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Escuela Universitaria de Enfermería y Fisioterapia

Trabajo Fin de Grado

Grado en Fisioterapia

Tenerife as a health-tourism destination for English-speaking patients in physiotherapy rehabilitation.

Tenerife como destino turístico de salud para la rehabilitación fisioterapéutica de pacientes de habla inglesa.

Diamela León Cabrera

Curso 2014/2015 – Junio

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AUTORIZACIÓN DEL TUTOR PARA LA PRESENTACIÓN DEL TRABAJO FIN DE GRADO

Centro:	FACULTAD DE CIENCIAS DE LA SALUD SECCIÓN ENFERMERÍA Y FISIOTERAPIA
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TÍTULO DE TRABAJO DE FIN DE GRADO:

TENERIFE AS A HEALTH-TOURISM DESTINATION FOR ENGLISH-SPEAKING PATIENTS IN PHYSIOTHERAPY REHABILITATION.

TENERIFE COMO DESTINO TURÍSTICO DE SALUD PARA LA REHABILITACIÓN FISIOTERAPÉUTICA DE PACIENTES DE HABLA INGLESA.

EL TUTOR

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En La Laguna, a 1 de junio de 2015

EL TUTOR

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ABSTRACT

Introduction: English is the most international language in the Health Sciences and Health tourism is a growing practice by foreign patients who come to Tenerife, as well as a new field and a great opportunity for the development of physiotherapy.

Objectives: To determine if physiotherapists' good knowledge of English influences the patient's decision when choosing Tenerife as a physiotherapy treatment destination. To analyse whether Tenerife could become a health tourism destination in the immediate future for English-speaking patients.

Material and Methods: A stratified study according to the various geographical areas of the island was designed. A pilot study of 22 English-speaking patients sample was taken and they were given a carefully prepared survey, to establish trip intention, quality of rehabilitation treatment and importance of English during process.

Results: A great amount of respondents would recommend Tenerife as a health destination for other English-speaking patients. Most of them declare that the quality of physiotherapy in Tenerife is better than in their own countries. A great number of them consider good communication in English as an important aspect to take into account when deciding the destination to travel.

Conclusion: Tenerife begins to stand out as a good health- destination for European patients. It would be necessary to invest in the field of health and promote English to improve situation in order to compete with other destinations around the world.

Key words: Physiotherapy, English, health tourism, Tenerife, survey.

RESUMEN

Introducción**:** El inglés es el idioma más internacional en las Ciencias de la Salud y el "turismo de salud" es una práctica creciente en pacientes extranjeros que vienen a Tenerife, al igual que un nuevo campo y una gran oportunidad para el desarrollo de la Fisioterapia.

Objetivos: Determinar si el buen conocimiento del inglés por parte de los fisioterapeutas influye en los pacientes a la hora de elegir Tenerife como destino para recibir un tratamiento. Analizar si Tenerife podría convertirse en un destino de salud para pacientes de habla inglesa, en un futuro inmediato.

Material y métodos: Se diseñó un estudio estratificado atendiendo mayoritariamente a las distintas zonas geográficas de la isla. Se tomó una muestra piloto de 22 pacientes de habla inglesa, y se les entregó una encuesta, cuidadosamente preparada, para establecer: intención del viaje, calidad del tratamiento e importancia del inglés durante el proceso.

Resultados: Una gran cantidad de los encuestados recomendarían Tenerife como destino de salud para otros futuros pacientes de habla inglesa. La mayoría afirma que la calidad de la fisioterapia en Tenerife es mejor que en sus propios países. Un gran número de ellos considera la comunicación en inglés como un aspecto importante a la hora de decidir el destino para viajar.

Conclusión: Tenerife empieza a destacarse como destino de salud para pacientes europeos. Sería necesario invertir en el campo de la salud y promover el inglés para mejorar la situación con el fin de competir con otros destinos de todo el mundo.

Palabras clave: Fisioterapia, inglés, turismo de salud, Tenerife, encuesta.

1. INTRODUCTION

1.1. Justification

People's mobility is a growing trend over the last century, not only for holiday reasons purely. But nowadays, increasingly, people travel looking for services to other destinations, for various reasons, such as price, quality or availability of these services themselves in other countries.

Health is more than a precious commodity, it is a right. Therefore, it is a service increasingly demanded by people from all over the world and numerous countries have opted for politics to support this sector. Spain and specially the Canary Islands, is a good place to become an international power of health tourism counting already with a renowned healthcare system in the world and a major tourist tradition.

The Canary Islands, and in particular, Tenerife, is a tourism's global landmark. The visit of over 12 million tourists per year corroborates this fact. However, most of these foreign tourists have not visited our islands for any reasons related to health. So this industry still generates only a few benefits in our region. But in no distant future, private sector investments in the healthcare field in the island could place Tenerife in a good position as a health tourism destination on the world outlook.

This study aims to show the use of health tourism in Tenerife as a tourism product that it could be crucial for the Canary Islands economy and the development of healthcare areas (like medicine or physiotherapy) involved in it.

1.2. History of languages in Health Sciences communication

At the beginning of the fifth century B.C., Greek was spoken at the Mediterranean basin. The Greeks started a huge geographic expansion; as a consequence, they founded a lot of colonies around the Mediterranean Sea. At the same time, several scientists stood up and performed big brain creations like Hippocrates, author of *O Ιπποκράτης το σώμα (Corpus hippocraticum)* [1].

As centuries went by and because of Roman Empire advance, Latin was the dominant language for a long time. It was used by prestigious healthcare professionals like Galen, author of *De anatomicis administrationibus*[2].

After Muhammad's death in 632 A.C., the Muslim spread began. In less than one hundred years, they occupied Syria, Egypt, Palestine, Persia, the Iberian Peninsula and a part of India. الطب ف ى ال قانون ك تاب (*Kitāb al-Qānūn fī al-ṭibb, The Medicine Canon*) by the famous doctor Avicenna is a representative sign of Arabian transmitted science.[3]

After a darkness period for the science, the Middle Ages gave way to the Reinassance. In the 15th Century, Latin became the main language for doctors in Europe again *"when scholars could communicate only in Latin"*[4]. From then on, the majority of medical publications were written in this language like *Conciliator Differentiarum* by the author Pietro Abano. Also, in this period, Latin was the language of university education what would persist throughout centuries[5].

In the 19th Century, because of the French Revolution, the common languages replaced Latin in medicine language, first in France and then in the rest of Europe. About the last century change, there was not an only language for medicine. There

was one by each country in possession of a cultured language. At least, three of them (French, German and English) achieved international dissemination like bearers of the main scientific progress. An evidence of that, it was the René Laënnec's publication *L'auscultation médiate ou traité de diagnostic des maladies des poumons et du coeur fondé principalement sur ce nouveau moyen d'exploration* and his invention, the stethoscope [6].

1.3. English in Health Sciences communication

One of the characteristics of the past 20th Century and the current 21st one has been the predominance almost absolute of English in Health Sciences communication. It has been produced by the huge social and economic development of USA after the Second World War that it has allowed to perform important investments in research works in all different fields the knowledge [7].

Nowadays, in the age of globalization, English has become in the great international language that it has an effect on all the countries of the world including the non-English speaking ones. Its influence affects directly all professional fields and it is considered to be a clear need to apply for the best jobs. As the authors Meneghini and Packers mention on their article *Is there science beyond English?: Any scientist must therefore master English – at least to some extent – to obtain international recognition and to access relevant publications*[8]*.*

However, in 2020, China is expected to be the first economic power in the world. The majority of the global investment is expected to go to this country and companies from all over the world would have their head office there. So, probably Chinese would begin to face up to the English supremacy[9].

1.4. Health and Health tourism

According to the World Health Organization[10] (WHO): *"health is a complete condition of physical, mental and social wellbeing and not merely the absence of diseases or infirmity".*

Health tourism (or Medical tourism) is the process in which a person travels to receive health services in a country different from his or her own.

As the Organization for Economic Cooperation and Development (OECD) says in its study *Medical Tourism: Treatment Markets and Health Systems Implication: a scoping review*[11], *"medical tourism is a term used to describe the practice of travelling to a different destination from a patient's place of residence to obtain a medical treatment, at the same time the destination is visited and the patient carries out several activities but much more typical from a normal tourist".*

Nevertheless, this definition is a little bit restrictive because it encompasses more subsections, not only the recovery tourism, but the prevention one too. However, the concept that will be treated in this study is, above all, the recovery tourism focusing in rehabilitation.

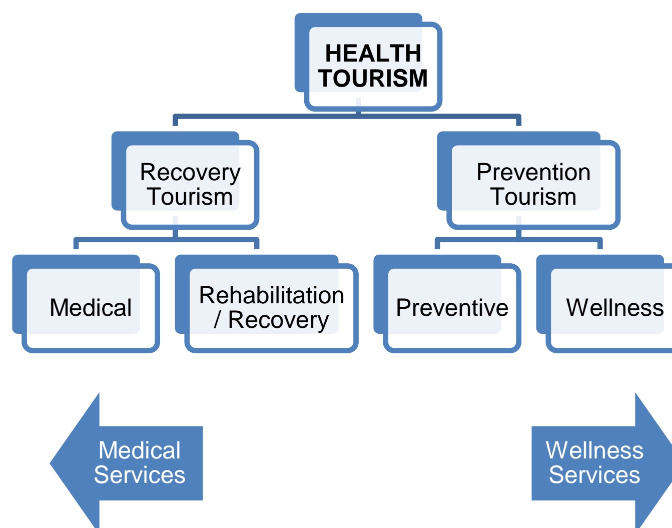

Figure 1.- Subsections' diagram integrated in Health Tourism[12].

According to this diagram, the kind of services that the tourists are looking for include all those related to recovery, maintenance and promotion of health.

Thus, the services included in the health tourism offer are very diverse and they can be represented in a value chain health of people in accord with the following graphic.

