



## Product Development Planning to Enhance Competitiveness at Klinik Mata KMU Gresik

Sururut Tazkiyah<sup>1\*</sup>, Hendra Kurniawan<sup>2</sup>, Djazuly Chalidyanto<sup>1</sup>, Thinni Nurul Rochmah<sup>1</sup>

<sup>1</sup> Department of Health Policy and Administration, Faculty of Public Health, Universitas Airlangga

<sup>2</sup> Klinik Mata Utama Gresik

### ARTICLE INFO

#### Article history:

Received 19 March 2023

Accepted 15 June 2023

Published 29 June 2023

#### Keyword:

eye clinic  
cataract surgery  
IOL

### ABSTRACT

The rate of blindness caused by cataracts in Indonesia is the highest in Southeast Asia and ranks third in the world at 1.47%. Cataract treatment can only be cured by surgery. The shape of the IOL (lens) is also increasingly diverse to meet the needs of cataract sufferers. Along with the development of this field, different product offerings can become another value as competitiveness as owned by KMU Gresik Eye Clinic. This research aims to develop IOL Premium service products as a solution for patients with cataracts and refractive errors. This study was observational analysis because there was no intervention on the respondents during the data collection process. Data collection was carried out through filling out questionnaires on 100 respondents based on needs and evaluating services that have been running. The results showed that in general as many as 72% of respondents still experienced poor vision, while 85% of respondents had experiences in the poor category of vision, so 89% of respondents experienced vision difficulties. Klinik Mata KMU Gresik needs to carry out product development, such as IOL Premium, VIP services, and teleconsultation to increase its competitiveness in overcoming emerging problems and meeting the demands and needs of sufferers.

This open access article is under the [CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.



### Kata kunci:

klirik mata  
operasi katarak  
IOL

#### \* corresponding author

dr. Sururut Tazkiyah

Department of Health Policy and  
Administration, Faculty of Public Health,  
Universitas Airlangga

Email: [sururut.tazkiyah-2021@fkm.unair.ac.id](mailto:sururut.tazkiyah-2021@fkm.unair.ac.id)

DOI: 10.30604/jika.v8i2.2036  
Copyright 2023 @author(s)

### ABSTRAK

Tingkat kebutaan yang diakibatkan katarak di Indonesia merupakan yang tertinggi di Asia Tenggara dan berada di urutan ketiga di dunia yaitu sebesar 1,47%. Pengobatan katarak hanya bisa disembuhkan dengan cara operasi. Bentuk IOL (lensa) juga semakin beragam untuk memenuhi kebutuhan penderita katarak. Seiring dengan berkembangnya bidang ini, penawaran produk yang berbeda dapat menjadi value lain sebagai daya saing seperti yang dimiliki oleh Klinik Mata KMU Gresik. Penelitian ini bertujuan melakukan pengembangan produk layanan IOL Premium sebagai solusi untuk penderita katarak dan kelainan refraksi. Penelitian ini bersifat observasional analiyik karena tidak adanya intervensi terhadap responden selama proses pengumpulan data. Pengumpulan data dilakukan melalui pengisian kuisioner pada 100 responden berdasarkan kebutuhan dan evaluasi layanan yang sudah berjalan. Hasil menunjukkan bahwa secara umum sebanyak 72% responden masih mengalami penglihatan yang buruk, sedangkan 85% responden memiliki pengalaman dalam kategori buruk dalam penglihatan, sehingga 89% responden mengalami kesulitan penglihatan. Klinik Mata KMU perlu melakukan pengembangan produk, seperti IOL Premium, layanan VIP, dan telekonsultasi untuk meningkatkan daya saingnya dalam mengatasi masalah yang muncul dan memenuhi permintaan dan kebutuhan penderita.

This open access article is under the [CC-BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.



## INTRODUCTION

Along with the development of technology in the field of refractive surgery, surgery in treating cataracts has become common in society. This leads to increased patient expectations for successful cataract surgery. Many patients expect clear vision without the help of glasses after undergoing cataract surgery, both for distance and near vision. *The 2016 European Society of Cataract and Refractive Surgery Clinical Survey* states that 43% of cataract surgery procedures target *vision monovision* (Zvorničanin & Zvorničanin, 2018). *The World Health Organization* (WHO) estimates the number of visually impaired individuals worldwide in 2010 at 285 million people and 39 million of them suffer from blindness (*World Health Organization Eastern Mediterranean Regional Office* (WHO EMRO), 2012). Cataracts are the second leading cause of visual impairment worldwide, at 33% and the cause of 51% of blindness in the world in 2010 (Acharya *et al.*, 2021; *Africa Health Organization* (AHO), 2019; Pascolini & Mariotti, 2012). About 20 million people suffer from blindness caused by cataracts, 90% of which are in developing countries, including Indonesia (Safi *et al.* 2018; Tana, Mihardja, & Rif'ati, 2007).

The results of Basic Health Research (Riskesdas) in 2013 stated that the prevalence of cataracts in Indonesia was 1.8% (Kementerian Kesehatan Republik Indonesia (Kemenkes RI), 2013). The rate of blindness caused by cataracts in Indonesia is the highest in Southeast Asia and ranks third in the world, at 1.47% (Tamansa, Saerang, & Rares 2016). It is estimated that there is one blindness every minute in Indonesia. Meanwhile, the prevalence of cataracts in East Java Province based on the results of Riskesdas in 2013 was 1.6% or as many as 141,132 people (Kemenkes RI, 2013). This number is the second highest number of blindness by province in Indonesia after Central Java Province (Kemenkes RI, 2013). Every year more than 38 thousand residents of East Java Province are threatened with cataracts (Fitria, 2017). In line with the high prevalence of cataracts in East Java Province, cataract cases at the KMU Gresik Eye Clinic are also quite high. Cataract surgery is still the flagship and the largest contributor to turnover at KMU Gresik Eye Clinic.

