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Identification of the Flow of Innovations in Tourism Related to Aesthetic Medicine⁴

Abstract

Aesthetic medicine is, next to the wellness and spa, one of the most rapidly growing segments of health tourism. Its dynamic growth is closely linked to innovative offers (perhaps better described as “product innovation”). To date, however, there have been no scientific studies focusing on this market. Services in the field of aesthetic medicine are usually discussed descriptively as a subcategory of medical tourism, and innovation in this sector remains unexplored.

In this article we focus on innovation in aesthetic medicine as it pertains to health tourism, using the Delphi method to analyze innovation flow. Twelve experts from the fields of economics and management sciences with backgrounds in innovation and the economics of tourism (including health tourism) were invited to participate in the study. This group included also practitioners. The research was conducted in June and July 2015.

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Our research addresses the current dearth of academic works on aesthetic medicine tourism, and lack of any relevant models of its flow and spread.

Keywords: aesthetic medicine tourism, aesthetic medicine, aesthetic medicine innovation, innovation flow channel

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Introduction

As Europeans age, tourist services in aesthetic medicine are gaining importance. Aesthetic Medicine Tourism has emerged in response to changing social preferences related to improvement of mental and physical aesthetics associated with physical appearance. The success of the medicine tourism sector depends on innovative activities offered by this sector.

In the article we identify the flow of innovation in aesthetic medicine tourism sector, and identify providers of aesthetic medicine tourism services responsible for it. There is limited literature on this topic, and no modeling of its flow and spread. The presented research fills this knowledge gap.

Development of Aesthetic Medicine Tourism

The limited literature that does exist on aesthetic medicine tourism places it within health tourism (combining aesthetic medicine and travel). Tourist services are well-defined in the literature, = however the area of aesthetic medicine services requires further exploration.

Aesthetic medicine is of recent vintage. Its roots are linked to: the creation of the French Society of Aesthetic Medicine (1973) and establishment of the Union International de Medicine Esthetique – UIME (1975) based in Paris. Aesthetic medicine in Poland dates back to the establishment of the Aesthetic Medicine Section at the Polish Medical Association in 1993, whose activities consisted of meetings, conferences and congresses. In 2002 the Graduate School of Aesthetic Medicine was opened, in 2007 the quarterly “Academy of Aesthetic and Anti-Aging Medicine” began publication, and in 2008 a certification program for doctors of aesthetic medicine was launched. In 2010 the Aesthetic Medicine Section became the Polish Society of Aesthetic Medicine and Anti-Aging which, by 2013, had more than 1000 physician members (Polish Association of Aesthetic Medicine).

Aesthetic Medicine deals with patient aesthetics, health, and psychophysical welfare [Ignaciuk, 2009, pp. 223–226]. Use of the adjective “aesthetic” denotes the use of medical procedures and products to target physical attractiveness (beauty), rather than disease

treatment. Individual medical specialties in the “aesthetics” segment often use techniques typical of other medical fields (e.g., drugs, procedures, nutrition, rehabilitation and physical therapy) but with the more narrow primary objective of improving physical attractiveness. Aesthetic medicine practitioners are physicians who use medical methods to meet this objective [Śpiwak, 2012, pp. 69–71]. Secondly, aesthetic medicine also seeks to prevent, treat, correct, and provide rehabilitation for broader patient health issues [Ignaciuk, 2009, pp. 223–226].

Health tourism describes health and leisure needs, as well as the improvement of beauty and well-being [Lewandowska, 2007 pp. 174–190]. Since aesthetic medicine tourism is focused on removing external appearance defects and improving mental state, it is properly understood as a health tourism segment, because it motivates a person to travel [Gaworecki, 2003, p. 38].

The health tourism literature currently does not concern aesthetic medicine tourism, per se [Hunter-Jones, 2003, p. 170; Mika, Ptaszycka-Jackowska, 2007, p. 279; Lubowiecki-Vikuk, 2010, pp. 93–104; Prochorowicz, 2008, p. 133]. In our view, separate classification is warranted because aesthetic medicine tourism lies in between medical tourism, wellness and spa, and spa tourism, without replicating any one of them. For example, it includes improving body appearance through minimally invasive or non-invasive methods, without surgical intervention. This distinguishes aesthetic medicine tourism from other health tourism. The common element in all related segments is the combination of therapy and sightseeing.