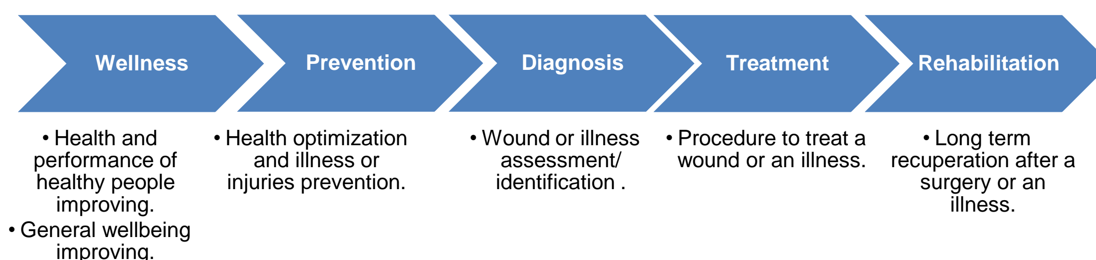

Figure 2.- Health services flow chart[13].

1.4.1. Exclusions[14]

The tourist's displacement is necessary in order that health tourism takes place. Thus, tourism health are not those health services provided by third party suppliers (eg. diagnosis radiographs in other countries).

The reason for the trip should be to seek health services in order that health tourism takes place. International tourists or residents receiving health services in a country which are not citizens but have not moved for this reason are not considered as health tourists. These are the foreigners residing in Spain or a tourist who comes to get medical service due to an accident or supervening disease. As the OECD[11] study previously quoted says they must be willing to travel and a wish to be treated.

1.4.2. The negative concept of Medical Tourism[14]

The expression "medical tourism" is so used as maligned by healthcare professionals because traditionally, all kinds of displaced patients have been included in it as:

- People who are on vacations and they need emergency assistance by supervening illness or accident, and whose assistance is guaranteed by the European Health Insurance Card (in case of European citizens), by private insurance companies with international coverage or other forms of financing.
- Private patients who program their treatments through medical tourism facilitators or they are referred by international insurers who know they can offer their subscribers the same service and holidays, for far less money than what they pay for therapy in their own countries.
- The Spanish Health Services also treat European patients, mainly Nordic ones, prior agreement with the relevant centers and institutions, having in mind that their countries send them to relieve their waiting lists.
- "The guile health tourism" in which the patients take advantage of their staying in Spain to obtain a free treatment at the expense of the Spanish Healthcare System (against the payment or copayment required in their countries of origin).
- In some cases, alternative therapy tourism and wellness one can be included.

Of course, the negative concept of medical tourism is related to the growing practice of several foreigners to achieve free treatment, with fraudulent intentions, paid by the Spanish Government.

Generally, Regulations (EEC) 1408/71 and 574/72 control the right of insured people in one of the EU Member States to receive healthcare in another State belonging to this community, during an occasional visit or habitual residence there. This assistance should be provided in the same conditions as it is insured in the country of destination.

Precisely, health tourism's product structuring can help end these losses, but it can also turn into an opportunity. With the new regulatory framework created by the EU, through the Cross-Border Healthcare Directive, it intends to regulate cross-border care and reimbursement system performance across countries EU members and other health coordination mechanisms.

1.5. Health Tourism in Spain[14]

Spanish Health Service is considered one of the best in the world. It has reached the 7th place according to the WHO[15].

In accordance with the World Tourism Organization[16] (UNWTO), Spain is the 4th country in tourists' reception in the world. Some data related to the international tourism in Spain reflect the importance of this industry for the Spanish economy:

- In 2011, Spain was chosen as a destination by 99.9 million international visitors, 57% of them being tourists. The total expense generated by this number of visitors reached 58,851,000€.
- In this period of 2011, a total of 56.7 million international tourists were received, a figure that was 7.6% higher than the one achieved the previous year.

- Regarding the average daily expense of international tourists, this ratio increases 5% over the year earlier like there was a decrease in the average stay (below 4%).
- The summer season once again concentrated most of arrivals, over 37% of the total, and it was also the period in which tourism spending was concentrated.
- Among the source markets, United Kingdom, Germany and France stand out involving 55% of tourists' entrance in Spain.

1.5.1. Services and healthcare treatments of Health Tourism in Spain[14]

From the analysis of the OECD[11] and Deloitte[17] studies as well as the job vacancies posted on the main medical facilitators, we can say the services usually included in health tourism are:

- Assisted reproduction
- Aesthetic and Plastic Surgery
- Cardiology
- Oncology
- Urology
- Traumatology
- Ophthalmology
- Dentistry
- Rehabilitation
- Nutrition and natural therapies
- Anti-aging and aesthetics
- Wellness: Hydrotherapy, alternative therapies
- Care for dependents, rehabilitation and residential services

In Spain, organ transplants, obstetrics, and vaccination programs are excluded from the potential supply of health tourism. For obstetrics, there is continuous process based on a direct relationship with professional gynecologist. Vaccination programs, meanwhile, are managed and controlled directly by the health authorities of each state.

According to the National Transplant Organization[18] (ONT), access to transplantation in our country is limited only to Spanish citizens and foreigners who have established legally as residents in our country. Several international organizations related to health have rejected categorically the so-called "transplant tourism", understanding this one as the trip to transplant when involving organ trafficking, marketing them or if the resources used to provide transplants for patients from abroad limit the ability of providing transplant services for its own population.

1.5.2. Physiotherapy in Health Tourism

1.5.2.1. Scheduled surgeries[14]

It highlights the supply in orthopedics, urology, gastric surgery and cardiology. To a lesser extent, specialties as neurology, nephrology and pulmonology can be interesting to be integrated in the supply health tourism in Spain.

In Traumatology, hip and knee interventions mostly directed to senior patients and other interventions directed to a younger population, related to skeletal disorders because of the practice of any sport should be highlighted. They are treatments that require services assistance to support the patient's recovery, such as rehabilitation and physiotherapy, and health products related to orthopedics. Also typically they require a longer stay, so the patient's average cost may be higher than in other surgical treatments.

1.5.2.2. Residential tourism, rehabilitation and dependence[14]

Residential tourism is a product related to housing construction in tourist areas to be purchased by national and foreign customers as a second residence, habitual home or apartment to spend on rent. The importance of residential tourism is a dual concept, as tourism and real estate product, as it has a great capacity to generate economic activity and employment, both in services and in construction.

In Spain, this type of tourism has developed specially in those areas where the temperature average is around 18ºC and benefit from more than 3,000 hours of sunshine per year like: the Mediterranean Coast, "Costa Blanca", "Costa del Sol" or the Balearic and Canary Islands.

In view of the fact that the final customer is usually a senior person, many residences offer health services such as hydrotherapy (Spa, thalassotherapy, etc.), medical care, physiotherapy, rehabilitation, and social services.

Although tourists normally reside in these resorts, they are not the medical tourists themselves, many of these complexes are focusing their facilities to the reception and coordination of medical tourists, they require to spend more or less periods to recover from health treatments which caused the trip. For example, in various places, some of these developments have agreements with hospitals for stays of 3-6 months, which is the estimated time of recovery of certain orthopedic surgeries (hip or knee).

1.5.2.3. Health and wellness[14]

There is another fast growing demand and it is about programmes on searching health prevention and recovery of ailments while the tourist is on holidays. These treatments are grouped as medical wellness and they put an emphasis on dietary and psychological counseling.

Wellness tourism in Spain has become in an important source of employment. Maybe, because it combines perfectly with others touristic products like beach and sun tourism or cultural one… The billing increase is due to the foreigner's demand of dynamism[19]. This fact is not a strange situation, considering that some years ago several European healthcare systems (like the German one) subsidised part of the stays and treatments in Spanish centers (mostly in the Balearic and Canary Islands).

The main kind of wellness service is thermal medicine, it is the medical branch used for therapeutic and rehabilitative purposes by the thermal cures. This technique is performed in a spa:

A Spa or thermal station is that facility which has medicinal mineral waters declared as Public Utility, medical services and adequate facilities to carry out the treatments that have been prescribed. Its use, therefore, is focused on health and welfare, either to treat ailments or to prevent them.

The most treated conditions are those related to rheumatology, physiotherapy, respiratory and dermatology treatments and they depending on the water composition.

Spain has a significant spa network and a significant recognition among the clients. Currently, in our country, there are 113 operational spas distributed around the self-governing communities[20].

1.5.3. Main places of Health Tourism in Spain[14]

In Spain, there is a series of geographical areas where health tourism's facilities converge. There are characterised by:

- Consolidated touristic zones where international demand has created a huge amount of healthcare centers: Mallorca, Costa del Sol, Alicante…
- Large cities: Madrid or Barcelona.
- Areas near political borders like Badajoz.
- Places specialised in certain treatments: Navarra or Asturias.

Tourism's traditional demand in these places has created the critical mass enough to make a specialised supply, in many cases, in the foreign patient. Such is the case of the Balearic and Canary Islands and Costa del Sol.

The Balearic and Canary Islands[14]

These two archipelagos have always been a destination for foreigners (above all, English and German people) mainly because of the year-round good weather and the sea. A large private healthcare supply has resulted by this fact and it has already been focused on these segments.

It should be pointed out the presence of *Hospiten* group[21], originally from the Canary Islands. It is a private and international hospital network, with more than 1.000 beds, committed to the provision of a first-level health service which attends more than 1.000.000 patients. Since 2000, *Hospiten* has started an international expansion through the location of important tourist centres in Europe and America where it was feasible opening a health center of very high quality. Nowadays, it has

fourteen hospitals located in Spain, Dominican Republic, Mexico and Jamaica. It maintains cooperation agreements with a wide range of hotels, tour operators, and cruise companies in the tourism sector.

Another hospital group of interest for health tourism is *Juaneda HealthCare Network*[22] present in the Balearic and Canary Islands with four hospitals, nine clinics and 26 medical centres. It has a structure designed to assist foreign patients, with the help of interpreters and a team of customer service staff that speak until 18 different languages. It maintains cooperation agreements with 85% of tour operators working in the Balearic Islands.

In the Canary Islands, *Gran Canaria Wellness* platform has integrated medical centres in its offer and has generated a second brand: *Gran Canaria Medical*[23], in order to support the promotion and marketing of this industry.

In the Balearic Islands, it has been followed the Plan for Tourism of the Balearic Islands where health tourism is set as a fundamental product to generate tourism. In February 2013 took place the 1st Tourism and Health Forum[24] of the Balearic Islands took place. It was a meeting point between managers of tourist destinations, healthcare and welfare and businesses of the tourism sector to exchange knowledge, experiences and reflections on the importance of health tourism as a strategic axis for the promotion of our destination, the prospects for supply and demand, or the creation of new and attractive offers associated with the pursuit of wellness position allowing our destination among our major European markets.

