

Digital Technology that Enhances Life Quality of the Elderly in Saensuk Subdistrict, Mueang District, Chonburi Province

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ABSTRACT

Objective: This study investigates the factors influencing the use of senior medical transportation services in Saensuk Municipality, Mueang District, Chonburi Province, with the aim of developing effective marketing strategies to meet the needs of the elderly. **Method:** A mixed-method research design employing an explanatory sequential approach was utilized, beginning with quantitative surveys followed by in-depth qualitative interviews to elaborate on the initial findings. **Results:** The study identified that digital tools enhance elderly access to healthcare, social interaction, and essential services, although barriers such as low digital literacy, high costs, and usability challenges persist. Digital communication platforms were found to significantly improve the well-being of elderly users by reducing loneliness and facilitating healthcare access. **Novelty:** This research offers a localized and comprehensive perspective on digital adoption among the elderly in a Thai community, suggesting practical strategies such as implementing digital literacy programs and senior-friendly technologies. It contributes to bridging the gap between technology and elderly care services, offering valuable insights for policy development and service improvement.

INTRODUCTION

According to world population prospects, the elderly or population aged 65 and above is rapidly growing, that is estimated that the global share of the older population aged 65 and above is projected to increase from 10% of the world's population in 2022 to 16% in 2050, which doubles the number of children under age 5 and is almost equal to the number of children under age 12. The United Nations (UN) makes population estimates which indicate that the elderly will account for over 10% of the world's total population, and the fact that the aged population tends to live in poverty is very concerning. As a result, every country needs to prepare plans to respond to such social and economic challenges [1]. As for Thailand, the National Statistical Office of Thailand concluded that Thailand has started to become an ageing society since 2005 with the aged population that amounted to 10.4% of the country's total population, and that Thailand is projected to become a complete ageing society around 2024-2025 [2].

Many countries around the world have formulated plans to address the challenges of an ageing society, i.e., local administrative organizations support the aged population in terms of policy and welfare and collaborate with them in an appropriate or consistent manner according to each area, for example, social security fund systems offering pension funds, health insurance systems, elderly-friendly community promotional campaigns, etc [3], [4]. In Thailand, resource mobilization, human resource development, role

adjustment and enhanced cooperation of organizations and agencies, amendment and revision of rules and regulations, as well as development of healthcare service types and systems are conducted. The Government, communities, and families take on the burden of healthcare, living expenses, and costs of appropriate housing. Nevertheless, Thai elderly people who live in urban and rural areas of Thailand where states of economy are different are faced with disparities in access to healthcare owing to transport limitations, limited awareness of patients' rights, and health-promoting behavior campaigns. *Situation of the Thai Elderly 2016* indicates that the number of elderly persons living alone or living with peers tends to grow; there are approximately 400,000 dependent elderly persons; and the number of elderly persons with dementia tends to increase dramatically, that is, the number of dependent elderly persons will increase to 1.3 million, and there will be 1.4 million patients with dementia within 2 decades. These people desperately need healthcare services [5]

The elderly people living in the Saensuk Municipality area, Mueang District, Chonburi Province account for 15% or 7,138 out of a total population of 46,320. As a result, a senior development center was built in this area as a venue for activities to develop the elderly physically, mentally, and socially, and the city is transformed into the first smart city of Thailand. Local administrative organizations employ technology in developing the communities concretely, viz., the local elderly's security. The pilot project is the Smart Living Project which ensures the elderly's safety and well-being, using the Internet of Thing (IoT) technology collaboratively provided by the Faculty of Engineering, Burapha University, Dell, Intel, and other public and private agencies that are aware of the importance of development and advocacy of such devices and systems. The project also offers elderly healthcare services adopting smart technology, namely a remote-control system that switches on and off lights in houses, emergency buttons provided in case of emergencies, elderly helpline services developed by private agencies, the Device GPS Tracking system designed for emergencies, and Smart Health Kits for conducting medical examinations and collecting health data which are linked into an elderly health record database.

However, it's highly likely that the elderly living in Saensuk Municipality live alone and may be neglected owing to their family's economic status, in particular bedridden patients or those with stroke who have a chance of unattended death. Rueangphueng indicates in her research that the elderly want to be facilitated when contacting municipal officials and need healthcare technology, rehabilitation specialists, activities for seniors, as well as medical transportation services. According to preliminary surveys, it is found that the Saensuk Municipality addresses the needs and doesn't provide services for single seniors or those who live with others family members that are not available on appointment days or cannot find any available parking space at the hospital. Attempts to advance a good understanding of the target group's psychological and behavioral factors and surveys on the marketing mix carried out to enable senior medical transportation services from and to infirmaries in Saensuk Municipality will fully address the needs of the target group which continues to grow. Even though the

project has enhanced the quality of life of a small group of people living in a small area of Thailand, this constitutes a prototypical smart city in accordance with the Sustainable Development Goal 11 which is about making cities and human settlements inclusive, safe, resilient, and sustainable.

