self-testing to the male partner, and additional interventions: a qualitative study of antenatal care participants in Malawi. *Journal of the International AIDS Society*, 20(1), 21610.

Collins, H. (2010). *Creative Research: The theory and practice of research for the creative industries.* Worthing, United Kingdom: AVA Publications.

Coulter, A., Le Maistre, N., & Henderson, L. (2005). Evaluation of London patient choice patients' experience of choosing where to undergo surgical treatment. *Evaluation of London Patient Choice Scheme*.

Cravens, D. W., & Piercy, N. (2006). *Strategic marketing* (Vol. 6). New York City, NY: McGraw-Hill.

Creswell, J. (2014). *Research design: Qualitative, quantitative, and mixed methods approach (4th ed.)*. Los Angeles: Sage Publications, Inc.

Das, G. (2014). Linkages of retailer awareness, retailer association, retailer perceived quality and retailer loyalty with purchase intention: A study of Indian food retail brands. *Journal of Retailing and Consumer Services*, 21(3), 284-292.

Evans, J. R., & Berman, B. (1995). *Principles of marketing*. Prentice-Hall.

Figueroa, C., Johnson, C., Verster, A., & Baggaley, R. (2015). Attitudes and acceptability on HIV self-testing among key populations: a literature review. *AIDS and Behavior*, 19(11), 1949-1965.

Fishbeln, M. A. (1980). theory of reasoned action: some applications and implications. *Nebr Sym pM otiv*, *27*, 65-116.

Fishbein, M., & Ajzen, I. (1975). Belief, attitude, intention, and behaviour. Reading, MA:

Addison-Wesley.

GbolagadeAdewale, A., & Oyewale, I. (2013). Impact of Marketing Strategy on Business Performance. *Journal of Business and Management (IOSR-JBM), 11*(4), 59-66

Goi, C. L. (2009). A review of the marketing mix: 4Ps or More?. *International journal of marketing studies*, *1*(1), 2.

Harichund, C., & Moshabela, M. (2018). Acceptability of HIV self-testing in sub-Saharan Africa: scoping study. *AIDS and behaviour*, 22(2), 560-568.

Hayes, A. F., & Matthes, J. (2009). Computational procedures for probing interactions in OLS and logistic regression: SPSS and SAS implementations. *Behaviour research methods*, *41*(3), 924-936.

Hinson, R. E., Adeola, O., Limbu, Y. B., & Mogaji, E. (2020). Marketing in Healthcare-related Industries. *IAP*.

Holt, C. A. (2007). *Markets, games, & strategic behaviour*. Boston, MA: Pearson Addison Wesley.

Hu, Y. J. (2012). The moderating effect of brand equity and the mediating effect of marketing mix strategy on the relationship between service quality and customer loyalty: The case of retail chain stores in Taiwan. *International Journal of Organizational Innovation*, *5*(1), 155- 162. (Holt, 2007).

Huang, E. et al. (2015) 'P17.08 Using grindrTM, a smartphone social networking application, to increase HIV self-testing among men who have sex with men in Los Angeles', Sexually Transmitted Infections, 91(Suppl 2), p. A226.1-A226. doi: 10.1136/sextrans-2015-052270.586.

Indravudh, P. P., Choko, A. T., & Corbett, E. L. (2018). Scaling up HIV self-testing in sub-Saharan Africa: a review of technology, policy and evidence. Current opinion in infectious diseases, 31(1), 14.

Indravudh, P. P. et al. (2017) '"I will choose when to test, where i want to test": Investigating young people's preferences for HIV self-testing in Malawi and Zimbabwe', Aids, 31(April), pp. S203–S212. doi: 10.1097/QAD.0000000000001516.

Izizag, B. B., Situakibanza, H., Mbutiwi, T., Ingwe, R., Kiazayawoko, F., Nkodila, A., & Mbula, M. (2018). Factors associated with acceptability of HIV self-testing (HIVST) among university students in a Peri-Urban area of the Democratic Republic of Congo (DRC). . *The Pan African Medical Journal.*, 31.

Jobber, D. (2004). Principles and Practice of Marketing. 4th Edition, McGraw-Hill International Ltd., Berkshire, 942 p

Johnson, C., Baggaley, R., Forsythe, S., Van Rooyen, H., Ford, N., Mavedzenge, S. N., ... & Taegtmeyer, M. (2014). Realizing the potential for HIV self-testing. *AIDS and Behavior*, *18*(4), 391-395.

Jones, S., Murphy, F., Edwards, M., & James, J. (2008). Doing things differently: advantages and disadvantages of web questionnaires. *Nurse researcher*, *15*(4).

Khan, I., & Rahman, Z. (2014). Influence of Experiential Marketing on Customer Purchase Intention: A Study of Passenger Car Market. *Management and Labour Studies*, *39*(3), 319–328. https://doi.org/10.1177/0258042x15572411.

