



The Perspective of Marketing Mix Elements in Health Care Services – A Review

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Abstract: The success of healthcare services and diagnostic laboratories depends on their use of the marketing mix. Price optimization, service expansion, better health education, and more funding are also crucial. Clinical decisions depend on laboratory diagnosis and test results, helping customize medication for a particular patient. Diagnostic labs are considered a "cash cow" for healthcare organizations. Marketing mix has been considered critical in the success of any service organization, and the same applies to Healthcare too. A modern and valuable marketing tool in healthcare services is the marketing mix. Patient satisfaction has been the goal of any healthcare organization's marketing activity, which is significantly influenced by the 7Ps of the service marketing mix. Hospitals have been using the 7Ps of the marketing mix for a long time, and a lot of literature is available. At the same time, the literature on the applicability of marketing mix tools in the diagnostic industry is limited. Doctors and patients disagree on what variables should be considered when picking a lab. This study seeks to review the marketing mix of hospitals and their applicability in the diagnostic industry. A systematic review of relevant websites, articles, periodicals, and peer-reviewed journals on google scholar, the Internet, EBSCO host, and ProQuest was done. The paper enriches the literature on marketing characteristics of health services from a diagnostic lab perspective. This study will be helpful for professionals in laboratory business and count on their theoretical knowledge. Moreover, this article paves the way to further research in this field to find an appropriate marketing mix for the diagnostic industry.

Keywords: Healthcare, 7Ps, Clinical laboratories, Marketing Mix, marketing mix of diagnostic lab, diagnostic lab marketing, healthcare marketing, etc.

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I. INTRODUCTION

The service industry in India has received significant foreign direct investment and is considered a critical sector in India's GDP. It is 54% of total GDP and four-fifth of total foreign direct investment (FDI)¹. Regarding revenue and employment, Healthcare has become one of the largest sectors of the Indian economy, employing 4.7 million people directly². In 2020, the estimated total market size of the healthcare industry was \$194Bn, which is expected to reach \$372Bn by 2022². The healthcare service market comprises hospitals, diagnostic laboratories, radiology services, health insurance, etc. The diagnostic service is an integral part of the healthcare industry. However, it contributes 3-5% of total healthcare revenue but is instrumental in 70% of medical decisions³. Laboratory tests contribute 80% of the objective medical information needed for making health decisions³. Diagnostics is the primary step in deciding the action plan for treating patients⁴. The domestic diagnostic industry in FY21 was ~US\$ 10B and is expected to compound annual growth rate (CAGR) growth of ~14% over the next five years⁵. Nowadays, laboratory tests monitor disease progression and alter the treatment based on patient response. That's why laboratory medicine has been considered a critical component of the healthcare system³. The diagnostic industry in India is highly fragmented, and its structure differs per its ownership⁶. Medical laboratories are considered cash cows in the healthcare system⁷. During the Covid-19 pandemic, the laboratory market rapidly expanded, and more than 2500 National Accreditation Board of Laboratories (NABL) accredited labs were operational in India⁸. Managers need the right marketing mix to succeed in today's fast-paced, globally competitive business world. As a commercial function, marketing involves preparing, announcing, pricing, and distributing goods and services with the end user in mind. It also comprises several interrelated elements that must coordinate to achieve this goal. The marketing mix is often referred to as the "4Ps," which stands for "product," "pricing," "place," and "promotion" in most businesses. It is essential to consider the customer's perspective, the service provider's resources, the timing of events, and the procedures involved. Therefore, besides the above four, "people, physical environment, and process" constitute the service marketing mixtures and are often known as the 7Ps. The marketing mix model influences the buying decision of a consumer.⁹ Many factors impact industry performance, including the marketing mix employed¹⁰. Researchers have found that marketing Mix is a critical success factor, especially for service industries^{11,12}. Increased public knowledge of healthcare and therapeutic issues, along with the proliferation of healthcare service providers, has made attracting, keeping, and pleasing patients more difficult since consumers now have more healthcare options¹³. The marketing mix is essential to customer satisfaction and hospital revenue growth of hospitals¹⁴. In this context, there is a stark lacuna in the academic studies on the Indian diagnostic industry. Very few studies outline the marketing mix employed by the diagnostics laboratories. It is critical for suppliers of medical and therapeutic services to use marketing components like any other business to thrive. The marketing mix seems crucial for optimizing service costs, increasing surgical operations, raising health awareness, altering the mindsets of service providers, boosting the hospital's financial resources, and easing the communication gap between clinicians and patients. The study aims to review the literature

on the marketing mix of the healthcare industry and discuss its applicability to the diagnostic industry.