Cataracts occupy the second position of eye diseases that are a priority in the world that must be overcome. Cataracts are considered a priority condition in WHO's *Global Action Plan for Universal Eye Health* program which aims to reduce the prevalence of preventable visual impairment and blindness by 25% from 2010 to 2019, and to ensure access to rehabilitation services for visual impairment (W. Wang *et al.*, 2016; WHO, 2013). This program is in line with the Indonesian government's national program, namely the Roadmap for Combating Visual Impairment in Indonesia 2017–2030 which targets to reduce the prevalence of preventable visual impairment by 25% (Kemenkes RI, 2018). Indicators used in measuring national development in accordance with WHO guidelines in carrying out this program include: (1) prevalence and causes of visual impairment; (2) the number of eye care service health workers; and (3) The number of cataract surgeries in the rate of cataract surgery per million population in one year (CSR) as well as the number of individuals who have undergone cataract surgery compared to the number of individuals who require cataract surgery (*Cataract Surgical Coverage* (CSC)) (Kemenkes RI, 2018; WHO, 2013).

As cataracts and refractive surgery developed, surgery became prevalent in society, as did the expectation of a higher success rate for surgery. Many patients who undergo cataract surgery expect clear vision without the help of

glasses after undergoing surgery for both far and near vision. Phacoemulsification has been the method of choice for cataract extraction in developed countries over the past few years. Phacoemulsification is a cataract surgery technique performed with local anesthesia with minimal sutures that uses ultrasonic vibrations to destroy the lens nucleus through an *ultrasonic probe* that has a *needle tip* that is able to vibrate with a very high frequency equivalent to the frequency of *ultrasound* waves and extract fragments of their fragments (Martínez, Moyano, & González-Lezcano, 2021; Thanigasalam, Chandrasekhara, & Chandrasekhara, 2014). Intraocular lenses (IOLs) that are considered ideal are expected to produce patient vision without any complications or visual barriers in all visual distances (Braga-Mele *et al.*, 2014). The use of different intraocular lenses causes emmetropia to be achieved in almost all cases (Braga-Mele *et al.*, 2014; Visser, Bauer, & Nuijts, 2013; Wang *et al.*, 2017). Premium intraocular lenses, including multifocal and accommodating, are expected to provide good vision without additional eyeglass correction (S. Y. Wang *et al.*, 2017). *Thoracic* intraocular lenses offer patients the opportunity to correct astigmatism and be free from the use of glasses after surgery (Visser *et al.*, 2013).

KMU Eye Clinic is an outpatient clinic that provides specialist medical services equivalent to class D private hospitals. It began collaborating with the Health Social Security Organizing Agency (BPJS Kesehatan) in 2015 to increase patient visits and maximize existing services. In 2020, KMU Eye Clinic developed digital technology and VIP services to bring up service innovations and product development. Over the past two years, there has been a decrease in the trend of OOP patient visits. KMU Eye Clinic management tries to keep OOP patient visits stable and create superior services for OOP patients not covered by BPJS Kesehatan. Through the development of KMU Eye Clinic products, it is expected to increase sales and maximize profits. Competition is increasingly fierce in all types of businesses, including in the healthcare industry. Service providers compete to provide added value to their products for consumers starting from promoting the services they have through all social networks, even contacting directly by phone. Therefore, to overcome these challenges and competition, the quality and value of clinical services are needed that can be an added value and attractiveness, thereby increasing public confidence to choose to use KMU Eye Clinic services.

## METHODS

### *Participant characteristics and research design*

This study used an analytical observational research design. This design makes it possible to obtain a picture of the problem that suits the situation on the ground without intervening with the target or respondents during data collection. Respondents in this study were limited by the following criteria: (1) Were OOP patients at KMU Gresik Eye Clinic; (2) Be 18 years of age or older; and (3) Willing to be the subject of research by signing a consent form after getting an explanation (*informed consent*).

### *Sampling procedures*

This research was conducted at KMU Gresik Eye Clinic. Research data collection activities in the field were carried

out in March 2021. The sampling process is carried out randomly (*random sampling*) with *accidental sampling* techniques. *Accidental sampling* is a *sampling* technique by taking samples that happen to exist or are available at the location according to the research context (Notoatmodjo, 2010). The samples in this study were actual and potential patients who carried out examinations at the KMU Gresik Eye Clinic with criteria for middle to upper class people.

*Sample size, power, and precision*

The calculation of the sample size in this study uses the formula of Lemeshow *et al.* (1997), as follows:

$$n = \frac{(Z_{1-\alpha})^2 P (1-P) N}{[d^2 (N-1)] + [(Z_{1-\alpha})^2 P (1-P)]} \quad (1)$$

$$n = \frac{(1,96)^2 \times 0,325 \times (1-0,325) \times 2.404}{[(0,09)^2 \times (2.404-1)] + [(1,96)^2 \times 0,325 \times (1-0,325)]} \quad (2)$$

$$n = \frac{(1,96)^2 \times 0,325 \times 0,675 \times 2.404}{[(0,09)^2 \times 2.403] + [(1,96)^2 \times 0,325 \times 0,675]} \quad (3)$$

$$n = \frac{2025,973404}{20,307051} \quad (4)$$

$$n = 99,7669924 \quad (5)$$

$$n \approx 100 \quad (6)$$

Information:

- n = Minimal number of samples
- N = Total population
- Z<sub>1-α</sub> = Z table values = 1,96 (untuk α = 0,05)
- d = Tolerated errors = 0,09
- P = Proportion of OOP patients = 0,5

Based on these calculations, it was found that the number of samples in this study was 100 respondents with status as OOP patients at the KMU Gresik Eye Clinic.

*Measures and covariates*

The data collection process is carried out directly by researchers. The collection of data studied, including sociodemographic characters (age, gender, occupation, family income, and education), product needs, service needs, accessibility, products, *positioning*, innovation, promotion was carried out through interviews by filling out questionnaires directly to respondents, documentation studies, observations, and *Focus Group Discussion* (FGD). Research instruments include questionnaires and interview guides, lists of documentation studies, and live FGDs. The list of questions in the questionnaire used was compiled by the researcher himself by adjusting the needs of the study.