Kazimierczuk, K., Zawadzka, A., & Koźmiński, W. (2009). Narrow peaks and high dimensionalities: exploiting the advantages of random sampling. *Journal of Magnetic Resonance*, *197*(2), 219-228.

Kenya, H. A. (2020, 10 8). *HIV And AIDS In Kenya*. Retrieved from Avert.: https://www.avert.org/professionals/hiv-around-world/sub-saharan-africa/kenya

Kenya National Bureau of Statistics (2017) Kenya | Road Transport: No of Motor Vehicles: Registered | Economic Indicators. Available at: https://www.ceicdata.com/en/kenya/road-transport-number-of-motor-vehicles-registered/road-transport-no-of-motor-vehicles-registered (Accessed: 14 September 2019).

Kim, H. Y., & Chung, J. E. (2011). Consumer purchase intention for organic personal care products. . *Journal of consumer Marketing.*

Kothari, C. R. (2004). *Research methodology: Methods and techniques*. New Age International.

Kotler, P. (2005). *According to Kotler: The world's foremost authority on marketing answers to your questions.* Amacom Books.

Kottler, P. & Keller, L. (2012). Marketing Management, 14th Edition. New York City, NY: Pearson Educated Limited.

Lee, Y. H., Bang, J. H., Park, S. M., Kang, C. R., Cho, S. I., Oh, M. D., & Lee, J. K. (2018). Cost-Effectiveness of Voluntary HIV Testing Strategies in a Very Low-Prevalence Country, the Republic of Korea. *Journal of Korean medical science*, 33(46).

Liu, Y., Wu, G., Lu, R., Ou, R., Hu, L., Yin, Y., & Ye, M. (2020). (2020). Facilitators and Barriers Associated with Uptake of HIV Self-Testing among Men Who Have Sex

with Men in Chongqing, China: A Cross-Sectional Survey. *International Journal of Environment.*

Lule, E. N. (2012). The effectiveness of marketing strategies on the sales performance of pharmaceutical companies in Nairobi, Kenya.

Mahmoud, T. O., Ibrahim, S. B., Ali, A. H., & Bleady, A. (2017). The Influence of Green Marketing Mix on Purchase Intention: The Mediation Role of Environmental Knowledge. *International Journal of Scientific & Engineering Research, 8*(9), 1040. https://doi.org/10.14299/ijser.2017.09.006

Marlin, R. W. et al. (2014) 'Piloting an HIV self-test kit voucher program to raise serostatus awareness of high-risk African Americans, Los Angeles', BMC Public Health, 14(1), pp. 1–5. doi: 10.1186/1471-2458-14-1226.

McCarthy, E. J. (1960). *Basic marketing: a managerial approach*. RD Irwin.

Moyo, T., Mokgatle, M., & Madiba, S. (2017). Opinions about and acceptability of HIV self-testing amongst students at the Institute of Health Sciences-Lobatse, Botswana. *PULA: Botswana Journal of African Studies*, 31(1).

Mugo, P. M., Micheni, M., Shangala, J., Hussein, M. H., Graham, S. M., de Wit, T. F., & Sanders, E. J. (2017). Uptake and acceptability of oral HIV self-testing among community pharmacy clients in Kenya: a feasibility study. *PLoS One*, 12(1).

Mumbi, M. K. (2019). *The Influence of marketing mix strategies on organizational performance: a case of Asset Management Companies in Nairobi County* (Doctoral dissertation, Strathmore University).

Murule, J. (2011). Strategic responses by manufacturing pharmaceutical firms to changes in the pharmaceutical industry in Kenya. *Unpublished MBA project*.

Mutugi, J. K. (2017). A cultural-contextual assessment of the use of social marketing approach in HIV/AIDS programmes in Kenya. *Doctoral dissertation, University of East London*.

Mwangi, M. M. (2015). Adoption of green marketing strategies by fast moving consumer goods manufacturers in Nairobi city county. *Doctoral dissertation, University of Nairobi*.

Myers, J. E., El-Sadr, W. M., Zerbe, A., & Branson, B. M. (2013). Rapid HIV self-testing: long in coming but opportunities beckon. *Aids*, *27*(11), 1687-1695.

National AIDS Control Council (2018) HIV Estimates Report Kenya 2018. Available at:

https://nacc.or.ke/wp-content/uploads/2018/11/HIV-estimates-report-Kenya-20182.pdf (Accessed: 14 September 2019).

Ng, O. T., Chow, A. L., Lee, V. J., Chen, M. I., Win, M. K., Tan, H. H., ... & Leo, Y. S. (2012). Accuracy and user-acceptability of HIV self-testing using an oral fluid-based HIV rapid test. PLoS One, 7(9), e45168.

Ng, O. T., & Tan, M. T. (2013). HIV self-testing: money matters. Clinical infectious diseases, 57(5), 771-772.