2. RESEARCH METHODOLOGY

A systematic review of healthcare marketing from a diagnostic laboratory's perspective was carried out. A detailed online search for articles related to the marketing mix, healthcare marketing mix, and diagnostic labs' marketing practices was done in relevant articles, periodicals, and peer-reviewed journals on google scholar, the Internet, EBSCO host, and ProQuest. Various websites, magazine articles, and industry reports were also reviewed. In addition, the search included academic and business management databases to find information on healthcare marketing, marketing mix, and diagnostic market. The research question was "marketing mix in healthcare" and "marketing practices of diagnostic laboratories."

2.1. Review of Marketing mix elements

2.1.1. Concepts of Marketing & its Elements

Marketing creates, communicates, and delivers benefits to satisfy customers' needs. As per the chartered institute of Marketing¹⁵, marketing is a management process responsible for profitably identifying, anticipating, and satisfying customer requirements. The marketing mix is a fundamental concept of marketing. The marketing mix affects consumer buying decisions because strategic exchanges are created in the market field to achieve company goals¹⁶. Isoraite¹⁷ described the marketing mix in terms of actions and decisions taken to achieve the company's goal and satisfy customer needs. The marketing mix is defined as a set of controllable variables and their levels that a firm uses to influence the target market¹⁸. Cengiz and Yayla¹⁹ defined marketing mix as a combination of tactics a business uses to achieve its objectives. After defining the target audience and understanding the competition, the key function of strategic marketing is to build the correct marketing mix. The marketing mix is not a science but a conceptual framework to configure the company's offerings so that these offerings can meet the customer's needs. These tools are used to develop both long-term strategies and short-term tactical programs²⁰. Scholars give various definitions to the marketing mix:- "Marketing mix is a combination of all of the factors at the command of a marketing manager to satisfy the target market"²¹. "Marketing mix is the controllable variables that an organization can coordinate to satisfy its target market"²². "A marketing mix is the set of controllable marketing variables that the firm blends to produce the response it wants in the target market"²³. Culliton²⁴ described marketing executives as a mixer of ingredients to create a recipe that helps an organization achieve its goals. Borden^{25,26}, while lecturing at Harvard business school, used the term "marketing mix," which he called "mixing of ingredients" by the marketer. Initially, Borden²⁵ gave 12 elements of the marketing mix, which were further regrouped into 4Ps by McCarthy²⁶, namely product, price, place, and promotion. Since McCarthy proposed the 4Ps of marketing, it was criticized widely. Möller highlighted the shortcomings of the 4Ps marketing mix framework, as the pillars of traditional marketing management have frequently become the target of intense criticism²⁷.

Table-I Strengths & Weakness of 4Ps	
4Ps of Marketing	
Strength	Weakness
Simple easy to understand and memorize	Too simple and static
Good for introductory marketing	Don't take consumers into consideration
Useful conceptual framework	Lacking people, participants, Process, and Physical evidence
Ability to adapt to various problems	Relationship marketing
Establish marketing theory and practice	

Table-I- Adapted from Rafiq and Ahmed (1995) and (Goi, 2009)^{28,29} Booms et al.³⁰ added the 3Ps (participants, physical evidence, and Process) to the original 4Ps so that they can be applied to service marketing. Goldsmith³¹ added the 8th P in the marketing mix, which was personalization. In the service industry, the marketing mix needs to be designed in a way that, once implemented, should lead to performance³³.



Fig 1: 7Ps of the marketing mix.

