Profiling Indonesian Medical Tourists: A Motivation-Based Segmentation Study

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A R T I C L E   I N F O

A B S T R A C T

In the past few decades, the number of Indonesians who travel abroad for medical tourism has increased dramatically. A literature review has indicated that research investigating the underlying motivational factors for Indonesians to travel overseas for medical treatment is still a few. Therefore, this study aimed to segment the Indonesian medical tourists based on push and pull travel motivation constructs. Exploratory factor analysis and cluster analysis techniques were applied to analyze the data. A survey was completed to 192 Indonesians who have had a medical travel experience overseas. The results of this study revealed four push motivational factors and three pull motivational factors. Based on this push and pull factors, three different medical tourist segments were identified: trendy, prudent, and opportunistic segments. The emergence of these three segments would require different approach-es and strategies for tourism stakeholders to serve each segment better.

A B S T R A K

Dalam beberapa dekade terakhir, jumlah masyarakat Indonesia yang berwisata medis ke luar negeri terus meningkat. Literatur menunjukkan studi mengenai motivasi untuk melakukan wisata medis masih belum banyak dilakukan. Penelitian ini bertujuan untuk mengidentifikasi faktor motivasi pendorong dan penarik wisatawan medis Indonesia untuk berwisata medis ke luar negeri. Selain itu, penelitian ini bertujuan memetakan profil para wisatawan menjadi segmen-segmen berdasarkan motivasi untuk berwisata medis. Survei dilakukan kepada 192 masyarakat Indonesia yang pernah mengunjungi luar negeri untuk berobat. Analisa faktor dan analisa klaster digunakan sebagai teknik statistik yang mengolah data untuk mencapai tujuan penelitian. Hasil penelitian mengungkap empat faktor motivasi pendorong dan tiga faktor motivasi penarik untuk berwisata medis ke luar negeri. Dari faktor motivasi pendorong dan penarik ini terbentuk tiga klaster wisatawan medis yaitu wisatawan medis pengikut tren, penuh pertimbangan, dan pencari kesempatan. Ketiga segmen baru yang terbentuk dari hasil penelitian ini membutuhkan pendekatan dan strategi yang berbeda.

1. INTRODUCTION

The advancement of medical science and technology has made consumers well-informed and enables them to seek medical treatments (Cham et al., 2020). Traveling abroad for medical treatment or health service purposes is known as medical tourism. According to Cohen (2008), medical tourism is defined as the activity of a person who travels to another town or country to receive health services while enjoying a vacation, or people who take the benefits while seeking medical treatment. Singapore, Malaysia, Thailand, and South Korea are well-known as medical tourism destinations in Southeast Asia with a high quality of medical services (Lee, Lim & Kim, 2020; Zarei & Maleki, 2019). The Chairman of the Indonesian Surgeon Congress, Paul Tahelele, stated that around six hundred thousand middle to upper classes Indonesians had traveled over-seas to seek medication (Dhae, 2014). Indonesia Services Dialog (ISD), an organization that provides a dis-cussion forum about the services sector in Indonesia, recorded that the number of Indonesia who seeks medi-cation abroad experienced an increase of almost a hundred percent in the last ten years (Sulaeman, 2018). Data from iGATE RESEARCH, a marketing research company,

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reveals five countries that are viewed as the most prominent medical tourism destinations in Asia, namely Singapore, Thailand, South Korea, Malaysia, and India. Indonesian citizen is included in the top arrivals and spending in Singapore, South Korea, Malaysia, and India. Data from the National Health Care Group International Business DevUnit (NHG-IBDU) of Singapore shows that fifty percent of international patients who seek medication in Singapore are Indonesians (Sulaeman, 2018). A market analysis done by the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) in 2007 illustrates that most medical tourists in Malaysia are from Indonesia. Similarly, Frost and Sullivan show that in 2010, sixty-nine percent of total medical tourists visiting Malaysia came from Indonesia. A study conducted by Yeoh, Othman, and Ahmad (2013) found that seventy two-point twenty-one percent of international patients in Malaysia come from Indonesia. The majority has been seeking medical treatment in Malaysia.

A literature review has indicated that research examining Indonesian's motivation to seek medical treatment and other medical services abroad is rare. Therefore, this research tries to research this motivation by adopting the push and pull factors as its theoretical framework. According to Pesonen (2011), push factors are the intrinsic attributes that motivate tourists to travel, while pull factors are the destination attributes that decide the chosen travel destinations based on how well-matched that destination attributes with the needs received from the push factors. Through push factors, we can identify what motivates the Indonesians to seek medical treatment abroad. In contrast, pull factors can give information on what attracts the Indonesian to seek various medical services in some destination countries. In addition to identifying medical tourism motivation, profiling the tourists based on the motivation would be more comprehensive to understand Indonesian tourist behavior. This segmentation aims to figure out each segment's characteristics to help service providers understand what their aimed market segment wants.