Nick, H. (2015). Handbook of Research on Integrating Social Media into Strategic Marketing. Hershey, PA: IGI Global.

Njau, B., Covin, C., Lisasi, E., Damian, D., Mushi, D., Boulle, A., & Mathews, C. (2019). A systematic review of qualitative evidence on factors enabling and deterring uptake of HIV self-testing in Africa. *BMC public health*, 19(1), 1289.

Novikov, A. M., & Novikov, D. A. (2013). Research methodology: F*rom the philosophy of science to research design*. CRC Press.

Nugroho, A. R., & Irena, A. (2017). The Impact of Marketing Mix, Consumer's Characteristics, and Psychological Factors to Consumer's Purchase Intention on Brand "W" in Surabaya. *IBuss Management*, *5*(1), 55–69.

Oketch, A. (2019) Regulator seeks to cap a number of chemists in proposed guidelines - Daily Nation. Available at: https://www.nation.co.ke/news/Regulator-seeks-to-cap-number-of-pharmacies/1056-5091986-7actk7/index.html (Accessed: 1 October 2019).

Onkvisit, S., & Shaw, J. (2012). International marketing: strategy and theory. Abingdon-on-Thames, UK: Routledge

Pharmacy and Poisons Board (PPB). (2019). Phone Interview.

Pourhosseini, A., & Shahrokh, Z. D. (2013). The Effect of Marketing Strategy on Sales Performance: The Moderating Effects of Internal and External Environment. *World Applied Sciences Journal*, *26*(1), 28-33.

Paschen-Wolff, M. M. et al. (2019) 'A Systematic Review of Interventions that Promote Frequent HIV Testing', AIDS and Behavior. Springer US, 23(4), pp. 860–874. doi: 10.1007/s10461-019-02414-x.

Peter, P.J. & Donnelly, J.H. (2007). Marketing management: *Knowledge and skills (8th ed.). New York*: McGraw-Hill.

Ramayah, T., Lee, J. W. C., & Mohamad, O. (2010). Green product purchase intention: Some insights from a developing country. *Resources, conservation and recycling*, *54*(12), 1419-1427.

Ramirez, F. J., Parra-Requena, G., Ruiz-Ortega, M. J., & Garcia-Villaverde, P. M. (2018). From external information to marketing innovation: the mediating role of product and organizational innovation. *Journal of Business & Industrial Marketing*, *33*(5), 693-705.

Ravangard, R., Khodadad, A., & Bastani, P. (2020). How marketing mix (7Ps) affect the patients' selection of a hospital: experience of a low-income country. *Journal of the Egyptian Public Health Association*, 1-8.

Schultz, D. E. (2001). Marketers: Bid Farewell To Strategy Based on Old 4Ps. Marketing News, 35(2), 7.

Shuttleworth, M. (2008). Qualitative research design.

Sekaran, U., & Bougie, R. (2016). *Research methods for business: A skill-building approach*. John Wiley & Sons.

Singh, M. (2012). Marketing mix of 4P's for competitive advantage. *IOSR Journal of Business and Management*, *3*(6), 40-45.

Spyrelis, A., Abdulla, S., Frade, S., Meyer, T., Mhazo, M., Taruberekera, N., ... & Billy, S. (2017). Are women more likely to self-test? A short report from an acceptability study of the HIV self-testing kit in South Africa. AIDS care, 29(3), 339-343.

Strauss, M., George, G., Lansdell, E., Mantell, J. E., Govender, K., & Romo, M. (2018). HIV testing preferences among long-distance truck drivers in Kenya: a discrete choice experiment. *AIDS care*, 30(1), 72-80.

Stros, M., & Lee, N. (2015). Marketing dimensions in the prescription pharmaceutical industry: a systematic literature review. *Journal of Strategic Marketing*, *23*(4), 318-336.

Swapna, M. A. (2019). Theoretical Review on Consumer Purchase Intention with Reference to Brand Image of Products.

Tempalski, B., Cooper, H. L., Kelley, M. E., Linton, S. L., Wolfe, M. E., Chen, Y. T., ... & Semaan, S. (2019). Identifying which place characteristics are associated with the odds of recent HIV testing in a large sample of people who inject drugs in 19 US metropolitan areas. AIDS and Behavior, 23(2), 318-335.

Tshuma, M. (2018) 'An Exploration of the Perceptions and Experiences of', (May), pp. 1–173.

Uche, N. O. & Osumba, B. (2017). Effect of Marketing Strategies on Sales Performance of Selected Small and Medium Enterprises in Abia State, Nigeria.

Walsh, S. T., Kirchhoff, B. A., & Newbert, S. (2010). Differentiating market strategies for disruptive technologies. *IEEE Transactions on engineering management*, *49*(4), 341-351.

Williams, C. (2007). Research methods. *Journal of Business & Economics Research (JBER)*, 5(3).