Objectives of the research

1. To explore factors that affect decisions on using senior medical transportation services to and from infirmaries located in Saensuk Municipality, Mueang District, Chonburi Province
2. To draw up guidelines on proper marketing plans aimed at providing services that fulfil the needs of the target group

Research hypotheses

1. Demographic, psychological, and behavioral factors affect decisions on using medical transportation services to and from infirmaries located in Saensuk Municipality, Mueang District, Chonburi Province.
2. 7P-service marketing mix factors affect decisions on using senior medical transportation services to and from infirmaries located in Saensuk Municipality, Mueang District, Chonburi Province.

Conceptual framework

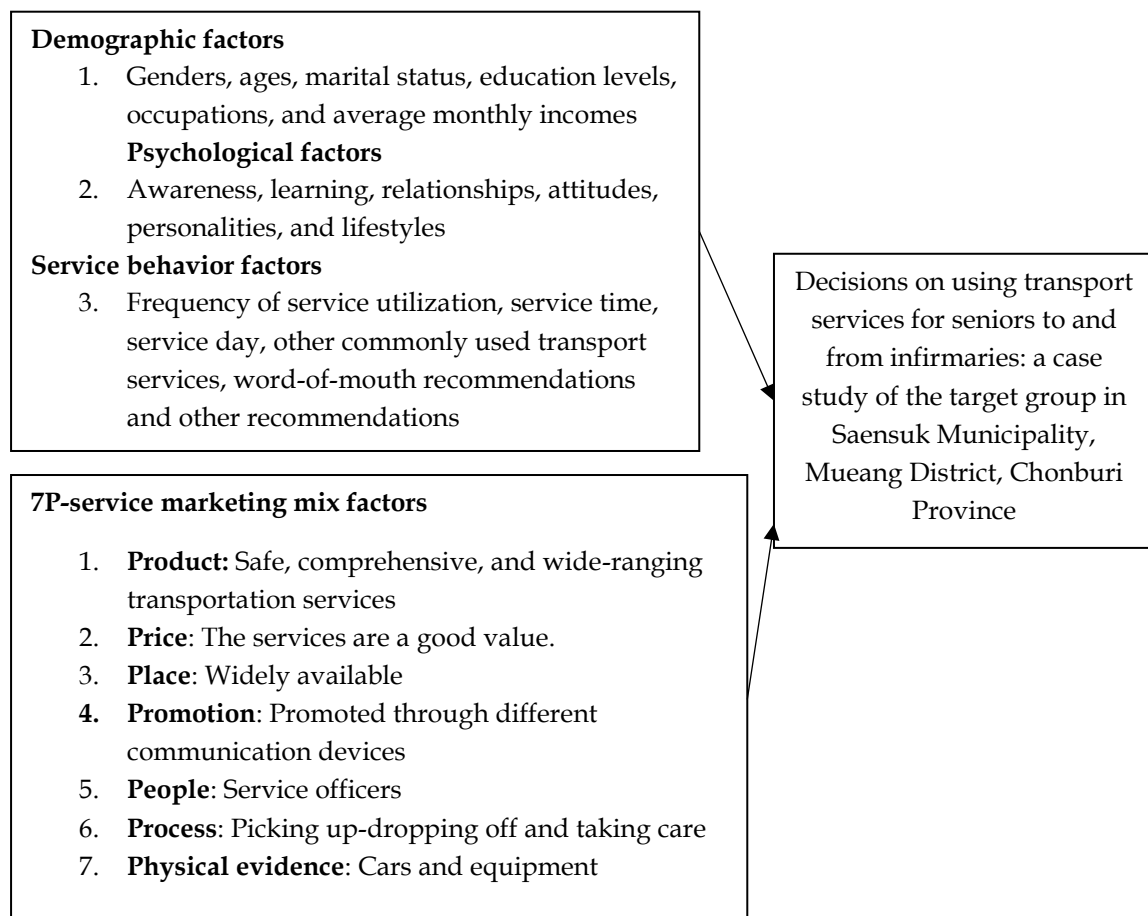


Figure 1. Conceptual framework

Definition of terms

Decisions on using services refer to a thorough evaluation of any characteristics of services and reasonable decision-making carried out at minimum cost in response to customers' problems.

The elderly refer to the population aged over 60 years who lived in Saensuk Municipality, Mueang District, Chonburi Province.

Senior medical transportation services refer to the medical transportation services provided by drivers and personal caretakers who were responsible for picking up and dropping off the elderly and dealing with all activities at hospitals.

Infirmaries refer to health centers, municipality centers, community health centers, and hospitals in Saensuk Municipality, Mueang District, Chonburi Province.

Significance of the study

1. Entrepreneurs who are going to start up senior medical transportation businesses can use the data and research findings as guidelines on decision-making and planning appropriate marketing strategies for their businesses.
2. The application of the research can bring many benefits to senior citizen associations and geriatric caregiver groups relevantly.

RESEARCH METHOD

The research employed mixed method research design and explanatory sequential design, which is a two-phase design. In the initial stage, quantitative research methods, i.e., surveys were conducted, while qualitative research methods, viz. in-depth interviews were carried out in the 2nd stage. Edmonds & Kennedy (2017) categories explanatory sequential designs into 2 subtypes, namely (1) case-selection which aims at the application of the quantitative research (in the initial stage) in selecting the most suitable participants in the qualitative research (in the 2nd stage) using purposive sampling; and (2) follow-up explanations purposefully use qualitative findings (in the 2nd stage) to further explain (initial) quantitative research results.