2. THEORETICAL FRAMEWORK AND HYPOTHESES
Medical Tourism
According to Cohen (2008), medical tourism is an activity done when someone wants to go to another city or country to receive medical treatments while enjoying a vacation or someone who takes the opportunity while being treated. Gupta (2004)

defined medical tourism as a medical treatment provided for a patient that collaborates with the tourism industry. The private medical treatment sector usually facilitates this process by involving the private and public sectors of the tourism industry. Medical tourists will get surgery or medical treatment while also get to live in the visited destinations. Tham (2018) explained that medical tourism is characterized by (1) the destination is a place that is far from home, (2) health as an important motive, (3) done with a way of vacation.

Connell (2013) explained that medical tourism is a common term used in many cases in which improving the health condition is the main purpose of the trip. Medical tourism involves more invasive procedures and various medical check-ups than a passive procedure with relaxation therapy methods. Therefore, medical tourism is directed toward treatments such as beauty surgery, heart surgery, and hip or knee replacement. Cormany and Baloglu (2011) also explained that medical tourism is a term used to show someone's cross-border travel behavior that needs big or small surgery, beauty care, and dental care. Preventive medical services like a medical check-up and health screening procedure are also included in medical tourism (Heung, Kucukusta & Song, 2011). This medical tourism concept is different from what is often referred to as wellness tourism. Tham (2018) defined wellness tourism as tourism that often includes a service package offered by the tourism service provider, which consists of comfortable accommodation, physical fitness center, beauty treatment, healthy diet, relaxation, meditation, and other mental activities. So, it can be concluded that medical tourism is related to physical health treatment, while wellness tourism is related to mental health. This research will aim more for medical tourism. The tourists look for medical treatment such as a medical check-up, health screening procedure, beauty surgery, dental care, health surgery, certain viruses' treatment, hip or knee replacement, and any other medical treatment process.

Travel Motivation
One of the most commonly used concepts in tourism research is the motivation concept (John & Larke, 2016). Crompton (1979) also acknowledged that understanding motivation factors that influence travels dolly helps understand the tourist. Tourists' motivations cover a wide area and are well-proven in showing a correct and certain fact in tourism research. Motivation is a pushing force inside an

individual that pushes him/her to act. This pushing force is created by pressures from unfulfilled needs (Schiffman & Kanuk, 2015). Motivation can be considered a selective and preferential aspect of certain behavior responsible for explaining an individual's actions (Lee & Spisto, 2007).

Maslow's hierarchy of needs is the most commonly adopted motivation theory in the literature. According to Maslow (1970), motivation is defined as a 'reason' that underlies an individual's act. Maslow also states that an individual's motivation to do something can be divided into five levels based on their hierarchy of needs: physiological, safety, love and belonging, esteem, and self-actualization. While Maslow's theory contributes much to the motivation theory, the push and pull factors motivation theory is the most commonly adopted theory to identify tourists' motivation in a tourism context. Push and pull motivation theory is the main concept in tourists' motivation literature (Pesonen, 2011). John and Larke (2016) contend that despite various theoretical perspectives adopted to examine tourist motivation, the push and pull factors are still the core in the tourism literature review.

Push and Pull Factors in Medical Tourism
There were three previous studies as references in analyzing the push factors in medical tourism (Laesser, 2011; Jananto & Roebianto, 2015; Khan et al., 2017). Laesser (2011) found that the push factors in medical tourism could vary greatly, such as: want to treat and increase their beauty; enjoying the comforts; taking a break and relax; challenging and pushing themselves; to end a life phase; sparing some time for themselves; actively moving; going out of their daily routine; seeing and experiencing something new; socializing with new people; adding new experiences; spending time with family; experiencing something new; and having a prestigious trip.

Different from Laesser (2011) that aimed more at the pushing force of the tourists' needs and desires, the research conducted by Khan et al. (2017) focused on tourists' feelings towards about what is available in their origin country, such as dissatisfaction with the treatment price, in which the treatment price is considered too expensive or what they get is not as expected before; lack of trust to the medical services, in which the trust factor for the available services is considered low, so they want to search for other options; a past bad experience, giving a traumatic feeling and a feeling of refusal of getting the same experience again; and

dissatisfaction with the type of available treatment, in which the available treatment's type is considered as not the most up to date and is incomplete. Further, Jananto and Roebianto (2015) explained that medical tourism's push factors could come from two sources. The first is the social or external factor. The trend, prestige, public opinion, reference from relatives, and the doctor and hospital referral in Indonesia affect a person's decision to do medical tourism. The second one is from the internal factor that consists of the tourists' medical treatment needs and the perception and expectation of the destination country's medical treatment.