2. OBJECTIVES

2.1. Main objectives

The main objectives in this study are to determine if physiotherapists' good knowledge of English influences the patient's decision when choosing Tenerife as a physiotherapy treatment destination as well as to analyse whether Tenerife could become a health tourism destination in the immediate future for patients whose language of communication is English.

2.2. Secondary objectives

As secondary objectives are set up the following ones:

- To set up if the patients choose Tenerife to start or keep a physiotherapist treatment because of the benefits that the year-round good weather and the sea have on their health.
- To determine if the physiotherapists' English level is at the height of maintaining an adequate communication with the English-speaking patients.
- To determine if the patients who came are satisfied with the physiotherapist experience they received in Tenerife.

3. MATERIALS & METHODS

3.1. Materials

In order to investigate different aspects related to the health tourism in Tenerife, a carefully prepared survey was done which aims to report about the importance of English in this topic and if the quality of physiotherapy here is good enough for Tenerife to become an international destination of patients based on their experience. Also, we want to take account of several points such as which the incentives to come here were, if the trip to Tenerife was mainly motivated by health grounds, if the patients would be so satisfied with their treatments such as they would recommend this place as a private health-tourism destination to other future patients and if they think physiotherapy here is better than in their country of origin (in the case of receiving any treatment there).

Then, we are going to explain the aforementioned points, focusing in the five first questions because they will be the basis of our pilot study.

As we expounded previously, the need to master English today is an undeniable issue in a world where international relations are becoming more important and where the language of communication *par excellence* is English. We propose a survey that assesses and analyses the importance of English in the main reasons whereby European patients come to Tenerife and if these reasons are related to physiotherapy or rehabilitation.

In our opinion, there are three basic points that physiotherapists in Tenerife should consider:

1. Interaction with the patients
2. Interaction with geriatric patients in rehabilitation programs and its benefits
3. Use of English

Point 1:

The physiotherapist-patient relationship has a great interest because unlike other health professionals, the physiotherapist has a direct physical contact with the patient. Body language, verbal communication and environmental factors affect this relationship.

It is important to ask ourselves why it is meaningful communication between a physiotherapist and his or her patient, what they expect from us and how the aforementioned communication can influence in the treatments.

Certain contempt has been generated due to the importance and power of human relationships between health professionals and patients in health care, in physiotherapy too, because we know the human treatment of patients by the physiotherapist is the first reason why they declare themselves satisfied with the care provided.

In the opinion of Farin E[25], although each patient perceives differently the physiotherapist treatment received, there are variables that most people consider necessary in a good relationship with the physiotherapist. Therefore, the basic needs that the patients claim generally are: physiotherapist’s emotional behavior to them,

the information received about their problem would be comprehensible and the physiotherapist would try to understand their perceptions and cognitions.

Also, Benedetti F[25] confirms the foregoing and adds confidence and hope are fundamental to this physiotherapist-patient binomial.

The communication with the patient is very important. Consequently, due to the patient's language, if the physiotherapist does not know or cannot communicate with him or her, difficulties will arise in relation to the patient's satisfaction. As we show below, this lack of interaction triggers a series of disruptions in the individual that would only delay the treatment and prevent from being confident with the physiotherapist.

In the health area, the difficulties of communication must be had in mind, because they could suppose a great obstacle in the physiotherapist interaction with the patient, considering that often major barriers between them are established.

It should be noted that the problems to maintain good communication could be due to difficulties with speech and/or comprehension, to medical interventions and language barriers of those physiotherapists who do not speak the patient's language. If they encounter such barriers when they are communicating, a series of feelings can be triggered such as anxiety, fear or exacerbated pain that would entail a delay in the treatment and a loss of confidence in his or her therapist.

In many situations, patients are facing critical decisions, so they need to communicate clearly with the physiotherapist to ensure that receive a positive care. According to the study *El Acceso a la Comunicación en el Escenario Medico*[26], 62% of the patients had high levels of frustration and anxiety that come associated with the inability to communicate effectively during the treatment with the therapist and therefore, they could not satisfy their needs.

The Joint Commission on the Accreditation of Healthcare Organization (JCAHO) emphasizes that *"the patient has a right and need for effective communication"* [27] Specifically, *Elements of Performance for RI.2.100, No.4* testifies that *"the organization addresses the needs of those with vision, speech, hearing, language, and cognitive impairments"*. In addition, the objectives of the National Patient Safety[28] note that "*encourage the active participation of patients in their own care"* will help to get over communication's barriers. Thus the studies show that patients who have good communication, are more satisfied with their treatment, they have greater control in relation to their health, and usually they recover better.

Point 2:

People of 65 years of age and above, as Carone and Costello[29] point, are considered to be "elderly". They are often subjected to disabling syndromes, either with a biological or pathological origin, and these are what the physiotherapy tries to compensate, because the presence of diseases occur more easily and frequently in the elderly than in the individual young people. Several factors are involved such as: hearing and sight decrease, general loss of strength and muscle strength together with stability decrease and joint disorders.

That is why a foreign tourist to have to receive physiotherapy in our country because of an accidental fall when they are on holidays or they could travel to Spain looking for better physiotherapy treatments than in their country of origin.

As Lunt and Carrera[30] say in their study, health tourist is 55 years old or above. Seniors often have more financial autonomy and greater freedom to travel. When they travel, they cover greater distances, generating more stays[31].

The ageing population is permanent[32]. Since 1950, the proportion of elderly people has increased constantly, from 8% in 1950 to 11% in 2009, and it is expected to reach 22% in 2050. While in old age mortality continues to decline and fertility remains low, the proportion of elderly will increase.

The ageing population has leaded to tourism policies as the European Senior Programme[33] to adapt tourism products to the expectations and needs of a group that it is characterised by mobility limitations or health problems in general. The treatments demanded by this sector are related to improving quality of life, dependence, age-related conditions (prosthesis, etc.), as well as everything related to the wellness concept.

Physiotherapists are expert in exercise, serving a wide range of people to optimize their physical capacity and prescribing exercise as part of a structured, safe and effective programme. An important part of his or her job is to help individuals to remain active as they age. More than any other profession, physiotherapists prevent and treat chronic disease and disability in the elderly prescribing a specific activity and movement.

The World Health Organization[34] recommends regular physical activity for the elderly, since it has been shown to improve functional status and quality of life in this group of individuals. In any case, it is considered they should commit to at least 30 minutes of moderate intensity physical activity five days per week[35].

The elderly people that make regular physical activity improve in:

- Balance
- Coordination and motor control
- Flexibility
- Strength
- Resistance

As a result, physical activity may reduce the risk of falls, which is the leading cause of disability in older people[34].

Participation in regular exercise programmes leads to the elderly having higher levels of functional capabilities, greater independence and a better quality of life[35].

Exercise programmes help to slow down the functional decline. Elderly people can reach, with a proper exercise programme, activity levels that can report to them health benefits, and decrease the dysfunctions which would normally be expected with this age[36].

Point 3:

Today, the need to master English is an undeniable issue in a world where international relations are becoming more important and where the language of communication par excellence is English. The growing importance of knowledge of this language has affected all non English-speaking countries also including Spain; where various fields and professions are affected to a greater or lesser extent, for example those ones related to the Health Sciences.

The importance for healthcare professionals to handle English can be framed into four sections:

1. Research:

Currently, any health professional who wants to access to specialised books and know the developments that happen in his or her field of knowledge, inevitably needs to know English, since 75% of the literature is published in English. Thus, the great value that English language has to gain access to all kinds of literature must be considered. Therefore, when you start an investigation, this issue is of utmost importance and necessity, as most of the publications in the field of Health Sciences are conducted in this language.

To get an idea of the importance of English in this respect, objectives data are presented in this table (see Table 1). These data come from a study that was conducted to determine the number of publications per language made in the 1980s, using as a data source the *Index Medicus*[37].

LANGUAGES	PERIODICAL AND NON-PERIODICAL PUBLICATIONS	%
English	189.616	72,2%
Russian	16.153	6,2%
German	15.263	5,8%
French	10.697	4,1%
Japanese	7.308	2,8%
Italian	4.944	1,9%
Spanish	3.241	1,2%
TOTAL	**262.262**	**94,0%**

Table 1.- Percentages of publications per language in the 1980s.

These are some of the reasons why we should raise awareness of the importance of studying and learning English, as a parallel alternative to the university degree.

2. Use of equipment's manuals at the hospitals:

Due to the fast advancement of technology, this one comes continuously to hospitals or health centers, equipment, apparatus and new instruments, whose instructions are written mostly in English. Therefore, the knowledge of the language could be very useful and profitable, as well as the autonomy that gives professionals when they are performing their own work, without the need to rely on other people.

On the other hand, virtually all centres have computers to facilitate the work, and all the members of staff used to handling them know that, although many of the software elements are already translated into Spanish, they often find themselves in situations where it is necessary to know English to understand interactive computer language, such as the operating system.

3. Use of computers and programmes:

The 21st Century can be called "the information century", so it is necessary to use science documentation in order to investigate and show how this information should be treated.

Information sources usually know existing documents for its selection and acquisition facilitating its access and knowledge. Nowadays, the main source of information is the Internet and the Web[38].

However, if it has its advantages, it also has disadvantages, as we get more opportunities knowing that surfing on the Internet we can get any kind of information without having to use another language, which reduces the ability to communicate with other countries and to exchange techniques, protocols, treatments etc. It should be noted that throughout this search on the Internet, not all the data found are correct and these would jeopardise the knowledge acquired during the training of the physiotherapist, the first resort to this source of Internet instead of promoting the dissemination of knowledge through communication with other countries and carry out a more generalised protocol, based on the patients' health and welfare.

It is of interest to name also that the physiotherapist might have the tendency to avoid certain articles in English by a lack of reading comprehension on his or her part, which would entail a common preference to consult websites and pages with little, unsuitable and even wrong content, and consequently acquire a bad professional training.

However, it should be pointed out that English is the language par excellence of telecommunications, since 80% of the information is stored electronically. Among an estimated 40 million Internet users, 80% of them communicate through the English language.