Innovativeness of Aesthetic Medicine Tourism

Innovation is connected with the terms “idea”, “invention”, or “change”, “improvement”, “reform” [*Innowacje...*, 2005, pp. 65–66]. It is also referred as a specific tool for entrepreneurs that contributes to starting a new businesses, providing a new quality of services [Drucker, 1985, pp. 35–36]; or introducing a new product, process, system or device [Freeman, 1982, p. 7]. This applies to new applications of old solutions [Rogers, 1962, p. 143] and new solutions leading to developmental changes [Domanowska, 2006, p. 198]. Polish legislation defines innovation as: activities related to the preparation and launching of the production of new or improved materials, products, devices, services, processes or methods, intended to be introduced to the market or for other practical uses [Ustawa, 2005]. Innovation in tourism depends on creating new products and services, including those based on new social services and directions of travel [Damanpour, 2005, pp. 555–590]. It is important to point out that they are based on combining different types of social services and converting them into a commercial tourism product, often in response to changing social preferences.

The combination of aesthetic medicine treatments with tourist services (related to travel and stay) have led to the creation of an innovative tourism product that combines aesthetic medicine services with leisure tourism. It relies on new aesthetic medicine products and new preferences in the field of traditional tourism. The innovativeness of aesthetic medicine services is also illustrated by a rapidly growing pharmaceutical market as well as new pharmaceuticals and medical equipment. The merging of these sectors is also reflected in the mitigation of medical procedures and development of new therapeutic institutions, especially in the private sector. Since innovations in aesthetic medicine can influence the development of tourism, and tourist preferences can influence the search for medical products (and their institutionalization) the development of medicine may be a driving force for the tourism industry, and medical innovation can be a call for action for decision-makers in tourism.

The study of innovation in aesthetic medicine tourism should therefore recognize institutional linkages between tourism and aesthetic medicine. These links are responsible for the flow of information from one sector to another [Nooteboom, 2000]. When traditional boundaries and barriers of institutional linkages are exceeded, the creation of innovation occurs [Garcia-Altes, 2005, pp. 262–266].

Methodology of Research

The Delphi method enables the synthesis of essential knowledge (including implicit one) for the examined subject (Popper), and is used here to identify the directions of the flow of innovations in aesthetic medicine tourism.

Use of an expert panel and the Delphi method is based on four assumptions [Plummer, Armitage, 2007], which are:

- a group of participants (experts) selected based on their expertise;
- the process of multiple interactions (here double) through which expert opinions are exchanged and consensus achieved;
- participant feedback to facilitate interaction and reflection; and
- the opinions of experts that contribute to the solution of a selected problem.

The last step involves analyzing collected research materials using quantitative and qualitative methods [Loo, 2002, pp. 762–769].

The study was conducted in three stages. In the first stage, a team of contractors formulated the research theses from a theoretical analysis of the literature [Nazarko, 2013a, p. 7]. The study was performed using a CAWI questionnaire. The analysis involved 12 economic science experts with a background in innovation and the economics of tourism, including health tourism. Practitioners were also included in the expert team.

The second stage of the study focused on the performance of the first round of the Delphi survey and involved sending the CAWI survey to experts. After receiving completed forms, we performed an aggregated analysis of the results of the first survey round which was also sent to the experts.

In the third stage, experts once again received the research form and, in addition, a graph portraying the collective opinions of all experts participating in the first Delphi survey round. The experts could then change their opinion on a given subject, select new answers or maintain their original response [Rowe, Wright, 1999, pp. 353–375].

The study was conducted in the months of June and July 2015.

The structure of the analysis of the test results

The study identified:

- selected health tourism segments in which innovation would be analyzed;
- specific operators directly involved in the provision of aesthetic medicine tourism services, and their relative roles in this segment;
- entities forming the chain network of providers of aesthetic medicine tourism services that significantly impacted the flow of innovation; and
- the role of different participants in the innovation process.

The significance of service providers in developing aesthetic medicine tourism was performed using a scale of 0 to 5, where 0 means no significance in the provision of aesthetic medicine tourism services, while 5 means the greatest significance in the provision of the aesthetic medicine tourism services.

In each analyzed category the influence of service providers on innovation, the impact encouraging indicator (Ws) was designated (according to the formula) [Nazarko, 2013b, p. 106; Ejdys, 2013, p. 112; Dębkowska, 2013, p. 97]:

$$Ws = \frac{n_{BD} \cdot 100 + n_D \cdot 80 + n_S \cdot 60 + n_N \cdot 40 + n_{BN} \cdot 20 + n_{BZ} \cdot 0}{n} \quad (1)$$

where:

- n_{BD} – number of responses “great significance”,
- n_D – number of responses “big significance”,
- n_S – number of responses “medium significance”,
- n_N – number of responses “little significance”,
- n_{BN} – number of responses “very little significance”,
- n_{BZ} – number of responses “no significance”,
- n – total number of responses.