Sampling techniques adopted in surveys

Multiple-stage sampling techniques were implemented. The 1st step: purposive sampling was used to define study sites where the interviews would be carried out, namely Saensuk Municipality, Mueang District, Chonburi Province. The 2nd step: Cluster random sampling was carried out to divide the population into subgroups each of which have similar characteristics to the whole sample, that is, 134 caretakers, 134 elderly people, and 134 staff members who worked in geriatric care in infirmaries which amount to 402 people in total. The 3rd step: Simple random sampling was conducted, that is, a total of 420 questionnaires were distributed to the sample in the 1st and 2nd steps.

Sample of research

The sample Data were collected from the sample that comprises 3 groups of people, namely the elderly, caretakers, and infirmary staff members that provide geriatric medical services, both male and female, in Saensuk Municipality, Mueang District, Chonburi Province. In the research, caretakers must be over 34 years old because those who were 60 years old (born in 1959), on average, getting married at 25.9 years old.

Therefore, the care takers who were their descendants should be 34 years old and above, and the average life expectancy in Thailand was 76 years.

As to the sample size, a total adult population in Saensuk Municipality, Mueang District, Chonburi Province in 2021 was 27,854 and a total elderly population in Saensuk Municipality, Mueang District, Chonburi Province in 2021 was 8,027. The sample size was determined by calculations using Taro Yamane's formula (Yamane, 1973), given a +5% margin of error, and the sample size was approximated to 400.

Research and survey instruments

The research used questionnaires as research instruments. The outline of the questionnaires is shown below:

1. The 1st part: Checklist questions about demographic, psychological, and behavioral information, i.e., genders, ages, education levels, occupations, average monthly incomes, awareness, learning, relationships, attitudes personalities, lifestyles, frequency of service utilization, service time, service fees, types of previously used transportation services, word-of-mouth recommendations, and other recommendations were included in the questionnaires.
2. The 2nd part consists of questions about service marketing mix modified from Wirtz's and Lovelock's tenets and research [6]. Many scholars have used these factors as variables in research, for instance [7], [8], [9].
3. The 3rd part comprises questions about decisions on using senior medical transportation services to and from infirmaries modified from the tenets and research studies of [10], [11], [12]. The questions in the 2nd and 3rd parts are close-ended questions, in which one answer will be chosen, on a 5-point interval scale:

Level 5 = Strongly agree

Level 4 = Agree

Level 3 = Neutral

Level 2 = Disagree

Level 1 = Strongly disagree

The interpretation criteria of the average level were determined by calculating class intervals to obtain equal class interval width. The interpretation criteria are as follows:

A mean score from 4.21 – 5.00 = Strongly agree

A mean score from 3.41 – 4.20 = Agree

A mean score from 2.61 – 3.40 = Neutral

A mean score from 1.81 – 2.60 = Disagree

A mean score from 1.00 – 1.80 = Strongly disagree

Research instrument quality control

The questionnaires designed for the research were tested for their validity and reliability as follows:

1. Validity test: The questionnaires were tested for content validity including texts, language use, and language appropriateness, and they were improved and revised

so that they had greater validity. The revised questionnaires were tested for validity once again.

2. Reliability test: 20 revised questionnaires were used to collect data in a pre-test from those who were similar to the sample, and the questionnaires were assessed reliability by calculating Cronbach's Alpha (α) which equaled 0.85. The Cronbach's Alpha of 0.85 indicates a good level of reliability, so the revised questionnaires were used to collect data in the research.

Statistics used in data analysis

Descriptive statistics were used to calculate mean and standard deviation. Inferential statistics used in the research included multiple regression analysis where a significance level of 0.05 was used for hypothesis testing.

Independent Variables are listed below:

1. Demographic, psychological, and behavioral factors, namely genders, ages, education levels, occupations, average monthly incomes, awareness, learning, relationships, attitudes personalities, lifestyles, frequency of service utilization, service time, service fees, types of previously used transportation services, word-of-mouth recommendations, and other recommendations
2. 7P-service marketing mix factors, namely Product, Price, Place, Promotion, People, Process, And Physical Evidence of dependent variables, i.e., decisions on using senior medical transportation services to and from infirmaries located in Saensuk Municipality, Mueang District, Chonburi Province

The sample in the interviews

Data were collected from the sample of 10 persons from 3 groups, that is, the elderly, caretakers, and infirmary staff members that provide geriatric medical services, both male and female, in Saensuk Municipality, Mueang District, Chonburi Province.

Research instruments used in the interviews

Semi-structured interviews were conducted using guideline questions which were general questions to offer the interviewees opportunities to fully provide information and to allow the researchers to be flexible while further exploring interesting issues. Previous relevant studies and theories were reviewed to develop questions highlighting their consistency with the research framework. The questions were then submitted to the advisor to verify the content. The questions used in the interviews are in line with the following guidelines:

1. Demographic, psychological, and behavioral factors, namely what is your gender?, what is your age?, what is the highest degree you have received?, what is your occupation?, what is your average monthly income?, what is your daily routine like?, do you know any medical transportation services?, If medical transportation services are available, will you be interested in using one?, do you like medical transportation services?, how often do you go to hospital?, what time do you go to hospital?, what time do you go to hospital?, how do you get to hospital?, how much do you spend on transportation?, if medical transportation services are available, and will you relay or recommend them to others?

