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ORIGINAL ARTICLE

A Demand Strategy Framework for the Ophthalmology Market in the Philippines: A Model for the Pharmaceutical Industry

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ABSTRACT

Purpose – This study aims to analyze the factors that influence the prescribing habits of Filipino ophthalmologists.

Methodology – A total of 20 Filipino ophthalmologists were interviewed to identify the attributes they look for in an ophthalmic drug. The gathered attributes were then subjected to conjoint analysis, resulting in 31 attribute combinations. To determine the importance of these attributes, a conjoint survey was conducted with 318 respondents who ranked the attributes based on their significance. Pearson correlation coefficient and Kendall t-tests were performed to evaluate the model's fit and determine whether the attributes affect physicians' prescribing habits. Additionally, path-worth analysis was conducted to assess the importance of attribute scores and level values.

Findings – The results showed that Filipino ophthalmologists prioritize quality, free drug samples, and the patient's economic status. Conversely, price was found to be the least important attribute. Furthermore, the path-worth of variables indicated a higher preference for high efficacy/tolerability, one unit of sample per visit, and no sponsorship of continuing medical education (CME) but participation in conventions. Ophthalmologists also favored generics, purite/polyquad preservative, and a price range of ₱801 and up. Partial detailing of pharmaceutical representatives with 4 times or more per month visit and personal relationships were also prioritized. However, patients' economic status was not a significant consideration in their prescribing decisions.

Originality/Novelty – This study is unique because it delves into the various factors that affect the prescribing practices of Filipino ophthalmologists, analyzing each attribute in detail. This is a novel approach that hasn't been thoroughly explored in previous research, and it could be the first of its kind both in the Philippines and abroad.

Implications – This research study can be helpful for the healthcare industry to identify the key product attributes and their corresponding levels that affect the prescribing habits of physicians. By doing so, firms can develop targeted marketing strategies and better patient-centered programs for healthcare providers. Furthermore, this study can encourage future research on similar subject matters and incorporate key learnings in classroom discussions related to business courses.

Keywords: Drug attributes, Conjoint, Pearson correlation, Prescribing habits

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INTRODUCTION

The value of the Philippine Pharmaceutical Industry stood at Php 164 billion in 2018 from Php 146 billion in 2014, up by 12.3% or an annual average growth of 3% (KPMG, 2019). The KPMG report, citing the International Medical Statistics Consulting to the Philippine Pharmaceutical Healthcare Association of the Philippines (PHAP), indicated that the industry's sales volume included research-based and generic companies. The industry is composed of ethical and proprietary segments, which differ from one another in the manner of promotion. The ethical segment consists of prescription drugs that are promoted exclusively to physicians through the media of direct mail, advertising in medical journals, and personal selling by medical representatives (MR). Due to the clamor for highly affordable medicines, the Generics Drug Law of 1988 and the Universally Accessible Cheaper Quality Medicines Act of 2008 were enacted so Filipinos could have greater accessibility to quality medicines at affordable prices. In the pharmaceutical industry, physicians are the direct target market, while patients are the direct customers of the physicians (Ahmed et al., 2020). Hence, patients purchase medication by obtaining a prescription from their physician.

Physician's prescription involves modifying the amount or quality of drugs prescribed by a doctor and includes reviewing drug treatment and assessing the benefits and risks of all medications as required by national regulations (Parodi López & Wallerstedt, 2019). A Prescription is a document that bridges the doctor, patient, and drugstore or pharmacy (Husnain et al., 2019). A prescription's simplest form includes the drug name, active ingredient, dosage, quantity, and physician's instructions. Prescriptions are commonly viewed as contracts between patients and physicians for treating illnesses and generating revenue for drug companies. Therefore, the purpose of this study is to investigate the factors that drive physicians' prescribing decisions focused on Filipino Ophthalmologists and address the research problems: (1) the inadequacy of clues of the factors that drive Filipino ophthalmologists in choosing a product to prescribe and (2) the most deterministic factors of Filipino Ophthalmologists' prescribing habits. These issues have implications for the cost-effectiveness and cost-efficiency of the strategies of the pharmaceutical industry in general and the ophthalmology market in particular. In this study, variables refer to the factors that impact the prescription habits of physicians, which have been taken from foreign studies. These factors have been classified into three categories: firm variables, medical representative variables, and patient variables. The firm variables relate to drug quality, drug sampling, price, CME, corporate image, and drug preservatives. The medical representative variables include the frequency of calls, relationship with doctors, and detailing, while the patient factor is based on the patient's economic condition. These variables were tested if they are factors that could shape the ophthalmologists' prescribing habits regarding drug choice for their patients.