*Data analysis*

Validity and reliability tests are conducted to test questionnaires before they are given to respondents. Then, the collected data is processed and analyzed through the process of *editing, scoring, coding, and tabulating*. Next, the data is interpreted using computerization. Descriptive analysis techniques are carried out to make it easier for researchers to find out the picture of patient characteristics and problems at the KMU Gresik Eye Clinic.

**RESULTS AND DISCUSSION**

**Identify Respondent Characteristics**

The frequency distribution of sociodemographic characteristics of respondents is shown in Table 1.

**Table 1**  
**Frequency Distribution of Sociodemographic Characteristics of Respondents**

Characteristic	Number of Respondents	
	n	%
Age		
35 – 45 years (late adult)	1	1,0
> 45 – 55 years old (early elderly)	87	87,0
> 55 – 65 years old (late elderly)	12	12,0
> 65 years old (seniors)	0	0,0
<b>Total</b>	<b>100</b>	<b>100,0</b>
Gender		
Man	55	55,0
Woman	45	45,0
<b>Total</b>	<b>100</b>	<b>100,0</b>
Revenue (per month)		
< Rp 3.871.052,00	65	65,0
> Rp 3.871.052,00 – Rp 7.742.104,00	27	27,0
> Rp 7.742.104,00 – Rp. 11.613.156,00	4	4,0
≥ Rp 11.613.156,00	4	4,0
<b>Total</b>	<b>100</b>	<b>100,0</b>
Education level		
Low (≤ SMA)	41	41,0
High (> High School)	59	59,0
<b>Total</b>	<b>100</b>	<b>100,0</b>
Work		
Civil Servant (PNS)	18	18,0
Private Employees	41	41,0
Self employed	18	18,0
Other	23	23,0
<b>Total</b>	<b>100</b>	<b>100,0</b>

The age categories in this study are based on age categorization according to the Ministry of Health (re: Ministry of Health) in 2009 (Windri, Kinasih, & Sanubari, 2019). Based on table 1, it is found that the majority of respondents are individuals who are classified as early elderly. This is in line with information from the Health Data and Information Center (Infodatin) Kemenkes RI (2018) which states that the prevalence of blindness caused by cataracts in Indonesia in the population aged more than 50 years is 1.9% of the total 3% blindness. Although the prevalence of blindness in all age groups in Indonesia is not high, the prevalence in the elderly that exceeds 0.5% indicates that blindness due to cataracts is still a public health problem (Kemenkes RI, 2018). Cataracts are degenerative diseases that are affected by age. WHO estimates that there will be 40 million people in the world who are blind by 2025 (W. Wang et al., 2016). Better human life expectancy causes the proportion of people over the age of 50 years to increase, so there will also be an increase in the prevalence of people suffering from cataracts.

The dominant sex group is the male group with a percentage of 55%. The results of descriptive analysis related to sex in this study are in line with research conducted by Acharya *et al.* (2021) which states that the higher prevalence of male cataract patients than women can be caused by

gender bias in *healthcare seeking* behavior. Kemenkes RI (2018) also mentioned that CSC levels in men are higher than women. Men usually earn more than women, so more men have eye health checkups or cataract treatments done. It can also be caused simply because there are more male than female cataract visitors or patients in clinics or hospitals. However, the results of this study are not in accordance with several studies that say based on *Global Burden Disease* (GBD), the prevalence of cataracts in women is greater than men (Fang *et al.*, 2022; Lou *et al.*, 2018; Prasad *et al.*, 2020). This can be due to the longer life expectancy of women than men (*greater longevity*) which is also associated with higher morbidity of age-related diseases (Fang *et al.*, 2022; Prasad *et al.*, 2020). The existence of gender disparity also plays a role in the lower rate of cataract surgery in women than men (Fang *et al.*, 2022; Lou *et al.*, 2018). This leads to lower levels of income and education which makes women unable to afford cataract surgery.

Based on table 1, the majority of respondents earn less than Rp 3,871,052.00 per month. This can be interpreted that the majority of respondents earn below the Gresik Regency / City Minimum Wage in 2019 (Pemerintah Daerah Provinsi Jawa Timur, 2018). Based on research conducted by Fang *et al.* (2022), Cataracts are more concentrated in countries with low socioeconomic status. Lou *et al.* (2018) It also mentions that lower socioeconomic status leads to a high prevalence of cataracts in women than men. Economy is an activity carried out by the community that can generate money to meet the needs of life, including for the needs of health service financing. When viewed from socioeconomic factors, income is one of the factors that affect the level of public insight and indirectly affects the type of work and income. In addition, the thing to consider is the ability of the household budget which affects the speed to seek treatment if family members are sick. Income level is related to poverty which will affect people's health status.

**Table 2**  
**Frequency Distribution of Eye Health Conditions of Respondents**

Category	Category				Total
	Very bad	Bad	Good	Excellent	
General eye health	25 (25%)	47 (47%)	24 (24%)	4 (4%)	100 (100%)
Experience of visual impairment	54 (54%)	31 (31%)	14 (14%)	1 (1%)	100 (100%)
Difficulties due to decreased visual ability	56 (56%)	33 (33%)	9 (9%)	2 (2%)	100 (100%)

Based on table 2, it can be concluded that in general the majority of respondents experience visual impairment in the bad category. Disorders that are often experienced are usually related to blurred vision, pain and discomfort in the eyes, and dependence on glasses. In addition, 54% of respondents had a very bad experience related to a decrease in their visual abilities. This causes feelings of worry, limitation in activities, frustration due to vision, pain and discomfort in the eyes, and dependence on others. Visual impairment also caused respondents to experience difficulties with the majority being in the very poor category. Difficulties experienced by respondents included difficulty in reading, difficulty doing work, difficulty in watching television, difficulty walking, and difficulty in seeing objects.