2. Service marketing mix factors include (1) Product: what vehicle do you want to take? Please identify your preferable convenience, hygiene, and safety while traveling (2) Price: how much do you pay for a medical transportation service and think it is value for money? (3) Place: how do you get a transportation service? (4) Promotion: what kinds of advertisements do you see? Do discounts, free gifts, and point accumulation affect your transportation service uses? (5) People: what services and skills should a medical transportation service provider have? (6) Physical Evidence: what should the vehicles look like? Does the service providers' dress affect you? (7) Process: If the transportation service comprise such process, are you satisfied with pre-and post-service procedures, customer service centers, and payment methods?
3. Questions about decisions on using medical transportation services: Do you need senior medical transportation services?, where do you find information about senior medical transportation services?, how do you assess choices of medical transportation services while making a decision on using the service?, what affects your decision on using the service?, and what do you want after receiving the service?

Quality control of research instruments used in the interviews

The questions were used in interviews with 2 persons who were similar to the sample to verify the questions' language use in terms of simplicity, and the questionnaires were then revised and used with those who were similar to the sample again. When sufficient data from documents and fieldwork were gathered for the research, preliminary data analysis was carried out by categorizing it according to the outline, drawing up guidelines on data analysis, and finding additional information. After that, more data were collected while re-interviewing the interviewees about the missing issues which were useful for the data analysis. Another data analysis was performed to obtain accurate data. Nonetheless, methodological triangulation was used to ensure the accuracy and reliability of the data obtained from the interviews by going through the following process:

The methodological triangulation of data collection was conducted by considering different methods for collecting data on the same topics through observations carried out by the researcher and 3 volunteer caretakers for elderly people from Saensuk Municipality who took turns observing the elderly's and their caretakers' travel to hospital every week for 2 months and interrogating them. All data were recorded, while documents, i.e., articles, journals, online information, and previous relevant studies showing various aspects were explored and interpreted simultaneously. The obtained information was examined on concepts relevant to the objectives of the research. Also, all significant issues were explored to connect all concepts to draw theoretical conclusions and temporary hypotheses. The concepts were then divided into groups by theoretical sensitivity. All this led to new concepts and grounded theories. These procedures are known as the grounded theory approach introduced [13]

RESULTS AND DISCUSSION

Results

Quantitative research results

The Cronbach's alpha reliability results when the value of Cronbach's alpha ranged between 0 – 1 are shown in Table 1 below:

Table 1. The results of reliability analysis

Measurement	Number of items	Total	α score
7P-service marketing mix factors		29	
Product	3		.91
Price	4		.95
Place	4		.96
Promotion	7		.92
People	4		.97
Physical evidence	4		.97
Process	3		.95
Decisions on using senior medical transportation services	6		.95

Based on the descriptive statistics, it is revealed that the sample of 402 persons consists of 274 females (68.16%), 125 males (31.10%), and 3 LGBTQ+ persons (0.74%). The majority of the sample aged between 34 and 42 years (33.57%), held a bachelor's degree (43.47%), got married (42.78%), worked for infirmaries (33.50%), and earned an income of $\leq 20,000$ Baht a month (28.98%) as shown in Table 2.

Table 2. The number and percentage of the sample's personal data (n = 402)

Personal data	Number of persons	%
Gender		
Female	274	68.16
Male	125	31.10
LGBTQ+	3	0.74
Total	402	100.0

Age range		
34-42 years old	143	35.57
43-52 years old	119	29.60
53-62 years old	40	9.96
63-72 years old	61	15.17
73 years old and above	39	9.70
Total	402	100.0
Education level		
Less than undergraduate degrees	139	34.92
Undergraduate degrees	173	43.47
Higher than undergraduate degrees	86	21.61
Missing values = 4		
Total	398	100.00
Marital status		
Single	121	30.10
Married	172	42.78
Widowed	44	10.95
Divorced / separated	65	16.17
Total	402	100.00
Occupation		
Infirmity staff member	134	33.50
Merchant / business owner	105	26.25
House husband / housewife	65	16.25
Government official / state enterprise officer	43	10.75
Private-sector employee	42	10.50
Others	11	2.75
Missing values = 2		
Total	400	100.0
Average monthly income		
≤ 20,000 Baht per month	113	28.98
20,000 – 30,000 Baht	59	15.13

30,000 – 40,000 Baht	105	26.92
40,000 – 50,000 Baht	88	22.56
>50,000 Baht	25	6.41
Missing values = 12		
Total	390	100.0

As for the results of the multiple regression analysis performed to test for correlation between independent variables, viz., demographic factors, psychological factors, service behavior factors, and 7P-service marketing mix factors, it is found that all tolerance values are above 0.2, and all Variance Inflation Factor (VIF) values are lower than 10 which meet the criteria. This demonstrates that all independent variables are independent of one another and that the independent variables in a regression model are not correlated, so multicollinearity doesn't occur [14].

