

**Open University of Cyprus**

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**Master's Dissertation**



**Digital Transformation in the Event Industry. A Marketing Approach**

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## Summary

Due to the current global health crisis of Covid-19, the event industry was forced to adopt a virtual model basically overnight. The event industry is changing, and progressing in order to adapt to current trends, and embracing digital transformation with the entire latest tech on display at conferences and meetings. The new technologies available are assisting conference organizers with creating an immersive experience and they are now able to turn attendees into participants by adding an experiential dimension to their events, making a conference or any other event a collaborative occurrence as opposed to a function that people attend just for the purpose of consuming knowledge.

The aim of this research is to assess physicians' attitude towards the sudden change of traditional in-person meetings into on-line conference. Additionally, to identify event planners' viewpoint, to suggest future changes and make recommendations of how to maintain high levels of participation and engagement. Therefore, it will attempt to overview potential solutions offered by both event planners and participants.

Furthermore, this study aim to review recent significant developments in meetings and events industry, present the beginning of the digital transformation of the event industry- years before the pandemic of COVID-19, the competitive advantages of on-line events and how professionals can be prepared for future disruptions.

The methods utilized for this dissertation are a combination of in-depth interviews to medical event planners and a survey with closed ended questions to physicians who are taking part in medical conferences. Both methods provide an in-depth analysis in order to better understand the motivations attached to the participants' decisions to continue taking part in on-line conferences.

Both physicians and event planners in this study showed mostly satisfaction with this change and ready to continue by completing and perfecting these new methods. While the majority reported fatigue and overwhelmed with the number of conferences, increasing the time for more effective communication could be a solution. The findings and recommendations from this study highlight the importance for further studies to refine all the conference's tools.

Keywords: tourism, marketing, physical events, digital events, electronic marketing, conferences, attendees' motivation, digital transformation

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# Chapter 1

## Introduction

The purpose of the Event Industry is to bring people together for personal, academic, scientific, educational, athletic or professional reasons and is recognized around the globe for its positive impact on the economy of the region (Jago & Shaw, 1999). Governments support and promote the event industry for economic development, businesses have included it in their marketing and promotion strategies and it is ranked as the 13<sup>th</sup> largest global economy.

The 2018 Global Economic Significance of Business Events study, commissioned by the Events Industry Council and conducted by Oxford Economics (*Events council, 2018*), shows that:

- 1.5 billion people worldwide participate in business events annually
- \$2.5 trillion (USD) in direct and indirect spending as a result of business events
- \$1.5 trillion (USD) in global GDP contribution
- 26 million people have direct or indirect jobs in this industry
- \$704 (USD) average spending by business events participants

The first wave of digital transformation started in 1980, however, due to the current global health crisis of Covid-19, the event industry was forced to adopt a virtual model basically overnight. Events, meetings and tradeshows all over the world with physical presence were cancelled, or postponed or were digitally transformed. The digital transformation in the events involves people that connect and interact in a virtual environment without using the same physical location. It is important to gain an in-depth understanding of the impact that this transformation has caused to participants and event planners and we will focus our study to the healthcare professionals and medical congresses. While there has been previous research on participants' engagement in online meetings, none has focused specifically on the difficulties the event planners have faced, the change of the competencies they need further and the new marketing strategies they need to follow in order to create engagement and high number of participation. Furthermore, as the new technologies have permanent changed the event industry, it is important to understand the differences in physical and digital events, the advantages and the disadvantages and expand scholarly knowledge of this phenomenon.

We will gather and analyse interviews and data to gain in-depth insight into event planners' and participants' attitudes, perceptions, and modes of engagement.

# Chapter 2

## Literature Review: The Event Industry

### 2.1. Definition

The definition of events has been discussed by many authors and several terms used to describe it. The Chambers Dictionary defines event as “anything which happens; result; any incidence or occurrence, a memorable one; contingency or possibility of occurrence; an item in a programme (of sports, etc); often held over three days (three-day event); an organized activity at a particular venue for sales promotion, fundraising. “ (1998, p.560).

The Accepted Procedures Exchange (APEX) Industry Glossary of terms (2003) defines an event as “an organized occasion such as a meeting, convention, exhibition, special event, gala dinner, and so forth. An event is normally composed of a number of different yet related functions”. Getz (2005, p. 16) notes that a principle applying to all events is they are temporary and that, ‘Every such event is unique stemming from the blend of management, program, setting and people’.

Rogers defines conferences as “an out-of-office conference of by least 4 hours duration involving at least eight people” (Rogers, 2003, p.19)

The event industry includes events of all sizes from the Olympic Games, down to small business meetings. Many industries, organizations and businesses hold events in order to market their label, build business relationships, networking, promote knowledge, raise money, or celebrate achievement.

Medical conferences were created to help physicians to be informed of the progress in medicine, learn about news studies and research and exchange information. There are conferences for every specialty and disease and conferences focus on medical education. T

Event planning is called the process of planning and coordinating the event. This can include budgeting, scheduling, coordinating travel arrangements, venue selection, communication with speakers or entertainers, venue decorating, event security, catering, negotiating with third party suppliers and vendors, designing the scientific or social program and abstract handling. Each event is different and process of planning and execution of each event differs on basis of type of event.

Event manager is the person charged with creating experiences and bringing visions to life. Plans the concept, coordinate, control, culminate and closeout the event (5 C's of event management) and taking responsibility for all the creative, technical, and logistical elements.

In order to get a better insight of the events we will briefly present when the industry started and how developed over the years.

## 2.2. A brief history in the events industry

Since the beginning of time, people feel the need to mark the key moments of their lives and have found ways to celebrate: The first events and gatherings were to promote peace and friendship between tribes, the changing of the seasons; the phases of the moon.

From the Chinese New Year to ceremonies in ancient Greece, myths and rituals have been created to interpret cosmological happenings.

Cleopatra was the first known event planner, by drifting down the Nile River on a boat filled with candles and perfume in order to impress Mark Anthony.

The Medieval French Royalty organized themed events and parties with costumes and musicians. The events hosted in the region of King Louis XV of France and Marie Antoinette still influence many people.

The Royal Ascot, an equestrian sport event appeared in 1711 and the Oxford and Cambridge Boat Race in 1829. One of the major and biggest sport events, the modern Olympic Games, began in 1896 in Athens, Greece.

During the Industrial Revolution (1760-1840) progress opened the doors for meetings and events. It became vital for people to meet and organize gatherings in order to network, discuss ideas, grow their businesses and create collaboration.

In September 1814 was held the Congress of Vienna that helped the development of the modern meeting industry. This Congress was convened in order to redistribute the territories after Napoleon's wars and the organization included accommodation, social programmes, logistics and up-to-date meeting contents. Another known political event is the Anti-Masonic Convention in 1831 and the Republican Convention in 1856.

The first international trade show known as The Great Exhibition at the Crystal Palace in London in 1851, was aiming to bring together the best products from around the world. According to Dale (1995), it was a big success which hosted over 6 million visitors.

The first known International Medical Congress, was held in 1867 in Paris (McMenemey, 1967). Another reference (Lavy N., 2014) stated that the Jewish physicians in Eretz Israel held their first professional conference in 1914 and a total of 24 out of 48 doctors participated. The Trachoma Conference of 1914 became a milestone in the history of medicine in the Holy Land.

Cultural events began to come forth from the early 1870 with the Workington music Festival and later in that period, the Last Night of the Proms appeared and is probably one of the biggest music events in the world (Bowdin and Allen, 2006, p.7).

In the 19th century, universities increasingly provided events for disseminating information within academic circles, and during the 20th century, trade and industry began to invest heavily in meetings, hosting events aimed to develop staff and sales (Rogers 2008, Shone 2009). At both trade and academic

meetings, established and trainee delegates get together to share information, interact and discuss matters of professional interest (e.g. Rowe 2017a). Therefore conferences have become an integral part of practice in terms of knowledge exchange.

To understand better the event industry we will present the structure and we will analyse the type of events and how has formed over the years.

### 2.3. Types of Events

There are many different types of events, classified by their size, type and content according to its set of requirements.

The categories when the events are characterized by their *size* are: local/community events, Hallmark events, Major events and Mega events.

*Local/community events* are any gatherings supported by the host community for 50 and more participants and could be held on public property. This can be a marathon, clean the city, local concerts or food festivals.

*Hallmark events* are usually unique events synonymous with the name of a place and are very important in terms of tradition and number of people it attracts. Such events are Carnival in Rio de Janeiro, Oktoberfest in Munich in Germany and Tour de France. Getz (2005, pp. 16–17) describes them in terms of their ability to provide a competitive advantage for their host communities and the tourism researcher Ritchie (1984, p. 2) defines Hallmark events as: 'Major single-time or repeating events of limited duration, initiated mainly to enhance awareness, appeal, and profitability of a tourism destination in a short or long time span.

*Major events* are events that are capable of attracting significant number of visitors, they have great media interest and coverage and economic benefits. (Glenn, Allen, O'Toole, Harris, McDonnell, 2001, p.17). Such events are Euro, Rugby League World Cup, Tour, IIFA Awards.