2.1.2. Marketing Principles of Health care system

Marketing principles applied to the complex field of the healthcare system are called health marketing³⁴. Purcarea (2019) described healthcare marketing as an indispensable element of a health brand³⁵. Healthcare has certain features not found in other industries, so it needs a specific marketing approach³⁶. It is also noteworthy that hospital services have no money equivalent and patient satisfaction in terms of effectiveness and convenience of getting assistance is of utmost importance. The essential outcome of medical care is the patient experience, primarily related to patient safety and clinical significance^{37,38}. Service quality positively influences the healthcare industry's patient experience and satisfaction level³⁹. Abedi et al. (2019) have emphasized the criticality of the 7Ps of the marketing mix in healthcare management and healthcare marketing⁴⁰. Various studies on prioritizing marketing mix elements have given different results.⁴¹ Bekele (2020) claimed that all the 7Ps marketing mix components positively affect customer satisfaction⁴². The process is the most powerful influence on customer (patient) satisfaction. People and the physical environment have the highest status in the marketing mix^{43,44}. But all of them agree that the 7Ps of the marketing mix are essential in increasing the profitability of the hospital business and achieving patient satisfaction. The priority of the marketing mix element can vary based on the type of hospital. In public hospitals, the determining factors are the following: price, products, physical assets, place, people, and promotion. In private hospitals, the relevant factors are products, physical assets, promotion, place, process, people, and price¹⁴. The operational cost of services and the value provided to a patient constitute the price element in hospital services. Besides that, the hospital should consider patients' paying ability when deciding the service price¹³. Like other service industries,

people play a vital role in smoothly and successfully delivering services. People in the hospital industry include doctors, nurses, and administrative staff¹³. Operational efficiency is dependent on processes defined by the hospital service provider. Thus, processes become a critical element of the marketing mix of hospital services¹³. A good layout, hygiene better information system become part of physical evidence. Previous studies have concluded that public hospitals must pay more attention to various marketing mix elements⁴⁰.

2.1.3. Marketing in Diagnostic laboratories

The clinical laboratory is essential to health care, and medical treatment depends on laboratory test results³. Until the 1960s, the hospital laboratories' work was restricted to hospital inpatients, emergency room patients, and some outpatients⁴⁵. With better insurance coverage and treatment of patients with OPD, the need for a laboratory outreach program was recognized⁴⁵. Lab outreach is defined as receiving lab specimens from sources other than inpatients⁴⁷. Laboratories have a particular fixed cost of operation, and as the volume of tests increases, the cost is reduced⁴⁸. However, it is not the cost reduction per test, but with increased patient inflow, laboratories increase the number of tests offered⁴⁶. The success of a laboratory outreach plan is dependent on many variables, including⁴⁸:-

- Administration: Commit to providing support and resources
- Pathologist: Champion and physician liaison-general PR
- Laboratory manager: Coordinate inpatient and outreach services
- Outreach manager: Develop outreach services

- Marketing or sales manager: Develop marketing and sales team

Root (1990)⁵⁰ and Beatty (2001)⁵¹ emphasized meticulous planning and execution that require market-oriented performance analysis and establishing marketing opportunity, strategy, and program; there is vital importance for the sales and marketing team in increasing laboratory outreach programs. The marketing team becomes the torch bearer and provides the strategy and instrument to acquire new business besides maintaining an existing business⁴⁸. Sales enablers like leave-behind leaflets, brochures, newsletters, literature, and communication tools produced by the marketing team to help educate doctors and provide information to prescribers.⁵² In the medical laboratory, services include inquiry about tests (customer care or reception), arranging phlebotomist, preparation of patients, samples collection, transportation, storage, processing and examination, test validation, interpretation, reporting, and doctor consultation or counseling⁵³. These are services offered along with safety and ethics carried out during medical laboratory services⁵³. All marketing mix elements influence the patients' satisfaction with medical laboratory services. The people element includes customer care providing the test information and test results explained by laboratory doctor or counselor. Process elements influence the waiting time to receive laboratory results and the availability of ordered laboratory tests.

Cleanliness of the laboratory and accessibility and hygiene of washrooms are part of the place element⁵⁴. Berkowitz (1995)⁵⁵ emphasized the importance of effective marketing of the pathology practice in an increasingly competitive industry. A successful laboratory marketing program's aim is to accurately assess the consumer's requirements and develop methods to supply them with their demands⁵⁰. Kanina (2013)⁵⁶ studied the promotional mix of Kenya's most significant diagnostic lab and found that promotion strategies, including direct selling below-the-line and above-line promotions, positively influence customer growth. Pathology service providers could use the marketing mix to measure the client's satisfaction and enhance their marketing management. All elements of the marketing mix are essential to customer satisfaction. Gosavi (2016)⁵⁷, found that chain labs effectively use all marketing mix elements in their strategy. Overall, it is evident that all the 7 Ps of marketing are relevant to the marketing strategy of a diagnostic lab. There are limited studies on the marketing mix strategy of a diagnostic lab. Also, little literature comparing different lab marketing strategies based on their ownership. Online test booking and mobile phlebotomy services are available, so the importance of place element in the diagnostic industry needs to be evaluated⁵⁸. The convenience element of Lauterborn's 4Cs marketing mix model can replace the place element from the 7Ps marketing mix model of the diagnostic lab.