A multiple regression analysis was performed to test for the correlation between all variables by applying the Enter method. The results of the multiple regression analysis are presented in Table 3 below.

Table 3. The results of the analysis of the impact of the demographic factors, psychological factors, service behavior factors, and 7P-service marketing mix factors upon decisions on using senior medical transportation services.

Independent variables	Decisions on using senior medical transportation services		
	B	SE B	β
Constant	-0.16	0.24	
Demographic factors	0.22	0.07	0.11**
Psychological factors	0.29	0.06	0.15***
Behavioral factors	0.22	0.07	0.11**
Product	0.11	0.14	0.08
Price	0.24	0.10	0.19*
Place	0.36	0.17	0.26*
Promotion	0.73	0.08	0.58***
People	0.26	0.22	0.18
Process	0.61	0.27	0.29*
Physical evidence	0.95	0.21	0.66***

$R^2 = 0.61$, $\Delta R^2 = 0.60$ ($p < .001$). * $p < .05$, ** $p < .01$, *** $p < .001$

Based on Table 3, the statistically significant results show that all independent variables can overall predict decisions on using senior medical transportation services, when $R^2 = 0.61$ which indicates that the demographic factors, psychological factors, service behavior factors, and 7P-service marketing mix factors positively affect 61% of the sample's decisions on using senior medical transportation services.

Each variable was examined, and it is revealed that the demographic factors, psychological factors, service behavior factors, and the Price, Place, Promotion, Process, and Physical Evidence elements of the 7P-service marketing mix factors significantly affect the sample's decisions on using senior medical transportation services ($p < .05$). The Physical Evidence element of the 7P-service marketing mix factors has the highest β value ($\beta = 0.66, p = .000$), followed by the Promotion ($\beta = 0.58, p = .000$) and Process ($\beta = 0.29, p = .03$) elements, respectively. While the Product ($\beta = 0.08, p = .42$) and People ($\beta = 0.18, p = .23$) elements don't affect the sample's decisions on using senior medical transportation services.

The abovementioned analysis leads to the results of hypothesis tests as shown below in Table 4.

Table 4. Results of hypothesis tests

Hypotheses	Results
The demographic, psychological, and behavior factors that affect decisions on using senior medical transportation services from and to infirmaries in Saensuk Municipality, Mueang District, Chonburi Province	The hypothesis is accepted.
The 7-P service marketing mix factors that affect decisions on using senior medical transportation services from and to infirmaries in Saensuk Municipality, Mueang District, Chonburi Province	The hypothesis is partially accepted.

Qualitative research results

The demographic, psychological, and behavior factors and 7-P service marketing mix factors affect marketing planning for senior medical transportation services from and to infirmaries in Saensuk Municipality, Mueang District, Chonburi Province as detailed below:

1. Demographic, psychological, and behavior data

The interviewees consisted 5 males and 5 females, aged between 34 – 84 years, held at least a bachelor's degree, 7 of whom were married and 3 of whom were single, worked as government officials, private employees, business owners, and medical staff members in infirmaries, received an average monthly income of 20,000 – 50,000 Baht, classified as people with the following personality traits: trusting, direct, considerate, agreeable, respectful, gentle, capable, orderly, duty-bound, success-oriented, disciplined, careful, duty-oriented, routine-oriented, action-oriented, sufficient, and self-sufficient.

The interviewees' frequency of hospital visits: 1 – 6 hospital visits per month, most of them went to hospital in the morning or according to hospital appointments, treatment

cost ranged from 300 – 1,000 Baht, and they drove their personal car to hospital personal car, accompanied by their children or spouses, or hired some long-time acquaintances to accompany them to hospital.

6 of the interviewees (using infirmaries in Chonburi Province and Bangkok) know and understand about senior medical transportation services, like the services and tend to use them, find the service costs high, think that the services presented users' positive images, and need to find and compare information before making decision on using the services. 4 of the interviewees (2 elderly people and 2 caretakers who used only infirmaries in Chonburi Province) do not know about the senior medical transportation services.

All the interviewees who worked for infirmaries think that the elderly and caretakers need such services based on their observations of recurring problems, that is, late arrival, missed appointments owing to transportation issues, and lacks of caretakers while receiving treatment at infirmaries. All the interviewees who worked for infirmaries reckon that the infirmaries should provide the staff with information and raise an awareness of senior medical transportation services, both delivered by their infirmaries and others. If such services are available in Saensuk Municipality, they will recommend them to the elderly and caretakers.

2. Opinions on the 7-P service marketing mix

As for the Product element, 8 of the interviewees think that senior medical transportation services should be comprehensive (including picking up, dropping off, taking care of all activities at hospitals, and concluding information for the customers). Also, 2 of the interviewees believe that it is not necessary to provide comprehensive services as picking up and dropping off services are needed, while abilities safety, trustworthiness, capabilities for managing incidents and coordinating to deal with problems partially affect their decisions on using senior medical transportation services.

