

# Classification and Conceptualization of Health and Reproductive Tourism Concepts: Greece as an Example

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**Abstract:** The purpose of this article is to study Health Tourism and in particular Medical Tourism in Greece, which is growing rapidly on a global scale. Medical Assisted Reproduction, as Health Tourism, is a pillar of development of the countries where it is practiced, contributing dynamically to the gross domestic product. The methodology of the research was based on the review of the provisions of the Greek legal rules and the most recent international literature. Through the results of the study, the actual dimensions of the definitions of the science of tourism are given and these dimensions are delineated based on contemporary literature and Greek legislation.

**Keywords:** Medically assisted reproduction, Law, Tourism, Greece, Administration, Economy

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## 1. Introduction

Health Tourism and in particular Medical Tourism is a promising field for attracting tourists internationally. Modern international literature has demonstrated that services in medically assisted reproduction is an important branch of management with very promising growth prospects.

Health tourism in the field of medically assisted reproduction, internationally, promises an upward trend in the countries implementing it in order to meet the ever-increasing needs of infertile couples.

In Greece, Health Tourism is a special form of tourism that refers to tourists who choose to travel to another country and is related to prevention, improvement of their mental and physical health and, of course, their long-term treatment. This specific form of tourism can cover the whole range of medical services, but presumably includes medically assisted reproduction, dental care, orthopedic surgery and cosmetic surgery.

Furthermore, reproductive tourism is the application for medically assisted reproduction techniques across national borders by infertile couples. It should be noted that infertility is defined as the failure to achieve pregnancy after attempting sexual intercourse and without protection measures for 12 consecutive months.

## 2. Literature Review

Health tourism (Article 20): Health tourism, which will be dealt with in more detail in this paper, according to Article 20 of Law 4582/2018 (A'208) of Greece, is defined as the special form of tourism, which consists in providing visitors - tourists with high quality services related to the prevention, treatment and improvement of their physical, mental and spiritual health.

Health tourism includes: a.medical tourism, b.dental tourism, c.thermal tourism and d.wellness tourism. More specifically, health tourism is distinguished by: Medical tourism which is defined as the movement of visitors - tourists with health problems or chronic illnesses to the tourist destination of their choice in order to receive health services from primary or secondary health care facilities operating legally, with the aim of preventing, diagnosing or treating diseases and maintaining or improving their personal health.

During their stay in the tourist destination, tourists-visitors combine medical care with leisure, information, transport, guided tours and catering activities for themselves and companions.

Spa - thermal tourism is a special form of tourism providing tourist services in areas, the main characteristic of which is the use of recognized thermal natural resources in special facilities for therapeutic purposes and concerns those who wish to combine rest and recreation with the use of thermal natural resources to improve their physical, mental and spiritual health.

Wellness tourism is a form of tourism in which visitors-tourists enjoy in tourist facilities high quality services including fitness care, aesthetic care, anti-aging, thalassotherapy, healthy nutrition, relaxation, meditation, body care, as well as mental and physical rejuvenation, individually or in groups.

## 2.1 Health Tourism and Medical Tourism: A Theoretical Discussion

To start with, it is important to clarify the concepts of Health Tourism and Medical Tourism. Health tourism is defined as the form of tourism that consumers choose to travel, with the intention of receiving some form of medical procedure or care, within the extended context of the operation of the health care system, both in the public and private sector where it is developed, in terms of its intended purpose (Sarantopoulos, 2014).

More specifically, Health Tourism, is a specific form of tourism in our country, which refers to tourists and is related to prevention, improvement of mental, as well as physical health and of course, their treatment in the long term.

More specifically, this special form of tourism can cover the whole range of medical health services, but presumably it includes 1.dental care, 2.orthopedic surgery, 3.cosmetic surgery and, 4.assisted reproduction. Also, Health Tourism, as it was institutionalized and exists in Greece by Article 20 of Law 4582/2018 (A'208) "Health Tourism", is defined as: "[...] a special form of tourism, which consists in providing visitors-tourists with high quality services related to the prevention, treatment and improvement of their physical, mental and spiritual health. Health tourism includes medical tourism, dental tourism, spa - thermal tourism and wellness tourism" (Greek Parliament, 2018).