Woodward, R. (2004). Technological expansion: The interaction between diversification strategy and organizational capacity. *Journal of Management Studies*, 33(3), November: 701-712.

Word Population Review (2019) Nairobi Population 2019 (Demographics, Maps, Graphs). Available at: http://worldpopulationreview.com/world-cities/nairobi-population/ (Accessed: 1 October 2019).

World Health Organization (2010) Kenya Pharmaceutical Country Profile. Available at: https://www.who.int/medicines/areas/coordination/kenya_pharmaceuticalprofile_december2010.pdf (Accessed: 5 September 2019).

Wu, Y. L. (2018). Marketing mix, customer value, and customer loyalty in social commerce. . *Internet Research*.

APPENDICES

Appendix I: Ethical Review Letter

Strathmore UNIVERSITY

23rd April 2020

Ms Leboo, Beatrice
mleboo2000@gmail.com

Dear Ms Leboo,

RE: Effects of Marketing Mix Strategies on Intention To Purchase HIV Self Testing Kits From Pharmacies in Nairobi City County

This is to inform you that SU-IERC has reviewed and **approved** your above research proposal. Your application approval number is **SU-IERC0675/20.** The approval period is **23rd April 2020 to 22nd April 2021.**

This approval is subject to compliance with the following requirements:

i. Only approved documents including (informed consents, study instruments, MTA) will be used
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-IERC.
iii. Death and life threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-IERC within 72 hours of notification
iv. Any changes, anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-IERC within 72 hours
v. Clearance for export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days upon completion of the study to SU-IERC.

Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://oris.nacosti.go.ke and also obtain other clearances needed.

Yours sincerely,

for Dr Virginia Gichuru,
Secretary; SU-IERC

STRATHMORE UNIVERSITY INSTITUTIONAL ETHICS REVIEW COMMITTEE (SU-IERC)
23 APR 2020
TEL: +254 (0)703 034 000
P. O. Box 59857 - 00200
NAIROBI - KENYA

Cc: Prof Fred Were,
Chairperson; SU-IERC

Ole Sangale Rd, Madaraka Estate. PO Box 59857-00200, Nairobi, Kenya. Tel +254 (0)703 034000
Email info@strathmore.edu www.strathmore.edu

Appendix II: NACOSTI Permit Letter

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **317116**

Date of Issue: **28/March/2020**

RESEARCH LICENSE

This is to Certify that Ms.. Beatrice Cherutich Leboo of Strathmore University, has been licensed to conduct research in Nairobi on the topic: EFFECTS OF MARKETING MIX STRATEGIES ON INTENTIONS TO PURCHASE HIV SELF-TEST KITS FROM PHARMACIES IN NAIROBI COUNTY for the period ending : 28/March/2021.

License No: **NACOSTI/P/20/4510**

317116

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

Appendix III: Questionnaire

This questionnaire contains questions assessing the impact of the marketing mix factors on purchase intention for HIV self-test kits. Kindly fill out all sections.

RESPONDENT'S CONSENT:

I agree to participate in this research:

Yes ( )

No ( )

SECTION A: BACKGROUND INFORMATION

1. **What is your Gender?**

   Male ( )

   Female ( )

2. **What is your age?**

   18- 25 years ( ) 26-35 years ( )

   36-45 years ( ) 46- 55 years ( )

   56-65 years ( ) 66 and above ( )

3. **What is your highest education level?**

   Diploma level ( ) Undergraduate level ( )

   Masters level ( ) PhD level ( )

PART B: DETERMINE THE EFFECT OF MARKET MIX FACTORS IN THE INTENTION TO PURCHASE HIVST KITS IN NAIROBI COUNTY

PRODUCT FACTORS (Select only one answer)

This section assesses the importance of various product aspects of the HIV-self testing kit concerning consumer's interest in purchasing the kit.

Kindly indicate your level of agreement with the following statements where one is strongly disagree, 2 is disagree, 3 is neutral, 4 is agree and 5 is strongly agree.

No	Product Factors	5	4	3	2	`1
1)	The ease of use of the HIV self-testing kit is an					

	important factor in marketing the kit					
2)	The ability to conduct HIV tests in private is an important reason in considering purchase of the kit.					
3)	The convenience of accessing the kit through a local pharmacy is important to consumers					
4)	The availability of product information on usage and medical risk is important to consumers.					

PRICE FACTORS (Select only one answer)

This section assesses the importance of various price aspects of the HIV-self testing kit in relation to consumer's interest in purchasing the kit.

Kindly indicate your level of agreement with the following statements where 1 is strongly disagree, 2 is disagree, 3 is neutral, 4 is agree and 5 is strongly agree.