*Mega-events* are events that affect whole economies such as World Fairs and Expositions, the World Soccer Cup Final, or the Olympic Games. Those are events which are expressly targeted at the international tourism market and may be suitably described as 'mega' by virtue of their size in terms of attendance, target market, level of public financial involvement, political effects, extent of television coverage, construction of facilities, and impact on economic and social fabric of the host community. (Hall, 1997, p.5).

The categories when the events are characterized by their *form and content* are:

1. *Cultural events* include events with an important expression of human activity. This contributes to the social and cultural life and can be an event for the language, music, food, architecture and art.
2. *Sports events* are a very important part of the event industry and have a tradition going back to the ancient Greek Olympics. It is a sport competition and attracts visitors from all over the world.

The economic benefits for the country hosting such events are great and media coverage has placed them on top of the destination management and strategy of the governments.

3. *Business or corporate event* is any activity where the purpose is to discuss and analyse, research, provide information and exchange views, or conduct commercial activity. Such as events are seminars, workshops, conferences, meetings, exhibitions, trade fair or shows, incentive travel, and corporate events. In event industry business events is known as MICE (Meetings, Incentives, Conventions and Exhibitions).
  - 3.1. Seminars address to a target audience and small groups of people, with the purpose to provide relevant information about a particular subject. It is offered by a commercial or professional organization.
  - 3.2. Workshops and training sessions that bring employees together with the aim to learn brainstorm and introduce a new concept.
  - 3.3. Conference is called the event with many speakers, sessions in one or multiple venues, is called conference. Usually is organized for three to five days and is divided in round tables, panel discussions, oral presentations and poster sessions. Conferences can welcome hundreds or thousands of delegates and can be national or international.
  - 3.4. The gathering of two or more people is called a business meeting. The purpose is of making discussions and take decisions of company's objectives and operations.
  - 3.5. Exhibition/Trade fairs or shows are the events when businesses in a particular industry promote their products and services and are a great way to generate sales leads. Trade fairs usually take place in very large venues.
  - 3.6. Incentives travels are a reward, recognition program or a loyalty program, for employees, customers or partners. We use the term of corporate events to refer to the business activity for employees, clients and suppliers in order to launch a product, to announce a new service, to demonstrate expertise and inform about the achievements of the company.
4. Political Events are being organized in order to influence the image of political parties.
5. Social Event is an event characteristic of persons forming groups. It happens at a given place and time involving a public performance or entertainment and marks an important circumstance. (anniversary, wedding, themed party, etc.)
6. Educational Events provide the opportunity to discover new knowledge and techniques and are critical to the development of the education sector. National Conference on Personalized Learning and Diversity, Education and student Success are known educational events in the world.
7. Medical/Healthcare events are educational events organized by medical societies and related organizations providing information about new studies and research and share knowledge between healthcare professionals. A medical event and workshop can be in small size with a few

participants, medium size and large international congresses of tens of thousands of participants, researchers, professor of medicine and exhibitors.

### **Classification of Events**

- **By size**
  1. Local-Community events
  2. Hallmark events
  3. Major events
  4. Mega events
- **By content**
  1. Cultural Events
  2. Sports Events
  3. Business/Corporate Events
    - 3.1. Seminars
    - 3.2. Workshops
    - 3.3. Conferences
    - 3.4. Meetings
    - 3.5. Exhibitions/Trade fair or shows
    - 3.6. Incentive travel
  4. Political Events
  5. Social Events
  6. Educational Events

Source: own compilation

## **2.4. The structure of the event industry**

The globalization of markets -the merging of local markets into one huge marketplace- in 1980 drove a rapid expansion in the connectivity of the world's economies and cultures and led the growth of the events with a new formation of the industry, with its own suppliers, practitioners and professionals. There has been a development of training and educational programmes and the complex and demanding operational environment has led the governments to increase regulations. The key components of the event industry are four: Event Management Companies, Event Industry Suppliers, Associations, and External Regulatory Bodies.

The Event Management Companies are professionals that organize events on behalf of their clients. They are able to organize a number of different events where participants from different sectors can be invited. They are responsible to keep the event on track for greater success, find appropriate vendors, handle risk management and increase customer satisfaction.

The Event Industry Suppliers include professionals in hospitality such as hotels, venues, travel agencies, audio-visual production, catering, transportation, communication and marketing, security and accounting services. The network of expert and specialized suppliers is an integral part of the event industry helping the production of professional events.

The growth of the industry has helped the formation of professional associations able to provide codes of ethical practice, solutions, networking and communications within the industry which is constantly changing, expanding and innovating. The major associations are:

- ILEA: International Live Events Association
- NACE: National Association For Catering And Events
- ESPA: Event Services Professional Association
- MPI: Meetings Professionals International
- ICCA: International Congress And Convention Association
- GMIC: Green Meetings Industry Council
- CEMA: Corporate Event Marketing Association
- IAVM: International Association Of Venue Managers
- NCBMP: National Coalition For Black Meeting Planners
- Eventovation: A Community For Anyone In The Events Industry
- PCMA: Professional Convention Management Association
- SGMP: Society of Government Meeting Professionals
- WIPA : Wedding International Professionals Association
- ACCED-I : Association of Collegiate Conference and Events Directors-International
- AEP : Academic Event Professionals
- IACC : International Association of Conference Centers
- IAEE : International Association of Exhibitions and Events
- SEPA : Students Event Planners Association

The Prescription Medicines Code of Practice Authority (PMCPA) is the self-regulatory body which administers the Association of the British Pharmaceutical Industry and is a code of practice for the Pharmaceutical Industry established on 1993. The aim of the Code is to ensure that promotion of medicines by the pharmaceutical industry is carried out within a robust framework, to support high quality patient care. (PMCPA, 2021, [www.pmcpa.org.uk](http://www.pmcpa.org.uk)). Organizers of healthcare conferences should read Clause 19 of the ABPI code with the guidelines that covers the procedures when planning a healthcare conference.

The External regulatory bodies help event professionals to have a legal responsibility to provide a safe workplace and to obey all laws and statutes relating to employment, contracts, taxation and so on. Every



professional event manager needs to be familiar with the regulations governing events and to maintain contact with the public authorities that have a vested interest in the industry. (Glenn, Allen, O'Toole, Harris, McDonnelli, 2001).

In 2020, after the global health outbreak (Covid-19), the industry transformed almost overnight, digitally. Consequently, society overall faced a radical change due to the development of digital technologies and their extensive implementation of all markets.

# Chapter 3

## Digital Transformation in the Event industry

### 3.1. Technical aspects of digital transformation from 1990 till today

Digital Transformation is becoming an important topic for organisations and industries around the world (Kaufman & Horton 2015, Von Leipzig et al. 2017).

A broad definition describes it as the integration of digital technologies and business processes into a digital economy (Liu et al., 2011).

Therefore when we discuss about digital transformation is not only about investing in new technologies but also the challenge for companies to restructure and adapt with the new developments. Despite the fact that companies recognize importance, they still face multiple obstacles preventing them from starting, let alone benefiting, from digital transformation (Von Leipzig et al., 2017).

The first digital transformation started in the 1980s when begun the introduction of technology and information with internet. Computers became essential part of everyday professional life and the main tool.

Prior 1990s, event planners had to physically mail or fax invitation and use hand-written registration processes. Flyers, posters and word-of mouth were the only way to advertise an event. Telephone was used to confirm the participation of attendees. Physical maps and handy direction pick-ups were used to figure out the location of the event.

With the invention of the internet in the 1990s, the event business significantly changed.

The internet started to offer inexpensive solutions and event professionals were finally able to communicate and market their events using websites and emails bringing a different perspective to the event industry.

Dr. Kasser, Professor at the Graduate School of Management and Technology at University of Maryland University College (UMUC), was a pioneer in the asynchronous audio enhancement while he started to give on-line lectures for a distance education program in 2000. Recognizing that conference presentations and classroom lectures are similar, the authors prototyped an approach for delivering presentations asynchronously at the conference by prerecording the audio enhanced PowerPoint presentation onto a CD-ROM and playing the recorded presentation to the conference session without notifying the audience of what was to happen.

The first Web Based Asynchronous Virtual Conference was in the summer 1999 between two classes in the MSWE degree. Two sections of the distance education class on Software Maintenance were allowed to make audio presentations to their peers as if they had been in the classroom and face to face class Systems Engineering were offered the opportunity to use the audio enhancement technology and record their presentation instead of making it in front of the class.

(A Web Based Asynchronous Virtual Conference - A Case Study Dr. Joseph E. Kasser 2000)

The technology continued to advance throughout the 2000s. Portable devices such as laptops and smartphones became popular and the event planning became completely possible on a digital manner. Attendees started to embrace a paperless existence and meeting planners started to interact with attendees before, during and after the event, measure data and learned how to succeed engagement.

From 2010 related technology gadgets are used to ensure participation and are very easy to send a document, create and register an event and participate in a meeting everywhere in the world by using only portable devices. Event planners, suppliers and venues started an on-line collaboration with the ability to contact anyone no matter where they are located, within seconds.

With the help of the technology and especially after the outbreak of the pandemic of Covid-19 in 2020, video conferences, live streams and hybrid events became available to everyone. Event organizers can instantly connect with attendees and host events with a global presence.