The basis of a good knowledge of English or at least the guidelines for the professional future of physiotherapy fall into the account that the knowledge and good use of this language will be essential for possible entry into the world of work both abroad and in the Canary Islands with foreign patients, thus, they have to be present and patent in their academic studies, both being a student, and during their professional future, the centre of this process.

4. Interaction with foreign patients:

We cannot forget Spain is a tourist country which attract thousands of visitors from different geographic areas and whose communication's vehicle is usually English, even in the case of those who are not from English-speaking countries. It is possible that at some stage, these tourists require or come to seek some kind of medical or physiotherapist care. Therefore, the health professional requires minimum

requirements in relation to the level of English to establish a good communication with the patients.

It is true that not all information is explained by the doctor. The physiotherapist should explain in English what disease the patient has, what its forecast of evolution might be, what to avoid doing, the appropriate treatment and to know to answer any questions. However, if the physiotherapist does not have a good training in English, it will be impossible to treat these patients, with the consequence of creating the displeasure of patients when noticing that a lack of communication and understanding is established by both, and the uncertainty of knowing whether they will be well treated by the corresponding physiotherapist.

Thus, it is noted that while in some areas the knowledge of English may seems less necessary, in others, as in the Canary Islands, is virtually indispensable. Therefore, we must keep in mind that by ignoring our professional future we cannot know for sure if we will assist a foreign patient, do any replacement or have our future place in a tourist area, so we think appropriate that any physiotherapist has a minimal knowledge of English to enable him or her to communicate with the patient and / or their relatives or friends in certain warranty conditions. In this way, the physiotherapist may initiate direct interaction both with the latter as with any health professional, keeping them informed of the status of their health and the treatments required, considering that oral communication can be established even by phone with anyone in their country of origin if necessary, so it is necessary to maintain a fluent conversation in English.

For all the above reasons, we could say that the knowledge of English to any professional in the area of Health, it is an obvious necessity.

3.2. Methods

To support everything described in this study, a pilot sample has been taken and the possibility of performing a larger study remains to be done in the future.

Thus, an anonymous survey was conducted (see Appendix 1) and the answers could be chosen using the Likert's scale[39] (*Strongly disagree, disagree, neutral, agree or strongly agree)*. Age and nationality were required.

Firstly, to carry out a specific health-tourism's study related to physiotherapy in Tenerife, we have divided the island into several zones according to their geographical location:

1. <u>Metropolitan area:</u> including Santa Cruz de Tenerife, San Cristóbal de La Laguna, Tegueste and El Rosario.

2. <u>Southeastern area</u>: including Candelaria, Arafo, Güímar, Fasnia and Arico.

3. <u>Southwestern area:</u> including Granadilla de Abona, San Miguel de Abona, Vilaflor, Arona, Adeje, Guía de Isora and Santiago del Teide.

4. <u>Northern area:</u> including Buenavista del Norte, Los Silos, El Tanque, Garachico, Icod de los Vinos, San Juan de la Rambla, La Guancha, Los Realejos, Puerto de la Cruz, La Orotava, Santa Úrsula, La Victoria de Acentejo, La Matanza de Acentejo, El Sauzal and Tacoronte.

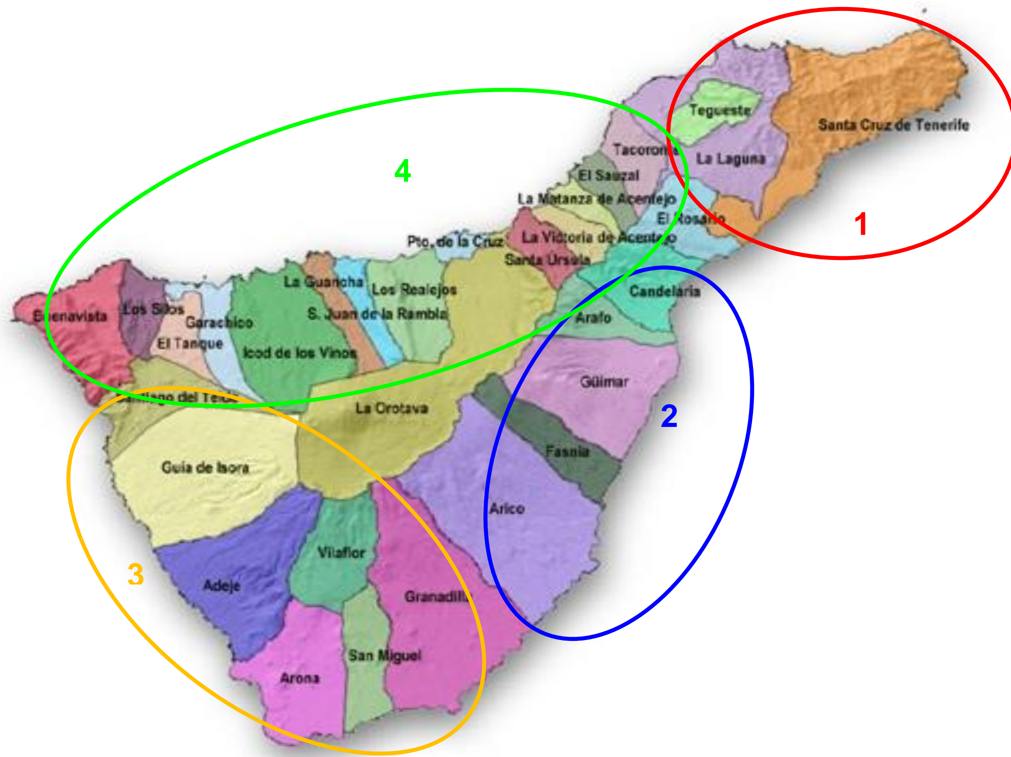

Figure 3.- Map of Tenerife divided into geographical areas.

In each of these areas, three centres that assist or can assist English-speaking patients were found. We divide them according to their size and the number of beds available. They are classified in:

- Big-sized
- Medium-sized
- Small-sized

Metropolitan area

In zone 1, there are three big-sized centres:

- *Clínica Parque*
- *Hospiten Rambla*
- *Quirón Tenerife*

Southeastern area

In zone 2, there are three small-sized centres:

- *Centro médico rehabilitador Villa de Candelaria*
- *Centro de fisioterapia Reactivite*
- *Centro de fisioterapia Canarias*

Southwestern area

In zone 3, there are two big-sized centres:

- *Hospiten Sur*
- *Quirón Los Cristianos*

And one medium-sized:

- *ICOT Las Americas*

Northern area

In zone 4, there are two big-sized centres:

- *Hospiten Tamaragua*
- Hospiten *Bellevue*

And one medium-sized:

- *ICOT La Orotava*

According to this classification and the different geographical locations, the following percentages of influence have been established:

1. Metropolitan area: it has a 20% of influence on the total because of the size of the centres chosen here and the number of visitors.
2. Southeastern area: it has a 10% of influence on the total because of the lack of bigger size centres and the few tourists who visit this zone.
3. Southwestern area: it has a 50% of influence on the total because of this zone is the most visited part of the island and therefore it has greater volume of patients.
4. Northern area: It has a 20% of influence on the total because of the centres chosen here and the number of visitors.

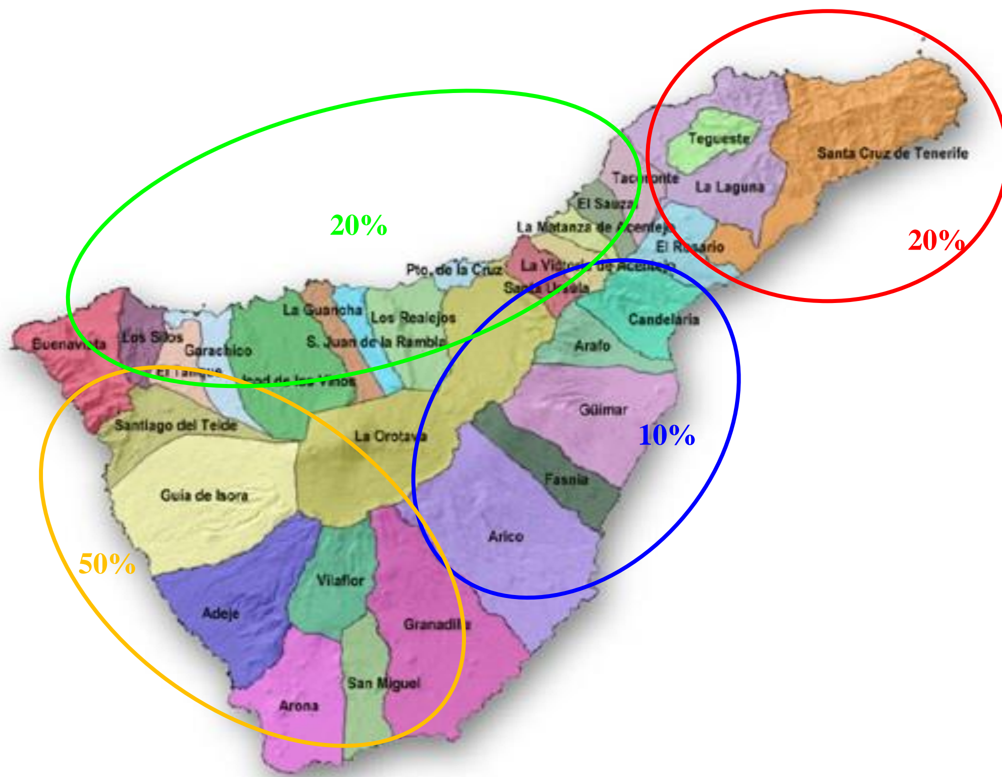

Figure 4.- Map of Tenerife divided into percentages of influence.

The questionnaire distributed contains the following questions:

1) Has your trip to Tenerife mainly been motivated by the intention to begin –or continue with- your rehabilitation treatment?

2) Did you choose Tenerife as a destination to carry out your rehabilitation because of the benefits that the year-round good weather and the sea have on your health?

3) Would you recommend Tenerife as a private health-tourism destination to other English-speaking people?

4) Was the fact that English is spoken in the centres where they are treating you an incentive to come here?

5) Do you think your physiotherapist's level of English is good enough to maintain adequate communication between you both?

6) Have you understood the techniques and exercises that have been explained to you in English?

7) Have you received any kind of physiotherapy treatment in the country where you live?