The index ranges from 0 to 100, and a numerical value above 50 indicates a high degree of significance, which increases the closer it is to an index value of 100. Indicators below 50 indicate a low degree of significance of a given entity, and the lower the indicator value, the lower the significance impact [Nazarko, 2013b, p. 106; Ejdys, 2013, p. 112; Dębkowska, 2013, p. 97].

Entities included in the chain network of aesthetic medicine tourism service providers with a significant impact on innovation have been identified based on the structure of networks of institutional links. Their significance assessment and impact on innovation flow was conducted using a scale ranging from 0 to 5, where 0 means the lack of significance and 5 means a direct role in the flow of innovation in aesthetic medicine tourism.

In each of analyzed categories, the foster index (Wsi) is determined in terms of influence of service providers on the flow of innovation (developed on the basis of: Nazarko [2013b, p. 106], Ejdys [2013, p. 112], Dębkowska [2013, p. 97]):

$$Wsi = \frac{n}{n_{max}} * 100\% \quad (2)$$

where:

n – number of responses,

n_{max} – maximum number of responses.

The index ranges from 0% to 100%, a numerical value above 50 indicates a high degree of significance, and the closer the index value is to 100 the higher the degree of importance. Indicators below 50 demonstrate a low degree of entity importance, and the closer the indicator value is to zero the lower the significance of its impact [Nazarko, 2013b, p. 106; Ejdys, 2013, p. 112; Dębkowska, 2013, p. 97].

According to the value of the WSI index, direct supporting and auxiliary connections have been distinguished.

Direct links clearly affect the flow of innovations to aesthetic medicine tourism service providers. In immediate relation, the value of the WSI index exceeded 50.00%, although the links supporting this relationship have a lesser impact on the flow of innovations. The value of the WSI index ranges from 49.99% to 25.00% as Auxiliary Relationships only marginally affect the flow of innovations. The WSI index value ranges from 24.99% to 1.00% of indications.

Five categories were used to specify the role of different actors in the innovation process: does not play a role, facilitates the diffusion of innovation, ensures the commercialization of innovation, forms the core of innovation, and participates in the creation of innovation flow.

The results permit the role played by aesthetic medicine tourism in innovation to be identified. Operators directly involved in providing aesthetic medicine tourism services have been indicated, and the institutional links occurring in the innovation flow were defined and their role particularized. The types of ties and the flow directions of innovation were also defined.

Results of Research

There are four main health tourism segments. They are spa tourism, wellness and spa, medical tourism, and aesthetic medicine tourism. According to 41.67% of respondents, study of the latter segment should be expanded.

The provision of aesthetic medicine tourism services is dominated by three groups of service providers: private medical offices (power of influence 66.66), spa treatment establishments (power of influence 51.67) and specialized physiotherapy centers (power of influence 50.00). A lower impact was attributed to the services associated with accommodation (power of influence 40.00) and tourism organizers (power of influence 35.00–33.00). The results are presented graphically in Figure 1.

FIGURE 1. The impact of players in the development of aesthetic medicine tourism services

Source: own study based on research results.

Our analysis of institutional links between the service providers in this segment was based on their importance in the flow of innovation, and revealed a complex multi-vector network. We found the strongest linkages between providers of aesthetic medicine tourism services and tour operators. Links between these entities are also directly responsible for the flow of innovation. A detailed analysis of interlinkages indicated the presence of two

internal networks. Each of these networks have shared, separate links that allowed clusters to be identified. Specialized equipment manufacturers, pharmaceutical manufacturers and organizers are the strongest links directly responsible for the flow of innovation in the internal network of aesthetic medicine tourism services providers.

Supporting links within the flow of innovation are ensured by centers for disseminating knowledge, service recipients, providers of accommodations and the human capital of the company. Firms with supporting links are the centers of knowledge creation and suppliers, including the suppliers of specialized equipment and sales agents.

Within the internal network of travel organizers, aesthetic medicine tourism services providers are directly responsible for the flow of innovation. A supporting role in this flow is also played by specialized sale agencies, human capital companies, firms promoting knowledge, recipients of services, and competitors. A complementary role in the flow of innovation is played by accommodation providers and insurance agencies.