More than 20 years later, event technology finally helped to automate manual processes of each piece of the event life cycle and helped events to be more sustainable for the environment.

### **3.2. Events and Sustainability**

The increased concern over climate and environmental change has reinforced the need for more sustainable approaches to events. (Holmes K., et al., 2015). The emergence of innovative technology due to the pandemic (Covid-19) and the megatrend of digitalisation through the years, has transformed the event industry and contributed to the environmental development by creating green meetings. According to Convention Industry Council (CIC), the sustainable event is the one that incorporate environmental considerations to minimize the negative impacts on environment. The ways to minimize those impacts are to *reduce water use, to have plastic free meetings, to eliminate paper products, to book eco-friendly venues, to use less transportation, to reduce waste, to reduce energy for lighting etc.*

Events can generate significant pressure on environmental resources with negative impact on the air, soil, water and people, unless they are well-managed and monitored. Therefore, it is becoming more and more important to develop models that can measure their environmental sustainability (Boggia, A., et al., 2018).

The advantages by organizing sustainable events are environmental, social and economic.

- 1) *Environmental*: Involves the contribution of both the economic and the social and their effect on the environment and its resources.
- 2) *Social*: Relates to human rights and values, relationships and institutions.
- 3) *Economic*: this concerns the allocation and distribution of scarce resources. These are known as the three dimensions or pillars of sustainable development. (S'harin B., et al. 2015).

### 3.3. Advantages of digital events

Online conferences have become the new normal, providing numerous advantages and opportunities. According to Yoshiyasu Takefuji, Professor at Keio University (Tokyo, Japan), virtual conferences and meetings should be practiced under Covid-19 pandemic. The motive of this statement was the cancellation of the world's largest scientific (neuroscience) meeting in August 2020. He said that the cancellation means giving up the study of neuroscience. Digital events offer a series of advantages that we will examine below.

#### 3.3.1. Attendees/Speakers:

*Networking opportunities:* Participants can list specific interests and event goals and ensure effective networking and interaction between speakers, exhibitors and other participants.

*Flexibility to attendees to choose sessions:* In virtual events participants can choose sessions and upload pre-recorded content according to their program and time zone.

*Live Polling:* Being able to communicate with polling, quizzes, surveys and Q&A's keep attendees engaged during the sessions and allow them to take part of the conversation.

*Time saver:* Virtual registration, virtual check-in and no need for travel cut down on time for participants saving a lot of personal and family time.

*Social Media Integration:* During the event, participants can share quotes, opinions and ask questions staying engaged and connected.

*Cost-effective:* Participants can reduce expenses from transportation, accommodation and food & beverage consumption.

*Mobility:* Higher participation of attendees with disabilities

*Removal of geographical limitation:* Attendance from different continents and time zones

*For Speakers:* Pre-recorded presentations have the advantage of pre-screen and edit the final speech.

(Source: Martin-Gorgojo, A. et al. (2020); Dua, N. et al. (2020); Colombo, A., Marquesleniamarques, L., (2019))

### **3.3.2. Organizers:**

*Increased attendees number worldwide:* With no travel involved, participants can participate from everywhere in the world

*Cost-effective:* Event planners can significantly reduce expenses from design, venue charges, manpower, transport, accommodation and catering costs which are associated with a physical event. A virtual event cost on average 75% less than a physical event.

*Analytics and Reporting:* Collecting data and measuring attendee's feedback, event management companies have an insight into participant's interests and behaviours. This interaction can determine the success of the event, evaluate possibilities and preferences and make improvements in the future.

*Time-effective:* The overall organization of the conference need less time for planning

*Value for collaborators (exhibitors and sponsors):* Exhibitors and sponsors can connect virtually with attendees at any time, have effective interactions and promote their services. Using product banners, videos, live product demos and other can have higher participants' attention and exposure.

(Source: Gajuryal, S. et al. (2020); Madray, J.S., (2020))

### **3.3.3. Environmental and Social Advantages:**

*Prevention of terrorism act:* Attacks could be indiscriminate including in places frequented by foreign nationals such as conference centres and hotels. Participants can attend a virtual event with safe.

*Lower Carbon Footprint:* Without the need for participants to travel or use a building the negative effects of travel emissions, energy and waste can be reduced.

*Viral Load Monitoring:* Mitigates the risk of contracting a virus.

(Source: Martin-Gorgojo, A. et al. (2020) ; Dua, N. et al. (2020) ; Colombo, A., Marquesleniamarques, L., (2019))

### **3.4. Disadvantages of digital events**

The basic prerequisite for a digital event is technology, where there is a lot of discussion about the effects and the challenges of using technology in every part of people's life. We oppose the disadvantages below:

*Less effective communication:* A great advantage of a physical meeting is the human interaction. The lack of face to face interaction creates less familiarity and emotions which are important for effective communication.

*Instability in connection:* Technology is the most important prerequisite for a digital event. However, connectivity issues can reduce the effectiveness of an online event.

*Different time-zone:* the global time difference can limit participants in taking part in live sessions and speeches.

*Short attendees' attention:* While participants are in a venue, can join sessions, visit exhibition, network and focus on the event. In digital events it is very challenging to commit participants to sit in front of their computer screen for a long period while other things competing for their attention. It is of high importance to provide content that keeps participants focused all the time.

*Massive data and analytics gathering:* High risk of security and exploitation of participant's information.

*Limited Networking and Interaction:* Weak interaction with audience and speakers. Less opportunity to make new contacts, do business, promote sales or learn.

*Economic Impact:* The Global Event and Tourism Industry have faced a crisis due to Covid-19 outbreak. One of the biggest disadvantages of digital events is the loss of income from tourism for the host cities and local companies.

(Source: Martin-Gorgojo, A. et al. (2020) ; Dua, N. et al. (2020) ; Colombo, A., Marquesleniamarques, L., (2019))

# Chapter 4

## Medical Conferences and Events

### 4.1. The planning

In the rapidly changing world of medicine, scientific conferences are a key component of academic communication and development and help health-care professionals to keep them informed with important research, to share knowledge and experiences and develop new skills and techniques. Medical conferences are intended to discuss health issues, new techniques and innovations, developments and research and are at the heart of a scientist's professional life, providing a great opportunity for learning and networking. Physicians and surgeons take time away from their patients and labs to listen other experts. Speakers based on their own studies and observations discuss about health problems and analyse results. The formats of these events may be as workshops, round tables, seminars, oral and poster presentations and are generally organized by departments of health in hospitals, medical associations and educational institutions. Every day some new innovation and breaking study is published and physicians have to be updated. The exposure to other professionals through those events offers motivation to improve their performance and the need for science has never been higher, hence the high number of medical conferences all around the world. Worldwide there are around 100,000 medical events per year.

The preparation of a medical conference is separated in different phases. The first phase is to conceptualize the concept including the topic, the specialties of physicians that can attend, whether the conference will be national or international and the geographical place that will be held. After the pandemic outbreak (Covid-19), the organizing committee of the conference has also to decide whether the event will be with physical presence, on-line or hybrid. The organizing and scientific committee must be established to take all the decisions above. The next phase is to find a suitable date and venue that will allow a high number of speakers and delegates to participate. The third phase is to select the Keynote Speakers which is a very difficult part since a successful conference depends on the quality of the research will be presented. The accommodation, transportation, catering services, social events, technology support, marketing promotion of the event and sponsorship opportunities are the following decisions the organizing committee with an event consultant should take, according with the budget of the conference. The budget can be defined from the expected registration fees and sponsorship of the event. The scientific committee has to consider the submission of the abstracts of oral and poster presentations and make the call when the registration will be opened. The anticipated problems on the organization could be: last minutes cancellation of speakers, airplanes delays, late arrivals on lectures, technical issues, and late breaks.

The conference, regardless of size, requires a prolonged period of planning, dedication and hard work in order to be successful and to enrich the scientific community. There are five objectives of attendance, to present a research, to earn knowledge on new researches from others, to network, to start new collaborations and explore a new cultural environment. (Swash et al., 2018)

The pandemic announced by the World Health Organization on March 11, 2020 has affected almost every nation with significant changes on everyday life due to the implementation of protective measures to help impede the spread of the virus. These protective measures have had major consequences on continuous medical professionals' development (Saad et al., 2021).

In short period of time, planned meetings had to be cancelled, postponed or rapidly moved online. A snapshot survey by Saad et al. in 2021, which conducted online on 100 anonymous medical professionals, showed a significant drop in the attendance of number of participants from 52% to 37%, between the years 2019 and 2020. Organizers had to adapt to the rapid change of in-person to on-line, hybrid meetings and webinars through multiple platforms. In the same survey 41% of respondents were positive about this form of meeting due to cost-effectiveness, however, 55% did not like the fact of diminished chances of networking.

The pandemic has accelerated the need to organizers to provide useful context and insight and create a strong digital experience that will offer interaction and engagement to participants. And while the effectiveness of virtual medical education has been demonstrated, there remains a paucity of information regarding the effectiveness of virtual scientific conference. (Chan, A., et al., 2021). In our study we will try to provide additional insights into the advantages and disadvantages of virtual conferences from event organizers and participants.