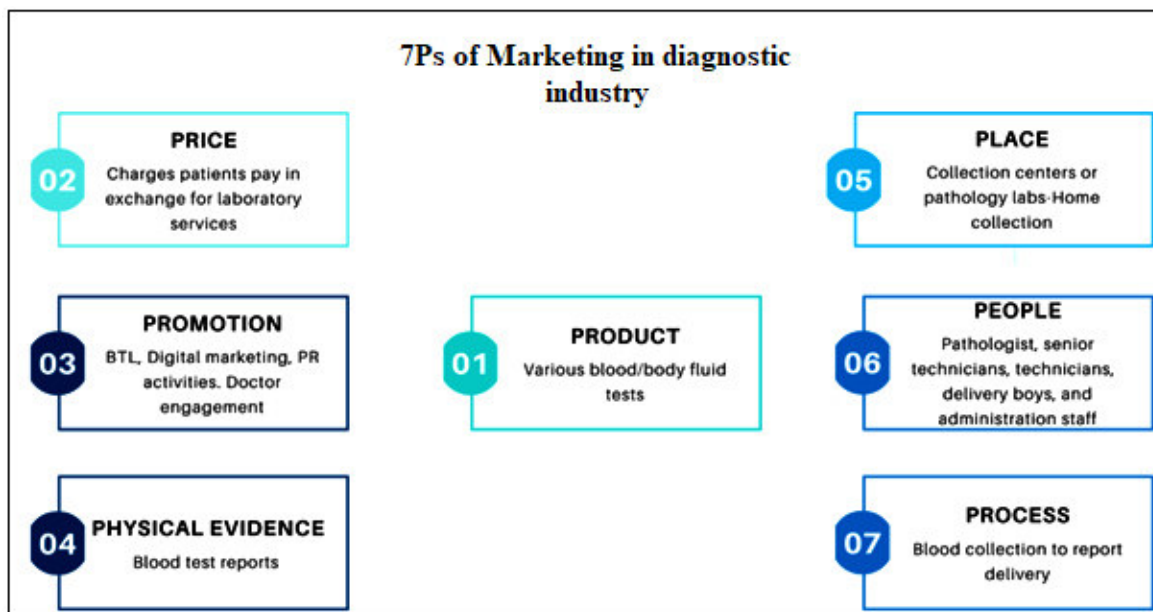


Fig 2: 7Ps of marketing in the diagnostic industry

The product can be a good or a service. It is a package of advantages provided to customers at a price⁵⁹. Like other service industries, healthcare organizations offer intangible products, and customers can't feel the taste and touch of the product. The service mix of the diagnostic lab includes tests offered under various departments, including pathology, microbiology, clinical genetics, hematology, histopathology, and biochemistry⁶⁰. The pathologist's reputation and goodwill

are crucial in the standalone lab. The brand name of the laboratory is also a critical factor for laboratory success^{4,61}. Consumers are increasingly adopting preventive and wellness-related tests⁵. Special packages are created for various age groups and gender. Nowadays, customized panels of tests are designed for multiple age groups and gender—figure-3 Elements of product in the diagnostic industry.