The analysis identified types of firms belonging to one network and affecting the flow of innovation in both types of entities. These are providers of accommodation services, centers for the dissemination of knowledge, services recipients, competitors and human capital companies.

FIGURE 2. Institutional relationships in the flow of innovation

Source: own study.

Due to the number of links between institutions in the network, simple single, simple complex, and complex distributed linkages have been identified.

Simple single relationships occurred between two types of providers (aesthetic medicine and accommodation services). Simple complex links occurred through cooperation among several service providers (aesthetic medicine, accommodation, tourist organizing services) whose goals were converging or complementary. In both types of links there is a single direction of flow of innovation.

FIGURE 3. Flow diagram of innovation

Source: own study based on research.

Complex distributed links characterize the entire network. They result from innovation occurring in various fields of activities. In this network it is not possible to determine the dominant direction of the flow of innovation. Figure 3 presents a flow diagram of innovation resulting from institutional links.

Research concerning the role of firms in creating innovation indicates that private medical offices have the highest significance. Hospitals are at the core of innovation. At the stage of commercialization of innovations, an important role is played by spas, clinics and individuals providing aesthetic medicine tourism services. In the chain of diffusion of innovation, the highest level of importance is attributed to hotels and other accommodation facilities, with less importance given to travel organizers and tourist agencies (Figure 4).

FIGURE 4. Entities involved in the provision of aesthetic medicine tourism services and their role in the innovation process

Source: own study based on research results.

The above analysis allows for the assignment of roles to firms in the innovation process provided through individual links in the process (Figure 5).

FIGURE 5. Dominant players in the process of innovation of aesthetic medicine tourism according to the cells of the innovation process

Source: own study based on research.

Conclusions and recommendations

The test results lead to the conclusion that aesthetic medicine tourism is an innovative form of health tourism. The most important role in this form of tourism services is played by aesthetic medicine service providers. The test results lead to the conclusion that the purchase of the tourist product, the core of which is aesthetic medicine, is crucial in the aesthetic medicine tourism.

The flow of innovation in this segment occurs in a complex multi-sectoral network. Within it, the largest impact on the innovation originates from aesthetic medicine service providers (private clinics, health treatment facilities, specialized clinics and physiotherapy). Suppliers of medical services also play a most important role in the first three links of the innovation development process (creation, core, and commercialization of innovation). Accommodation and tourist services providers are responsible for the final link in this process – the diffusion of innovation.

One positive phenomenon in the process of developing innovation in aesthetic medicine tourism is the presence of many actors in the providers' supply chain. The complicated network of institutional entities included in the supply chain can determine the high potential of innovativeness of these services.

The scope of innovation in aesthetic medicine tourism has not yet been tested. We recognize the need for further research to identify the types of innovation that arise in an institutionally complex, multi-vector network of innovation flow. Another potentially interesting research problem involves the innovation system. The practical aspect of the research also requires the identification of indicators of evaluation of innovative activities in this sector.