As to the Price element, all the interviewees agree that the costs of senior medical transportation services should be determined by service types and distances, and that legitimate receipts should be issued for services rendered. 9 of the interviewees want detailed explanations of service fees, and only one interviewee does not want them.

As for the Place element, all the interviewees think that senior medical transportation services should be widely available through different channels and platforms, i.e., phones, websites, service providers' applications, Line, Facebook, and Instagram that are comprehensive and sufficient for communication, reservation, and payment. Moreover, they think that services providers do not have to response immediately or offer round-the-clock support, except in case of emergencies where customers can contact the service providers through specific emergency contact numbers.

As to the Promotion element, the interviewees are mostly reached by online media, i.e., social media. All the elderly mainly use Line application. 5 of them watch TV news and variety shows, while 5 of them watch news and other programs on the internet and other platforms except TV. Furthermore, all the interviewees are interested in out of home media and think that advertising, PR, personal selling, and direct marketing affect

their decision-making, while only one interviewee thinks that membership, privileges, annual discounts, redemption, and free gifts do not affect his decision-making.

As for the People element, all the interviewees are of the opinion that transportation service officers should undergo training and have general traits, that is, tidy, gentle, and service-minded.

As to the Physical Evidence, all the interviewees think that service cars should be comfortable and clean, easily accessible, and wide-ranging. Besides, service cars for wheelchair users should provide space for wheelchairs or available wheelchairs for customers, and service officers should dress respectably and show some identification in advance.

As for the Process element, all the interviewees think that reservation should be made through convenient channels before receiving the service, and confirmation should be given. During the service, everything should be done in accordance with terms and conditions. After receiving the service, service reports should be given, and service assessments should be carried out.

3. Opinions on about decisions on using senior medical transportation services to and from infirmaries

All the interviewees need and intend to use senior medical transportation services. The researcher had 9 of them use the medical transportation services on a trial basis, not knowing any information, and only 1 of them looked for further information on the service for a short while before receiving the service and compared the obtained information before assessing and selecting options of senior medical transportation services. All the interviewees gave assessments after using the service. If they are satisfied by the service, they will intentionally use the service once again in the future and recommend it to others.

Additional detail about the Promotion element of the 7-P service marketing mix factors which affects marketing planning for senior medical transportation services from and to infirmaries in Saensuk Municipality, Mueang District, Chonburi Province, is shown below:

Based on the results of previous quantitative research, it is found that the top-3 Promotion factors that mostly affect the sample's decisions on using senior medical transportation services to and from infirmaries are namely PR, advertising, and membership with privileges. When the in-depth interviews were carried out to research further, it is revealed that the findings align with the previous research results, that is, all the interviewees think that advertising, PR, personal selling, and direct marketing affect their decisions on using senior medical transportation services. The interviewees know new products and services through advertisements on TV and hosts' PR in TV shows, and they receive information (images, messages, and advertising videos) through social media. When they later become interested in them, they will look for further information using Google which will lead them to the company's websites. They will ask about additional information or make an appointment on the phone or through applications.

As to membership with privileges, i.e., annual discounts, redemption, and free gifts, as well as exclusive privileges granted to service users by business alliances, most

of the interviewees are interested in them. Some of them think that their acquaintances' customer service experience and their service trials are more important than other convincers.

The media that the interviewees are mostly exposed to is online media, viz., social media. They receive information and response through it for 2 – 5 hours a day. All the elderly mainly use Line application, and there are 7-10 large and small chat groups that they become members, and the groups are always active. They send stickers on a daily basis according to festivals, post news, forward stories that they find interesting, make personal and formal appointments through Line. The elderly watch every clips, read every messages, and really believe the news and information, in particular those forwarded by friends. Some elderly people are users of Facebook, Instagram, and YouTube, but they usually look around rather participate in. The non-senior interviewees are exposed to the media through social media as well, and they are always active and responsive. Sometimes, they spend excessive time on social media during daily routines, and they are exposed to and forward news and information, as well as conduct all transactions online.

Half of the interviewees still watch news and variety shows on TV, while the other half watch news and other programs on the internet or other platforms except TV. All the interviewees are also interested in out of home media, that is, roadside signs or billboards.

Discussion

Consumer Behavior embraces the processes involved in consumer decision-making, encompassing the stage from selecting products and services to after purchasing products and services to fulfil their needs, as well as households' and organizations' needs. Customer needs vary in terms of geographical features, demography, psychology, and behavior toward products and services, and they contribute to purchase and consumption of diverse products and services. As for factors that impact senior medical transportation services to and from infirmaries located in Saensuk Municipality, the research findings indicate that even though the sample's demographic, psychological, and behavioral factors are different, they create positive impact upon their decisions on using senior medical transportation services which demonstrates that the citizens of Saensuk Municipality also have the same needs of such services.