Medical tourism can be understood as a subset of the broader concept of patient mobility, which can be divided as follows:

- Temporary visitors to foreign countries. This includes people on holiday abroad who use health services as a result of an accident or sudden illness. Health services for tourists are funded in the European Union (EU) in several ways for occasional or emergency care, private insurance and direct costs through the European Health Insurance Card (EU citizens).
- Long-term residents: There are increasing flows of EU citizens choosing to retire to other countries within and across EU borders, outside their country of origin (Rosenmöller, et al., 2006) and working-age exchanges of citizens within Europe are increasing. These residents may have access to health services financed in various ways through the country of residence, the country of origin, private insurance or private provision. These people are not considered "medical tourists".
- Common borders: Countries that share a common border can work together to provide international public funding for health services from providers in other countries (Rosenmöller, et al., 2006).

Outpatients: These are patients who choose to travel abroad from healthcare institutions using interstate agreements. Usually, these agreements are due to long waiting lists, legal and lack of specialized equipment and doctors in their country of origin. These patients, often travelling relatively short distances and contracted services (both public and private) and are more likely to be subject to stricter safety checks and quality assurances (Lawson & Weinstein, 2002; Glinos & Baeten, 2006). These individuals can be termed "mass" medical tourists, although they receive funding from the government or agency rather than acting as individual clients in the traditional sense.

*Reproductive Tourism (Definition, data):* According to the World Health Organization (WHO), about 15% of heterosexual couples face a medical problem related to their reproduction, namely infertility. According to the Ministry of Health, in Greece, the number of infertile couples is estimated at around 300,000, in the United States around 10 to 15 million, and in Germany close to 600,000. For this reason, every year on 15 June has been established as World Fertility Day and is an information day concerning infertility of couples by official state agencies.

These rates have remained relatively unchanged over decades, at least for the last 20 years, as many studies confirm that 10 to 15% of the general population worldwide has an infertility problem. In the United Kingdom, the percentage of couples who have had an infertility problem has remained unchanged over the centuries, since, according to a study carried out in the nineteenth century, it was observed that 1/6 of couples were unable to procreate, at a rate of 16%.

Several scientific studies have been carried out which have confirmed that 10 to 15% of the world's population is infertile. According to the original study carried out in the United Kingdom in the 19th century, 495 heterosexual couples with a marriage duration of five years and an age range of less than 75 years for women

took part. This first study during the period in question showed that 16,3% of heterosexual married couples had a real infertility problem. In addition, studies of countries such as the Netherlands, France and England have also found that this infertility rate was in the range of 10 to 15 %.

More specifically, according to Hull, et al, (1985), 708 couples in England were surveyed and it was concluded that 1 in 6 couples had a fertility problem, at a rate of about 16%. In a similar study of 1,850,00 women in France, according to Thonneau et al, (1991), in the years 1988 - 1989, the percentage of women who consulted a specialist doctor regarding fertility problems was studied and the conclusion of the study was 14.1%. According to (Snick, et al., 1997) in a survey conducted in Walcheren, Netherlands, with the conclusion of the survey showing that 9.9% of women between the ages of 15 to 45 years sought medical help at least once in their lifetime for infertility issues.

Here, it is worth noting that according to Zegers-Hochschild, et al. (2009): «infertility is defined as the failure to achieve pregnancy after trying (i.e. sexual intercourse) and without protective measures for 12 consecutive months”.

Also, health tourism, as a part of addressing infertility, is referred to the a.domestic and b.international Reproductive Tourism population for individuals who want to improve their health and well-being (Büyükoçkan, et al., 2021). The concept of health tourism has evolved from the medical world to health care tourism and concurrent health tourism (Goodrich, 1993). Goodrich and Goodrich (1987) believed that health tourism destinations not only have beautiful landscapes, but also provide health service infrastructures such as hotel accommodation, water sports and golf. Since 2000, the definition of health tourism has gradually diversified. Ross (2001) defined industry as health tourism and as related activities in which tourists travel from their place of residence to another destination for health reasons for medical treatment. Further, Martin (2009), believed that reproductive tourism exhibits the internationalization of reproduction and childbearing as it has been demonstrated, as a phenomenon in which individuals travel across international borders in order to obtain Medically Assisted Reproduction services. Reproductive tourism is aptly defined as the search for assisted reproductive techniques across national borders (Inhorn, 2011).