8) Do you think the quality of the physiotherapy treatment is better here in Tenerife than in other places where you have had it?

9) When your treatment has finished, will you stay in Tenerife permanently?

10) Do you think that your trip and your rehabilitation treatment have both been satisfactory?

Therefore, the main aim of this study is to know the importance of English in the field of physiotherapy and if the patients who have been treated here consider that Tenerife would be a good private health-tourism destination.

To collect and organize data from the questionnaires statistical computer programmes *Excel 2010* and *SPSS 21.0. (IBM Statistics)* were used.

IDENTIFIERS

In order to simplify the wording of the different questions, they were identified with keywords, which are shown in Table 2.

Identifiers	Questions
1. Trip intention.	Has your trip to Tenerife mainly been motivated by the intention to begin –or continue with- your rehabilitation treatment?
2. Weather and sea benefits.	Did you choose Tenerife as a destination to carry out your rehabilitation because of the benefits that the year-round good weather and the sea have on your health?
3. Recommend Tenerife to other people.	Would you recommend Tenerife as a private health-tourism destination to other English-speaking people?
4. English incentive to come.	Was the fact that English is spoken in the centres where they are treating you an incentive to come here?
5. Physiotherapist's English level.	Do you think your physiotherapist's level of English is good enough to maintain adequate communication between you both?
6. Techniques' explanation in English.	Have you understood the techniques and exercises that have been explained to you in English?
7. Physiotherapy treatment in own country.	Have you received any kind of physiotherapy treatment in the country where you live?
8. Physiotherapy quality in Tenerife.	Do you think the quality of the physiotherapy treatment is better here in Tenerife than in other places where you have had it?

9. Stay in Tenerife.	When your treatment has finished, will you stay in Tenerife permanently?
10. Satisfactory experience.	Do you think that your trip and your rehabilitation treatment have both been satisfactory?

Table 2.- Questionnaire's identifiers.

SAMPLING DESIGN

Stratified sampling was carried out with proportional affixation percentages of influence in four zones previously defined taking into account the geographical location (Metropolitan, Northern, Southeastern and Southwestern areas) and within each one, a cluster sampling was done based on the size of the centres in those areas.

They have been classified into small, medium and big centres according to the number of beds available, so one of the centres of each group would be chosen at random to take the sample size.

From a population (target) of N = 11.616 English-speaking tourists who came to Tenerife due to reasons related to health[40] and setting a level of confidence for the estimation of 95% ($\alpha = 0.05$), considering that we want to estimate:

p = "the proportion of those tourists who come to receive physiotherapy's treatments".

With accuracy, ε is set between 1% and 10% and this ratio is assumed not to exceed 20% of these tourists in any of the considered ones. The formulas are applied for the fixed sampling[41]:

$$n = \frac{N\, z_{\alpha/2}^2\ p(1-p)}{\varepsilon^2(N-1) + z_{\alpha/2}^2\ p(1-p)}$$

With $z_{\alpha/2} = z_{0.025} = 1.96$ and p being substituted for the maximum value considered, that is, p = 0.20.

Accuracy	**n**
0,01	8431
0,02	4625
0,03	2640
0,04	1649
0,05	1112
0,06	796
0,07	596
0,08	462
0,09	368
0,1	300

Table 3.- Percentage accuracy.

According to table 3, to simulate the distribution of patients sampled in different centres and different areas a precision of 7% has been considered, which forces us to work with a total sample of 596 patients. But as this is a pilot study, a 22 patients' sample was taken.

Table 4 shows the amount of patients in each centre. It should be pointed out that the areas with bigger percentage of influence (such as Metropolitan, Northern and Southwestern) have more patients to be surveyed.

Areas	**Percentage of influence**	**Patients' sample**	**Centres**		
			Big	*Medium*	*Small*
Metropolitan	20%	119	119	-	-
Northern	20%	119	79	40	-
Southeastern	10%	60	-	-	60
Southwestern	50%	298	197	99	-
Total	100%	596	395	139	60

Table 4.- Areas divided by number of patients in each centre.

Once the random drawing conducted at different centres in each area has been carried out, the chosen ones would be the following:

	Centres		
Areas	*Big*	*Medium*	*Small*
Metropolitan	Quirón Santa Cruz	-	-
Northern	Hospiten Tamaragua	Icot Orotava	-
Southeastern	-	-	Centro de Fisioterapia Reactivité
Southwestern	Quirón Los Cristianos	Icot Las Américas	-

Table 5.- Centres chosen by random in each area.

STATISTICAL METHODS

The statistical methods used were Reliability Analysis, Contingency Tables, and Cluster Analysis. Now, each of them will be described briefly.

Reliability Test

The Cronbach's alpha coefficient is used to measure the reliability of a measurement scale, and it was named by Cronbach in 1951. This method estimates the reliability with which the patients have answered the survey, understanding this reliability as the general trend with which patients have responded the different items.

There are different methods to estimate such reliability, the most used is known as Cronbach's alpha[42]. This method involves measuring the correlations between different items for each of the individuals and the correlations among the responses between different individuals for each item. Thus, the more the value of Alfa approaching to 1, the greater the internal consistency of the items analysed. Thus, for example, an alpha of 0.8 can be interpreted as 80% of what our sample is really reflecting what is happening in the population.

Contingency tables

To analyse the dependence or independence between two qualitative variables, it is necessary to study their joint distribution or contingency table. This table is double

entry, where each box contains the number of cases or individuals who have a level of one factor or other level characteristics analysed and the other factor analysed.

This table is defined by the number of attributes or variables analysed together and the number of modes or levels thereof. For example, when we analyse the possible relationship between the variable "Physiotherapy quality in Tenerife" and "Satisfactory experience," a contingency table 2x3 arises, for each of these variables has three levels (Not agree, Neutral or Agree).

These tables have two main objectives:

1) Organize the information contained in an experiment when it is two-dimensional in nature, that is, when referring to two factors (qualitative variables).

2) To examine whether there is a relationship of dependence or independence between levels of qualitative variables to be studied. The fact that two variables are independent means that the values of a particular one are not influenced by the type or level when taking the other.

To identify these possible relationships of dependence between quantitative variables based on statistical χ^2 (Chi-square)[43] contrast, the calculation will allow us to state with a given accuracy of statistical confidence levels if they affect the levels of another used variable analysed.

Cluster analysis

It has implemented a cluster or cluster analysis, both in terms of individuals and items. With this tool we will be able to define homogeneous groups of individuals, and to identify potential patients whose opinion differs from the rest. Similarly, it also offers the possibility of generating sets of items that have the same tendency of response from different individuals analysed.

Cluster analysis (cluster) is a multivariate technique that seeks to group variables trying to achieve maximum homogeneity in each group and the biggest difference between the groups. Thus, the graphical representation to interpret the test result is called dendrogram[44]; a graph that is an inverted tree where the formation of clusters and the distances between them are reflected.

We start from an array of information that offers observations of all variables on the different elements considered, and calculate the differences between these elements by any of the usual distance measures, including the Euclidean one.

In addition, in order to check for consistency between the answers *the Cohen Kappa* coefficient was used.

To compare if the purpose of travel differs depending on the patient's age *ANOVA* test with *Tukey* post comparisons in cases where there are mean differences was used*, after verif*ying the normality of the variable using the *Kolmogorov-Smirnov test*.

To reduce the number of variables to study, a principal component analysis *(PCA)* was applied using the *Varimax* rotation to explain the relationship of the components with the different variables collected.

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4. RESULTS & DISCUSSION

Being this is a pilot study and taking a sample of 22 patients belonging to a big centre from the south of the island, the results are not entirely representative. That is the reason why we would recommend other and more exhaustive analyses, which would be carried out in the aforementioned way in the future.

In our study, after obtaining the results of the data collected from the 22 patients surveyed, the normality of the variable age (p-value = 0.678) was assumed. The mean age of the patients was 57.7 years (s.d. 12.14) varying between 28 and 82 years (see Appendix 2).

The nationalities of the survey respondents are:

- American
- Belgian
- Bulgarian
- Dutch
- English
- French
- German
- Irish

Table 6 shows the different responses answered by the patients according to each modality in each question that will be developed later.

	Q1	**Q2**	**Q3**	**Q4**	**Q5**	**Q6**	**Q7**	**Q8**	**Q9**	**Q10**
Strongly Disagree (1)	23	9	0	0	0	0	27	0	50	0
Disagree (2)	18	0	5	9	0	0	0	5	0	0
Neutral (3)	23	23	27	27	68	50	14	9	23	13
Agree (4)	23	27	18	27	18	27	14	36	0	14
Strongly Agree (5)	14	41	50	36	14	23	45	50	27	73

Table 6.- Percentage of each of the responses.

Next, we are going to analyse each question of the survey distributed separately.

4.1. Question 1: Has your trip to Tenerife mainly been motivated by the intention to begin –or continue with- your rehabilitation treatment?

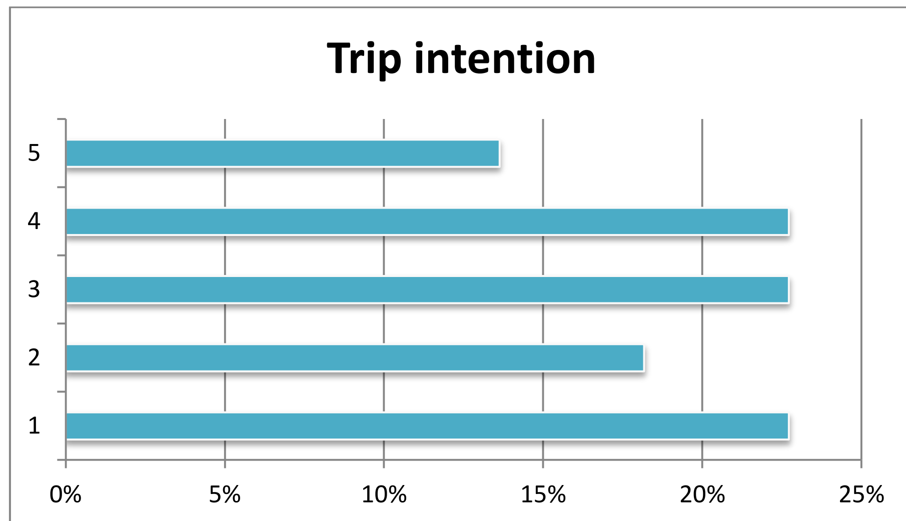

Figure 5.- Answer percentage in 1st question.