#### **4.2. Aids and barriers to delegate participation in medical conferences**

In-person academic conferences are important components of a researcher's role through enabling the dissemination of research and providing networking opportunities (de Leon & McQuillin, 2020; Oester et al., 2017). The decision for attending a conference is primarily based on its cost, accessibility, and safety (Yoo & Chon, 2008; Zhang et al., 2007), therefore, in-person conferences are not accessible to all scientists and academics. These factors can act as barriers for early-career researchers or academics from low income economies. However, a diversity of participants and speakers is important to be promoted.

Measure taken to combat the pandemic such as travel restrictions, closed borders and gathering bans led to cancellations of many conferences, meetings and workshops and forced the scientific community to consider alternative (virtual) formats based on video conferencing software. (Gichora et al. 2010; Abbott 2020; Achakulvisut et al. 2020 ; Arnal et al. 2020; Viglione, 2020). Online conferences aids delegate's



participation and mitigate these challenges by removing concerns about carbon emissions, travel costs and accommodation. However, the online meeting is less effective for networking and social opportunities. Therefore, calls to remove the barriers that are limiting global networking and communication are vital to improve science (Smith et al., 2017).

In the post-COVID era, hybrid conferences are the new reality, allowing participation of attendees and speakers both on site and at a distance. The virtual environment with streaming and videoconferencing allow live parallel sessions of oral presentations, speeches and e-poster presentations and participants communicate with forums, electronic questions and polling tools.

The responsibility will be on organizers of these future conferences to ensure an equitable participation for both categories, respecting not only the contingencies but also the ethos of each participant, and by making these events more accessible, affordable, inclusive, and environmentally friendly (Newman, 2021).

### **4.3. Delegate's Motivation**

Due to the increasing number of conferences being produced, there is a demand of more creativity and in continuous innovation to maintain attendee's interest. Event attendees' motivation is recognised by organizers as the most important factor and helps them to comprehend participants to maintain their engagement.

Motivations were first studied in the tradition of psychology, in which understanding the individual and the reasons why certain phenomena occur play a fundamental role. As human beings are complex, understanding motivations also helps to comprehend the causes of certain behaviours. In the events literature, this has been one of the most recent trends in analysing events. (Alba Colombo & Lénia Marquesleniamarques, 2019).

A new study (Chan A., et al., 2021), revealed that in a medical in-person conference with 146 attendees and 200 online, in which 32 (22% response rate) and 52 responses (26% response rate) were gathered, respectively, the learning objectives were better met in-person for the overall conference, but not for workshops, in which there was no significance difference.

Another study (Foramitti, J., Drews, S., Klein, F., Konc, T., 2021), shows the participant's opinions regarding advantages and disadvantages of virtual conferences and 94% answered positive regarding the costs. 85% said it was better the virtual conference regarding the amount of time needed to attend and 40% answered that the quality of academic discussions was better. However, a 15% of participants deal with an amount of technical problems and a 48% claimed the strong disadvantage of meeting new collaborators.

Recent studies have focused on event experience (Morgan, 2008; Pegg & Patterson, 2010), however, there is lack of research about the in-person or online motivation of attendees of scientific and medical conferences, the challenges and their needs. The objective of this paper is to investigate the advantages and disadvantages of a medical face to face and virtual conference from attendee's and organizer's perspective and aim to contribute towards highlighting some of these perspectives and provide a more detailed insight into aspects of motivations. Conference organizers are currently in different stages of experimentation with interactivity. However, with texting, direct messaging, voice assistants, and face-time tools already available and part of consumers' daily lives, there will be aspects of virtual engagement that attendees will not only expect to be part of the experience, they will expect it to work flawlessly. (Zargaran, D., Zargaran, A., Phillips, G., Atkins, J., 2020).

#### 4.4. Event Planners' challenges

Organizing a medical conference is a very challenging task and requires a tremendous amount of planning and preparation to achieve its vision and goal.

The two most important aspects of the success of any event are planning and implementation which requires plenty of brainstorming sessions and meetings (Gajuryal SH, et al., 2020)

After the Covid-19 outbreak, the event management consultants' and the scientific community realized that is critical to remain active as there was a rapid transformation from in-person events to virtual conferences and meetings.

Organizers had to consider the following before turning on-line.

What is the most responsible thing to do?	Is there cancellation insurance at the event site?	Do participants have travel cancellation insurance?
Will people attend?	Is there sufficient financial support?	Is the time enough to finalize the event?
Will speakers still be willing to present their latest(often unpublished)data?	Can the meeting be held safely?	Are there any restrictions and quarantine requirements?

Source: Zargaran, D., Zargaran, A., Phillips, G., Atkins, J., (2020)

Conference organizers need to be flexible and innovative and face the challenge to recreate the experience of physical conferences with discussions and workshops. A recent research (Foramitti, J., Drews, S., Klein, F., Konc, T., 2021), showed that virtual events have significant advantages of improving the academic quality of discussion and still obtain the opportunity for networking. What about the

emotional engagement due to the lack of in-person interaction? How the lack of applause after each talk will be replaced? Virtual events cannot involve all the feelings of the audience.

The micro-experience and the personalization, the safety, to make profit from virtual events require creativity and innovation and new priorities has to be set by the organizers.

As there are not many studies from the event management consultants' perspective, we will try to identify the biggest difficulty in organizing an online conference and what need to be changed in order to have higher participation and engagement from the delegates.

# Chapter 5

## Research Methodology

This chapter contains information related to research methodology and procedures. The research approach and methods, research technique, target population, sampling method, data collection design, data analysis and results.

The aim of the study is to gain an understanding about the engagement and experience of delegates in on-line medical conferences. We collected data to have an insight regarding the level of satisfaction and differences between physical and online events.

Qualitative research is a rich, varied, and changing field rather than a single homogenous entity that is static across time. It is an umbrella term for a diverse, expansive, and continuously evolving array of research interpretive paradigms, approaches, methods, evaluation practices, and products (Denzin & Lincoln, 2017).

In-depth interviews are mostly long-duration, face-to-face, interviews conducted to achieve desired goals. In-depth interview also known as one-on-one is a method of extracting more detailed information or deep understanding of a subject or concept. (Kvale,1996). An in-depth interview is a qualitative research technique that is used to conduct detailed interviews with a small number of participants. In contrast to other forms of qualitative research, researchers using an in-depth interviewing approach invest a significant amount of time with each participant employing a conversational format. (Rutledge & Hogg, 2020).

Quantitative research deals with numbers and figures and consists of different types of questionnaires, surveys, structured interviews, and behavioural observation which are based upon explicit coding and categorization schemes. It quantifies feelings, opinions, attitudes, behaviours, and different type of variables with a view of supporting or refuting hypotheses about a particular phenomenon (Farnsworth, 2019)

The methods utilized for this dissertation are a combination of interviews to medical event planners and a survey with closed ended questions to physicians who are taking part in medical conferences in order to better understand the motivations attached to the participants' decisions to continue taking part in on-line conferences.

For the interview portion, the study focuses on advantages and disadvantages of the organization of the online medical conference. The challenges the event planners meet and what tools they use for higher engagement of the participants.

For the survey, the study focuses in the effectiveness of the on-line medical conferences, the networking and the missed travel opportunities due to the Covid-19 outbreak. Surveys are used as a method of quantifying the way in which delegates take part in on-line medical conferences.

Both methods provide an in-depth analysis of delegates' motivation to participate in medical congresses, the impotency of their participation in terms of networking and learning new practices and the challenges they meet.

All data regarding the participants were anonymous, and all conference delegates accepted our privacy policy and terms of conditions for the use of cookies on the website and the use of data when registering to this survey.

### **5.1. Research design - Qualitative approach, Open ended interview questions**

**Qualitative approach.** For the first part of our research was conducted a qualitative study with eight written responses to open-ended interview questions to provide evidence that employees developed more competences due to Covid-19 pandemic and effective ways to communicate with the participants in on-line medical conferences.

The first section addressed by asking respondents to indicate the name of the company, their professional title and how many online events they have organized in their career.

In the next section the interviewers shared their opinion regarding the effectiveness of the online conferences and the challenges they faced to organize it. In the third section the event professionals answer questions regarding how they promote their events and if they implement new marketing strategies in order to have higher participation in their conferences. In the last section they answer questions regarding the advantages and disadvantages of the online conferences for the company and the delegates.

The alumni network was used to ensure that the participants are still practicing the profession of event planner and they have experience in organizing in-person and on-line events as well. At the time of the data collection, 100% were employed full-time in the hospitality industry and more specific they were working in PCO companies. (Professional Congress Organizers). The participants had an average age of 45 and had an average of 20 years working in the industry.

Due to the constraints by the Covid-19 and the different country of resident, the questions were completed online and sent via e-mail. This study provided evidence that event planners developed new competencies almost overnight and is still exploring all the possibilities for on-line organizations.

## 5.2. Research design - Quantitative approach, Survey with closed ended questions

**Quantitative approach.** A quantitative approach is used to identify one or more variables that are in a relationship and identify a specific, measurable trend (Creswell & Creswell, 2018). This approach is used to answer questions to explain, predict, or control a particular trend (Kumar, 2008).