Sheldon & Bushell (2009), pointed out health tourism as a type of tourism that can improve the lives and general quality of life of tourists who receive medical treatment, hygiene, beauty, sport/physical fitness, adventure, and of course, experience, although Hunter and Blackburn (2007) believe that the concept of health tourism is absolutely narrow.

On the other hand, the World Tourism Organization (WTO) recommends the separation of the concepts of health tourism and medical tourism.

In terms of resource types, health tourism, can be divided as a.health culture, b.religious experience, 3.hot springs medical care, 4.forest recreation and 5.mountain fitness (Sun, et al., 2022). Different countries, have different unique health tourism resources, such as spa tourism in Thailand, plastic surgery tourism in South Korea and medical tourism in China. Moreover, in terms of the function of health tourism, it can be divided into four types: a.medical practice such as medical tourism, b.leisure adaptation such as wellness tourism, c.physical enhancement such as sports tourism, and d.self-realization such as adventure tourism (Sun, et al., 2022).

Health tourism can be further divided into three forms: a.physical promotion, b.psychological promotion and c.social adaptation (Sun, et al., 2022). In terms of satisfaction for health tourism, health tourism can be divided into three alternative types: a.rehabilitation, b.health continuation and c.health enrichment (Sun, et al., 2022). It is worth noting here that health tourism is an emerging sector in the tourism industry, as in the year 2022, European grants have been approved and disbursed from the Recovery & Resilience (Tourism sector) 2021-2027, amounting to 28.458.000,00€ to the Ministry of Tourism (ID: 6Φ3PH-4ΦM), with the project "SUB3: Health & Wellness Tourism through thermal spring utilization (Health & Wellness Tourism through thermal spring utilization) - Action 16931" and with Code O.P.S. 5153454 for the implementation and monitoring of Health Tourism projects in the coming years. It is therefore, as can be seen, a highly topical phenomenon, Health Tourism. To this end, the Ministry of Tourism has appointed a special working group from its competent organizational units for the implementation of this action by the decision of the Minister of Tourism, No. 625/14.01.2022, which has been published in the "Di@ygeia" program. The "Di@ygeia" Program was established by Law 3861/2010 and aims to achieve the maximum possible publicity of government policy and administrative activity, to ensure transparency and to foster responsibility and accountability on the part of those exercising public authority.

Through a literature review (Sun, et al., 2022), including many studies in health tourism were found. These literature reviews can be mainly divided into three categories. The first category is related to the environment, such as public environmental occupational health and environmental sciences. The second category is related to medicine, such as health science services and interdisciplinary psychology. The third category relates to recreation and management, such as sports and leisure tourism and hospitality management. The main research topics are health tourism, wellness tourism, medical tourism, health and medical tourism.

## **2.2 Medical Tourism: Some Insights**

The first attempt to bring control and order to the whole field of assisted reproduction was made in 2002 with the publication of Law 3089/2002 (A327) "Medical assistance in human reproduction". In this law, an initial focus was attempted on the maximum age limits for women, beyond which assisted reproduction attempts would not be allowed, but without being clearly defined. Since then, articles 1463 to 1474 of the Civil Code have been amended and supplemented, corresponding to the concepts of consanguineous and affinity kinship using genetic material or embryos and the recognition of this child. A reference was made to the identification of the surrogate mother and the procedure for obtaining judicial authorization for the transfer of embryos of foreign genetic material to her. Reference was made to the use of written consent concerning the fate of cryopreserved embryos or gametes in general (ova or sperm). A reference has been made to the concept of anonymity of donors of genetic material (ova or sperm) and, finally, it has been clearly established that it is possible for the paternity of a child resulting from an assisted reproduction attempt to be contested by the former husband of a woman who has undergone an assisted reproduction attempt with another partner, provided that no more than 300 days have elapsed since the publication of their divorce.