According to figure 5, we can see that 41% of the survey respondents answer "Strongly disagree" or "Disagree" denying that the main intention to their trip would be to begin or continue with a rehabilitation treatment.

There is also a 23% who answer "Neutral" and this is interpreted as they do not mainly came for receiving physiotherapy treatment but since they were on the island, they would be prepared to receive it.

On the other hand, the other 37% of the survey respondents answer "Strongly agree" or "Agree", so there are some patients that planned their trip based on beginning or continuing with a rehabilitation treatment.

4.2. Question 2: Did you choose Tenerife as a destination to carry out your rehabilitation because of the benefits that the year-round good weather and the sea have on your health?

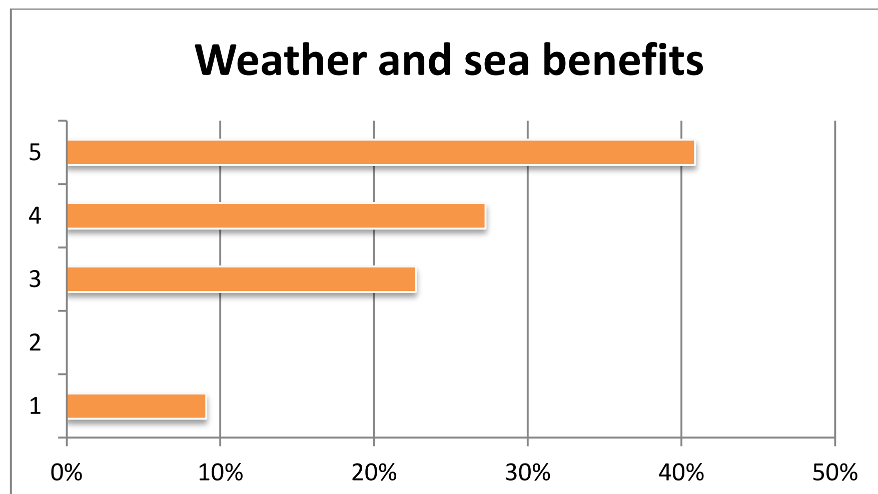

Figure 6.- Answer percentage in 2nd question.

According to figure 6, only a 9% of the survey respondents answer “Strongly disagree” and deny they came to Tenerife because of the benefits that the year-round good weather and the sea have on their health.

There is also a 23% who answers “Neutral” and this is interpreted as it seems them irrelevant for them.

On the other hand, the rest of the survey respondents (68%) answer “Strongly agree” or “Agree”, so there is a great number of patients that think the benefits that the year-round good weather and the sea have on their health are very important.

4.3. Question 3: Would you recommend Tenerife as a private health-tourism destination to other English-speaking people?

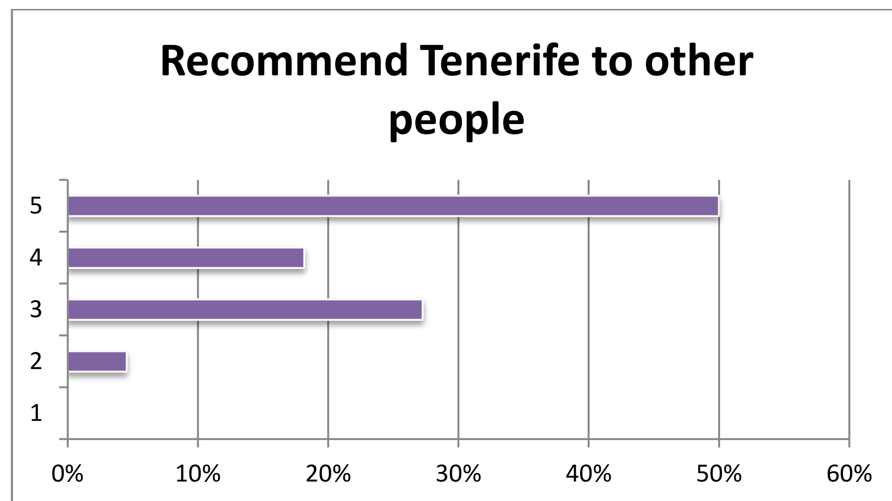

Figure 7.- Answer percentages in 3rd question.

According to figure 7, only a 5% of the survey respondents answer “Disagree” and they would not recommend Tenerife as a private health-tourism destination to other English-speaking people.

There is also a 27% who answers “Neutral” and this is interpreted as it seems not applicable for them.

On the other hand, the other 68% of the survey respondents answer “Strongly agree” or “Agree”, so there is a great amount of patients that would recommend this island as a private health-tourism destination to other English-speaking people.

4.4. Question 4: Was the fact that English is spoken in the centres where they are treating you an incentive to come here?

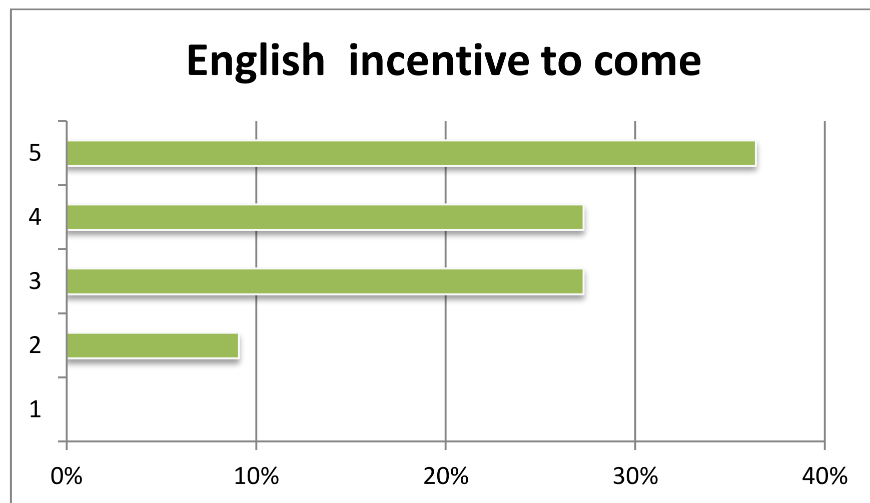

Figure 8.- Answer percentages in 4th question.

According to figure 8, 9% of the survey respondents answer "Disagree" so they do not think the fact that English is spoken in the centres where they are treating you an incentive to come to Tenerife.

There is also a 27% who answers "Neutral" and this is interpreted as it seems not pertinent for them.

On the other hand, the other 63% of the survey respondents answer "Strongly agree" or "Agree", so there are an amount of patients that think English is spoken in the centres where they are treating you an incentive to come here.

4.5. Question 5: Do you think your physiotherapist's level of English is good enough to maintain adequate communication between you both?

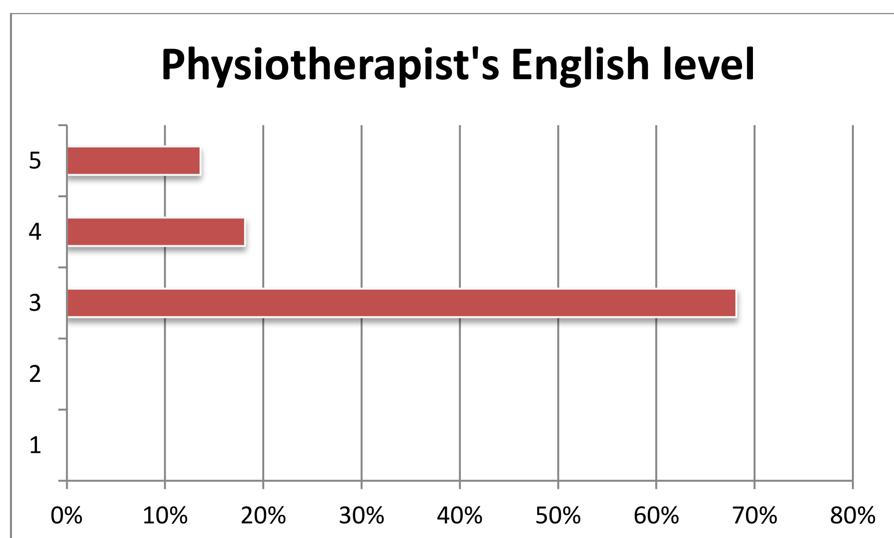

Figure 9.- Answer percentages in 5th question.

According to figure 9, anybody of the survey respondents answers “Strongly disagree” or “Disagree”.

On the other hand, there is a 68% who answers “Neutral” and this is interpreted as they think their physiotherapist’s level of English is enough to maintain adequate communication between them.

There is also a 32% of the survey respondents who answer “Strongly agree” or “Agree”, so they think their physiotherapist’s level of English is good enough to maintain adequate communication between them.

4.6 Question 6: Have you understood the techniques and exercises that have been explained to you in English?

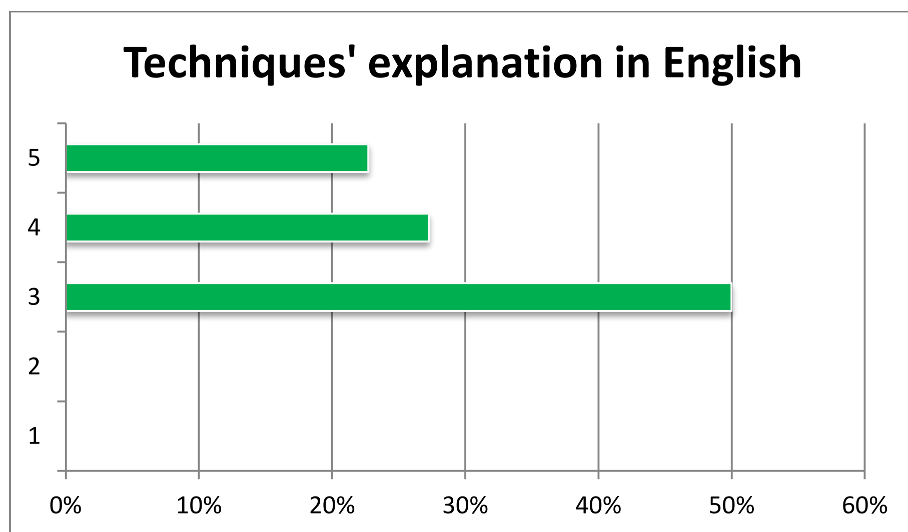

Figure 10.- Answer percentages in 6th question.