Moreover, much research has been completed in examining the pull factors that motivate travelers to take medical tourism (Musa, Thirumoorthi & Doshi, 2012; Jananto & Roebianto, 2015; Fetscherin & Stephano, 2015; John & Larke, 2016). Musa et al.'s (2012) study research found that pull factors emerged were: 1) excellent medical service, including a good track record of the medical services, personal touch by the doctor, convenient clinic or hospital service hours, specialized customer service, leading medical services, various medical services are available, safety and security are guaranteed, a popular destination for medical treatment, credit card payment facilities available; 2) value for money, including cutting-edge medical facilities, get the value for money from the medical treatment, modern medical treatment; 3) religious factor that is related to the availability of halal foods and the facilities offered for religious practice 4) cultural similarity that relates to the short distance from the origin country and similarity in food; and 5) supporting service, including good transportation services and the ease of immigration permit.

Similar to Musa et al. (2012), Jananto and Roebianto (2015) found that there were three pull factors in medical tourism, namely: 1) medical attribute that refers to the sophisticated facilities and medical equipment, friendliness and professionalism of the doctors and paramedics, fast services process and medical treatment, a variety of the medical treatments are available, and medical specialization in handling certain diseases; 2) practical consideration, including affordable accommodation, good facilities and infrastructure, easy to communicate with the doctors, paramedics and local citizens, the similarity of language and culture, and have a short distance to the origin country; and 3) leisure and entertainment, which include the availability of shopping center, cultural site, restaurant, café, bar, and other entertainment places.

Meanwhile, according to Fetscherin and Stephano (2015), pull factors of medical tourism revealed in their study were: 1) country environment, in which the destination country has a low level of corruption, has a similar culture and language with the origin country, the economy is relatively stable, safe for travelling, has a positive image and has a stable exchange rate; 2) tourism destination, in which the destination country is an interesting tourist destination, popular tourist destination, has many cultural or natural attractions, is an exotic tourist destination, and has comfortable weather; 3) medical tourism costs, includes low travel costs, low accommodation costs, low medical costs, affordable flight costs and low health care costs; and 4) facility and services, including quality medical care and materials, hospitals and medical facilities with high standards, experienced doctors, trained doctors, doctors with international reputation, staff and doctors with international certification, medical facilities and hospitals with good health care indicators, the presence of doctors who will be recommended to family or friends, hospitals and leading medical facilities, friendly staff and doctors, overall have a positive image of medical tourism, known to has sophisticated medical equipment, hospitals and medical facilities that are internationally accredited, the existence of educated doctors internationally, there are hospitals and medical facilities that are recommended and have high quality in health care.

3. RESEARCH METHOD

This study applied a quantitative approach. The data were collected through a survey employing a purposive sampling technique with these following sample criteria: 1) Indonesians aged minimum of seventeen years old and over; 2) have undertaken medical tourism abroad in the last three years, and 3) a patient who involved in the decision making of the medical trip taken. Snowball sampling was also applied, in which the researcher asked for recommendations from the selected samples. Data were analyzed using multivariate analysis techniques of factor analysis and cluster analysis. The sample numbers in the multivariate analysis can be decided by calculating five to ten times of the variable numbers (Sekaran & Bougie, 2016). In this research, there are twenty-seven variables, which consist of eleven variables that represent the push factors in medical tourism and sixteen variables that represent the pull factors in medical tourism. Thus, the number of samples needed is around 135 to 270 participants.

The questionnaires were distributed both offline and online utilizing the Google form platform. The researcher also contacted the patient who shared their experience of getting treatment abroad through Instagram and established a collaboration with tour and travel agencies that offer medical tourism package and international hospital representatives in Indonesia. Before the survey, a pilot study of 36 respondents was conducted to test the instrument's validity and reliability. There were 207 respondents participated in the survey. After data cleaning, 192 responses could be used for further analysis, showing a 92.7% response rate.