Several factors can influence physicians' prescription habits. It has been reported that the prescription behaviors of physicians are significantly influenced by a variety of factors, including the type of payment, idiosyncrasies of the patient, attributes of the product, and the extent of marketing expenditures (Hesam Aldin Sharifnia et al., 2018). Similarly, influencers of physicians' prescribing decisions reportedly include their attributes, treatment costs, pharmaceutical industry practices, and patient preferences (Davari et al., 2018). It has been observed, too, that pharmaceutical marketing endeavors are notably influenced by the provision of complimentary medication samples and the financial sponsorship of conferences by pharmaceutical firms (Evans & Fugh-Berman, 2015 as cited in Alowi & Kani, 2019). Pharmaceutical companies typically utilize various strategies to promote their

products, such as personal selling, complimentary samples, sponsoring national/international conferences, and providing continuous medical education (CME) programs while offering low to high-value give-aways to persuade physicians to prescribe their products (Acharya, n.d.). This study also reported pharmaceutical companies striving to differentiate their products by ensuring quality, competitive pricing, availability in drug retailers, providing unique dosage forms, and emphasizing the safety profiles of their medicines. According to a recent study by Hailu et al., (2021), there are numerous factors and attributes that influence the prescribing behavior of physicians. These include factors such as CME sponsorships, the frequency of visits and information provided by medical representatives, printed materials such as drug brochures and monographs, manufacturing plant visits by physicians, country origin, firm reputation and image, quality of medicine, clinical studies supporting the efficacy of the medicine, release drug innovation, accessibility, inclusion of drugs in the hospital formulary, the reach of local representatives who represent the principal company, price of the drug and effectiveness of therapy, disclosure of actual price of the product, and price-quality ratio. These strategies are the ones that most influence physicians in their prescribing behavior. A systematic review revealed that exposure to pharmaceutical firms' information is linked to higher prescribing frequency, cost, or lower prescribing quality (Ofori-Adjei & Fiakpornoo, 2019). The same study revealed that the prescribing habits of physicians at the medical outpatient clinic were not optimal in comparison to the national set targets. Consequently, measures are needed to improve the drug prescribing practices of the physicians. However, there were no significant differences observed in the prescribing habits of the physicians at the general medicine clinic, except for the prescription of drugs by their generic names (Ofori-Adjei & Fiakpornoo, 2019).

Furthermore, complimentary drug samples is an important consideration in the physicians' prescribing decisions. Alagha and Fugh-Berman (2022) indicated that physicians at a clinic that allowed samples were much more inclined to prescribe sampled medications than two similar clinics that did not allow samples. In Lebanon, drug samples are highly effective in motivating physicians to prescribe medication, making them the most powerful tool for generating prescriptions (Khazzaka, 2019). A systematic review and meta-analysis found moderate quality evidence that physicians' interactions with pharmaceutical companies, including sponsored CME, are associated with their prescribing patterns and quality (Brax et al., 2017). For their part, (Ion et al., 2021) assert that a high corporate image anchored on the firm's effective CSR initiatives mediates physicians' prescribing intentions. Another factor that impacts a physician's prescription is a good relationship. A strong relationship with physicians is developed through regular visits by medical representatives, promoting clinics, and presenting scientific knowledge to form prescription habits (Krunal et al., 2021). This implies that regular visits by medical representatives (MRs) can help in building relationships. One study explored the correlation between financial incentives provided by drug companies and physicians' prescribing decisions. The research found a positive association between financial payments and prescription decisions (Mitchell et al., 2021). It is worth noting that the prescribing habits of physicians can be a reliable indicator of how drugs are likely to be adopted (Zhang et al., 2019).