According to figure 10, all of the survey respondents answer “Strongly disagree” or “Disagree”.

On the other hand, there is a 50% who answers “Neutral” and this is interpreted as they understood the techniques and exercises that have been explained to them in English.

Also, the other 50% of the survey respondent answer “Strongly agree” or “Agree”, so they completely understood the techniques and exercises that have been explained to them in English.

4.7. Question 7: Have you received any kind of physiotherapy treatment in the country where you live?

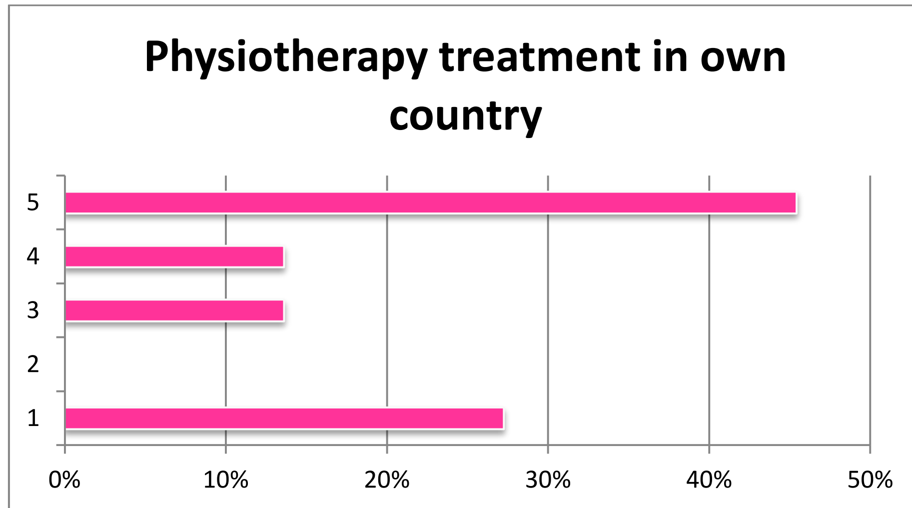

Figure 11.- Answer percentages in 7th question.

According to figure 11, 41% of the survey respondents answer "Strongly disagree" or "Neutral" so they have not received any kind of physiotherapy treatment in their countries.

On the other hand, the other 39% of the survey respondents answer "Strongly agree" or "Agree", so they have received a physiotherapy treatment in their countries.

4.8. Question 8: Do you think the quality of the physiotherapy treatment is better here in Tenerife than in other places where you have had it?

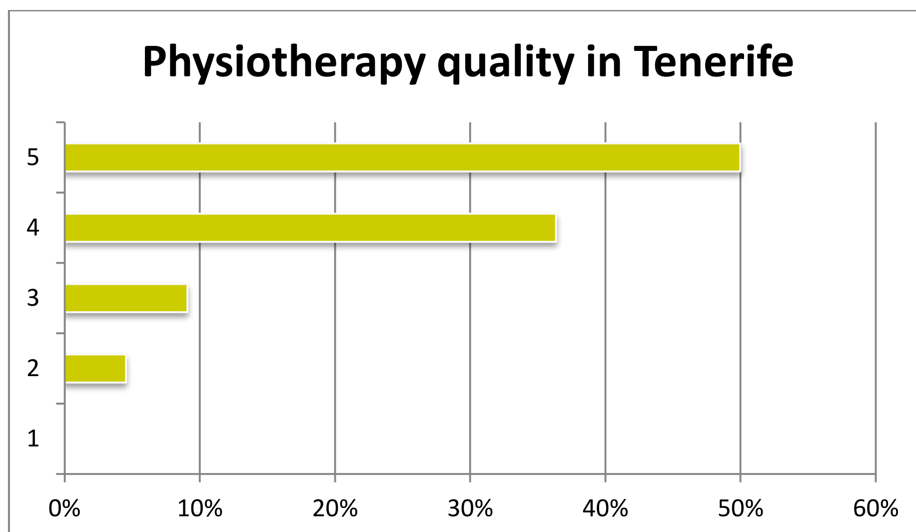

Figure 12.- Answer percentages in 8th question.

According to figure 12, a 5% of the survey respondents answer "Disagree", so they think that the physiotherapy quality in their country is better than in Tenerife.

There is also a 9% who answers “Neutral” and this is interpreted as they think the physiotherapy quality in their country is the same than in Tenerife.

On the other hand, the other 86% of the survey respondents answer “Strongly agree” or “Agree”, so there is a great amount of patients that think the physiotherapy quality in Tenerife is better than in their countries.

4.9. Question 9: When your treatment has finished, will you stay in Tenerife permanently?

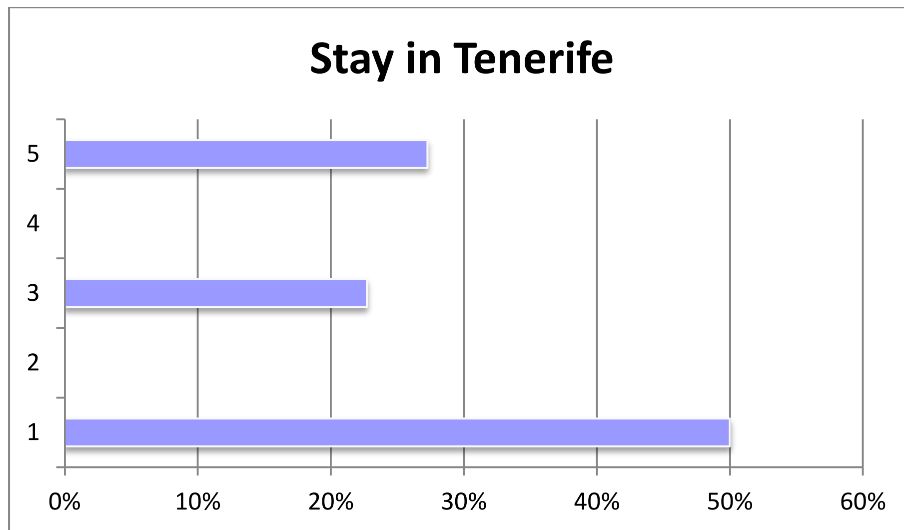

Figure 13.- Answer percentages in 9th question.

According to figure 13, a 50% of the survey respondents answer “Strongly disagree”, so they will not stay in Tenerife permanently when their treatment has finished.

There is also a 23% who answers “Neutral” and this is interpreted as they do not know if they will stay in Tenerife permanently when their treatment has finished.

On the other hand, the other 27% of the survey respondents answer “Strongly agree”, so there is an amount of patients that will stay in Tenerife permanently when their treatment has finished.

4.10. Question 10: Do you think that your trip and your rehabilitation treatment have both been satisfactory?

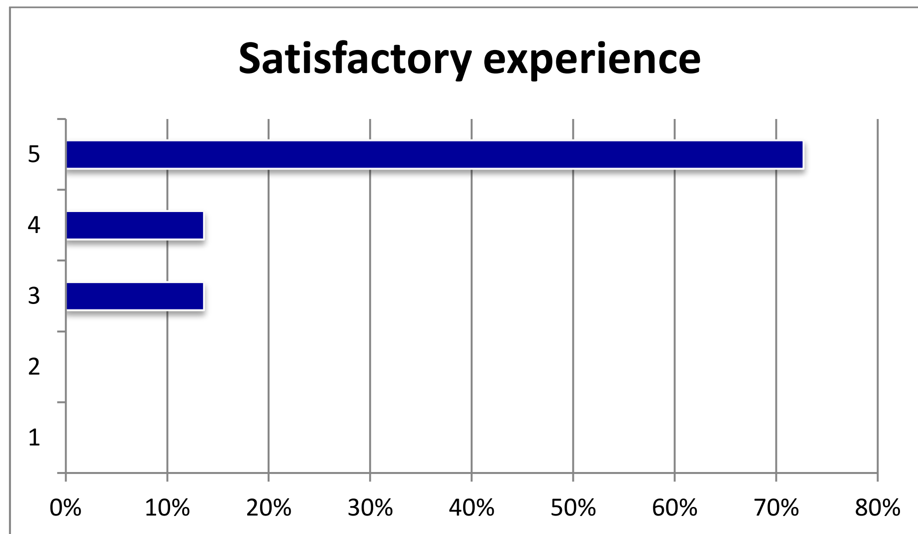

Figure 14.- Answer percentages in 10th question.

According to figure 14, none of the survey respondents answers “Strongly Disagree” or “Disagree”.

On the other hand, there is only a 13% who answers “Neutral” and this is interpreted as it seems irrelevant for them.

Also, the other 86% of the survey respondents answer “Strongly agree” or “Agree”, showing that their trip and their rehabilitation treatment have both been satisfactory.

Contingency tables

Now, we are going to analyse the possible relation or not between the different variables.

The ANOVA test was used to test whether there were significant differences between age and Q1’s components (“Dis*agree”, “Neutral” and “Agree”*). The fact that p-value is 0.855> α = 0.05 indicates that there are no significant differences in age between these groups (see Appendix 2).

We used the contingency tables when checking relationship between the variables Q5 and Q6. The fact that p-value is 0.022< α = 0.05 indicates that it does exist (see Appendix 2).

This relation indicates that among people who marked “Neutral” on Q6 there is only a 9% that marked “Agree” on Q5. While those who said “Agree” on Q6, a 55% also said “Agree” on Q5, differing this percentage significantly (see Appendix 2).

Then, we have checked that there is no significant relationship between the variables Q8 and Q9. The fact that p-value is 0.308 > α = 0.05 indicates that it does not exist (see Appendix 2).

We have also checked that there is no significant relationship between Q8 and Q10. The fact that p-value is 0.760 > $\alpha = 0.05$ indicates that it does not exist (see Appendix 2).

Principal component analysis (PCA)

It is a statistical tool to reduce the size of the study. In this example we would turn the 10 questions into four components, which are also independent of each other. These four components describe 82% of the information represented in the 10 original questions as we can see in table 7.