4. DATA ANALYSIS AND DISCUSSION
Respondent Profiles

Data from 192 respondents shows that respondents were dominated by females (61.5%), 21-40 years old (41.1%), and 41-60 years old (38.5%). The majority work as an entrepreneur (37.5%), and their average income per month is around IDR 20,000,000 (43.2%). The majority of respondents stated that the last time going abroad to do medical treatment in 2018 is 35.4%. However, the number is not too big compared to the respondents whose medical treatment in 2019 is 23.4%. Out of the total respondents, 35.9% had traveled abroad more than three times to have medical treatment. Malaysia (45.8%) and Singapura (44.3%) were two major countries as the medical tourism destination. In terms of the medical treatment received, most respondents did medical check-up (48.1%), followed by internal disease surgery (20.3%), and other medical treatment types such as cancer, tumors, and bones. In traveling for medical tourism, most respondents were accompanied by their families (87.5%). Most of the respondents spent three to five days (57.3%) in the destination country to receive medical treatments.

Table 1. Demographic profiles and travel characteristics

Attributes	n	%
Gender		
1. Male	74	38.5
2. Female	118	61.5
Age group		
1. 17-20 years old	11	5.7
2. 21-40 years old	79	41.1
3. 41-60 years old	74	38.5
4. 61-80 years old	28	14.6
Occupation		
1. Student	41	21.4
2. Private Employee	28	14.6
3. Entrepreneur	72	37.5
4. Government Employee	1	0.5
5. Professionals	6	3.1
6. Housewife	35	18.2
7. Others	9	4.7
Average Monthly Income		
1. Less than IDR 20,000,000	83	43.2
2. IDR 20,000,000 – IDR 30,000,000	35	18.2
3. IDR 30,000.001 – IDR 40,000,000	20	10.4
4. IDR 40,000.001 – IDR 50,000,000	14	7.3
5. More than IDR 50.000.000	40	20.8
The last time going abroad for medical treatment		
1. 2019	45	23.4
2. 2018	68	35.4
3. 2017	38	19.8
4. 2016	41	21.4
Frequency of going abroad for medical treatment		
1. Once	64	33.3
2. 2 times	32	16.7
3. 3 times	27	14.1
4. More than 3 times	69	35.9
Destination country		
1. Singapore	85	44.3
2. Malaysia	88	45.8
3. Thailand	5	2.6

Attributes	n	%
4. Korea	4	2.1
5. China	8	4.2
6. Others	2	1.1
Types of medical treatment conducted		
1. Medical check-up	111	48.1
2. Dental care	4	1.7
3. Treatment for aesthetic/beauty (remove wrinkles, eye bags, spots)	13	5.6
4. Internal disease surgery (heart bypass, kidney, liver, lung transplant)	47	20.3
5. Physiotherapy & other special therapies	15	6.5
6. Eye treatment & care (laser eye surgery, cataracts, etc.)	11	4.8
7. Therapy & treatment for fertility (fertility checks, IVF)	9	3.9
8. Others	21	9.1
Who accompanied on the trip to conduct medical treatment		
1. Alone	8	4.2
2. Family	168	87.5
3. Friend	16	8.3
4. Others	0	0.0
Length of stay		
1. Less than 3 days	31	16.1
2. 3-5 days	110	57.3
3. 6-10 days	28	14.6
4. More than 10 days	23	12.0
Note: n= 192		

Factor Analysis

Exploratory factor analysis was employed to collect information about the relationship between some of the push factors variables and the pull factors variables to do medical tourism abroad. Twenty-seven variables were containing 11 push factor variables and 16 pull factor variables. The statistical analysis result shows that 27 variables were reduced and merged into seven factors: four pull factors and three push factors. The newly formed four push factors can explain 66% of the total variants (Table 2), while the three pull factors can explain 61% of the total variants (Table 3).

The first motivation push factor is *Past Negative Experience*, which shows people's doubt about receiving medical treatments in Indonesia because of their past negative experience(s). The second factor is *Health Reasons* because, in this factor, the creator indicator comes from the desire to check their health condition and receiving medical treatments. *Social and Personal Self Fulfilment* represents the third push factor where someone tries to fulfill their own personal desires by considering the opinion, references, and recommendations from their close ones. Meanwhile, the fourth push factor is named *Convinced by the Expert"*, because in this factor the medical tourists have placed their trust on someone else who is an expert in his/her field, or someone who can be used as a reference that the medical tourist becomes convinced enough to do what he/she said.