The present study also explored the impact of the preservative component of eye medications. This topic is particularly interesting to ophthalmologists in the Philippines since these drugs are the primary therapy for managing eye diseases. They are usually packaged in multi-dose containers for patient convenience. To maintain sterility throughout treatment and prolong the shelf-life of the medication, multi-dose formulations must contain

a preservative (Walsh & Jones, 2019). Unfortunately, preservatives may induce ocular side effects. While preservative-free formulations are safer, they are not always available and are costly for patients (Goldstein et al., 2022).

Significant research has been conducted on the factors that influence physicians' prescription decisions. However, most of these studies are based on foreign research and are focused on medical specialties such as general practitioners and internists. As such, research on the prescribing practices of Filipino ophthalmologists is lacking. There is a lack of research on the impact of preservatives in ophthalmic drugs on the prescribing habits of Filipino ophthalmologists, making this study unique in both the Philippine and foreign contexts. The aim of this study is to fill this research gap.

Planned Behavior

One of the key concepts that this study is based upon is the Theory of Planned Behavior. This theory suggests that attitude, subjective norms, and perceived control over the behavior influence an individual's behavioral intentions and actions.(Pourmand et al., 2020). According to this theory, human behavior results from cognitive processes involving internalization and understanding before making a rational decision to act or not. The intensity of behavioral intention directly impacts behavior, meaning that the higher the intensity of intention, the greater the likelihood of the behavior being performed. (Asare, n.d.). The attitude towards a behavior refers to how people evaluate it as favorable or unfavorable. Subjective norm relates to the social pressure that influences people's decision to act or not to act. Perceived behavioral control in TPB refers to the ability to perform a behavior based on one's perception and its association with the behavior. In the context of the current study, TPB fits well because prescription decisions are the outcome of a rational decision-making process. The physician's decision to prescribe or not to prescribe a drug (i.e., behavioral intention) results from a cognitive process that involves a thorough understanding of the drug's attributes. Additionally, the intention to prescribe a drug may also be influenced by the physician's colleagues, who could be peers or consultants in the medical profession (i.e., social pressure or subjective norm).

Persuasion Theory

Persuasion, as described by Gardikiotis & Crano (2015), is a process that affects every aspect of human interpersonal relationships, regardless of their nature, be it in business, economics, politics, management, organization, mass communication, or foreign relations. It is a natural human tendency to try and influence the beliefs, mindset, and even philosophy of others. Persuasion involves exchanging knowledge and emotions that can change an individual's behavior toward an object. Specifically, the persuasion theory considered in this research is the cognitive approach. The cognitive approach is concerned with the processes of acquiring knowledge. Knowledge may inhibit or promote persuasion. The Elaboration Likelihood Model (ELM) is a cognitive approach to persuasion that involves deeply and thoughtfully processing the message concerning prior knowledge and attitudes (Gardikiotis & Crano, 2015). According to this theory, there are two routes for processing messages in ELM. First is the central route, where the recipient exerts much effort in analyzing the message content, such as the meaning of the message. Second is the peripheral route, where the recipient of the message exerts less thoughtful effort or less analysis of the message's content. An example of a peripheral route is knowing the source of the message. The key assumption of the ELM is that the change of attitude after the elaboration depends on the value of the thought after such elaboration on the message has been made. When the favorable thoughts about a proposition overshoot the unfavorable thoughts gathered from the analysis, the change in attitude leans on the position being advanced. With ELM, the message's recipient can delineate between a robust, logical, rational, and evidence-based argument and a weak and lukewarm argument.

Pharmaceutical firms advocate science-based promotions. Claims about the products are supported by clinical studies and delivered by medical representatives to physicians through detailing or scientific lectures. The persuasive nature of marketing communication in creating favorable attitudes or strengthening the current knowledge of physicians on products or medical trends drives

the pharmaceutical industry to invest in marketing communication programs whose end is to generate prescriptions.