No	**Price Factors**	**5**	**4**	**3**	**2**	**`1**
5)	The price of the kit is an important motivating factor in customer's in choosing to buy the kit					
6)	The pricing of the product as compared to other testing approaches is an important determinant of purchase					
7)	The possibility of discounts and vouchers is an important factor to customers					
8)	The availability of the product at an incentivized price by the government cost is vital to its utilization within the public					

PLACE FACTORS (Select only one answer)

This section assesses the importance of various place of the HIV-self testing kit in relation to consumer's interest in purchasing the kit.

Kindly indicate your level of agreement with the following statements where 1 is strongly disagree, 2 is disagree, 3 is neutral, 4 is agree and 5 is strongly agree.

No	Place Factors	5	4	3	2	`1
9)	The place of purchase (e.g. hospital or pharmacy) is an important determinant of incentive to purchase					
10)	The person from whom the device is received the product (e.g. through a partner or a community health worker) is or can be an important in considering purchasing the product					
11)	The location of the purchase (form a nearby store or from a pharmacy near work) would be an important factor in considering buying the product.					
12)	The availability of the product through online medical retailers is vital to the product purchase					
13)	The confidentiality offered at the pharmacy during purchase enhances product utilization					

PROMOTION FACTORS (Select only one answer)

This section assesses the importance of promotion aspects of the HIV-self testing kit in relation to consumer's interest in purchasing the kit.

Kindly indicate your level of agreement with the following statements where 1 is strongly disagree, 2 is disagree, 3 is neutral, 4 is agree and 5 is strongly agree

No	Promotion Factors	5	4	3	2	`1
14)	The media used to advertise the kit would be an important determinant of one's purchase of the product					
15)	How frequently a customer comes across advertisements media would be an important factor as customers consider purchasing the kit					

16)	The nature of the message (e.g. emphasizing urgency versus emphasizing convenience) is an important factor in determining a customer's choice to purchase the kit					
17)	The adoption of social networking in raising awareness on the kits is critical to the purchase intentions within the public					

SECTION C: PURCHASE INTENTION (Select only one answer)

This section assesses the respondent's intention to purchase the kits.

Kindly indicate your level of agreement with the following statements where 1 is strongly disagree, 2 is disagree, 3 is neutral, 4 is agree and 5 is strongly agree

No	**Purchase Intention**	**5**	**4**	**3**	**2**	**`1**
18)	Most customers would be willing to purchase the product					
19)	Most customers are aware of the product usage and medical information					
20)	Most customers would be willing to frequently purchase the product					
21)	Customers at the store have referred their friends and families to purchase the product					
22)	Most customers would be willing to purchase more than one kit to distribute to a partner or loved ones					

Thank you for taking time to participate in the survey

Appendix IV: List of Pharmacies In Nairobi

	Premise Name	Premise Street
1.	Accurate Pharmacy	KAMITI RD
2.	Adams Arcade Brick Pharmacy	NGONG ROAD
3.	Aden Ph Chemists	KWA CHIEF
4.	Adonisi Pharmaceuticals	BREWERIES
5.	Adval Limited	KWARE ROAD
6.	Applied Chemist	CATHERINE DEREBA ROAD
7.	Ar-razzaq Pharmaceuticals Wajir Ltd	JAM STREET
8.	Arabica Chemists-kasarani	MATHARE NORTH ROAD
9.	Arabica Chemists-lucky Summer Road	LUCKY SUMMER ROAD
10.	Arfaat Pharmacy- Eastleigh	RONALD NGALA
11.	Arnica Pharmaceuticals Ltd	RIVERSIDE DRIVE
12.	Banadoz Pharmaceuticals	KAMITI ROAD
13.	Barakaat Chemist Ltd	KIPANGA ATHUMANI ROAD
14.	Barichem Pharmaceuticals Ltd-umoja Three	OFF KANGUNDO ROAD
15.	Bariyow Medical Centre Ltd	KIPANDE ATHUMANI
16.	Barton Phamacy	OUTERING ROAD
17.	Base Drug Pharmacy	KAMITI ROAD
18.	Batian Peak Pharmaceuticals Ltd-knh	HOSPITAL ROAD
19.	Bayleaf Pharmacy	WOODAVENUE
20.	Beallara Pharmacy	N/A
21.	Bee Center Pharmacy	SPINE ROAD
22.	Beky Holding Pharmacy Ltd	MOMBASA ROAD
23.	Beky Holdings Pharmacy	LIMURU ROAD
24.	Bellcotte Pharmacy Limited	MUTHIORA ROAD
25.	Ben-ammi Pharmacies Ltd	5TH AVENUE