One year later, with Law 3305/2005 (A17), a new legal framework was presented and passed in the Greek Parliament, which was one of the best national legal frameworks for assisted reproduction. In its 33 articles, the concepts of human reproduction are clearly defined, such as, what is defined as in vitro fertilization (IVF), homologous and heterologous intrauterine insemination (IUI), microfertilization (ICSI), assisted hatching, what is gametes, what is a zygote, gamete intrafallopian transfer (GIFT), what is gamete and embryo cryopreservation and finally, what is surrogacy. The maximum permissible age for a woman to attempt to procreate through assisted reproduction methods was re-established at the age of 50, in accordance with the legal framework in force until then. The cryopreservation limit on the offered reproductive material was regulated, namely the maximum cryopreservation limit for sperm and testicular tissue, cryopreserved embryos the maximum retention limit is 5 years, with the possibility of renewal for up to another 5 years. For unfertilized ova and ovarian tissue, this limit is 5 years. The necessary blood tests that both parties must undergo before any attempt at assisted reproduction are clearly indicated. It has been regulated that the consent of both parties must be obtained before attempting assisted reproduction, as well as when it comes to the acceptance and donation of genetic material (ova or sperm). The anonymity of donors of genetic material has been legally ensured. The mixing of genetic material (own and donor) was prohibited. The taking of genetic material from clinically dead persons was prohibited. Minimum standards for the establishment and operation of assisted reproduction facilities have been laid down, corresponding to the minimum set by the European Union, the World Health Organization and the European Society of Human Reproduction and Embryology (ESHRE). Finally, fines (sanctions) were introduced, up to the withdrawal of the operating license and the composition and competences of the National Assisted Reproduction Authority were defined, but the special weight was given, according to Article 1 § 2 of Law 3305/2005 (A17), according to which, during the medically assisted reproduction., the interest of the child to be born must be considered.

The emphasis on the interest of the future child is a provision of compliance with the fundamental principle of children's rights, as enshrined in Article 3 § 1 of Law 2101/1992 (A192), the International Convention on the Rights of the Child and Article 24 of the Charter of Fundamental Rights of the European Union. With the new Law 4958/2022 (A142), the previous laws were amended and supplemented with the main feature of this law in its 44 articles being the increase of the age limit for women to be assisted reproduction to 54 years. The complete removal of the maximum duration limit of cryopreservation which is now maintained for an unlimited period. The legally existing assisted reproduction facilities amount to forty-six (46) and refer to both Public and Private Facilities, in total, as they exist and published in the government gazette and are kept in the list of the National Assisted Reproduction Authority.

Brady, et al. (2021), in their report, present 2020 data on U.S. births. Births are shown by age, race, and ancestry. They also present data on method of conception and preterm births. Data were based on 99.87% of all 2020 birth records received and processed by the National Center for Health Statistics on February 11, 2021 in the

U.S. Comparisons are made with 2019 data and previous years' data. The provisional birth rate for the United States in 2020 was 3,605,201, down 4% from 2019. The overall fertility rate was 55.8 births per 1,000 women aged 15-44, down 4% from 2019 to set another record low for the United States. The total fertility rate was 1,637.5 births per 1,000 women in 2020, down 4% from 2019, also reaching another record low for the country. In 2020, birth rates declined for women in all age groups 15-44 and remained unchanged for adolescents aged 10-14 and women aged 45-49. The birth rate for adolescents aged 15-19 years decreased by 8% in 2020 to 15.3 births per 1,000 women. Rates decreased for both younger (aged 15-17) and older (aged 18-19). The assisted reproduction birth rate increased to 31.8% in 2020. The low-risk cesarean delivery rate increased to 25.9%. The preterm birth rate decreased to 10.09% in 2020, the first rate decrease since 2014 (Brady, et al., 2021).

Moreover, according to the latest report published by the National Bioethics Committee (Vidalis & Mollaki, 2018), it is estimated that approximately 1,000 patients travel annually to Greece to receive Medically Assisted Reproduction (MAR) treatments. Data specific to reproductive tourism in Greece are limited compared to other countries.

### **3. Health Tourism or Medical Tourism: Greece as an Example**

In the study by Paraskou and Badu (2017), data were recorded for people visiting Greece to undergo infertility treatments. The most substantial reason why patients sought MAR services in Greece was the fact that there were restrictive legal provisions in their country of origin, especially for Italians and Germans, and the strict application criteria thus creating long waits for patients.