The Agency theory

Agency Theory concerns the relationship between principals and agents, which emphasizes their conflicting goals and different attitudes (Zogning, 2017). The agency theory describes the relationship between the owner of a firm (the shareholders) and the individuals who are hired to perform specific tasks on their behalf (the agents). In the context of pharmaceutical marketing, two types of relationship are formed. The first is between the drug manufacturer and the physician, where the manufacturer acts as the principal and the physician is the agent. The manufacturer entrusts their product to the physician, who then prescribes it to their patients to achieve the firm's sales goals. The second relationship is between the patient and the physician, where the patient is the principal and the physician is the agent. The patient entrusts their health to the physician, who then diagnoses their condition and prescribes the appropriate treatment to address it.

Thus, the following hypotheses were tested in the study. In this study, variables refer to the factors that impact the prescription habits deduced from Filipino Ophthalmologists . These factors have been classified into three categories: firm variables, medical representative variables, and patient variables. The firm variables relate to drug quality, drug sampling, price, CME, corporate image, and drug preservative. The medical representative variables include the frequency of calls, relationship with doctors, detailing The patient factor is the patient's economic condition. These variables were tested if they are factors that could shape the ophthalmologists' prescribing habits regarding drug choice for their patients.

METHOD

This study used a quantitative approach through Conjoint Analysis. Conjoint analysis is a model that evaluates the significance of product attributes (Beall & Perttula, 1991; Van Gils & Zwart, 2009) that drive consumer preference and is a method approximating a respondent's preference (de Guzman et al., 2014). Moreover, conjoint analysis has been widely used as a research tool to understand how consumers evaluate product attributes, process the selection of these attributes, and calculate relative market share. Data was gathered via a Conjoint survey indicating 31 combinations of attributes or factors sought by Filipino Ophthalmologists who ranked these combinations according to their priority. A purposive sample technique was used. Inclusion criteria were: a) a Filipino ophthalmologist; b) a member of the Philippine Academy of Ophthalmology (PAO); and c) a practitioner in the different regions of the country. There are 1,373 Filipino ophthalmologists practicing in the country according to the official membership records of the Philippine Academy of Ophthalmology (PAO) and the sample size for this study was 301 physicians utilizing proportionate sampling technique.

For data analysis, the Pearson correlation coefficient and Kendall t were used. Pearson coefficient is a conjoint analysis utility that detects the importance of attribute scores and the level of values. It measures the degree of influence of each attribute on the physician's decision to choose an alternative.

The relative importance of each attribute shows its importance relative to other attributes**.** The Pearson correlation coefficient is typically used for data assumed to have a normal distribution with a scale that ranges between -1 and +1. A scale of 0 indicates no linear association between variables (Schober & Schwarte, 2018). Moreover, Kendall's τ was used to determine the model's fit. It is a non-parametric model and a distribution-free measure of cross-correlation between two variables (Kendall & Gibbons, 1955 as cited in El-Hashash & Shiekh, 2022). Kendall's τ correlation coefficient returns a value of 0 to 1, where 0 indicates no relationship, while 1 reflects a perfect relationship.

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RESULT AND DISCUSSION

Table 1. Preferences of Filipino ophthalmologists

		Utility Estimate	Std. Error	Importance
Quality	High efficacy/high tolerability	3.442	.554	24.519
	High efficacy/less tolerability	.949	.554	
	Low efficacy/high tolerability	-4.391	.554	
Samples	No samples	-.930	.554	11.319
	1 bot	1.173	.554	
	2 and up	-.243	.554	
CME Convention	No CME & No participation in Convention	-.158	.554	9.086
	CME but no participation in Convention	-.676	.554	
	No CME but participates in Convention	.835	.554	
MR	Full/Classical Detailing	-.025	.554	6.988
	Partial	.191	.554	
	Sample Drop only	-.166	.554	
Patient Financial	Not important	.571	.554	9.910
	Less Important	-.324	.554	
	Important	-.247	.554	
Corporate	Originator	-.369	.554	8.066
	Branded Generic	.153	.554	
	Generic	.217	.554	
Med rep	Professional/Formal Relationship	-.291	.554	6.880
	Personal Relationship	.315	.554	
	Mere Acquaintance	-.024	.554	
Preservative	Preservative-free	.090	.554	9.839
	Purite/Polyquad	.557	.554	
	Benzalkonium Chloride (BAK)	-.646	.554	
Price	801 and up	-.287	.480	5.175
	601-800	-.575	.960	
	400-600	-.862	1.440	
Frequency	1x	.732	.480	8.218
	2x-3x	1.463	.960	
	4x	2.195	1.440	
(Constant)		13.111	1.413	

Pearson's R = 0.955, $p < .05$.
Kendall's Tau = 0.818, $p < .05$.