26.	Ben-ammi Pharmcies- Nhif	RAGATI
27.	Benamed Pharmacy	KANGUNDO RD
28.	Benmart Chemist	ZIMMERMAN ROAD
29.	Berachah Chemist Ltd	GIKOMBA-PUMWANI RD
30.	Berries Pharmacy	EASTERN BYPASS
31.	Besto Chemist	ACCRA ROAD
32.	Bethmed Pharmacy	KIBARAGE STREET
33.	Bethphage Pharmacy	SEASONS ROAD
34.	Bettan Pharmacy	KAMITI RD
35.	Bevel Chemist-umoja Ii	MANYANJA ROAD
36.	Beyond Pharmaceuticals-eastleigh	FIRST AVENUE
37.	Bhavesh Chemist (main)	NGARA ROAD
38.	Bhavesh Chemist (tomfrank)	NGARA ROAD
39.	Bibo Pharmaceuticals Ltd-mfangano	MFANGANO ST
40.	Big Brothers Chemist	JOGOO ROAD
41.	Bristol Chemist	KAHAWA WEST ROAD
42.	Brixtones Pharmaceuticals	6THSTREET
43.	Broms Chemist	OFF OUTER RING RD
44.	Brosh Pharmaceuticals Ltd	THIGIRI RIDGE RD
45.	Brutax Pharmacy	THIKA ROAD
46.	Budget Pharmaceutical Ltd	MIRIAMS RD
47.	Buheri Pharmacy	KAMITI ROAD
48.	Bwina Pharmaceuticals	
49.	Byland Pharmacy	BABA DOGO
50.	Bypass Pharm Chemist	MOMBASA ROAD
51.	Caben Pharmacy	CROSS RD
52.	California Medical Point Ltd	8TH STREET
53.	Calwin Pharma Ltd	WOODGROVE ROAD
54.	Camcare Pharmacy	FRAWAKI ROAD

55.	Canaan Pharmaceuticals Ltd	MUMIAS SOUTH-MUTINDWA JUNCTION
56.	Canaan Pharmaceuticals Ltd -petosam House	MUMIAS SOUTH SOUTH ROAD
57.	Canary Pharmacy	JONATHAN NGENO RD
58.	Goodlife Pharmacy Ltd -ngong Road	NGONG ROAD
59.	Goodlife Pharmacy Ltd Shell Karen	NGONG ROAD/LANGATA SOUTH ROAD
60.	Goodlife Pharmacy Ltd Thome Shell	THIKA ROAD
61.	Goodlife Pharmacy Ltd Valley Arcade	GITANGA ROAD
62.	Goodlife Pharmacy Ltd-hurlingam	ARWINGS KODHEK
63.	Goodlife Pharmacy Ltd-junction Branch	NGONG ROAD
64.	Goodlife Pharmacy Ltd-westgate	MWANZI ROAD
65.	Goodwill Chemist	GATHURU ROAD
66.	Gramark Pharmacy	OKOTH AURA RD
67.	Gramu Pharmacy	OLD NORTH AIRPORT RD
68.	Grand Chemist	
69.	Grasha Pharma	NGONG ROAD
70.	Great Times Chemist	EASTERN BYPASS,MIHANGO ROAD
71.	Green County Pharmacy Ltd	BAGAMOYO RD
72.	Greenspan Chemists	RING ROAD KILIMANI
73.	Griffins Pharmaceutical Ltd	SPINE ROAD PLAZA
74.	Guardmann Chemist	MCHUMBI ROAD
75.	Guci Pharmacy	MOI DRIVE
76.	Gud Pharmacy	OFF DONHOLM ROAD
77.	Gudtons Pharmacy	SAVANNAH ROAD
78.	Guide Pharmaceutical	OUTERING
79.	Gurukrupa Pharmacy	ITESYO LANE
80.	Gwasim Pharmacy	LUCKY SUMMER ROAD
81.	Habemus Pharmacy	MUTARAKWA RD

82.	Hakati Chemists	
83.	Hallel Ltd- Kahawa	NOTHERN BYPASS
84.	Hallel Ltd- Pipeline	OUTERING ROAD
85.	Halleluyah Pharmaceutical	MAJI MAZURI OFF MWIKI ROAD
86.	Hallion Pharmacy	OFF KAMITI ROAD ZIMMERMAN
87.	Haltons Limited - Ngumba	EAST AFRICA BREWERIES ROAD
88.	Haltons Limited - Roysambu	LUMUMBA DRIVE
89.	Haltons Limited - Tassia	TASSIA FEDHA ROAD
90.	Haltons Ltd - Jogoo Road Branch	MAFARI ROAD
91.	Haltons Ltd - Karen	NGONG ROAD
92.	Haltons Ltd - Kasarani	MWIKI ROAD
93.	Haltons Ltd - Pipeline	OUTER-RING ROAD
94.	Haltons Ltd - South C	FIVESTAR ROAD
95.	Haltons Ltd- South B	KAPITI RD
96.	Hanaano Pharmacy	ATHUMAN KIPANGA
97.	Hannan Pharmacy	45/44ROUTE.OPP CATHOLIC CHURCH
98.	Haripharm Pharmaceuticals Ltd -umoja	
99.	Harleys Ltd - Lunga Lunga	LUNGA LUNGA ROAD
100.	Harricare Chemists	GATHURU ROAD
101.	Hartlane Pharmaceuticals - Kitengela	
102.	Hartlane Pharmaceuticals Ltd - River Road	RIVER ROAD
103.	Haven Healthcare - Ruai	KANGUNDO ROAD
104.	Haven Pharmacy - South C	PLAINSVIEW ROAD
105.	Hazlet Pharmacy	KATANI ROAD
106.	Healchem Pharmacy Ltd	NGARA
107.	Healingray Pharmacy	MUTARAKWA ROAD
108.	Healpharm. Chemist	EASTERN BYPASS