This survey research technique was the most appropriate technique for this study. It helped the researcher to understand patterns of behaviours from participants in on-line medical conferences and discover new tools and ways for higher participation and engagement. Surveys as a research technique help determine relationships between two or more items and determine patterns and trends (Baumgartner & Hensley, 2013).

The on-line survey with closed ended questions was developed and distributed to physicians of different specialties and from different countries via e-mail several social medical networks using the snowball technique. Answering the survey was considered an implied consent to participate in the study, and all answers were confidential.

Using these two ways of distribution was the most effective method to ensure the possibility of each members of the population to have an equal opportunity for being selected as a respondent and be from different part of the world. The survey instrument, found in Appendix A, contained five sections in twenty one multiple choice' questions. The first section addressed by asking respondents to indicate in how many on-line medical conferences they have participated and their type of presentation, if any (abstract presenter, poster presenter, invited speaker). The second section was regarded the networking opportunities, the missed travel opportunities, the importance of the academic presentations and the effectiveness of the online conferences. The third section was about the mental exhaustion that occurs after a day of videoconferencing and ways to avoid it. The fourth section was regarded the marketing tools that are used from the event planners and participants could propose new ways of communication. The fifth section has the demographic questions (i.e., age, country of residence, gender and education). Likert scale included in the instrument.

The necessary time of answering the questionnaire was approximately 5-7 minutes and helped to have an insight of physicians' way of thinking regarding their participation in online conferences.

The step followed was the interpretation and evaluation of questions sent to physicians regarding participant's motivation, competitive advantages and financial impact.

### **5.3. Data Collection, Analysis and target population**

For the first part of the research with the qualitative study, we gathered 8 written responses in open ended questions. At the time of the data collection, all the respondents were working 100% in the events industry. The interviewee were from 4 different countries, one from Switzerland, one from UK, one from Canada and five interviewees from Greece.

A summative content analysis (Hsieh and Shannon, 2005) was used to analyse this part of the data. Started with identifying and quantifying target words or content within text with the goal of understanding the participant's thoughts ((Hsieh and Shannon, 2005; Potter and Levine-Donnerstein, 1999). This analysis was chosen to explore how the pandemic and the overnight turn to on-line conferences affected the events industry and was associated with positive or negative feelings and emotions. The goal of a summative content analysis was to first identify commonly used target words (e.g., income, networking opportunities, advantages and disadvantages) to describe the event planners thoughts about the on-line medical events and if the pandemic affecting their careers. Secondly, we wanted to identify themes or patterns. Latent content analysis is the process in which researchers explore the underlying meaning of a target word or the context in which it is used (e.g., anxious about getting sick versus anxious about losing my job) to identify the themes in the data (Hsieh and Shannon, 2005).

For the second part, data were collected through a confidential online survey and participants accessed the survey through a URL accessible with computer, tablet or mobile. No names or identifiers were included for the quantitative approach with the closed ended questions. The URL has been sent only to physicians and practitioners of medicine. Participants were able to forward the link to their colleagues. At the time of the data collection 77 responses were collected in three weeks from 18 countries (Greece, Switzerland, France, UK, Cyprus, Spain, Germany, Thailand, Scotland, Latvia, Italy, Australia, India, Yemen, Luxemburg, Ireland, Sweden and Romania.)

# Chapter 6

## Results

### 6.1. Interview results

For the first part of our research we conducted a qualitative study in order to determine the particular frequency of traits or characteristics of our subject and gain insight and motivations. We conducted one-to-one interviews from eight event planners with extensive experience in organizing medical conferences in Europe.

### 6.2. Professional titles and experience in organizing on-line conferences

The first section addressed by asking respondents to indicate the name of the company, their professional title and how many online events they have organized in their career.

All the participants are Event/Project Managers with the exception of two participants with different job titles, Congress, Director of Events and Event Secretary Services. They all have worked from five to thirty on-line events with a mean number of 15.3. (Table 1)

	Title	Experience (number of on-line conferences)
No.1	Congress, Client Director	30
No.2	Event Manager	More than 15
No.3	Event Management Consultant	5
No.4	Event Manager	10
No.5	Event Secretary Services	5
No.6	Event Manager	30
No.7	Project Manager	8
No.8	Project Executive	20

**Table 1. Titles and number of on-line conferences**

Regarding their preferences about organizing on-line or in-person events, 3 answered on-line, 2 in person, 2 hybrid and there was one participant without any preference. **Table 2.**

Do you prefer on-line or in-person and why?
Respondent No.1: <i>"I personally prefer onsite conferences as the interaction with the client and suppliers is deeper and more personal."</i>
Respondent No.2: <i>"They are the same to me"</i>



<p>Respondent No.3:  <i>"I prefer a hybrid model of both on-line and in-person conferences. However if I had to choose I prefer to organize in-person conferences"</i></p>
<p>Respondent No.4:  <i>"I prefer on-line conferences"</i></p>
<p>Respondent No.5:  <i>"Hybrid events-are more complicated but in my opinion are more innovative"</i></p>
<p>Respondent No.6:  <i>"In person, as it is almost impossible to replicate the networking part of events online, and it is more beneficial for sponsors as they leave the in-person events with new connections and potential leads. Online, they get a list of attendees and reach out to them before and after the event, however it is more difficult to make a long lasting personal impression. On the events side of things, it is easier and cheaper to organise an event online, however it is also very impersonal, as you don't get a chance to meet and greet attendees, speakers and sponsors, and it is not as creative as an in-person event. "</i></p>
<p>Respondent No.7:  <i>"I prefer in person conference and the main reason is the interaction they offer"</i></p>
<p>Respondent No.8:  <i>"I definitely prefer online events"</i></p>

**Table 2. Preference of on-line or in-person conference between interviewees**

*"I personally prefer onsite conferences as the interaction with the client and suppliers are deeper and more personal."* C.F.

*"In person, as it is almost impossible to replicate the networking part of events online, and it is more beneficial for sponsors as they leave the in-person events with new connections and potential leads. Online, they get a list of attendees and reach out to them before and after the event, however it is more difficult to make a long lasting personal impression. On the events side of things, it is easier and cheaper to organise an event online, however it is also very impersonal, as you don't get a chance to meet and greet attendees, speakers and sponsors, and it is not as creative as an in-person event."* L.P.

### **6.3.Changes in the industry for higher engagement of participants**

In the next section the interviewees shared their opinion regarding the changes should be done for higher engagement of participants.

Respondent No. 1 said: *“The interactivity between participants and between participants and invited speakers.*

Respondent No. 3 said: *“The standard format of presenting information to a virtual audience can fall flat - content needs to be produced to a high-quality standard and presentation kept concise and visually stimulating. Added "real life" touch points can go a long way to increase engagement (ex: gift boxes delivered prior to the conference)”*

Respondent No. 4 said: *“Better structuring of scientific programme to help keep participants focused, more opportunities for them to promote their work and better ways for delegates to engage with each other”*

Respondent No. 6 said: *“A few things should be standardised, such as interaction rooms - create interactive one on one meeting but also meeting rooms on specific topics limited to 10 participants, where all can debate on a specific topic, ask questions etc.”*

50% of the Respondents answered the interactivity should be changed for higher engagement.

### **6.4.The biggest challenge event planners frequently face**

The participants have asked about the biggest challenge they more frequently face with the participants in on-line conferences. 6 out of 8 (75%) they have said that technical problems and the connectivity issues are the most difficult part in an on-line conference. Another participant referred to the platform fatigue.

Respondent No. 1 said: *“Dependence on individual IT issues, connectivity problems”*

Respondent No. 3 said: *“Technological barriers to entry - slow internet speed, less buy-in as the conference is generally free/ low ticket price and so guests may "forget" to attend or not see the value. This is often due to the organizer or client failing to account for the expenses of producing a high quality experience and capturing guest interest from the beginning.”*

Respondent No. 6 said: *“The online event fatigue is real - the content needs to be really specific and stand out to attract a wider audience. People don't interact or ask questions if the format of all the events they attend online is similar. They just tune in and listen.”*

### **6.5. Is there an effective communication between event planners and delegates?**

The effective communication between event planners and delegates of the online conferences was discussed with the interviewees and 7 out of 8 (87.5%) gave a positive response. 1 interviewee said:

*“As an events manager, I am in the back, helping with any technical issues so I do not really interact with attendees. However, we have stopped doing networking areas, and instead we offer the opportunity to contact other delegates, speakers or sponsors and schedule one-on-one meetings during the breaks. These meetings can happen during breakout sessions, or after the event is over.”*

Another participant said: *“There is often too much time! It is easy to get bored - short videos with important content can communicate much more effectively than an email, PDF or live speaker when it comes to important housekeeping notes.”*

## 6.6. Marketing strategy implementation for on-line conferences

The participants for this interview have been asked about the marketing strategy they need to implement to market their events. Summarized in **Table 3**.