The outcomes of the statistics demonstrated that the conjoint model performed for this study (Table 1) were considerably a fit: Pearson's R is .955 and Kendall's T is .818. Table 1 indicates that the results of the conjoint technique showed that the Quality features is the most important attribute (24.519%) considered by Filipino ophthalmologists. This is

followed by sampling features (11.319%), and then Patient's Financial Condition (9.910%) which respondents also prioritized. Price (5.175%) was found to be the least important attribute.

In relation to the part-worth of firm variables such as drug quality features which resulted from the conjoint analysis, the higher preference is given to high efficacy/high tolerability drugs (3.442) over high efficacy/less tolerability (.949) and low efficacy/high tolerability (-4.391). As for the free drug sampling features, the doctors prefer one bottle of sample (1.173) than no sample (-.930) or 2 bottles and up (-.243). The more preferred CME/Convention sponsors feature is no CME but participates in convention (.835) while the least preferred is with CME but no participation in convention (-.676). For corporate image, generic is more preferred (.217) over branded generic (.153) and originator (-.369). In terms of preservatives feature, purite/polyquad (.557) is more preferred over preservative-free (.090) and BAK (-.646). Then, for drug price, ₱801 and up (-.287) is more preferred over ₱400-₱600 (-.862) and ₱601-₱800 (-.575).

The part-worth of medical representative variables like detailing showed a higher preference on partial (.191) than full/classical detailing (-.025) and sample drop only (-.166). As for the medical representative's frequency of visit features, the doctors prefer 4 or more times of visit (2.195) than once (.732) or two to three times (1.463). In terms of relationship features, having a personal relationship (.315) is preferred over a mere acquaintance (-.024) or a professional/formal relationship (-.291). Lastly, the part-worth of patient variable economic condition showed that ophthalmologists consider it not important (.571), compared to those who consider it less important (-.324) or important (-.247).

Path-worth result on quality (high efficacy & high tolerability) accepts of H1. Among the 3 levels of quality, the level of high efficacy and tolerability of ophthalmic drugs came out to be the Filipino Ophthalmologists' preference. Similar findings were reported when Hesam Aldin Sharifnia et al. (2018) found a positive relationship between product-related factors such as safety, efficacy, bioavailability, and doctors' prescribing habits, claiming that physicians consider first product efficacy when prescribing a drug. In addition, (Hailu et al., 2021) assert that drug quality is among the factors affecting physicians' prescribing decisions. However, other previous studies found that drug quality is not a significant factor in shaping physicians' prescription habits since other factors were identified to trigger prescription habits. In other words, while drug quality may be a consideration that supports the result of conjoint analysis, it does not appear that to be the only factor in physicians' prescribing decisions.

Path-worth results on free drug samples showed that Filipino Ophthalmologists favour receiving samples, thereby accepts H2. By and large, free drug samples are a motivating factor that influences physicians' prescribing behavior, according to previous literature. Free drug Samples are an important promotional tool in pharmaceutical marketing. Samples have a strong influence on physician's prescriptions because, given free to patients as a starter dose, samples help reduce the cost of treatment, and patients can start the therapy for prompt relief of their condition and prevent complications (Rafique, 2017). Moreover, the same study posits that with free samples, physicians can evaluate the efficacy and safety of the drug. Khazzaka (2019) found drug samples to have motivated physicians' prescriptions in Lebanon. For their part, the study of Alagha & Fugh-Berman (2022) indicated that samples positively influenced prescribing decisions. Therefore, the result of conjoint analysis is consistent with prior studies suggesting that drug samples significantly impact physicians' prescribing habits.