109.	Healstarchem Pharmacy	MOI DRIVE
110.	Health Aid Chemist	MUTHITHI/MPAKA JUNCTION
111.	Health Giving Chemists	MANYANJA ROAD
112.	Instachem Pharmacy	JOGOO ROAD
113.	Instant Pharmacy	NGONG ROAD
114.	Intel Pharmaceuticals	MWIKI RD
115.	International Organization For Migration	GIGIRI
116.	Interphase Pharmaceuticals Limited	UTAWALA ROAD
117.	Irerma Chemist	CATHERINE NDEREBA
118.	Ismyk Group Limited	FEDHA ESTATE
119.	Ivanna-med Chemist	KAMITI RD
120.	Jacaranda Chemist - Pangani Branch	FAIRVIEW STREET
121.	Jacaranda Chemist(karen)	LANGATA ROAD
122.	Jackeva Pharmacy Ltd	FEDHA ROAD
123.	Jacksparrow Chemist	KIJABE STREET
124.	Jadlyne Chemist	KAMITI ROAD
125.	Jagem Chemist	UTAWALA- GITHUNGURI ROAD
126.	Jait Pharmacy	LUMUMBA DRIVE
127.	Jakire Pharmaceutical	UTAWALA-BYPASSROAD
128.	Jaliki Phamaceuticals	KANGUNDO
129.	Jambo Medical Stores Ltd	BIRONGO RD
130.	Jamlink Pharmacy	WOODSTREET
131.	Jamon Chemist	KARURA STREET
132.	Janian Dispensing Chemist	SASUMUA
133.	Janjay Chemists	GITANGA RD
134.	Jankin Pure Medplus Group Kenya Limited	18TH STREET
135.	Janpharm Pharmaceuticals	ICIPE RD
136.	Jass Pharmaceutical Ltd	
137.	Jaste Top Pharmaceutical Suppliers Ltd-maringo	RUKWA RD

138.	Jata Chemist	NORTH AIRPORT ROAD
139.	Jatespharm Chemist	OFF KASARANI MWIKI ROAD
140.	Jatrim Chemist	MURANG'A ROAD
141.	Jawamaber Pharmacy	MATUMBATO ROAD
142.	Jaycare Pharmaceuticals	MAJI MAZURI STREET
143.	Lanipharm Pharmacy	STATION ROAD
144.	Light Pharmacy	NDINGI MWANZEKI
145.	Lighthouse Pharmacy	
146.	Liki Pharmacy Limited-outering Road	OUTERING ROAD
147.	Liki Pharmacy Ltd	MUTARAKWA
148.	Limuma Pharmacy Investment	MAJOR KINYANJUI
149.	Linawi Pharmaceuticals	EASTERN BY PASS
150.	Linkal Chemist -eastleigh	MARIMBI
151.	Linkchem Pharmaceuticals	TOM MBOYA STREET
152.	Lions Sight First Eye Hospital	KAPTAGAT ROAD
153.	Live Well Pharmacy & Cosmetics	MIREMA DRIVE
154.	Living Goods Kileleshwa	GEM LANE
155.	Liza Chemists	BY-PASS PLAZA
156.	Lizchem Chemist	MAKUMI
157.	Logos Pharmacy Limited	MTONGWE ROAD
158.	Loimah Pharmacy - Waithaka	WAMUTHITHIA ROAD
159.	Lome Pharmacy - Kasarani	KASARANI - MWIKI RD
160.	Lome Pharmacy-sunton	ACK CHURCH ROAD
161.	Lordian Pharmacy	DONHOLM/SAVANNAH
162.	Loringham Pharmacy	18TH STREET
163.	Lovera Medipharma Limited-mbagathiway	MBAGATHIWAY
164.	Loyals Medicare Chemist	UMOJA OFF MOI DRIVE
165.	Lucky Summer Chemist Limited	
166.	Lucmed Chemists	SOWETO RD