**Question:** *According to your opinion, which is the marketing strategy the organizers need to implement from now on to market their events? (ex: create an attention-grabbing event page, use keywords to boost your search potential, make the most of email marketing, ask your sponsors and partners to spread the word, leverage social media across platforms etc)*

No.1	<i>All of the above should be used. Even more than before the communication strategy needs to be adapted to the addressed community. We will not communicate on the same media and same rhythm with astronomers and geeks.</i>
No.2	<i>Email Marketing</i>
No.3	<i>Everything you have listed above is the way to go!! Create a Buzz</i>
No.4	<i>Learn to use social media</i>
No.5	<i>i think it's a combo of all these strategies</i>
No.6	<i>For digital events, it is vital to emphasise on how ground breaking the panel/ speaker/ topic is. Get the sponsors and speakers to share the tiles we create on social media, and email a wider list of potential attendees. Make the most of email marketing through all streams, and start marketing early about the perks of the event (attend from anywhere across the globe, get access to exclusive content etc)</i>
No.7	<i>Leverage the use of social media in every aspect</i>
No.8	<i>Ask your sponsors and partners to spread the word, leverage social media across platforms</i>

**Table 3. Marketing strategy**

## 6.7. Promotion of events after Covid-19

Participants answered if they have created new ways to promote their on-line events after the pandemic.

**Question:** *After Covid-19 outbreak, have you implemented new ways to promote your on-line events in order to have higher number of registrations? Please describe your ways*

*Interviewee No.1 answered: "We mainly use the social media and communications tools mostly used by the different congress communities (email, Slack, Twitter, Linked'in...)"*

50% of the participants in this interview answered they use social media to promote their on-line events.

*Interviewee No.3 answered: Providing a "teaser" video of the event can be very effective to increase registration as well as media buys for events open to the public. Use of direct mailing campaigns as well*

*Interviewee No.6 answered: Not really as we have always done hybrid, in-person and fully digital events, so our marketing strategy differs from one event to the other. We seek to have supporters of our events to help promote the event. We have very niche topics and always try to reach out to new audiences, who wouldn't be able to attend in person (busy schedules, live away from London).*

## 6.8. Advantages and disadvantages of the on-line events for the Company

Regarding the advantages of the on-line conferences, interviewees referred to the fact that is easier to reach more delegates, however one big disadvantage that 75% of the respondents said was the less income for the company.

No.1	<i>Advantages: Open the congress to new participants, lower carbon footprint, reduce costs (if only virtual) Disadvantages: lower participant involvement, less impact for the sponsors (less sponsorship)</i>
No.2	<i>Advantages:/ Disadvantages: You need more technicians</i>
No.3	<i>Advantages: The ability to reach an infinite audience with your messaging. Disadvantages: Would be the time and cost it takes to do so. Many companies mistakenly assume an online conference will be less expensive and it can be - but at the expense of the experience</i>
No.4	<i>Advantages:/ Disadvantages: Less income, less things to organise which could be a good thing but more risk as technical problems can make or break the entire event</i>
No.5	<i>Advantages: the good point is that the participations could be from everywhere so you attract more people Disadvantages: Lost a big amount of money about the accommodation and other services</i>

No.6	<i>Advantages: It is easy to organise, it is easier to promote and get audience to attend. Disadvantages: We do not get as much revenue from sponsors as there are less benefits for them</i>
No.7	<i>Advantages: We have a larger outreach to delegates and therefore the company is promoted to a bigger audience Disadvantages: Lower income</i>
No.8	<i>Advantages: More automated procedures Disadvantages: Less revenue</i>

**Table 4. Advantages and Disadvantages of the on-line events for the company**

## 6.9. Advantages and disadvantages of the on-line events for the participants

5 out of 8 (62.5%) interviewees mentioned the lower cost as one of the biggest advantages for the participants in on-line conferences. 2 out of 8 (25%) mentioned about the ability to watch the sessions from a place of their choice and 4 out to 4 (50%) interviewees referred to the fact there is no need for traveling.

The biggest disadvantage was the decreased networking opportunities answered by 7 out to 8 (87.5%) participants in this research.

No.1	<i>Advantages: Lower cost, lower carbon footprint, less time out of work, access to all content especially if there are many parallel sessions, even after the congress, possibility to export contacts made during the congress. Disadvantages: Less motivation, no space for unexpected meetings, no discovery of new destinations, limited networking.</i>
No.2	<i>Advantages: They can see the sessions many times Disadvantages: /</i>
No.3	<i>Advantages: Travel is not required and it can easily be fit into a day Disadvantages: Would have to be face to face networking which can fall flat online.</i>
No.4	<i>Advantages: They pay less money and don't have travel expenses Disadvantages: but lose the opportunity to meet people of their scientific field which to then is very important and can often be career changing</i>
No.5	<i>Advantages: Participants have the ability to watch the conference from their choice place. Disadvantages: Lost the direct contact with other people</i>
No.6	<i>Advantages: They don't have to commute to a venue, can tune in for the slot that they are interested in, from home or the office, in between meetings, still can connect with people and ask questions. Disadvantages: Online event fatigue, cannot ask spontaneous questions, less opportunity to network.</i>
No.7	<i>Advantages: Less expensive, do not need to travel, may attend later on demand Disadvantages: lose the touch with colleagues, poor networking, they are not able to attend courses that involve practice</i>

No.8	<i>Advantages: Accessible to all in lower rates</i> <i>Disadvantages: Networking opportunities are decreased</i>
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**Table 5. Advantages and Disadvantages of the on-line events for the participants**

## 6.10. Networking opportunities

Next question the participants answered was regarding the missed networking opportunities for delegates in online medical conferences.

**Question:** Do you believe there are less networking opportunities for the participants in online conferences and why?

6 out of 8 (75%) they have said that yes, they believe there are less networking opportunities and only 2 out of 8 gave a negative response.

Respondent No. 1 said: "Yes, as even if there is dedicated time for this, participants will not take the time and prefer to have a break from being on-line."

Respondent No. 2 said: "No, participants can socialise easily via virtual features."

Respondent No. 3 said: "Yes, it is a less natural way to meet and form connections. Conversation does not flow as easily in a virtual space and guests start off generally feeling uncomfortable."

Respondent No. 4 said: "Yes. While questions can be asked online, meaningful connections and conversations cannot."

Respondent No. 5 said: "I think there is always ways for networking also in on-line conferences."

Respondent No. 6 said: "Yes, on-line it's easier to reach out to a wider audience and make more connections, however, in person you make deeper personal connections, you tend to remember that experience more."

Respondent No. 7 said: "Definitely yes."

Respondent No. 8 said: "Yes, because they interact only via the platform."

## 6.11. The new norm

Last question in this interview was in regards with the new norm in conferences. If they believe they will continue organizing on-line events or go back to in-person events when the pandemic is finally over. 25% answered the new norm will be the on-line events, 37.5% answered in-person events, 25% answered that Hybrid events will be the new norm and only one (12.5%) answered that both on-line and in-person events will be the new norm. (Table.6)

Way of conferencing	Answers
On-line	2
In-person	3
Both on-line and in-person	1
Hybrid	2

**Table 6. The new norm**

No. 6 said: *“We’re doing mostly in-person only events and our attendees are very happy to finally go back to ‘normal’, meeting and networking with other delegates. We do online events as they are important and allow us to reach a wider audience and cover different topics.”*

While No.7 said: *“The digital events are here to stay. We will never be back organizing events in the way we used to.”*

Regarding on-line medical conferences No. 1 said: *“AV companies are now taking the lead and offering more and more options to make hybrid events possible and more attractive”* and No. 3 also commented: *“Online medical conferences (in my limited experience) can be quite dry and focus solely on conveying important data points about a product or service. There is huge benefit to be had from building these conferences not only for content, but for engagement so that the experience is positive and delivers an impactful message rather than a simple one.”*

## 6.12. Survey results

In this survey, a total of 77 physicians responded to the online survey; 48 (62.3%) males, and 28 (36.4%) were females. 1 (1.3%) participant prefer not to say about the gender.

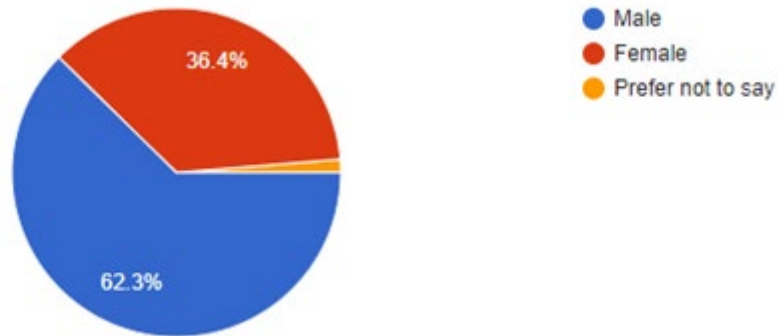
8 (10.4%) of the respondents were between 25-34 years old, 35 (45.5%) of the respondents were between 35-44 years old, 24 (31.2%) between 45-54, 7 (9.1%) between 55-64, 3 (3.9%) over 65 years old. The respondents were mostly from European countries (Greece, Switzerland, France, UK, Cyprus, Spain, Germany, Scotland, Latvia, Italy, Luxemburg, Ireland, Sweden and Romania, one form Australia, one from India, one Yemen and one from Thailand).