The elements of 7P-service marketing mix are different from the general 4P-marketing mix, which consists of Product, Price, Place, and Promotion, in that it also includes elements related to services that consumers can experience. The 7P-service marketing mix is modified to suit service businesses, so it comprises additional 3 elements, namely People, Physical Evidence, Process [6]. Ruensook explored marketing patterns of senior service businesses in Bangkok and found that entrepreneurs of such businesses needed employees with great expertise in geriatric care who received excellent training and development of venues and environment, and they should have marketing communication so that the businesses gained recognition from the target group. Moreover, services of international standard should be provided at appropriate and reasonable rates. Klinwichit et al [15] conducted a research study, entitled

“Development Saensuk Happiness Elderly Community Model (Phase II)” and it is found that there should be activities and services for the elderly, i.e., health promotion or health literacy activities, recreational activities, senior transportation services, senior medical transportation services, and geriatric day care community centers, and that geriatric day care community centers would be of great benefit.

As for service factors that impact senior medical transportation services to and from infirmaries located in Saensuk Municipality, the findings reveal that the sample mostly place importance on the Physical Evidence element in line with Wirtz and Lovelock (2022) who indicated that a limitation of services is the fact that they have one characteristic in nature – intangibility – and that they are abstract products and cannot be touched, but they are presented as performances. Before using the services, customers cannot be evaluated by measurement or tests directly. Therefore, the customers often look for any signs or concrete elements that represent service quality, for example, service officers’ dress, physical features of venues, tools and equipment, etc.

The 2nd element that the sample give importance is the Promotion element. According to Smithikrai, part of customers’ expectations of services was derived from various kinds of PR and advertisements placed by service providers to build up their images or to promote their services.

The 3rd element is the Process element. Challenges in service management for consumers who use face-to-face services lie in carefully designed service procedures, procedures and tools of high standards, service management with strict service quality control, thorough employee training, and automatic operations that replace humans [6].

The Product element of the 7P-service marketing mix does not affect decisions on using senior medical transportation services to and from infirmaries probably because the sample basically expect medical transportation services that include picking up and dropping off services, taking care of all activities at hospitals, and managing incidents and coordinating to deal with problems. All services are offered purposefully, that is, customers and service officers do not interact with one another accidentally or aimlessly. Both parties intend to interact and respond with each other particularly as co-workers in the same organization or networks and customers in an endeavor to deliver service experience which is related to giving commitments on service proposals [16]. Thus, these factors are definitely expected by the sample.

The People element does not affect the sample’s decisions on using senior medical transportation services to and from infirmaries as well. According to Kotler and Armstrong (2020), interaction which occurs during providing services has distinctive characteristics that are different from general social interaction. Such interaction is not dependent on familiarity, so service officers and service users do not need to be familiar with or have known each other. Yet, both parties interact with one another while playing specifically defined roles, and interaction during service deliveries is limited, that is, customer-service officer relationships are controlled by types of services, and they cannot go any further than that limitation.

The results of the interviews stress the impact of the 7P- service marketing mix factors upon marketing planning for senior medical transportation services from and to infirmaries in Saensuk Municipality, Mueang District, Chonburi Province, that is, the services should be safe and trustworthy; reservation should be made through convenient, comprehensive, and sufficiently available channels before receiving the service; confirmation should be given to the customer straight away; services providers do not have to response immediately or offer round-the-clock support, except in case of emergencies where customers can contact the service providers through specific emergency contact numbers; during the service, everything should be done in accordance with terms and conditions; costs and fees of senior medical transportation services should be determined by service types and distances; service cars should be comfortable and clean, easily accessible, and wide-ranging; service cars for wheelchair users should provide space for wheelchairs or available wheelchairs for the customers; service officers should dress respectably, show some identification in advance, undergo training; it is not essential that the service officers are friendly or able to deal any problems; after receiving the service, service reports should be given; legitimate receipts should be issued for services rendered; and service assessments could be carried out.

Mostly, the interviewees are reached by online media, out of home media, advertising, PR, PR, personal selling, direct marketing, and privileges.

Overall, the sample needed and intended to use senior medical transportation services, not finding any further information. They gave assessments after using the service. If they are satisfied by the service, they will intentionally use the service once again in the future and recommend it to others.

The findings align with the research of Kaewkorathr & Thabhiranrak [9] which indicated that the 7P-marketing strategies enable businesses to hold market power and affect the success of the operations of senior service providers in Thailand. Similarly, Chornsawat found that the marketing mix affected customer behavior in senior medical transportation service selection in Bangkok, and all this accord with the research of Ruensook which found that confirmation factors of a marketing model for elderly care services in Bangkok included the following aspects: services, personnel, physical environment, customer relations, channels of distribution, and marketing strategies.

Furthermore, the importance should be placed on internal marketing in terms of physical environment, marketing plans, and procedures in order to foster employee perception. As for external marketing, there should be official websites and applications that provide necessary information on senior medical transportation services to earn the target group's recognition through advertising, PR, personal selling, and direct marketing while maintaining the continuous interaction between the target group and service officers to establish healthy relationships. Likewise, Anantachart [16] proposed that brands and services are based on the principles of the establishment of relationships with customers by directly providing information to them as giving a commitment to expectant customers before experiencing rendered services, giving emphasis on personal

services based on a particular relationship which maintain service quality that meet the customers' expectations