167.	Lukemed Pharmacy-huruma	NGEI
168.	Lusam Pharmacy	MOI DRIVE
169.	Lymocott Chemists	KAMITI
170.	Lyntons Pharmacy	
171.	Lysha Pharmacy	MOI DRIVE
172.	M.s Healthcare Limited	SORE ROAD SOUTH B
173.	Mac Olben Pharmacy	MUTHIORA ROAD
174.	Mac Pharmacy	KILINDINI ROAD
175.	Macrence Pharmacie-ngong Road	NGONG ROAD
176.	Macrence Pharmacie-sona Road	SONA ROAD
177.	Maendeleo Chemist Ltd	MONROVIA
178.	Magchem Pharmacy	MOI DRIVE
179.	Magik Pharmacy	KASARANI MWIKI ROAD
180.	Magita Medical Stores	KANGUNDO
181.	Maji Mazuri Pharmacy	MAJI MAZURI
182.	Makaja Pharmacy	MOI DRIVE
183.	Makkah Hospital Ltd	GENERAL WARUINGE STREET
184.	Makutano Pharm Chemist	OFF NORTH AIRPORT RD
185.	Malibu Pharmacy Ltd - Jf Centre	ARGWING KODHEK RD
186.	Malibu Pharmacy Ltd Hurlingham	ARGWINS KODHEK ROAD
187.	Malibu Pharmacy Ltd- Kenrail Towers	RING ROAD PARKLANDS
188.	Malibu Pharmacy Ltd-reinsurance	TAIFA ROAD
189.	Malibu Pharmacy Ltd-vedic House	
190.	Malibu Supreme Centre-hurlingam	ARGWINGS KODHEK ROAD
191.	Mallorca Healthcare Ltd	OFF KAMITI ROAD, ALONG LUMUMBA DRIVE
192.	Malmed Chemist	LUMUMBA DRIVE
193.	Mambo Pharmacy	SAVANNA
194.	Mambolinks Chemists	KANGUNDO ROAD
195.	Mansion Chemist Ltd	WABERA

196.	Nairobi Pharmaceuticals (k) Ltd-rendille Rd	RENDILE RD
197.	Naivachem Pharmaceutical Ltd - Syokimau	MOMBASA RD
198.	Nanak Chemist Ltd	CHIROMO LANE
199.	Naschem Pharmacy	UMOJA NASRA GARDEN SPINE
200.	Nasi-onestop Pharmacy	NYAKINYWA ROAD
201.	Nedicina Chemist	JAMUHRI ESTATE NGONG ROAD
202.	Nedo Chemist - Githurai	MWIHOKO ROAD
203.	Neem Pharmacy Company Limited	ARGWINGS KHODHEK
204.	Newtons Pharmacy	MOI DRIVE
205.	Nicelife Healthcare Pharmaceuticals Ltd.-njiiri House	SUPERMARKET ROAD 1
206.	Niche Chemist	MUHOHO RD
207.	Nickmart Chemist	KANGUNDO RD
208.		
209.	Nickpharm Limited	ACCRA ROAD
210.	Nila Pharmaceuticals Limited-mountain Mall	THIKA ROAD
211.	Nila Pharmaceuticals Ltd - Mfangano Street	MFANGANO STREET
212.	Ridge Pharmaceuticals Ltd - Parklands	3RD AVENUE PARKLANDS
213.	Ridge Pharmacy	SPORTSVIEW DRIVE ROAD
214.	Ridhwan Pharmacy	IMARA DAIMA
215.	Rikipharm Chemist	JOGOO RD
216.	Rooj Chemist	KASARANI-MWIKI ROAD
217.	Rosden Pharmacy	FEDHA STREET
218.	Rugi Chemist-kahawa West	KAMITI
219.	Rupa Pharmacy	JOGOO ROAD LANE
220.	Ruthpharm Limited	MARA ROAD
221.	Saad Chemist	DONHOLM STREET
222.	Sache Chemist	MALEWA ROAD

223.	Sacred Heart Pazuri Pharmacy	LENANA ROAD
224.	Safedose Pharmacy & Diagnostics Limited-limuru Rd	LIMURU ROAD
225.	Safedose Pharmacy And Diagnostics Limited- Mombasa Road	MOMBASA ROAD
226.	Safedose Pharmacy And Diagnostics Ltd - Dennis Pritt	DENNIS PRITT
227.	Safedose Pharmacy And Diagnostics Ltd - Westlands	WAIYAKI WAY
228.	Safedose Pharmacy&diagnostics Ltd-wilson Airport	LANGATA ROAD
229.	Safeway Nairobi Pharmacy Limited	MBAAZI ROAD
230.	Safwah Pharmaceuticals Limited	FAIRVIEW ROAD
231.	Tavyn Pharmaceuticals	KAMITI RD
232.	Tawba Pharmacy	7TH STREET
233.	Temus Road Pharmacy	RUAKA
234.	Terrime Chemist	FEDHA ROAD
235.	Thrive Pharmaceuticals Limited	BEHIND NAIVAS, ALLSOPS.
236.	Tibabunanz Chemist	KASARANI MWIKI RD