The classification of visual impairments used in this study corresponds to the classification WHO EMRO (2012) based on sharp vision. Visual impairment is categorized as mild if visual acuity ranges from  $< 6/12 - \geq 6/18$ ; moderate and severe visual impairment category if visual acuity ranges

Most respondents are graduates of higher education or fall into the category of highly educated (more than graduated from high school). According to previous studies, individuals with low education have a higher risk of developing cataracts compared to highly educated individuals (Hadini, Eso, & Wicaksono, 2016; Ulandari, Astuti, & Adiputra, 2014). According to Sumomba, Ernawati, & Sustini (2019) Low levels of education can lead to a lack of awareness about cataracts and the measures taken to obtain treatment. Low level of education will cause low quality of human resources, causing lack of knowledge about a disease and how to handle it, including cataracts. The level of education affects the individual's ability to receive and digest information, so that the knowledge possessed by the individual will be more and more. In addition, the level of knowledge will affect the attitude and change in individual behavior towards the information that has been received.

The majority of respondents work as private employees because the majority of economic sectors in Gresik City are industrial sectors. The type of work plays a role in the prevalence of the incidence of a disease. Research conducted by Tana *et al.* (2007) It shows that 38.0% of the total incidence of cataracts is experienced by individuals who work as farmers / fishermen / laborers (private). This type of work that requires the individual to work in the sun or be exposed to radiation for long periods of time will cause clouding of the lens of the eye and increase the individual's risk for cataracts (Modenese & Gobba, 2018; Ulandari *et al.*, 2014).

### Eye Vision Health Identification

Other data analyzed were data related to the overall eye health condition of respondents.

from  $< 6/18 - \geq 3/60$ ; and blind category if visual acuity  $< 3/60$ . The term visual impairment refers to blindness and moderate-severe visual impairment. The leading cause of visual impairment worldwide is uncorrected refractive disorder (48.99%), followed by cataracts (25.81%) and *age-related macular degeneration* (AMD, 4.1%). Meanwhile, the most common cause of blindness was cataracts (34.47%), followed by uncorrected refractive disorders (20.26%), and glaucoma (8.30%) (AHO, 2019).

**Table 3**  
**Actions Respondents May Take If They Suffer from Cataracts**

Respondents' Actions If They Suffer from Cataracts	Total	
	n	%
Surgery	100	100,0
Non surgery	0	0,0
Total	100	100,0

Based on table 3, it can be concluded that it is known that all respondents choose to undergo surgery if they suffer from decreased visual ability caused by cataracts. Cataract surgery or surgery is one of the stressors for patients with cataracts. Surgical procedures are one of the stressors for individuals who will undergo them (Hawari, 2001). Based on the review of Psychiatric Nursing, the act of surgery gives rise to a crisis situation, that is, an internal disturbance caused by a stressful event, threatening and increasing anxiety.

Individuals who are about to undergo surgery experience stressful conditions caused by the internal and external environment. Internal stressors are factors that originate within oneself, such as age, gender, history of surgery, and recent level of education. Conditions of fear, anxiety and stress experienced by patients are caused by lack of information or ignorance of the patient about surgical procedures and fear of pain during anesthesia and after surgery.

### Identification, Screening of Ideas Based on Respondent Needs & Service Evaluation

Screening ideas or ideas is obtained based on the evaluation of services that have been running where the company filters ideas that arise by conducting evaluations. Screening criteria relate to the results of the analysis (strengths and weaknesses), long-term analysis of the marketing environment and the goals of the company.

Evaluation of services that have been running is an assessment that needs to be considered by management as criticism and useful suggestions to improve services based on input provided by respondents. The things assessed are related to, among others: the place of facilities chosen, the completeness of the type of service, the number of tariffs associated with the level of comfort and speed in providing services, ease of coverage, and services expected by respondents.

**Table 4**  
**Service Evaluation Frequency Distribution**

Category	Number of Respondents	
	n	%
The place where the patient first sought treatment when sore eyes	12	12,0
Doctor	72	72,0
Eye Clinic	16	16,0
Hospital		
<b>Total</b>	<b>100</b>	<b>100,0</b>
Reasons for treatment (more than one choice)		
Famous doctors/clinics/hospitals	40	15,8
The products offered are complete	20	7,9
Complete facilities	38	15,0
Priced	44	17,4
Strategic location and easy to reach	50	19,8
Attractive promos	9	3,6
Friends or family recommendations	52	20,5
<b>Total</b>	<b>253</b>	<b>100,0</b>
Completeness of types of medical services		
Very complete	28	28,0
Quite complete	27	28,0
Incomplete	23	23,0
Very incomplete	21	21,0
<b>Total</b>	<b>100</b>	<b>100,0</b>
Service fee		
Very expensive	0	0,0
Expensive	24	24,0

Category	Number of Respondents	
	n	%
Cheap	58	58,0
Very cheap	18	18,0
<b>Total</b>	<b>100</b>	<b>100,0</b>
How to Pay		
Very difficult	0	0,0
Difficult	2	2,0
Easy	70	70,0
Very easy	28	28,0
<b>Total</b>	<b>100</b>	<b>100,0</b>
Lounge comfort		
Very convenient	37	47,0
Comfortable	54	54,0
Uncomfortable	7	7,0
Very uncomfortable	2	2,0
<b>Total</b>	<b>100</b>	<b>100,0</b>
Convenience of patient service room		
Very convenient	36	36,0
Comfortable	62	62,0
Uncomfortable	1	1,0
Very uncomfortable	1	1,0
<b>Total</b>	<b>100</b>	<b>100,0</b>
Speed of service provided by officers		
Very fast	69	69,0
Fast	31	31,0
Slow	0	0,0
Very slow	0	0,0
<b>Total</b>	<b>100</b>	<b>100,0</b>
Waiting room comfort expectations		
Urgently needs to be improved	18	18,0
Needs improvement	76	76,0
No need to upgrade	6	6,0
There is really no need to upgrade	0	0,0
<b>Total</b>	<b>100</b>	<b>100,0</b>
Expectation of comfort of medical service room		
Urgently needs to be improved	64	64,0
Needs improvement	3	3,0
No need to upgrade	1	1,0
There is really no need to upgrade		
<b>Total</b>	<b>100</b>	<b>100,0</b>
Expectation of speed of service provided by employee		
Urgently needs to be improved	69	69,0
Needs improvement	1	1,0
No need to upgrade	5	5,0
There is really no need to upgrade		
<b>Total</b>	<b>100</b>	<b>100,0</b>
Ease of service location coverage		
Easy to reach	100	100,0
Hard to reach	0	0,0
<b>Total</b>	<b>100</b>	<b>100,0</b>
Location of service		
Strategic	94	94,0
Not strategic	6	6,0
<b>Total</b>	<b>100</b>	<b>100,0</b>
Services and promotions – respondent media are aware of services and promotions		
Social Media (Instagram)	9	9,0
Brochure	4	4,0
Billboard	5	5,0
Website	1	1,0
YouTube	73	73,0
Friends or family recommendations	8	8,0
<b>Total</b>	<b>100</b>	<b>100,0</b>
Service and promotion – the most appropriate promotional media		
Social Media (Instagram)	64	64,0
Social Media (Instagram)	6	6,0