<b>Age</b>	25-34	8 (10.4%)
	35-44	35 (45.5%)
	45-54	24 (31.2%)
	55-64	7 (9.1%)
	Over 65	3 (3.9%)
<b>Gender</b>	Female	28 (36.4%)
	Male	48 (62.3%)
	Prefer not to say	1 (1.3%)
<b>Education</b>	High school or equivalent	2 (2.6%)
	Bachelor's degree	4 (5.2%)
	Diploma of general education in medical sciences	1 (1.3%)
	Specialty	19 (24.7%)
	Master's degree	32 (41.6%)
	Doctorate (PhD, EdD)	21 (27.3%)
<b>Countries</b>	Greece, Switzerland, France, UK, Cyprus, Spain, Germany, Scotland, Latvia, Italy, Luxemburg, Ireland, Sweden, Romania, Australia, India, Yemen, Thailand	

**Table 7. Demographics**

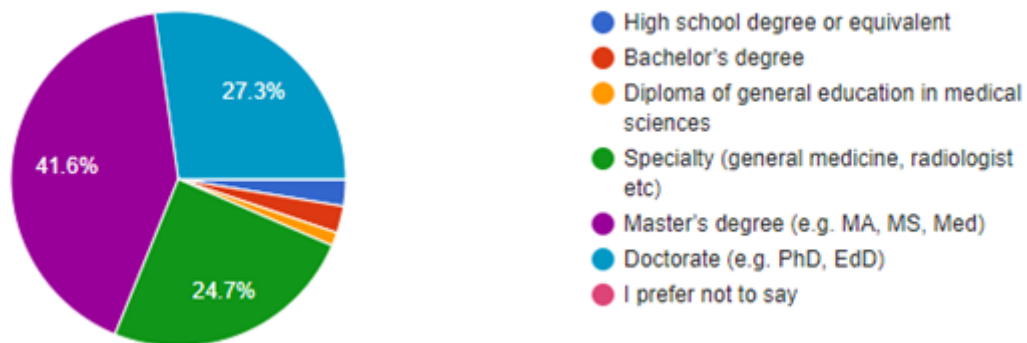


Physicians' characteristics and their responses to the survey questions are summarized in **Chart 1 and 2.**



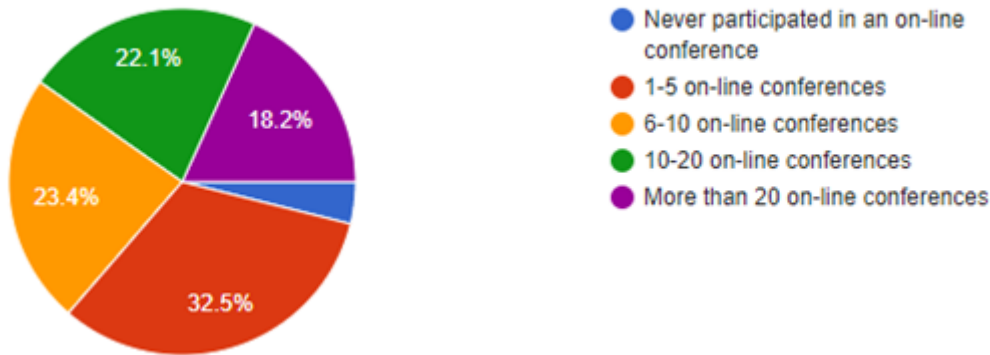
**Chart. 1 Gender**

Of the respondents, the highest degree or level of school completed were Doctorate (eg.PhD, EdD) 21 (27.3%), Master's degree 32 (41.6%), Specialty (general medicine, radiologist etc) 19 (24.7%), diploma of general education in medical sciences 1 (1.3%) and bachelor's degree/high school degree 4 ( 5.2%), as summarized in **Chart 2.**



**Chart 2. Degree level responses**

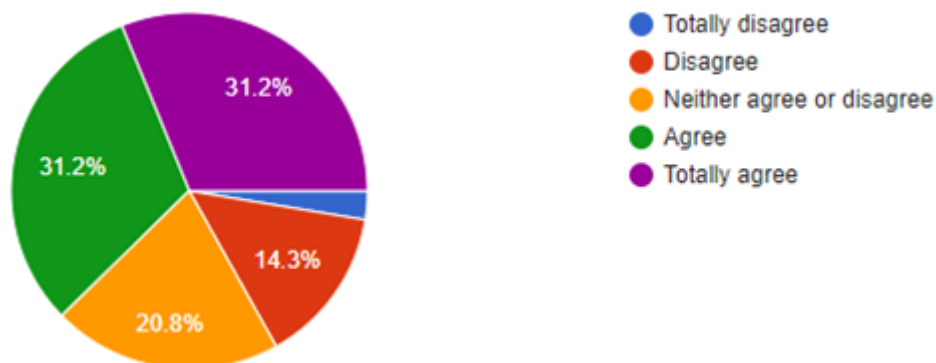
The majority of physicians; 25 (32.5%) attended 1-5 online conferences during their professional career, 18(23.4%) attended 6-10 on-line conferences, 17(22.1%) attended 10-20 on-line conference and 14 (18.2%) attended more than 20 on-line conferences during their career as summarized in **Chart 3.**



**Chart 3. Attendance in on-line conference**

In on-line conferences 30 respondents participated as Delegate without presentation, 16 participated with an Oral or Abstract presentation, 12 with a poster presentation, 10 participated as Invited Speakers of the congress, 6 as Members of the Organizing and Scientific committee and 3 participated with different delegation (sponsor, pharmaceutical company etc).

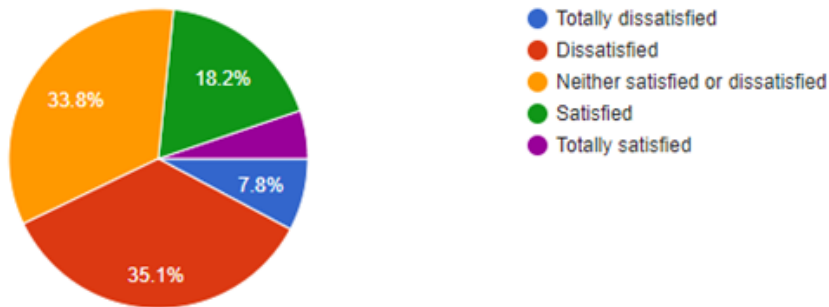
In the question according their opinion, if there are less networking opportunities in the on-line conferences, 24 (31.2%) physicians responded that totally agree, 24 (31.2%) that agree, 16 (20.8%) neither agree or disagree, 11 (14.3%) they disagree and 2 (2.6%) responded that totally disagree. (Chart 4.)



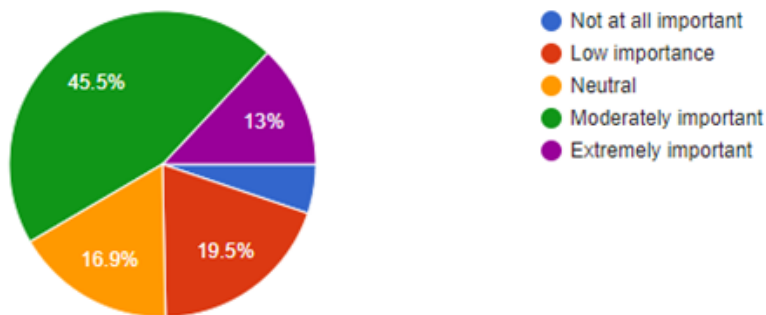
**Chart 4. Less networking opportunities question**

As regard to participation from the comfort of their office/home and the missed travel opportunity, 6 (7.8%) of the respondents were totally dissatisfied, 27 (35.1%) dissatisfied, 26 (33.8%) neither satisfied or dissatisfied, 14 (18.2%) satisfied, while only 4 (5.2%) of the participants were totally satisfied. (Chart 5).

When asked if the reduced costs are an important factor for their participation in an on-line conference, 4 (5.2%) respondents answered it is not at all important, 15 (19.5%) answered it is of low importance, 13 (16.9%) that is neutral for them, 35 (45.5%) of the respondents answered it is moderate important while 10 (13%) that is extremely important as summarized in **Chart 6**.



**Chart 5. Missed travel opportunity**



**Chart 6. Reduced Costs of the participation in on-line medical conferences**

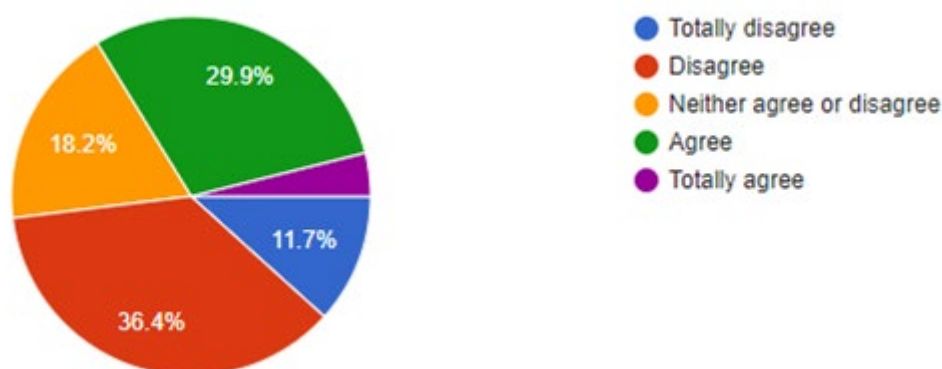
As regard to the quality of academic presentations and discussions, 46 (59.7%) reported that is extremely important in order to participate in a medical conference, 25 (32.5%), reported as moderately important, 5 (6.5%) were neutral about this subject, while only 1 (1.3%) reported is of low importance.