Table 2. Push factors influencing to medical tourism travel

Factors and Variables		Factor Loading	Eigenvalue	Variance (%)
F1:	*Past Negative Experiences*		2.402	21.836
PS9	Personal negative experience with medical treatment in Indonesia	0.802		
PS10	Others' negative experience with medical treatment in Indonesia	0.764		
PS7	Not satisfied with medical service cost in Indonesia	0.750		
PS8	Does not trust the quality of Indonesian hospitals or paramedics	0.700		
F2:	*Health Reason*		1.968	17.894
PS1	Want to check the personal health condition	0.886		
PS2	Want to receive medical treatment	0.831		
F3:	*Social and Personal Self Fulfilment*		1.825	16.587
PS4	Following the trend of receiving medical treatment abroad	0.805		
PS3	Want to make the personal appearance more attractive	0.714		
PS5	Recommendations from relatives	0.640		
F4:	*Convinced by the Experts*		**1.040**	**9.455**
PS11	The medical services needed are not yet available in Indonesia	0.875		
PS6	Recommendations from doctor or hospital in Indonesia	0.638		

Table 3. Pull factors influencing to medical tourism travel

Factors and Variables		Factor Loading	Eigen-value	Variance (%)
F1:	*Excellent Medical Facilities and Service*		5.062	33.747
PL3	Excellent treatment services and medical facilities	0.842		
PL2	Sophisticated and more modern medical equipment	0.809		
PL4	Professional and trusted doctors and paramedics	0.801		
PL9	The country is famous for its medical treatment	0.719		
PL1	Provision of various alternatives to medical treatment	0.661		
PL8	Treatment costs match with the quality	0.625		
PL6	More guarantee on patients' survivability	0.577		
PL7	Track records & testimonies from previous patients	0.556		
F2:	*Proximity and Similarity*		2.596	17.305
PL11	Affordable flights	0.865		
PL12	Language and cultural similarity	0.845		
PL10	Not far from Indonesia	0.761		
F3:	*Supporting Facilities*		1.558	10.386
PL15	Shopping center available	0.880		
PL16	Interesting tourism objects to be visited	0.879		
PL13	Sufficient local transportation	0.620		
PL14	Adequate accommodation	0.604		

Concerning pull motivation, the first factor that emerged was named as *Excellent Medical Facilities and Services*. In this factor, all medical facilities and services become the attributes that make someone interested in having medical tourism. The second factor reflects the closeness and intimacy, whether, in the distance, language, or culture, and thus the second factor is named *Proximity and Similarity*.

The last pull factor, **Supporting Facilities**, has emerged as participants considered that along with prevalent medical treatment and hospital, the quality of facilities that are available in the destination country, such as transportation access, accommodation services, and shopping center, is also viewed as supporting facilities that could assist participants while their stay in the destination for the treatment.

Cluster Analysis

In this research, cluster analysis was completed after the calculation of exploratory factor analysis. Four factors are created from the push factor's indicators and three new factors from the pull factor. Those seven factors become the segmentation base of medical tourism in Indonesia. After going through

the processing and trial and error using K-Means cluster analysis with 192 respondents' data, the researcher decided that the division of medical tourism in Indonesia into three clusters has the most optimum result.

Table 4 shows the data from the three emerging clusters, which will then be named as *Trendy* segment (n= 83) which represents 44.2% of the total respondents, *Prudent* segment (n= 60) with 31.3% of the total respondents, and *Opportunistic* segment (n=49) which accounts for 25.5% of the total respondents. Table 4 also explains the ANOVA result showing that *the Excellent Medical Facilities and Services* factor becomes the one with the highest value (f = 130,895). Meanwhile, *the Proximity and Similarity* (f = 12,064) and *Health Reason* (f = 12, 106) factors become the two factors with the lowest value.

Table 4. Segmentation of Indonesian medical tourists

Cluster	n	Past negative experience	Health reason	Social and self-fulfillment	Convinced by experts	Excellent medical facilities & service	Proximity and similarity	Supporting services
1	83	-0.30984	0.09286	0.51528	0.39731	0.38712	-0.34481	0.41996
2	60	0.80655	0.32051	-0.08101	-0.48970	0.52186	0.44081	-0.52610
3	49	-0.46279	-0.54976	-0.77363	-0.07336	-1.29474	0.04431	-0.06715
ANOVA results								
(F statistics)		40,696	12,106	35,126	16,067	130,895	12,064	18.639

Cluster 1: Trendy Medical Tourist Segment
With *Social and Self Fulfilment* was found to be the most influential factor, the respondents of this cluster did a medical tour to fulfill and satisfy their desire, where the *Social and Self Fulfilment* factor is shaped from the indicator of the following medical tour trend and want to make their appearance to be more attractive. Other than that, the members of this cluster also pay attention to how their closest ones see their status and appearance, supported by the indicator of recommendation and references from relatives, which influences the decision to take a medical tour abroad. The desire to enjoy their holiday while receiving medical treatment services has also become one of the aims of the first cluster's members, which can be shown through the *Supporting Services* factor, such as shopping center and tourist attraction as well as sufficient transportation and accommodation, which become the second biggest factor. This cluster is dominated by women, 21-40 of age who work as entrepreneurs and students with an average monthly income of less than IDR 20.000.000,-.