Category	Number of Respondents	
	n	%
Brochure	5	5,0
Billboard	3	3,0
Website	5	5,0
YouTube	17	17,0
Friends or family recommendations		
<b>Total</b>	<b>100</b>	<b>100,0</b>
Cataract surgery rates		
Affordable	80	80,0
Unaffordable	20	20,0
<b>Total</b>	<b>100</b>	<b>100,0</b>
Respondents' expectations after cataract surgery		
Can see clearly with the help of glasses	12	12,0
Can see clearly without the help of glasses	88	88,0
<b>Total</b>	<b>100</b>	<b>100,0</b>
Things to improve		
Types of services	34	34,0
Product	10	10,0
Building	56	56,0
<b>Total</b>	<b>100</b>	<b>100,0</b>
Services you want to develop		
Speed of service	37	37,0
Comfort of space	39	39,0
Featured products	24	24,0
<b>Total</b>	<b>100</b>	<b>100,0</b>
Approval of priority (VIP) services		
Agree	80	80,0
Disagree	20	20,0
<b>Total</b>	<b>100</b>	<b>100,0</b>
Reasons to choose VIP		
Comfortable	43	43,0
No waiting in line	57	57,0
<b>Total</b>	<b>100</b>	<b>100,0</b>
Flagship product development IOL (lens)		
Yes	98	98,0
Not	2	2,0
Did not answer	0	0,0
<b>Total</b>	<b>100</b>	<b>100,0</b>
Thoric monofocal product development		
Yes	53	53,0
Not	25	25,0
Did not answer	2	2,0
<b>Total</b>	<b>100</b>	<b>100,0</b>
Multifocal product development		
Yes	35	35,0
Not	65	65,0
Did not answer	0	0,0
<b>Total</b>	<b>100</b>	<b>100,0</b>
Multifocal toric product development		
Yes	66	66,0
Not	20	20,0
Did not answer	4	4,0
<b>Total</b>	<b>100</b>	<b>100,0</b>

Based on table 4, it is known that the eye clinic is a referral health service facility that will be visited by respondents if they experience eye complaints. The eye clinic was chosen because of its less complicated service procedures compared to hospitals, as well as the fear in people coming to the hospital during the pandemic. The majority of respondents chose an eye clinic because of recommendations from friends or family. Another factor that becomes a consideration for choosing health service facilities is a strategic location and affordable service prices. Recommendations come along with quality services from

these health care facilities. This is what makes customer satisfaction continue to recommend to others.

The hope of respondents in addition to being free from cataracts is to be able to see clearly without the help of glasses. Cataract surgery so far only handles complaints due to cataracts suffered by patients, without correcting refractive errors, so patients still use glasses again after cataract surgery.

Based on table 4, almost half of respondents think that medical services need to be complemented, such as the completeness of eye care equipment. The difference in completeness of services between eye hospitals and eye clinics is due to differences in standards in the provision of eye care. In addition, what respondents expect to improve is convenience and speed of service as a means of increasing customer satisfaction. In addition to product quality, one of the important motivations that influence consumers to buy back a product is the short time and convenience in obtaining it (Yeddula, 2012). Every patient hopes to get maximum service and get something as expected. A quality product is a product that is complete and has the ability to satisfy a consumer need. The main challenge faced by the service industry is how to collaborate the best quality of service with what consumers expect. The better the service received by consumers, the higher the rates that will be charged to him.

The comfort of the waiting room of health care facilities is one of the important elements that affect the *image* of the hospital. Uncomfortable waiting rooms do not help alleviate patient suffering even though the time spent in the waiting room tends to be the most compared to other rooms or places. The role of nurses today is more actively involved and focuses on healing and healing actions. Science and technology that are developing today, demand to perform a dual role in carrying out the task of *caring* and *curing* (Motowidlo & Kell, 2013). The patient's willingness to wait is a result of the actual waiting time and one of them is influenced by the clinic management for patients in the waiting room because *the wait time experience* is an improved goal in the practice of clinical process management and improvement (Chu *et al.*, 2019). Therefore, clinic management needs to improve the patient waiting time experience, one of which can be done by improving the condition of the room, so that patients are comfortable while in the waiting room.

According to this study, the clinic promotion media with the largest percentage is *YouTube*. This is not the same as the choice of media that is considered the most appropriate for promotion by respondents, namely promotion through social media. Through *marketing* on social media, management can provide interesting information and maintain two-way interaction with consumers, thereby increasing consumer *awareness* which will further lead to consumer loyalty to reuse the products offered (Shwastika & Keni, 2021). Promotional strategies that can be done in building *brand awareness* by combining elements that include advertising activities using print media (brochures), electronic media via the internet (*Facebook ads, paid promote*) and outdoor media (*billboards, banners, stickers or car branding*). In addition, promotion can also be done through *personal selling* activities, namely direct interaction with the community by understanding *product knowledge*.

A small number of respondents considered the cost of cataract surgery services at KMU Gresik Eye Clinic still expensive. This is because several local hospitals whose rates are still below the KMU Gresik Eye Clinic. Wulandari *et al.* (2020) conducted a study to compare the cost and

effectiveness of two cataract surgery techniques, namely SICS and phacoemulsification. The difference in service fees is due to differences in procedures provided.