The majority of patients were close to the age of 41-45 years (29.7%) and 46-50 years (18.8%) and married (45.3%) or living with a partner (18.8%). Most patients chose an MAR center in Thessaloniki (37.5%), in Athens (36.7%), but also in Crete, in Heraklion (11.7%). The main treatments sought by patients in Greece were egg donation (38.2%), embryo donation (20.9%) and, to a lesser extent, IVF (5.5%) and IVF with sperm donation (4.5%). The reasons that positively encouraged patients to visit our country for reproductive tourism were mainly the minimal financial cost, as Greece is a highly competitive country for various MAR services, easy access, spiritual and religious reasons, communication, quality of services, the reputation of the medical staff of the MAR centers and the combination of treatment with their holidays. Finally, the study concludes that the discouraging factors for choosing Greece for reproductive tourism were lack of credentials and published data, language and accessibility (Paraskou & Badu, 2017).

The increase of the maximum permissible age for a woman to undergo medically assisted reproduction from 50 to 54 years, with the opinion of the National Assisted Reproduction Authority, enhances health tourism and especially medical tourism in our country, making the environment in Greece extremely friendly for infertile couples travelling to the country from other countries of the world in order to have a child. The legislative framework in most European countries excludes women over the age of 45 from assisted reproductive treatments. Countries such as Spain and Cyprus, which are pioneers in medical tourism and in the field of assisted reproduction, have revised their legislative framework by raising the age limit to 50 years. The National Authority for Medically Assisted Reproduction has consulted the leadership of the Ministry of Health and proposed a special amendment to the law, increasing the age limit in our country from 50 to 54 years, after special permission has been granted by the Supervisory Board of the Authority, which in combination with the rest of the legislative framework and the provision of medical services in the sector has an extremely positive impact on medical tourism (President of the Supervisory Board of the NAMAR, 2023).

Also, according to available data, it shows that in the last 40 years, 8 million children have been born worldwide using assisted reproduction methods. Every year, around 2.5 million assisted reproduction cycles are carried out worldwide and around 500 000 children are born. In Greece in particular, the official data for 2018 submitted by the National Authority to the European body E.S.H.R.E. showed that more than 15,000 assisted reproduction cycles were performed, and more than 2,500 children were born (President of the Supervisory Board of E.A.I.Y.A., 2023).

### **4. Final Discussion**

The goal of the current paper was to Classify and Conceptualize the concepts of Health and Reproductive Tourism. We have tried to present the difference and similarities of Health and Medicine Tourism. Reproductive Tourism as a part of Health and Medicine Tourism. Medical Assisted Reproduction is a global industry (Anastasiadou et al., 2023). We present Greece as an example of country that Medical Assisted Reproduction is increasing rapidly. According to Koussoukis (2020) , Health Tourism will be the second industry after

pharmaceuticals internationally, as the revenues for medical tourism already exceed \$46 billion with 14 million patients per year at a rate of 15-20%, while  $\frac{1}{4}$  (i.e. 25%) of this rate is in Europe. Greece, at this point in time, holds 3% of the global medical tourism, but by 2025 it will attract about 100,000 patients with revenues of 400 million euros from medical tourists, which is 5 to 10 times more than general tourism tourists, with stays of 7 days to 21 days in the country, but with a per capita expenditure of 3,800 - 6,000 dollars.

## 5. Conclusions

In conclusion, Health Tourism is an important pillar of economic development in the countries where it is practiced by providing medical services across national borders. Moreover, Health Tourism with Medical Assisted Reproduction, in addition to tourism- economic development of the countries, also contributes to the demographic issues of the nations through the acquisition of offspring. Moreover, it would be a great oversight not to mention the psychological rehabilitation of infertile couples, since through medically assisted reproduction they can satisfy their desire to have offspring, having the privilege of receiving health services that are either extremely expensive in their country or possibly prohibited by local national legislation, but in any case, there is also the possibility of recreation. Finally, more exploration should be completed based on recent technological approaches connected with AI technology, Big Data Scheduling etc (Taraza et al., 2023, Papademetriou et al., 2023) related to legal, ethical and moral aspects of reproductive techniques regarding restrictions, human rights and moral dilemmas (Anastasiadou et al., 2023).

Still more research ought to be completed with big data sets with the algorithms related to Pipeline-Based Linear Scheduling of Big Data Streams in the Cloud in order to study citizens opinions, attitudes, perceptions and behaviors toward Reproductive Tourism and Cross border reproductive care (CBRC): Legal, Economic, Ethical issues and dilemmas (Souravlas & Anastasiadou 2020;2022; Souravlas et. al, 2020; 2021a; 2021b; 2021c; 2022).

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