Cluster 2: Prudent Medical Tourist Segment
This cluster consists of respondents who have had previous bad experiences in Indonesia, which causes them to choose to do a medical trip abroad to receive more trusted medical services. This can be seen from the *Past Negative Experience* factor that becomes the biggest contributor in this cluster. The *Excellent Medical Facilities and Service*s becomes a factor with the second-highest value, in which a close bond can be seen between the two factors. This cluster members go abroad purely to receive medication and medical treatment after receiving a bad experience in Indonesia. The guarantee of receiving excellent medical facilities and services becomes very important. This cluster is dominated by 41-60 years older women. The majority of the members work as entrepreneurs with monthly income less than IDR 20.000.000-. The members of this cluster tend to have their last trip in 2018 and 2019.

Cluster 3: Opportunistic Medical Tourist Segment
This cluster can have varied respondents, from

teenage to middle age, working as entrepreneurs, students, and even housewives. The majority of this cluster has only received medical treatment abroad once; thus, it can be concluded that this cluster members are not required to be always receiving medical treatment abroad. The biggest factor in this cluster is *Proximity and Similarity*; thus, it can be said that the members of this cluster lack the desire and effort to adapt. The majority of destination country is Malaysia because it is not too far and has many similarities with Indonesia. However, the most dominant factor's value is smaller than the value of the most dominant ones in cluster one and two. The researcher suspects that other factors are not included in the seven factors formed in this research, such as deciding to receive medical treatment and the medical tourism promotion package. This cluster is dominated by women, 20-40, and 41-60 of age who work as entrepreneurs, students, and housewives with average monthly income was less than IDR 20.000.000,-.

Discussion

Medical tourism has been growing rapidly, including in Indonesia. The number of Indonesian people traveling abroad for medical tourism purposes is increasing, reaching almost a hundred percent in the last ten years (Sulaeman, 2018). Push and pull motivational factors drive an individual to take particular tourism activities. According to Pesonen (2011), the push factor is an intrinsic attribute that motivates tourists to go traveling, while pull factors are a destination attribute that decides the chosen tourist destination, based on how compatible the destination attribute with the needs from the push factors. In this study, push factors indicate the internal reason why participants choose to go and do medical treatment abroad, while pull factors offer information about the destination attributes that are attractive in pulling the participants to select a certain country instead of the others as the medical tourism destination.

Findings from the exploratory factor analysis have revealed four push factors and three pull factors that motivate the participants to do medical tourism. *Past Negative Experience* explains the push that comes from the bad experience of the medical tourists' relatives or even themselves when they received the medical treatment in Indonesia, the dissatisfaction with the price of medical services in Indonesia, and also the lack of trust for the paramedic/hospital quality in Indonesia. This shows that there are still some negative points in Indonesia's facility and medical treatment services that make people choose

to seek medical treatment abroad to get better and more reliable medical treatment services. This factor aligns with the research result from Khan et al. (2017), in which the past negative experience gives traumatic feelings and causes them to refuse to experience the same thing again. This factor also includes dissatisfaction with the medical treatment price because it is considered too high or not following the obtained results.

Further, *Health Reason* emerged from knowing about the health condition and doing medical treatment. These two motivations have the highest *mean* score in the respondents' answers results in this research. Therefore, the factor of *Health Reason* can be considered to be strong enough to make Indonesian people choose to have a medical tour abroad. The creation of this factor is aligned with Laesser (2011) and Jananto and Roebianto (2015) that revealed that the desire to treat the health and the needs of medical treatment are the factors that push tourists to do medical tours.

The next push motivational factor is *the Social and Self Fulfilment* factor that shows trend and prestige as the reason to do medical tourism. This factor is aligned with Crompton's (1979), Ryan's (1991), McIntosh's (1977) and Murphy's (1985) findings, in which the prestige is considered as the push factors in medical tourism in which vacation has already become the part of the higher lifestyle and can improve the status or social degree. Hence, following the trend to do medical tourism abroad also affects medical tourists' decision in Indonesia. The desire is also made to make their self-appearance more interesting in which it can make other people's opinions and viewpoints to them better. Reference and recommendation become quite trusted and are two factors that affect people to do medical tourism abroad. The research result of Laesser (2011) and Jananto and Roebianto (2015) also found similar results as the push factors that emerged in this study. That is, Laesser (2011) explained that there was a push to increase self-beauty and do a prestigious trip. Meanwhile, Jananto and Roebianto (2015), who also researched Indonesian people's motivation to do medical tourism, showed that Indonesian people follow the trend to do medical tourism abroad. Relatives' reference is also considered as something that affects the decision to do medical tourism.