Comp.	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3,928	39,278	39,278	3,928	39,278	39,278	2,997	29,969	29,969
2	1,856	18,559	57,838	1,856	18,559	57,838	1,913	19,128	49,097
3	1,400	14,004	71,842	1,400	14,004	71,842	1,884	18,838	67,935
4	1,011	10,105	81,947	1,011	10,105	81,947	1,401	14,012	81,947
5	,707	7,073	89,021						
6	,407	4,073	93,093						
7	,344	3,437	96,531						
8	,161	1,605	98,136						
9	,113	1,127	99,263						
10	,074	,737	100,000						

Table 7.- Total variance applied in the extraction method of principal component analysis.

According to table 8, the four components obtained taking into account the variables that influence them are:

- Component 1: (Q3-Q6): “Dealing with English”
- Component 2 (Q1 and Q2): “Trip intention”
- Component 3: (Q7 and Q9) “Treatment in own country”
- Component 4: (Q8 and Q10) “Treatment satisfaction”

	Components			
	1	**2**	**3**	**4**
Q1		0,908		
Q2		0,781		
Q3	0,779			
Q4	0,879			
Q5	0,757			
Q6	0,781			
Q7			0,84	
Q8				0,888
Q9			0,745	
Q10				0,506

Table 8.- Principal component analysis.

The study on whether the scores of these components vary depending on the nationality of the patient was performed with *ANOVA* on each component. They indicate that significant differences appear on the basis of nationality for “Dealing with English” (p-value = 0.035) and “Treatment satisfaction” (p-value = 0.004).

		Sum of squares	gl	Square average	F	α
Dealing with English	Inter-groups	14,707	9	1,634	3,116	0,035
	Intra-groups	6,293	12	0,524		
	Total	21	21			
Trip intention	Inter-groups	9,803	9	1,089	1,167	0,392
	Intra-groups	11,197	12	0,933		
	Total	21	21			
Treatment in own country	Inter-groups	10,515	9	1,168	1,337	0,313
	Intra-groups	10,485	12	0,874		
	Total	21	21			
Treatment satisfaction	Inter-groups	16,822	9	1,869	5,369	0,004
	Intra-groups	4,178	12	0,348		
	Total	21	21			

Table 9.- *ANOVA test* for each component.

As we can see in table 10, American and Belgian patients marked better grades in the questions related to “Dealing with English”, while Irish and Dutch marked the worst ones. Also, Irish and Belgian patients marked better grades in the questions related to “Treatment satisfaction”, whilst Bulgarian and Dutch marked the worst ones.

	Dealing with English	Trip intention	Treatment in own country	Treatment satisfaction
American	1,0788617	-0,098228	-0,6725038	-0,6907603
Belgian	1,2456963	-1,3812509	1,0324438	0,6352301
Bulgarian	-0,3011046	-0,3851931	1,0843751	-2,0130618
Dutch	0,5243336	1,5041621	0,0872135	-1,4941375
English	0,351495	-0,1910518	0,2085397	0,765793
French	-0,7242283	0,1566258	-0,8018515	0,3876786
German	0,6239341	-0,1681473	-1,0573858	-0,6411317
Irish	-1,287949	0,8633317	0,4737698	1,1017208

Table 10.- Factorial scores of different components based on nationality.

5. CONCLUSIONS

There is a considerable amount of the survey respondents that would recommend our island as a private health-tourism destination to other English-speaking people. The results of this question are crucial for the development and the aims of this study. We can deduce that the goals of this research have been achieved.

With respect to the better quality of the physiotherapy treatment in Tenerife compared to other places, a high amount of patients have answered affirmatively. Consequently, this is extremely positive, since the patients who have received any kind of treatment in Tenerife would be eager to come back to the island in a near future.

For two thirds of the patients, the fact that English is spoken in the centres where they were treated was an incentive to come here. It is important for them because they came from all over Europe and they spoke different, even in some cases not as well known languages, and English has helped them to be able to communicate themselves.

The physiotherapist's level of English when treating the patient was perceived not to have been good enough. It was right but it could be improved. If health professionals' language training could increase, specifically where English is concerned, more foreign patients would come to Tenerife, in order to be treated.

As regards the patients' understanding the techniques and exercises that have been explained to them in English, patients' opinion is distributed in exact halves. On the one hand, a 50% of them have understood perfectly well the techniques and exercises explained by the professional. On the other hand, the other 50% have understood the techniques and exercises that have been explained to them but with some difficulties.

After analysing our results; the health-tourist's profile appears to be mainly a European patient around almost 60 years of age. This type of patient has taken into account positively the benefits that the year-round good weather and the sea have on their health. Half of the respondents answered they will not stay in Tenerife permanently when their treatment has finished. It is interesting to highlight that people think about Tenerife as a destination for spending short seasons on holidays or for receiving any treatment but not for living.

In relation with having received any kind of physiotherapy treatment in the country where the patients live, the amount of responses have been found to be quite similar between those who have answered that they have not received any treatment there and those who have stated it.

Finally, nearly all the patients have thought that their trip and their rehabilitation have both been satisfactory. This fact is the best way to continue to attract tourists and promote Tenerife as a health-tourism destination.

After the experience with this pilot sample, the possibility of further studies in the future is left open, in which the surveys may be answered by a bigger amount of patients and distributed in more centres in each area of the island as we have explained previously in "Materials & Methods".

We can conclude then, that Tenerife is beginning to distance itself as a competitive health-tourism destination on the European outlook. It would be necessary to invest in the healthcare field to improve and to have the best facilities

and the best professionals in order to compete with other destinations from all over the world.

A good command of English has been shown to be vital in the communication with foreign patients. So, the training of this language should be improved from the basis and also greater relevance at the university should be given to it, insisting on the benefits it can bring to a physiotherapist.

Thanks to the knowledge of English we can communicate -as we refer at various points in our work- with foreigners, both those who are in Spain and with professionals from other countries, so we believe it is beneficial for the dissemination of knowledge between nations, and to contrast different concepts, techniques and treatments and thus obtain a compromise that ensures the well-being of all individuals.

We conclude that future Spanish physiotherapists should acquire a good degree of knowledge of English to communicate with a universal language and share sources of information that are useful for treating our patients.

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7. APPENDIX 1

PATIENTS' SURVEY

EOD PROJECT

Universidad
de La Laguna

Escuela Universitaria de
Enfermería y Fisioterapia

Strongly disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly agree (5)

Nationality: ________________ Age: ___

1. Has your trip to Tenerife mainly been motivated by the intention to begin –or continue with- your rehabilitation treatment?

   ☐

2. Did you choose Tenerife as a destination to carry out your rehabilitation because of the benefits that the year-round good weather and the sea have on your health?

   ☐

3. Would you recommend Tenerife as a private health-tourism destination to other English-speaking people?

   ☐

4. Was the fact that English is spoken in the centres where they are treating you an incentive to come here?

   ☐

5. Do you think your physiotherapist's level of English is good enough to maintain adequate communication between you both?

   ☐

6. Have you understood the techniques and exercises that have been explained to you in English?

   ☐

7. Have you received any kind of physiotherapy treatment in the country where you live?

   ☐

8. Do you think the quality of the physiotherapy treatment is better here in Tenerife than in other places where you have had it?

   ☐

9. When your treatment has finished, will you stay in Tenerife permanently?

   ☐

10. Do you think that your trip and your rehabilitation treatment have both been satisfactory?

    ☐

8. APPENDIX 2

- **Tests for the variable "Age"**

***ANOVA* test**

	Sum of squares	gl	Square average	F	α
Inter-groups	50,6	2	25,3	0,158	0,855
Intra-groups	3045,764	19	160,303		
Total	3096,364	21			

Descriptive statistics

	N	Minimum	Maximum	Average	Standard deviation
Age	22	28	82	57,73	12,143
N	22				

Kolmogorov-Smirnov test

		Age
N		22
Normal parameters	Average	57,73
	Standard deviation	12,143
More extreme differences	Absolute	,153
	Positive	,111
	Negative	-,153
Kolmogorov-Smirnov's Z		,720
α		,678

- **Contingency tables**

Q5*Q6

			Q6		
			Neutral	Agree	Total
Q5	Neutral	Count	10	5	15
		% within Q5	66,70%	33,30%	100,00%
		% within Q6	90,90%	45,50%	68,20%
	Agree	Count	1	6	7
		% within Q5	14,30%	85,70%	100,00%
		% within Q6	9,10%	54,50%	31,80%
Total		Count	11	11	22
		% within Q5	50,00%	50,00%	100,00%
		% within Q6	100,00%	100,00%	100,00%

Q8*Q9

			Q9			
			Disagree	Neutral	Agree	Total
Q8	Disagree	Count	0	0	1	1
		% within Q8	0,00%	0,00%	100,00%	100,00%
		% within Q9	0,00%	0,00%	16,70%	4,50%
	Neutral	Count	2	0	0	2
		% within Q8	100,00%	0,00%	0,00%	100,00%
		% within Q9	18,20%	0,00%	0,00%	9,10%
	Agree	Count	9	5	5	19
		% within Q8	47,40%	26,30%	26,30%	100,00%
		% within Q9	81,80%	100,00%	83,30%	86,40%
Total		Count	11	5	6	22
		% within Q8	50,00%	22,70%	27,30%	100,00%
		% within Q9	100,00%	100,00%	100,00%	100,00%

Q8*Q10

			Q10		Total
			Neutral	Agree	
Q8	Disagree	Count	0	1	1
		% within Q8	,0%	100,0%	100,0%
		% within Q10	,0%	5,3%	4,5%
	Neutral	Count	0	2	2
		% within Q8	,0%	100,0%	100,0%
		% within Q10	,0%	10,5%	9,1%
	Agree	Count	3	16	19
		% within Q8	15,8%	84,2%	100,0%
		% within Q10	100,0%	84,2%	86,4%
Total		Count	3	19	22
		% within Q8	13,6%	86,4%	100,0%
		% within Q10	100,0%	100,0%	100,0%

- **Chi-square tables**

Q5*Q6

	Value	gl	α
Chi-square	5,238[a]	1	0,022

Q8*Q9

	Value	gl	α
Chi-square	4,807	4	0,308

Q8*Q10

	Value	gl	α
Chi-square	,548[a]	2	0,76