The level of patient satisfaction with clinical services is an important factor in developing a service delivery system that is responsive to patient needs, minimizes costs and time, and maximizes the positive impact of services on the community in general. The results of the study show that there are things that are expected to be developed related to comfort, speed and service product development. The clinic routinely needs to observe the services it provides in order to maintain the existing advantages and always improve the quality of service on variables that are still lacking in its assessment or according to respondents' assessments have not been in accordance with the results expected by patients.

The existence of priority services, such as the provision of VIP services, is also a means of improving facilities to provide comfort and speed of service to consumers or patients. The existence of VIP services causes differences in services for OOP and BPJS Health patients. Superior products are also expected to be developed to add to existing service products. This is in line with the clinic management where superior products will be developed as competitiveness with competitors. The existence of superior products that will be developed for cataract surgery services is very well received by respondents, because the *services* provided are different from other classes in terms of speed and comfort of service.

### Strategic Issues and Product Development Recommendations

Target consumers for the implementation of product development offered are consumers or paid/public/OOP patients, or patients who use BPJS insurance and have other private insurance cards. Based on the needs of respondents and the evaluation of services that have been running, there are several product development recommendations offered to develop existing services, so that they become the competitiveness of local hospitals that do not yet have these services. These services include premium IOL products, VIP services, and teleconsultation.

Based on table 4, the majority of respondents expect to be able to see clearly without using glasses after cataract surgery. IOL Premium products can eliminate complaints due to cataracts and correct refractive errors suffered by respondents. The only therapy for cataract sufferers is surgery that aims to improve vision or sharp vision. Cataract surgery is done by taking the lens of the eye that has cataracts and then replacing it with an implanted lens or *intraocular lens* (IOL). IOL cataract surgery has successfully improved the function of distance and near vision as indicated by the improvement of the patient's postoperative vision (Visser *et al.*, 2013; Zvorničanin & Zvorničanin, 2018). IOL Premium has the advantage that it can remove cataracts and correct cylinders, so patients do not need to wear glasses after cataract surgery.

Premium IOL technology and advanced surgical techniques have significantly improved postoperative outcomes in cataract patients (Zvorničanin & Zvorničanin, 2018). The products of Premium IOL are *monofocal* IOL and *multifocal* IOL. *Monofocal* IOLs function to correct astigmatism and *multifocal* IOLs and accommodating lenses function to provide clear vision at both far and near distances without any vision correction (Wang *et al.*, 2017). Lenses are manufactured in many types and sizes, including flat-top, curve-top, executive, and round. The best option for

standard vertical dimensions of this mid-segment lens is that it can correct vision for medium-distance patients. *Multifocal* toric IOL is still superior when compared to EDOF IOL. EDOF IOLs can improve medium and short distance vision above standard *monofocal aspheric* performance, while maintaining good contrast sensitivity (Nivean *et al.*, 2019). Some of the advantages of this type of lens are easy fitting and can reduce eye glare at night (*night glare*) (Kondylis, Klavdianou, & Palioura, 2019; Zvorničanin & Zvorničanin, 2018).

Another excellent product is the VIP Eye Clinic KMM Gresik service which allows Sunday *clinic* services and minimizes the inconvenience of respondents when visiting caused by long queues. The clinic is expected to meet optimal health service standards. Excellent service will be achieved if all human resources in it have special skills, including understanding the product deeply, looking attractive, being friendly and friendly, responsive to patients, mastering work, communicating effectively and being able to respond to patient complaints professionally. The patient's desire to get priority service, in the sense of getting comfort and speed of service is the main thing, in addition to service factors, facilities also affect the perception of customer satisfaction. The physical environment conditions of health care facilities and infrastructure must be considered, such as parking lots, waiting rooms, criticism boxes and suggestions so that customers feel comfortable in the environment. Medical supporting equipment must be adequate because it will give a positive impression to the image of the health service facility itself.

In addition, there is a teleconsultation program that provides space for the public to consult and get education related to eye health online every day with specialists. The COVID-19 pandemic has had an impact and changed various life arrangements in Indonesia. Adaptation efforts are needed to answer the needs of the community in various sectors during the COVID-19 pandemic. Teleconsultation practice is carried out as an alternative form of medical practice in response to the need for access to safe public health services by utilizing information and communication technology. This service is also supported by the development of the digital era, so that teleconsultation can be something that can be developed as a marketing strategy.

According to Peraturan Menteri Kesehatan Republik Indonesia Nomor 20 Tahun 2019 About the Implementation of *Telemedicine* Between Health Service Facilities, teleconsultation or *clinical online* consultation is a consultation service carried out remotely to help establish a diagnosis and / or provide management considerations or suggestions. Teleconsultation is part of *telemedicine*, so the scope is narrower. The development of the digital age has shifted the manual era. Currently, many young specialists have emerged in the fields of health and medicine. Therefore, it is important for doctors to be able to update and keep up with the development of the digital age. In addition, doctors must have a strong *brand image*. People today tend to choose doctors who have a good *image*, are educative and active in the world of social media, because people use social media to find information related to doctors or health services. Combining digital education and teleconsultation makes it attractive to the public in terms of strategies to promote health services and specialist doctors themselves.

## CONCLUSIONS AND SUGGESTIONS

The eye health of respondents in general is classified as poor, resulting in the emergence of experiences / conditions / conditions that are bad for eye vision. Meanwhile, impaired vision function also causes difficulties that will be experienced by respondents. The development of KMU Gresik Eye Clinic service products is needed to meet consumer needs and increase competitiveness with competitors. Product development can be in the form of service development or IOL Premium products, VIP services and teleconsultation services.

IOL Premium product as a solution for cataract patients who expect to be without glasses after cataract surgery. In addition, IOL Premium products can also be used by people with refractive errors that cannot be treated with LASIK action. VIP service presents *Sunday Clinic* services to provide priority services to meet consumer needs for fast and convenient service. Meanwhile, teleconsultation products provide online education and consultation services to make it easier for people to get education related to eye health and early treatment related to eye complaints.