The fourth push factor is *Convinced by The Experts*, which explains that some medical treatment services are yet to be available in Indonesia, either because the facilities and the sophisticated equipment are not yet available or because the experts can give certain treatment care are not yet available. With the

existing limitations, doctors and hospitals in Indonesia often reference the patients so they can get better medical treatment services. Therefore, doing medical treatment in a country that already has sophisticated and trusted facilities and medical personnel becomes the taken choice. Jananto and Roebianto (2015) and Khan et al. (2017) in their research explained that the reference from the doctors and hospitals the lack of medical services are summarized as the push factors in medical tourism. The results of push factors from this study are aligned with previous studies of Khan et al. (2017), Laesser (2011), and Jananto and Roebianto (2015).

On the other hand, this result found three pull factors of Indonesian people that attract medical tourism consist of *Excellent Medical Facilities and Service*, *Proximity and Similarity*, and *Supporting Services*. These three pull factors were named in accord with the factor name of the previous studies such as Musa et al. (2012), Jananto and Roebianto (2015), Fetscherin and Stephano (2015), and John and Larke (2016). *Excellent Medical Facilities and Services* are similar to the *Excellent Medical Services* factor from Musa et al. (2012), *Medical Attributes* from Jananto and Roebianto (2015), also *Healthcare Provider Specific* from John and Larke (2016). While in Fetscherin and Stephano (2015) divided this factor into *Medical Tourism Cost* and *Facility and Services*.

Musa et al. (2012) emphasized the *Proximity and Similarity* factor in the *Cultural Similarity* factor that includes the short distance from the origin country and the similarity of food, which is one of the cultural forms. Meanwhile, *Practical Considerations* of Jananto and Roebianto (2015), *Country Environment* Fetscherin and Stephano (2015), and *Destination Specific* of John and Larke (2016) have revealed a point that there is a similarity in culture and language emerging as the push motivating factor for tourists to do medical travel. While in the current research, the affordable flight cost indicator is included in the *Proximity and Similarity* factors, Fetscherin dan Stephano's (2015) included this factor in the *Medical Tourism Cost* factor. It happens because Fetscherin and Stephano (2015) used quite a lot of cost indicators for grouping, so it can make its factor that includes medical tourism cost. The pull motivation theory of Syrakaya et al. (1996) also explained that the common language used is motivating tourists to visit some destination country. With a familiar language, tourists can communicate better and feel more secure when they are in the destination country.

The third pull factor identified in this study is the *Supporting Services*, which align with the *Supporting Services* factor from Musa et al. (2012), *Leisure and Entertainment* from Jananto and Roebianto (2015), Fetscherin and Stephano (2015), *Tourism Destination* and *Destination Specific* from John and Larke (2016). Various facilities in the destination, such as adequate transportations and accommodations and the availability of many tourist spots and shopping centers, have proven to be tourists' pull motivation in the previous research. It also reflects the pull motivation theory in tourism from Syrakaya et al. (1996) and Kim (2008). Based on the pull factors in medical tourism, no significant differences from the previous research were found. It happens because a pull factor is something that attracts someone's interest in choosing a certain destination. The most chosen destinations in this research are Malaysia and Singapore. Musa et al. (2012) r analyzed the medical tourists in Indonesia, and Jananto and Roebianto (2015) analyzed Indonesian people that do medical tourism to Singapore and Malaysia. Therefore, the pull factors in medical tourists are not much different. Even Fetscherin and Stephano (2015) and John and Larke (2016) conducted their studies in different countries, both Malaysia and Singapore are already known globally as medical tourism destinations.

For this study, the segmentation of Indonesian medical tourists was completed by applying cluster analysis based on both push and pull factors newly emerged from the factor analysis calculation. The cluster analysis result is dividing the Indonesian medical tourists into three clusters: *Trendy*, *Prudent*, and *Opportunistic* segments. The first cluster is the ***Trendy* segment**. This segment is similar to the *Tourism Focus* cluster in Kanittinsuttitong (2015) and *Holidaying Medical Tourist* cluster in Wongkit and Mckercher (2013). In this cluster, the medical tourists are doing a non-urgent medical treatment, such as medical check-up and treatment for aesthetic/beauty. In other words, they travel overseas for medical tourism merely to follow the current trend, or just obtain a recommendation from the relatives that persuade them to do so. The availability of accommodation and transportation, shopping centers, and interesting tourism spot become the main consideration to choose the destination, meaning that medical treatment might not be the main reason to travel.