Tangible & intangible attributes of product in diagnostic industry

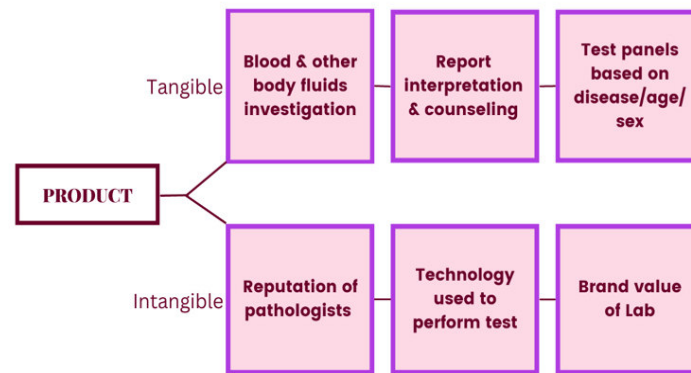


Fig 3: Elements of product in the diagnostic industry

Pricing is the most frequently used to express the actual fee made by an organization. Pricing in hospital services is usually done by keeping in mind the cost of operating the hospital, the overheads, wages of the physicians, nursing staff, and administrative staff, cost of infrastructure, bed occupancy, quality of service, cost of investigations, etc.¹³. For laboratory services, price is the charges patients pay in exchange for laboratory services. The price charged for the test depends upon the nature of the test⁴. For example, the price of a panel of tests is 30% lesser than the individual tests (industry source). Testing protocols and algorithms optimize patient costs⁴⁵. The place is one of the essential factors for Healthcare. The collection centers or pathology labs should be readily accessible and have well-maintained sample collection areas. A diagnostic lab has a pathology center or collection center to collect samples from the patient⁴. Labs provide a home collection facility to collect samples⁴. ~75% of the customers prefer home collection over lab walk-ins and are willing to pay rupee 75 - 100 extra for the same⁵. New labs are coming into the market, which strive only for home collection as they need physical collection centers⁶². Laboratories have dedicated sales and marketing departments to contact prescribing doctors and hospitals. Special promotional schemes for senior citizens are designed to get maximum workload from that segment of society. Blood testing camps are organized, and their awareness is spread through pamphlets and paper cutouts⁶¹. There are generally three channels of promotion in a diagnostic lab:

- Direct Promotion-Sales team, product marketing
- Retail Promotion-ATL and BTL activities, customer loyalty program
- Digital Promotion-social media, google ads

People contribute to or are involved in developing or supplying a service. They could influence the quality of the provided service and the consumer's perception. To offer excellent care, several hospitals operate medical and nursing schools to educate the personnel according to their needs. Patients also have a significant role in hospital care delivery¹³. The laboratory personnel include a Pathologist, senior technicians, technicians, marketing personnel, delivery boys, and administration staff personnel⁴. The customer interacts with these people at various levels, from sample collection to report delivery. Customer care in any lab is essential in answering patients' queries. If the patient needs to speak to the doctor, then the doctor's role is to satisfy the patient's queries⁴. Front-desk employees at reception, phlebotomists, and those receiving incoming calls (including billing) become

critical to the people element. All tangible representations of service refer to the environment in which a service is delivered, and the seller and customer interact as part of physical evidence³². The building, reception area, display window/board with information of tests and price list, news on medical fraternity related to diagnostics, certifications of external assessment for quality, awards won by pathologist/laboratory, etc.⁴. Even the report copy is part of physical evidence of laboratory services. It encompasses "procedures, mechanisms, and flow of activities"²⁸. A strategy should be designed for the customer's convenience and, judging from his point of view, thus focusing on his specific needs³². The Process for laboratory service begins when a patient enters a laboratory at the reception counter, the information provided, waiting time, etc. It is the nodal point of contact between the patient and the laboratory. Once the technician collects the blood sample, the patient's job is over, but the blood sample takes the patient's place⁴. Laboratories should create yearly marketing strategies to prepare for confronting the future. All seven elements of marketing are essential for laboratory marketing practice. The marketing manager must use them to create a niche for themselves and build a competitive advantage for the organization. Price, TAT (Turn Around Time), and Convenience are three significant elements of differentiation. These can be used in gaining marketing share and satisfying customer needs. Laboratories have to be in touch with society. All marketing planning should be done keeping the customer in mind. Therefore, hospitals and laboratories must embrace the marketing idea with a mindset that all planning must be done with the patient requirements addressed first and foremost. Clinical testing is a complex business. It is an honorable profession with a code of ethics and a statutory entity called the medical council of India to preserve the dignity of medical work. But regrettably, these organizations are inert and ineffectual in preventing illogical behaviors and malpractices. Somehow, the excessive clinical investigation expenses have to be brought under control. Proper communication with the right set of customers is a critical task of the marketing team in laboratories. Laboratories offer plenty of tests, so the marketer must do a thorough STP analysis (Segmentation, Targeting, and Positioning) for all diagnostic tests offered by medical laboratories. They were finally creating a panel of multiple tests related to specific disease diagnoses to help improve diagnostic accuracy and reduce the cost of tests and MRP for the patient. It also helps in avoiding multiple lab visits to patients and sample collection. A lab manager, in consultation with a clinician, can help create an algorithm of tests to diagnose a specific disease. Wellness packages

consisting of a battery of tests are essential for preventive health check-ups. The diagnostic laboratories must create packages including reflex tests based on guidelines and suggestions from clinicians.