The path-worth result on CME and participation in conventions rejects H3. Filipino Ophthalmologists favour firms that participate in conventions even if they don't sponsor CMEs. This result disagrees with the result of previous studies that physicians' interactions with drug firms, which included CME sponsorship, are associated with their prescription patterns (Brax et al., 2017; De Ferrari et al., 2014) and that the prescribing habits of physicians are affected by the firm-sponsored CME which was associated with the changes in the GP's prescribing habits. Furthermore, (Ahmed et al., 2014) claim that conference sponsorships in Bangladesh had no major effects on physicians' prescription behavior and that new drugs, promotional tools, and drug samples have a more significant effect on physicians' prescription decisions.

The Path-worth result on corporate image rejects H4. In the context of this study, the corporate image was defined at 3 levels, namely generic, which is sometimes called "me too" products; branded generics, also considered "me too products" but with a brand name; and the originator, a product of research and development which carries the high corporate image. The Filipino Ophthalmologists favour generics over branded and the originators from cost standpoint. The result agrees with Lieb & Scheurich (2014), who found that doctors who received adequate and accurate information were less likely to be influenced by the pharmaceutical industry. Corporate image may seem less influential when physicians get accurate information. On the contrary, Brax et al. (2017) found that interactions of physicians with drug firms, which include MRs' detailing, are associated with physicians' prescribing habits and that the corporate image of drug firms may influence physicians' prescribing habits. Moreover, Ion et al. (2021) claim that a high corporate image is based on effective CSR, which mediates physicians' prescribing intentions.

Path-worth result accepts H5**.** This finding collaborates with the study of (Mihaela Cristina et al., n.d.). Considering the side effects of preservatives, especially on patients who require long-term treatment, drug firms have been inclined to produce preservative-free single-dose formulations or drugs with safer preservatives. Sarkar (2021) further claims that there are two broad categories of preservatives in ophthalmic drugs, namely, detergents such as BAK and polyquad and oxidizing preservatives like purite, which is less harmful to ocular tissues. While polyquad is a derivative of benzalkonium chloride, it has less harmful properties. Ophthalmic drugs in multidose formulation should contain a preservative to maintain its sterility during the course of treatment, and to prolong its shelf-life (Walsh & Jones, 2019). Preservatives have side effects on prolonged use (Baudouin et al., 2010; Rosin & Bell, 2013). There are evidences about the association of eye toxicity with benzalkonium chloride (Baudouin et al., 2010), which remains as the main preservative in eye drops due to its good efficacy and safety profile (Baudouin et al., 2010). Most drugs used for long-term treatment contain Benzalkonium Chloride (Brignole-Baudouin et al., 2012) although the use of polyquad as a preservative in multi-dose ophthalmic drugs in the treatment of chronic diseases has been increasing. The advantage of preservative-free ophthalmic drugs compared with preserved drugs is the reduced side effects that enhance patient comfort and compliance. Highly tolerable eye drops can ensure compliance since these drugs can prevent preservative toxicity-induced side effects that can result in better therapeutic results. Although the use of preservative-free eye drops offer noteworthy medical advantage (Pisella et al., 2002), its use have some restraints. Preservative-free drugs increase therapeutic cost as they come in single-use or unit-dose packaging. Once opened, there could be possible contamination and therefore, the left-over content has to be discarded to prevent the patient from using it. This special packaging adds to production cost and is carried over then to the patient, and with this increased cost, patients may have the tendency to miss doses and

eventually neglect drug use thus affecting the therapeutic outcome due to decreased compliance (Rosin & Bell, 2013).

Path-worth results revealed that Filipino ophthalmologists choose a higher price range for ophthalmic drugs; thus, H6 is rejected. The result contradicts (Ahmed et al., 2014), claiming that physicians tend to prescribe generic drugs due to the cost implications of marketing expenses. The study of (Junior Ladeira et al., 2011) says otherwise, claiming that Brazilian physicians put more weight on the active ingredients of drugs than their price. The literature reveals that drug price is a significant factor in the prescribing habits of physicians, and regulations aimed at reducing drug costs may influence physicians to prescribe lower-cost drugs. The reason why ophthalmologists prefer higher-priced drugs is twofold. Firstly, ophthalmic drugs containing purite/polyquad typically fall within the price range of Ps 800 and above. Secondly, ophthalmologists who practice in provincial areas are dispensing doctors, which means they prefer to buy at a lower price and sell at a higher price.