The second cluster is the ***Prudent* segment**. It is similar to the *Medical Focus* cluster in Kanittinsuttitong (2015) and the *Dedicated Medical Tourist* cluster in Wongkit and Mckercher (2013). The medical tourists in this cluster make medical treatment or care as the main goal of their trip; thus, the assurance of getting highly qualified and trusted facilities and medical services becomes their main

consideration. As seen in Table 1, almost half of the respondents chose to travel to Malaysia to have medical treatment. This selection is most likely driven by Malaysia's positive and strong image as a medical tourism destination (Nikbin et al., 2019). The third cluster is the ***Opportunistic segment***. It is similar to *the Opportunistic Medical Tourist* cluster in Wongkit and Mckercher (2013), in which the tourist has never had a plan before to do a medical treatment. However, when they have already in the destination country, they decide to get medical treatment. With most cluster members having only done medical treatment abroad once, it can be concluded that this cluster's members do not always need to go abroad to receive medical treatments. The medical treatment that they receive in another country is not their primary choice, but an opportunity that they took. It also explains why the dominant factors' score tends to be smaller than the most dominant scorer in the first and second clusters, with a guess that there may be some other factors that are not included in the seven factors made in this research. This factor is also supported by Warner (2013), stating that cluster analysis conducted based on the factor analysis result may allow a cluster that did not have any correlation with the existing factors to be formed.

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

It is the closing of the article which reflects the This research revealed four new push factors and three new pull factors for medical tourism. The four push factors for Indonesians to do medical tourism are: *Previous Bad Experience*, *Health Reasons, Social and Personal Self Fulfilment*, and *Convinced by the Experts*. Meanwhile, the three pull factors are *Excellent Medical Facilities and Services, Proximity and Similarity, and Supporting Services*. Following the emergence of these seven factors, cluster analysis statistical technique identified three clusters of Indonesian medical tourists: the *Trendy* segment is the medical tourists who receive a non-urgent medical treatment such as medical check-up and aesthetic treatment, so they follow the trend and recommendation from their relatives as well as the availability of accommodation and transportation, shopping center and interesting tourist attraction are becoming the main appeal. *The Prudent* segment consists of medical tourists who make medical treatment as the main goal of their trip; thus, the assurance of getting highly qualified and trusted facilities and medical services becomes their main consideration. Lastly, *the Opportunistic* segment consists of tourists who have no prior plan of

receiving medical treatment. However, when they already have in the destination country, they decide to get medical treatment. The members of this cluster are not required always to go abroad to receive medical treatment. The medical treatment that they receive in another country is not their primary choice, but an opportunity that they took.

This study focuses on medical tourism that is directed to physical health. Future research could be more focused on wellness tourism directed to mental health such as spa, relaxation, meditation, healthy diet, and other mental activities where the huge potential of Indonesian wellness tourism can be developed. Although the participants were from several regions in Indonesia, the majority of them were from Surabaya. Thus, the researcher suggests that the next researchers widen their geographical grasp by taking respondents from various places in Indonesia. Alike governments in other countries that give full support to the development of respective medical tourism (Heung et al., 2011), the Indonesian government is expected to tighten the certification process for the doctor and paramedic profession so that all medical forces in Indonesia fully understand the treatment procedures. Aside from that, the government could also set regulations on the standard of facilities, equipment, and services to build a medical service place according to its classification. This research shows that previous negative experience and trusted facilities and medical services quality are the main push and pull factors for the Indonesian to have a medical tour abroad. Hospital and health service providers expected to be able to improve the quality of their facilities and services with the availability of adequate equipment and supporting facilities as well as professional medical personnel with a good quality standard so that they can avoid the occurrence of malpractice and unsatisfying services (John & Larke, 2016; Lee et al., 2020).

In addition to improving the quality of medical services and facilities, marketing and branding strategies are also deemed crucial to promote medical tourism. The Indonesian government could learn from the other countries, for instance, the Korean government that has invested in and actively promoted the Korean medical tourism industry since more than a decade ago (Kim, Arcodia & Kim, 2019). The segmentations of Indonesian medical tourists formed in this research can be used to compile medical tourism support packages depending upon the specific characteristics, motivation, and medical treatment sought by each segment.

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