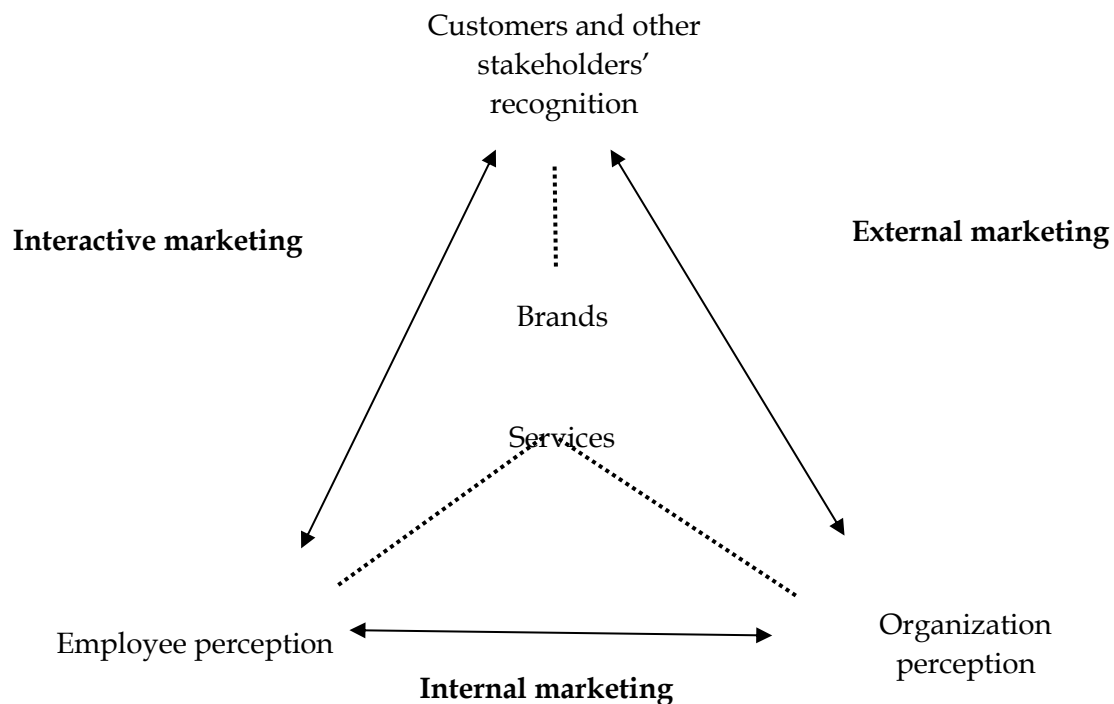


Figure 2. A marketing model and its impact upon the recognition of brands and services

The interviewees needed and intended to use senior medical transportation services, received information from previous service users in Bangkok, had high expectations for their direct experience, and received information through PR and advertisements in alignment with Smithikrai who found that customer expectations for services were affected by 4 major sources, namely personal needs, word-of-mouth recommendations, experience, and PR and advertising.

Besides, the research findings show that information from acquaintances who were previous service users and experience from trials were considered significant in line with Anantachart [16] who proposed that decisions on using any services were intangible, so consumers needed to depend on previous service user' experience or their own experience gained through trials. However, careful consideration should be given to the principles of quality management, personal services, and relationships which could be applied as guidelines on operating service businesses that need to promote long-term brand image.

As to the target group, i.e., the elderly, the research results demonstrate that they are mainly on social media in line with the study conducted by Chewasopit which revealed that behavior of the Thai elderly changed since their subjective ages were lower than chronological ages. Also, Mahidol University (2019) and Foundation of Thai Gerontology Research and Development Institute (2020) found that the elderly are mostly exposed to online media and that the elderly daily spent a maximum of 5 hours

on social media which demonstrated that the elderly increasingly used social media to satisfy their various needs such as communication, information updates, research, and entertainment. This aligns with the research conducted by Topothai which revealed that the elderly could use social media to study, update with new information, broaden knowledge, research interesting issues, communicate, entertain themselves, gain economic benefits, brainstorm, and cooperate with others. Also, Intage (Thailand) Co., Ltd. found that social media, e.g., Facebook and Line were so popular among the elderly that they served as their main information sources. They always seek new products, particularly special products and services for seniors. Moreover, they tended to try new brands and new things and accepted increasing expenses as long as those products and services met their different needs.

CONCLUSION

Fundamental Finding : This study highlights that Physical Evidence, Promotion, and Process elements of the 7P-service marketing mix are critical factors influencing the success of senior medical transportation services in Saensuk Municipality. Comfortable, well-equipped vehicles and professional service officers, coupled with strategic promotion and well-managed service processes, significantly enhance consumer trust and service satisfaction. **Implication :** Entrepreneurs aiming to enter this sector should prioritize developing comprehensive marketing strategies that integrate internal, external, and interactive marketing approaches, ensuring alignment with the behavioral tendencies and preferences of the elderly demographic. Effective communication via modern digital platforms can further strengthen service engagement and loyalty. **Limitation :** However, the study's localized focus on Saensuk Municipality limits the generalizability of the findings to broader populations with different socio-economic and infrastructural conditions. **Future Research :** Future studies should expand the geographic scope, incorporate comparative analyses across different regions, and explore the integration of emerging technologies such as AI-driven service personalization to better cater to the evolving needs of the aging population.

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