According to the path-worth result, Filipino ophthalmologists prefer the detailing provided by medical representatives (MRs) and as a result, they accept H7. In the pharmaceutical industry, MRs are the most influential tool for generating physicians' prescriptions (Alowi & Kani, 2019), and they are a source of information about the company's products and new clinical studies. The industry uses these marketing activities to convince physicians to prescribe their products (Lieb & Scheurich, 2014). In addition, the MRs serve as the communication medium between the firm and physicians. Therefore, it is crucial that the representatives convey accurate and complete information to doctors. "Medical Representatives' detailing helps to improve brand retention in the minds of physicians (Bhatt, 2018). According to a study conducted by (Workneh et al., 2016), nearly half of the physicians who received visits from medical representatives in Northern Ethiopia were influenced by drug promotion. Additionally, the study revealed that 50% of the physician respondents interacted with MRs for a duration of only 2-10 minutes. Therefore, Filipino Ophthalmologists prefer detailing during interactions with MRs, but it's crucial to keep it short due to limited time.

The Path-worth results indicate that Filipino Ophthalmologists prefer more frequent visits, thus supporting H8. The literature review suggests that MRs' visit frequency can influence physicians' prescribing habits. Abdul Waheed et al. (2011) assert that the "persistence phenomenon" is correlated with MRs' contact . with physicians and how frequently they see the physicians. Lieb & Scheurich (2014) found that frequent visits of MRs translated to frequent prescriptions and in higher daily doses. Junior Ladeira et al. (2011) described an MR's personal clinic visit as constructive material for advertising in Brazil. With a close relationship between the physician and the MR, such a visit directly impacts the physician's prescription at the time of prescribing. It may seem that the more frequently an MR visits a physician, the more frequently his product will be prescribed.

Path-worth analysis of the relationship between Filipino Ophthalmologists and Medical Representatives (MRs) revealed that the former favor MRs who have a closer and more personal relationship with them. Therefore, the result accepts H9.. This result agrees with previous studies. For example, a study found that physicians having greater interactions with MRs had more rapid acceptance of new drugs (Yu & Gupta, 2014). For their part, Klemenc-Ketis & Kersnik (2013) found that trustworthiness is the most valued characteristic of MR among Slovenian family physicians who participated in the study, and during clinic visits, physicians focus their attention on the MRs' trustworthiness and objectivity, more than his selling skills.

Path-worth result on patient's economic condition showed that the Filipino Ophthalmologists do not consider the patients' economic condition important thereby rejecting H10. This contradicts the findings of previous studies. For example, Ofori-Adjei & Fiakpornoo (2019) found that physicians' prescribing patterns at the medical outpatients' clinic were sub-optimal when compared with the national set targets and thus required measures to optimize the drug prescribing habits of physicians. However, the physicians did not differ in their prescribing patterns of the general medicine clinic except for the prescription of drugs by their generic names (Ofori-Adjei & Fiakpornoo, 2019). The generic names of drugs are written in physicians' prescriptions so that the patients can choose the drugs that suit their economic situation. Older studies showed that changes in physicians' clinical management were triggered by their patients' low socio-economic status, which could lead to limited care, thus resulting in undesirable therapeutic outcomes. While a review of studies on the prescribing of drugs found that the prescribing habits of physicians were influenced by patients' economic conditions, this study did not find economic conditions to be important among Filipino Ophthalmologists. A possible reason why this is so is because healthcare should be inclusive regardless of the patient's socioeconomic status. This means that quality healthcare should be accessible to all types of patients, including the marginalized sector of society.

CONCLUSION

This research found that the factors that influence Filipino ophthalmologists are multifaceted; therefore, the process by which their prescription habits are developed is complex to understand. This means that there is no single factor or attribute that shapes the prescribing habits of Filipino ophthalmologists but a combination of attributes with varying degrees of influence. From the result of the conjoint analysis, the emerging demand strategy framework that suits the Filipino ophthalmologists should focus on the preservative content of the ophthalmic drugs, an essential concern peculiar to the practice of ophthalmology. Framework should also consider the levels of each attribute when developing demand strategies and policies for the industry, healthcare providers, to be a part of academic discussions in applicable business courses.

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