3. CONCLUSION

A marketing mix is critical for the success of healthcare services. Service Marketing Mix is significant in today's diagnostic industry and is the most incredible instrument to be creative. All the services and marketing mix components are consumer-centric. Therefore, all elements of the 7Ps of the service marketing mix are crucial in delivering quality care and achieving patient satisfaction. The relevance of each component may vary depending upon the type of lab, whether chain lab or standalone lab. Newer diagnostic modalities and advanced technology are creating more dependence on pathological services. Test packages and algorithm-based reflex testing can redefine diagnostic centers' services and significantly reduce the price per test. The marketing team of

6. REFERENCES

1. Indiabudget Available from: https://www.indiabudget.gov.in/economicsurvey/doc/vol2chapter/echap09_vol2.pdf [cited 6/4/2023]
2. Niti [cited Aug 28, 2022]. Available from: https://www.niti.gov.in/sites/default/files/2022-02/Annual_Report_2021_2022_%28English%29_2202_2022.pdf.
3. Plebani M. (2015). Clinical laboratories: production industry or medical services? *Clin Chem Lab Med*, 53(7), 995-1004. doi: 10.1515/cclm-2014-1007, PMID 25405721.
4. Ajotikar VM. (2014). *Int J Innov Res Adv Stud (IJIRAS)*, 3(5, May) 2016.
5. Singhal M. (2022). Praxis report Diagnostics: unravelling the future- <https://www.praxisga.com/>; 2022-.
6. Ibef Available from: <https://www.ibef.org/industry/services.aspx> [cited 6/4/2023].
7. Strom CM. (2012). Changing trends in laboratory testing in the United States: a personal, historical perspective. *Clin Lab Med*, 32(4), 651-664. doi: 10.1016/j.cll.2012.07.003, PMID 23078665.
8. Nabl-India Available from: <https://nabl-india.org/nabl/index.php?c=searchlab&m=index&Itemid=177> [cited 6/4/2023].
9. Siripipatthanakul S, & Chana P. (2021). Service marketing mix (7Ps) and patient satisfaction in clinics: a review article. *Int Trend Sci Res Dev*, 5(5), 842-850.
10. Bahador MHH. (2019). The effect of marketing mix on organizations performance. *Ist Strategic Management Conference*. Vol. 2019; 2019.
11. Idris J. (2021). Marketing Mix 4Cs: impact on small and medium entrepreneurs (SMEs) marketing performance. In: *Proceeding of the 8th International Conference on Management and Muamalah*; 2021. p. 221-226.
12. Kovač I, Palić M, & Tolić M. (2021). The importance and significance of the marketing mix elements in a fashion retailing. *Inter EU law east: journal for the international and European law, economics and market integrations*, 8(1), 15-38.
13. Sreenivas T, Srinivasarao B, & Srinivasa Rao U, India A. (2013). An analysis of marketing mix in hospitals. *Int J Adv Res Manag Soc Sci*, 2(4), 187-207.
14. Abedi G, & Abedini E. (2017). Prioritizing marketing mix elements' effects on patients' tendency to the hospital using analytic hierarchy process. *Int J Healthc Manag*, 10(1), 34-41. doi: 10.1080/20479700.2016.1231435.
15. Marketing and the 7Ps: A brief summary of marketing and how it works. (2015, Marketing and the 7Ps;2015).
16. Prasetyo A, & Prihatiningtyas S. (2021). Strategy for Application of Marketing Mix (4p) in Marketing of Batik Natural Coloring Blessings Mojo. *Multidiscipline International Conference*. Vol. 1(1); 2021, December. p. 43-50.
17. Işoraité M. (2016). Marketing mix theoretical aspects. *Int J Res Granthaalayah*, 4(6), 25-37. doi: 10.29121/granthaalayah.v4.i6.2016.2633.
18. Kotler P, & Armstrong GM. (1989). *Principles of Marketing*. ISBN: 9780137053605. Prentice Hall.
19. Cengiz E, & Yayla H. (2008). The effect of marketing mix on positive word of mouth communication: evidence from accounting offices in Turkey. *Innovative marketing*; 2008.
20. Palmer A. (2004). *Introduction to marketing: theory and practice*. Oxford University Press.
21. McCarthy EJ. (1964). *Basic Marketing: A Managerial Approach*. rev ed. Homewood, IL: R.D. Irwin Publishing.
22. McCarthy EJ, & Perreault WD. (1987). *Basic Marketing: A Managerial Approach*. 9th ed. Homewood, IL: Irwin Publishing.
23. Philip K, & Armstrong G. (1989). *Principles of Marketing*. 4th ed. Englewood Cliffs: Prentice Hall.
24. Culliton James W. (1948). *The management of marketing costs*. Boston: Division of Research Graduate School of Business Administration Harvard University.
25. Borden NH. (1964). The concept of the marketing mix. *J Advertising Res*, 4(2), 2-7.
26. Khan MT. (2014). The concept of marketing mix and its elements. *International journal of information. Bus Manag*, 6(2), 95-107.
27. Möller K. (2006). The Marketing Mix Revisited: towards the 21st Century Marketing by E. Constantinides. *J*