Product development must be balanced with the development of marketing strategies in this digitalization era. The priority thing that can be done is to optimize social media as a place for *online* education, for example the provision of web seminars (webinars), Instagram *live*, and strengthening *the website* to make it easier for people to find the health services needed.

Clinic management is expected to optimize digital promotion and improve services that have been running in accordance with the services expected by patients, so that patient satisfaction in receiving services will increase. This research can be replicated by adding other related factors or evaluating the product development that has been carried out at the KMU Gresik Eye Clinic to measure the effectiveness of the program.

## ETHICAL CONSIDERATIONS

### Funding Statement.

No funds, grants, or other support was received.

### Conflict of Interest Statement

There is no *conflict of interest* in conducting research.

## REFERENCES

- Acharya, M., Baidya, S., Das, R., Sarkar, P., & Choudhury, H. (2021). The impact of cataract surgery upon visual acuity and quality of life in patients with cataract in Tripura. *International Journal Of Community Medicine And Public Health*, 8(1), 167–174. <https://doi.org/10.18203/2394-6040.ijcmph20205688>
- Africa Health Organization (AHO). (2019). Blindness and vision impairment factsheet. Retrieved from <https://aho.org/factsheets/blindness-and-vision-impairment-factsheet/>
- Braga-Mele, R., Chang, D., Dewey, S., Foster, G., Henderson, B. A., Hill, W., ... Yoo, S. (2014). Multifocal intraocular lenses: Relative indications and contraindications for implantation. *Journal of Cataract and Refractive Surgery*, 40(2), 313–322. <https://doi.org/10.1016/j.jcrs.2013.12.011>
- Chu, H., Westbrook, R. A., Njue-Marendes, S., Giordano, T. P., & Dang, B. N. (2019). The psychology of the wait time experience - What clinics can do to manage the waiting experience for patients: A longitudinal, qualitative study. *BMC Health Services Research*, 19(1), 1–10. <https://doi.org/10.1186/s12913-019-4301-0>
- Fang, R., Yu, Y.-F., Li, E.-J., Lv, N.-X., Liu, Z.-C., Zhou, H.-G., & Song, X.-D. (2022). Global, regional, national burden and gender disparity of cataract: findings from the global burden of disease study 2019. *BMC Public Health*, 22(1), 2068–2093. <https://doi.org/10.1186/s12889-022-14491-0>
- Fitria, A. (2017). Hubungan umur, sikap, pengetahuan, biaya terhadap tindakan untuk melakukan operasi katarak. *Jurnal Berkala Epidemiologi*, 4(2), 176–187. <https://doi.org/10.20473/jbe.v4i2.2016.176>
- Hadini, M. A., Eso, A., & Wicaksono, S. (2016). Analisis Faktor Risiko yang Berhubungan dengan Kejadian Katarak Senilis Di RSU Bahteramas Tahun 2016. *Medula: Jurnal Ilmiah Fakultas Kedokteran Universitas Halu Oleo*, 3(2), 256–267. <https://doi.org/10.33772/medula.v3i2.2552>
- Hawari, D. (2001). *Manajemen Stres, Cemas, dan Depresi* (Ed. 1, cet). Jakarta: Fakultas Kedokteran Universitas Indonesia.
- Kementerian Kesehatan Republik Indonesia. (2013). Laporan Hasil Riset Kesehatan Dasar (Riskesdas) 2013. In *Badan Penelitian dan Pengembangan Kesehatan Kementerian Kesehatan RI*. Jakarta Pusat.
- Kementerian Kesehatan Republik Indonesia. (2018). Infodatin (Pusat Data dan Informasi Kementerian Kesehatan Republik Indonesia) - Situasi Gangguan Penglihatan. In *Kementerian Kesehatan Republik Indonesia*. Jakarta Pusat.
- Kementerian Kesehatan Republik Indonesia. *Peraturan Menteri Kesehatan tentang Penyelenggaraan Pelayanan Telemedicine Antar Fasilitas Pelayanan Kesehatan*. , Pub. L. No. 20, 1 (2019).
- Kondylis, G., Klavdianou, O., & Palioura, S. (2019). Multifocal and extended depth of focus intraocular lenses. *Annals of Eye Science*, 4(1), 2–7. <https://doi.org/10.21037/aes.2019.0101>
- Lemeshow, S., Hosmer, D. W., Klar, J., & Lwanga, S. K. (1997). *Besar Sampel Dalam Penelitian Kesehatan*. Retrieved from <https://opac.perpusnas.go.id/DetailOpac.aspx?id=386149>
- Lou, L., Ye, X., Xu, P., Wang, J., Xu, Y., Jin, K., & Ye, J. (2018). Association of sex with the global burden of cataract. *JAMA Ophthalmology*, 136(2), 116–121. <https://doi.org/10.1001/jamaophthol.2017.5668>
- Martínez, M. B., Moyano, D. B., & González-Lezcano, R. A. (2021). Phacoemulsification: Proposals for improvement in its application. *Healthcare (Switzerland)*, 9(11), 1–13. <https://doi.org/10.3390/healthcare9111603>
- Modenese, A., & Gobba, F. (2018). Cataract frequency and subtypes involved in workers assessed for their solar radiation exposure: a systematic review. *Acta Ophthalmologica*, 96(8), 779–788. <https://doi.org/10.1111/aos.13734>
- Motowidlo, S. J., & Kell, H. J. (2013). Job performance. In *Handbook of psychology: Industrial and organizational psychology* (In N. W. S, pp. 82–103). John Wiley & Sons, Inc.
- Nivean, M., Nivean, P. D., Reddy, J. K., Ramamoorthy, K., Madhivanan, N., Rajan, M., & Sengupta, S. (2019). Performance of a new-generation extended depth of focus intraocular lens-a prospective comparative study. *Asia-Pacific Journal of Ophthalmology*, 8(4), 285–289. <https://doi.org/10.1097/APO.0000000000000245>