Notes

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References

- Damanpour, F. (2005), Organizational innovation: a meta-analysis of effects of determinants and moderators, *Academy of Management Journal*, No. 34(3).
- Dębkowska, K. (2013), *Regionalny Foresight Gospodarczy. Scenariusze wzrostu gospodarczego województwa mazowieckiego*, Związek Pracodawców Warszawy i Mazowsza, Warsaw.
- Domanowska, I. (2006), Znaczenie innowacyjności i instrumenty wspierające innowacyjność przedsiębiorstw w kontekście integracji z Unią Europejską, in: J. Szablowski (Ed.), *Zarządzanie innowacjami. Teoria i praktyka*, Wydawnictwo Wyższej Szkoły Finansów i Zarządzania w Białymstoku, Białystok.
- Drucker, P.F. (1985), *Innovation and entrepreneurship: practice and principles*, Harper and Row, New York.
- Ejdys, J. (2013), *Regionalny foresight gospodarczy. Scenariusze rozwoju lokalnego województwa mazowieckiego*, Związek Pracodawców Warszawy i Mazowsza, Warsaw.
- Freeman, Ch. (1982), *The economics of industrial innovation*, F. Ponter, London.
- Garcia-Altes, P. (2005) The development of health tourism services, *Annals of Tourism Research*, Vol. 32(1).
- Gaworecki, W.W. (2003), *Turystyka*, Polskie Wydawnictwo Ekonomiczne, Warsaw.
- Hjalager, A.-M. (2010), A review of innovation research in tourism, *Tourism Management*, Vol. 31(1).
- Hunter-Jones, P. (2003), The role of holiday taking, *Journal of Travel Medicine*, No. 10.
- Ignaciuk, A. (2009), Czy medycyna estetyczna stanowi zagrożenie czy uzupełnienie leczenia uzdrowiskowego, in: *Innowacyjne kierunki rozwoju turystyki uzdrowiskowej i lecznictwa uzdrowiskowego*, XVIII Kongres Uzdrowisk Polskich, Karpacz-Muszyna.
- Innowacje i transfer technologii* (2005), Słownik pojęć, PARP, Warsaw.
- Koźmiński, Cz. (2013), *Zarys turystyki zdrowotnej i uzdrowiskowej*, Wydawnictwo Uniwersytetu Szczecińskiego, Szczecin.
- Łęcka, I. (2003), Nowe (?) trendy w turystyce zdrowotnej, *Prace i Studia Geograficzne*, Vol. 32, Geografia turystyki, Wydawnictwo Uniwersytetu Warszawskiego.
- Lewandowska, A. (2007), *Turystyka uzdrowiskowa*, Wydawnictwo Naukowe Uniwersytetu Szczecińskiego, Szczecin.
- Loo, R. (2002), The Delphi method: a powerful tool for strategic management, Policing: An *International Journal of Police Strategies & Management*, Vol. 25, No. 4.
- Lubowiecki-Vikuk, A.P. (2010), Demograficzne tendencje i ich wpływ na rozwój turystyki i rekreacji w regionie krajów Europy Środkowo-Wschodniej, *Zeszyty Naukowe Wyższej Szkoły Handlu i Usług w Poznaniu*, No. 19.
- Mika, M., Ptaszycka-Jackowska, D. (2007), *Formy turystyki zdrowotnej*, in: W. Kurek (Ed.), *Turystyka*, Wydawnictwo Naukowe PWN, Warsaw.
- Nazarko, J. (2013a), *Regionalny Foresight Gospodarczy. Metodologia i instrumentarium badawcze*, Związek Pracodawców Warszawy i Mazowsza, Warsaw.
- Nazarko, J. (2013b), *Regionalny Foresight Gospodarczy. Scenariusze rozwoju innowacyjnego mazowieckich przedsiębiorstw*, Związek Pracodawców Warszawy i Mazowsza, Warsaw.
- Nooteboom, B. (2000), *Learning and innovation in organizations and economies*, Oxford University Press, Oxford.
- Penc, J. (1999), *Innowacje i zmiany w formie*, Agencja Wydawnicza Placet, Warsaw.
- Plummer, R., Armitage, D.R. (2007), *Charting the New Territory of Adaptive Co-management: A Delphi Study*, *Ecology and Society*, Vol. 12, No. 2.
- Polskie Towarzystwo Medycyny Estetycznej, accessed at: <http://www.rynekestetyczny.pl/20-lat-medycyny-estetycznej-w-polsce> (15.09.2015).

- Popper, R., 33 *Foresight Methods*, <http://rafaelpopper.wordpress.com/foresight-methods/> (2.10.2014).
- Prochorowicz, M. (2008), *Turystyka medyczna nową perspektywą dla polskich placówek służby zdrowia*, in: R. Grzywacz (Ed.), *Turystyka i rekreacja szansą rozwoju aktywności społecznej*, WSiLiZ, Rzeszów.
- Rogers, D.M. (1962), *Diffusion of Innovation*, Free Press, New York.
- Rowe, G., Wright, G. (1999), The Delphi technique as a forecasting tool: Issues and analysis, *International Journal of Forecasting*, No. 15(4).
- Śpiwak, R. (2012), Estetologia medyczna, medycyna estetyczna, dermatologia estetyczna, chirurgia estetyczna, ginekologia estetyczna, stomatologia estetyczna – definicje i wzajemne relacje poszczególnych dziedzin, *Estetol Med Kosmetol*, No. 2(3).
- Szymańska, E. (2013), *Procesy innowacyjne przedsiębiorstw świadczących usługi w zakresie organizacji imprez turystycznych*, Oficyna Wydawnicza Politechniki Białostockiej, Białystok.
- Ustawa z dnia 29 lipca 2005 r. o niektórych formach wspierania działalności innowacyjnej (Journal of Laws of 2005, No. 179, Item 1484).