a diagnostic center should take cognizance of these facts and create an appropriate marketing mix strategy suited for their organization. Diagnostic services are not just for consumers who require tests, but creating the desire in healthy people for health checkups is also now the job of the marketing team of diagnostic labs.

4. AUTHORS CONTRIBUTION STATEMENT

Dr. Ashish Sahdev conceived and presented the idea to Dr. Sudipta Sen Gupta. Dr. Ashish did the literature review, and Dr. Sudipta supervised the process. Dr. Ashish & Dr. Sudipta discussed the methodology, and both authors contributed to identifying the important articles relevant to the study. Finally, all authors discussed the results and contributed to the final manuscript.

5. CONFLICT OF INTEREST

Conflict of interest declared none.

- Mark Manag, 22(3-4), 439-450. doi: 10.1362/026725706776861181.
28. Rafiq M, & Ahmed PK. (1995). Using the 7Ps as a generic marketing mix: an exploratory survey of UK and European marketing academics. *Mark Intell Plan*, 13(9), 4-15. doi: 10.1108/02634509510097793.
 29. Goi CL. (2009). A review of marketing mix: 4Ps or more? *Int J Mark Stud*, 1(1), 2-15. doi: 10.5539/ijms.v1n1p2.
 30. Booms BH, & Bitner MJ. (1980). New management tools for the successful tourism manager. *Ann Tourism Res*, 7(3), 337-352. doi: 10.1016/0160-7383(80)90027-4.
 31. Goldsmith RE. (1999). The personalized marketplace: beyond the 4Ps. *Mark Intell Plan*, 17(4), 178-185. doi: 10.1108/02634509910275917.
 32. Grădinaru C, & Toma SG. (2017). The extended marketing mix: the case of el celler de Can Roca. *Contemp Econ*, 2(3), 219-227.
 33. Catana S, & Toma SG. (2021). Marketing mix in healthcare services. *Ovidius Univ Ann Econ Sci S*, 21(1), 485-489
 34. Dimitrievska V. (2020). *Health Marketing*. doi: 10.1179/175330310x12918040319658.
 35. Purcarea VL. (2019). The impact of marketing strategies in healthcare systems. *J Med Life*, 12(2), 93-96. doi: 10.25122/jml-2019-1003, PMID 31406509.
 36. Thomas, R. K. (2008). *Health Services Marketing A Practitioner's Guide*. Springer Science+Business Media. doi:10.1007/978-0-387-73606-8
 37. Thomas A, Menon A, Boruff J, Rodriguez AM, & Ahmed S. (2014). Applications of social constructivist learning theories in knowledge translation for healthcare professionals: a scoping review. *Implement Sci*, 9(1), 54. doi: 10.1186/1748-5908-9-54, PMID 24885925
 38. Doyle C, Howe C, Woodcock T, Myron R, Phekoo K, McNicholas C, et al. (2013). Making change last: applying the NHS institute for innovation and sustainability model to healthcare improvement. *Implement Sci*, 8(1), 1-1
 39. Siripipatthanakul S, Phayaphrom B, Nurittamont W, & Chana P. (2021). Effect of the service marketing mix (7Ps) on patient satisfaction for clinic services in Thailand. *Int J Bus Mark Commun*, 1(2), 1-12.
 40. Abedi G, Malekzadeh R, Moosazadeh M, Abedini E, & Hasanpoor E. (2019). Nurses' perspectives on the impact of marketing mix elements (7Ps) on patients' tendency to kind of hospital. *Ethiop J Health Sci*, 29(2), 223-230. doi: 10.4314/ejhs.v29i2.9, PMID 31011270.
 41. Khumnualthong P. (2015). The effects of service marketing mix (7Ps) on customer satisfaction and customer loyalty of medical aesthetic clinics; 2015 ([doctoral dissertation] [PhD thesis]. Thailand: University of the Thai Chamber of Commerce).
 42. Bekele B. (2020). The effect of marketing Mix elements on customer satisfaction case study for Wegagen Bank; 2020 ([doctoral dissertation]. St. Mary's University).