- Notoatmodjo, S. (2010). *Metodologi Penelitian Kesehatan* (Ed. Rev.). Jakarta: Rineka Cipta.
- Pascolini, D., & Mariotti, S. P. (2012). Global estimates of visual impairment: 2010. *British Journal of Ophthalmology*, *96*(5), 614–618. <https://doi.org/10.1136/bjophthalmol-2011-300539>
- Pemerintah Daerah Provinsi Jawa Timur. *Keputusan Gubernur Jawa Timur Nomor 188/665/KPTS/013/2018 Tahun 2018*. , Pub. L. No. 188/665/KPTS/013/2018 (2018).
- Prasad, M., Malhotra, S., Kalavani, M., Vashist, P., & Gupta, S. K. (2020). Gender differences in blindness, cataract blindness and cataract surgical coverage in India: A systematic review and meta-analysis. *British Journal of Ophthalmology*, *104*(2), 220–224. <https://doi.org/10.1136/bjophthalmol-2018-313562>
- Safi, S., Ahmadi, H., Katibeh, M., Yaseri, M., Ramezani, A., Shahraz, S., ... Mokdad, A. H. (2018). Burden of vision loss in the Eastern Mediterranean region, 1990–2015: findings from the Global Burden of Disease 2015 study. *International Journal of Public Health*, *63*(Suppl 1), S199–S210. <https://doi.org/10.1007/s00038-017-1000-7>
- Shwastika, R., & Keni, K. (2021). The Effect of Brand Awareness, Social Media Marketing, Perceived Quality, Hedonic Motivation, and Sales Promotion Towards Consumers Intention to Purchase in Fashion Industry. *Proceedings of the International Conference on Economics, Business, Social, and Humanities (ICEBSH 2021)*, *570*(Icebsh), 23–31. <https://doi.org/10.2991/assehr.k.210805.004>
- Sumomba, Y., Ernawati, T., & Sustini, F. (2019). Level Knowledge Of Cataract, Education, And Socioeconomic Status With Preoperative Visual Acuity In Patients With Senile Cataract In PHC Hospital Of Surabaya. *Journal of Widya Medika Junior*, *1*(3), 165–173. <https://doi.org/10.33508/jwmj.v1i3.2099>
- Tamansa, G. E., Saerang, J. S. M., & Rares, L. M. (2016). Hubungan Umur dan Jenis Kelamin dengan Angka Kejadian Katarak di Instalasi Rawat Jalan (Poliklinik Mata) RSUP Prof. Dr. R. D. Kandou Manado Periode Juli 2015 - Juli 2016. *Jurnal Kedokteran Klinik*, *1*(1), 64–69.
- Tana, L., Mihardja, L., & Rif'ati, L. (2007). Merokok dan usia sebagai faktor risiko katarak pada pekerja berusia  $\geq 30$  tahun di bidang pertanian. *Universa Medicina*, *26*(3), 120–128.
- Thanigasalam, T., Chandarsekhara, R. S., & Chandrasekhara, S. (2014). Outcome of phacoemulsification and extracapsular cataract extraction: A study in a district hospital in Malaysia. *Malaysian Family Physician*, *9*(2), 41–47.
- Ulandari, N. N. S. T., Astuti, P. A. S., & Adiputra, N. (2014). Pekerjaan dan Pendidikan sebagai Faktor Risiko Kejadian Katarak pada Pasien yang Berobat di Balai Kesehatan Mata Masyarakat Kota Mataram Nusa Tenggara Barat. *Public Health and Preventive Medicine Archive*, *2*(2), 121–126. <https://doi.org/10.15562/phpma.v2i2.137>
- Visser, N., Bauer, N. J. C., & Nuijts, R. M. M. A. (2013). Toric intraocular lenses: Historical overview, patient selection, IOL calculation, surgical techniques, clinical outcomes, and complications. *Journal of Cataract and Refractive Surgery*, *39*(4), 624–637. <https://doi.org/10.1016/j.jcrs.2013.02.020>
- Wang, S. Y., Stem, M. S., Oren, G., Shtein, R., & Lichter, P. R. (2017). Patient-centered and visual quality outcomes of premium cataract surgery: A systematic review. *European Journal of Ophthalmology*, *27*(4), 387–401. <https://doi.org/10.5301/ejo.5000978>
- Wang, W., Yan, W., Fotis, K., Prasad, N. M., Lansingh, V. C., Taylor, H. R., ... He, M. (2016). Cataract surgical rate and socioeconomics: A global study. *Investigative Ophthalmology and Visual Science*, *57*(14), 5872–5881. <https://doi.org/10.1167/iov.16-19894>
- Windri, T. M., Kinasih, A., & Sanubari, T. P. E. (2019). Pengaruh Aktivitas Fisik Dengan Kualitas Hidup Lansia Hipertensi Di Panti Wredha Maria Sudarsih Ambarawa. *Jurnal JMP Online*, *3*(11), 1444–1451.
- World Health Organization (WHO). (2013). *Universal eye health: A global action plan 2014-2019* (World Health Organization (WHO), Ed.). Retrieved from <https://www.who.int/publications/i/item/universal-eye-health-a-global-action-plan-2014-2019>
- World Health Organization Eastern Mediterranean Regional Office (WHO EMRO). (2012). WHO releases new global estimates on visual impairment. Retrieved from <https://www.emro.who.int/control-and-preventions-of-blindness-and-deafness/announcements/global-estimates-on-visual-impairment.html>
- Wulandari, A., Dahlui, M., Ernawaty, Wulandari, R. D., & Rochmah, T. N. (2020). Cost effectiveness analysis between small incision cataract surgery and phacoemulsification. *Journal of Health and Translational Medicine*, *23*(Suppl 1), 231–237.
- Yeddula, V. R. (2012). *Healthcare Quality: Waiting Room Issues*. University of Nebraska - Lincoln.
- Zvorničanin, J., & Zvorničanin, E. (2018). Premium intraocular lenses: The past, present and future. *Journal of Current Ophthalmology*, *30*(4), 287–296. <https://doi.org/10.1016/j.joco.2018.04.003>