 43. Ravangard R, Khodadad A, & Bastani P. (2020). How marketing mix (7Ps) affect the patients' selection of a hospital: experience of a low-income country. *J Egypt Public Health Assoc*, 95(1), 25. doi: 10.1186/s42506-020-00052-z, PMID 32990885.
 44. Pardede JA, & Saragih M. (2020). The correlation between process and physical evidence toward Patient Satisfaction Among Private Hospitals in Medan; 2020.
 45. Hermansen et al. (2015). Models for success in clinical lab outreach. 2015, October;4(6):6.
 46. Hermansen et al. (2016). March survival strategies for laboratory outreach programs- 5. 2016;2:2
 47. Francis P. (2017). Using strategic marketing approaches in lab outreach. *MLO Med Lab Obs*, 49(4), 30-32. PMID 29979008.
 48. Anderson V. (2007). Hospital laboratory outreach: benefits and planning. *Clin Lab Med*, 27(4), 791-805. doi: 10.1016/j.cll.2007.07.007, PMID 17950898.
 49. Anderson VL. (2008). Customer service and its importance in the clinical laboratory. *Lab Med*, 39(4), 197-200. doi: 10.1309/AYKRJTB4EE6WMCW.
 50. Root J. (1990). Laboratory outreach marketing planning for success. *Lab Med*, 21(4), 235-239. doi: 10.1093/labmed/21.4.235.
 51. Beatty MF. (2001). Marketing the rural hospital-based laboratory: building a customer-centered outreach program. *Clin Leadersh Manag Rev*, 15(1), 11-15. PMID 11236189.
 52. Friedberg RC, & Rauch CA. (2007). The role of the medical laboratory director. *Clin Lab Med*, 27(4), 719-731. doi: 10.1016/j.cll.2007.08.001, PMID 17950894.
 53. Etukudoh NS, & Obeta UM. (2021). Patients (clients) satisfaction with medical laboratory services contributes to health and quality improvement. In: Agrawal A, Kosgi S, editors. *Healthcare access*. IntechOpen.
 54. Alealign A, & Belay YA. (2019). Patient satisfaction with clinical laboratory services and associated factors among adult patients attending outpatient departments at Debre Markos referral hospital, Northwest Ethiopia. *BMC Res Notes*, 12(1), 517. doi: 10.1186/s13104-019-4558-8, PMID 31426833.
 55. Berkowitz EN. (1995). Marketing the pathology practice. *Arch Pathol Lab Med*, 119(7), 655-658. PMID 7625911.
 56. Kanina. (2013). Influence of promotion Mix strategies on the growth of customers of pathologists lancet Kenya.
 57. Pravin Subhash Gosavi. (April 2016). A study of marketing practices of owned, hospital and chain diagnostic laboratories in Pune city.
 58. Stros M, & Lee N. (2015). Marketing dimensions in the prescription pharmaceutical industry: a systematic literature review. *J Strateg Mark*, 23(4), 318-336. doi: 10.1080/0965254X.2014.931878.
 59. Thabit T, & Raewf M. The evaluation of marketing mix elements: A case study. *Int J Soc Sci Educ Stud*, 4(4).
 60. Fleming KA, Naidoo M, Wilson M, Flanigan J, Horton S, Kuti MBBS, et al. (2017). An essential pathology package for low- and middle-income countries. *Am J Clin Pathol*, 147(1, January), 15-32. doi: 10.1093/ajcp/aqw143, PMID 28158414.
 61. Ajotikar et al. (2015). Marketing of healthcare services with reference to laboratory services. *J Eng Comput Appl Sci (JECAS)*. 2015. No 1. Vol. 4(6, June). p. 2319-5606. Available from: <http://www.healthians.com> [cited 6/4/2023].
 62. Agarwal A, & Singh MR. (2016). Service Quality and patient satisfaction: an exploratory study of pathology laboratories in Jaipur. *Hosp Top*, 94(2), 23-32. doi: 10.1080/00185868.2016.1146544, PMID 27315561.