**Chart 7. Importance of the quality of academic presentations and discussions**

In the question if the on-line conferences are as effective as the conferences with physical presence, 6 (7.8%) of the participants totally disagreed, 29 (37.7%) disagreed, 14 (18.2%) neither agreed or disagreed, 24 (31.2%) were agreed while only 4 (5.2%) totally agreed with this sentence.

Regarding the effective communication with the organizers and other delegates during the on-line conferences only 3 (3.9%) of the participants totally agreed, 23 (29.9%) agreed, 14 (18.2%) neither agree or disagreed and 28 (36.4%) of the respondents disagreed and according to their opinion there is not an effective communication during an on-line medical congress. (**Chart 8.**)



**Chart 8. Do you have effective communication with organizers and delegates?**

In on-line conferences, 6 (7.8%) of the participants totally agreed that they usually have enough time for their questions after the presentations, 30 (39%) agreed, 21 (27.3%) neither agreed or disagreed, 18(23.4%) disagreed while only 2 (2.6%) totally disagreed.

Regarding the platforms (Zoom, Teams, EventsAir, Cvent, etc) the participants need to use for attending in conferences and meetings, 6 (7.8%) they totally agreed that they feel fatigued (mental exhaustion that occurs after a day of videoconferencing), 38 (49.4%) agreed, 8 (10.4%) neither agreed or disagreed, 24 (31.2%) disagreed and only 1 (1.3%) participant responded that totally disagreed.

The next question is what they usually do to avoid platform fatigue in on-line conferences, 10(13%) answered they limit the duration of their participation, half of the participants, 39 (50.6%) answered they choose the sessions are most important, 18 (23.4%) they take frequent breaks during the congress, 8 (10.4%) they reduce distracting noise and 2 (2.6%) they find another way, as summarized in **Chart 9.**



**Chart 9. What do you do to avoid platform fatigue?**

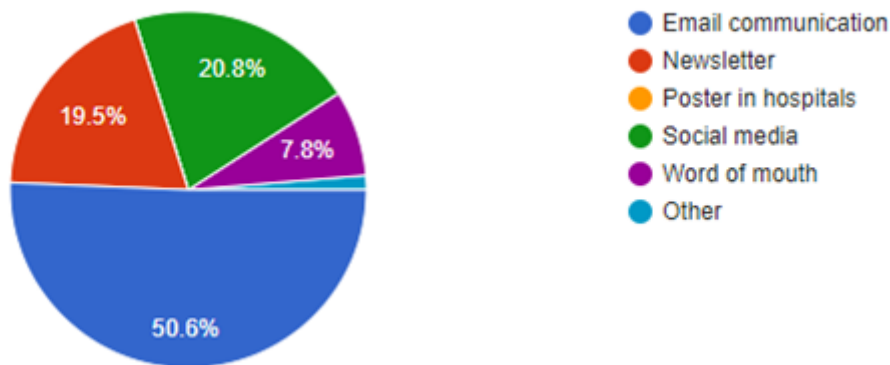
In regards with the Web atmospherics (colors, icons, music, design), we have asked to the respondents if they play important role for their participation in the on-line conferences. 5 (6.5%) they responded they totally disagreed, 28 (36.4%) they disagreed, 15 (19.35%) neither agreed nor disagreed, 27 (35.1%) they agreed and a small percentage of 2.6% (2 votes) they totally agreed that Web atmospherics play a significant role for their participation in on-line medical conferences.

When asked if digital/hybrid events can replace in-person meetings after the pandemic or will be the new norm; 14 respondents (18.2%) reported “Yes, there are the new norm from now on”, in comparison to 15 (19.5%) who reported “No, when the pandemic is over, we will go back to in-person conferences.” Moreover, 47 (61%) reported that both digital and in-person events are the new norm. 1 (1.3%) participant preferred not to say. Findings are illustrated in **Chart 10**.



**Chart 10. Are digital/hybrid events the new norm?**

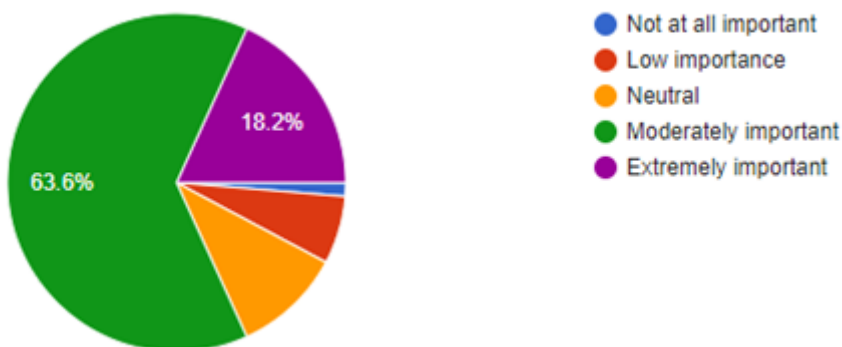
Regarding the way the physicians they usually learn about a new conference half of the participants answered by email communication 50.6% (39 votes), 19.5% (15 votes) by newsletters, 20.8% (16 votes) by social media, 7.8% (6 votes) by word of mouth while only 1.3% (1 vote) by other means. (**Chart 11**)



**Chart 11. Ways of learning about a new conference you would like to attend**

With an open question if the participants can propose another approach from the organizers and event planners in order to participate in their on-line conferences, the responders answered with e-mails through websites of societies, with good speakers, with recorded sessions, with contact through their associations, with a challenge, with reduced costs, with reduced number of events, especially those organized by industry, with personal communication/invitation, with callender addons, with discounts on products and a combination with family for attractive holidays for in-person events.

For in-person events, the importance for the respondents of the host city and/or country where the conference is held, 14 (18.2%) responded it is extremely important, 49 (63.6%) it is moderately important, 8 (10.4%) is neutral, 5 (6.5%) is of low importance, while 1 (1.3%) answered it is not at all important, summarized in Chart 12.



**Chart 12. For in-person events, is it important the host city/country?**

In regards with the carbon footprint when the participants attend in person events, only 5 (6.5%) answered is extremely concerned, 17 (22.1%) is moderately concerned, 16 (20.8%) is neutral, 18 (23.4%) is slightly concerned and a high number of 21 (27.3%) answered not at all concerned.

In the last section if the participants of the survey have any comments, the participant from Australia answered that the time zone has a big impact. In Australia most online participation is outside working hours and it is hard to be present. Another participant comment that you lose personal contact though online conferences, networking opportunities are reduced, and also after conference you tend to go for a drink/dinner which helps in creating better relationships in professional level.

# Chapter 7

## Discussion

The global health crisis of COVID-19 has forced the conventional medical conferences across the world to adopt a new concept of events -the on-line, and has led to an increase of this new concept in an attempt to maintain learning and teaching new methods to the physicians.

At this study, preference about onsite events from the event planners is ambiguous. Half of them reported preference in on-line conferences while the other half reported preferences for the onsite conferences.

In regards with the changes that need to be done for higher engagement, half of the interviewees reported more interactivity between participants and better promotion for networking opportunities while the content need to be produced to a high-quality standard and presentations kept concise and visually stimulating.

The biggest challenge faced more frequently is the technical problems and connectivity reported the majority of the event planners in this study and regarding the effective communication during the on-line conferences, surprisingly the majority reported that there is enough time unlike participants that they reported the time is not enough.

In the contrast of what the physicians reported regarded the promotion of the events, the leverage of the use of social media was the first answer to the majority of the event planners.

The biggest advantage for the companies organize medical conferences is they can reach delegates from all over the world, however, the revenue is much lower than in onsite events that participants stay in hotels and spend more money. This same disadvantage for the companies is the biggest advantage for the participants as the 58.5% reported the reduced costs is very important for them.

In this study, 18.2% of physicians attended 20 and more meetings on-line and 22.1% 10-20 on-line conferences and the majority reported dissatisfied regarding the less networking opportunities and the missed travel opportunities. Only one-fifth was satisfied for participating from their comfort of their home and the reduced costs of their participation. Moreover, the satisfaction of the effectiveness of the on-line conference and the communication between delegates, speakers and event planners was much lower than expected and almost half of the participants answered negative. However, the majority was satisfied with the time was given to them to ask and answer questions.

As expected, the majority (57.2%), reported feeling overwhelmed and fatigued from the use of the on-line platforms and half of the participants (50.6%) choose to participate only to the most important sessions to avoid mental exhaustion that occurs after many hours of videoconferencing. Apparently, this study



showed that the colours, icons, music and design (web atmospherics) of the conference play equal role for the participants.

Regarding participants' opinion for on-line or in-person events, the majority (61%) reported that both digital and in-person will be the new norm. Almost equal number of participants reported that conferences will stay digital (18.2%) or the conference will be in-person again (19.5%) when the pandemic is over.

Interestingly, considering that almost half of the participants to this study (55.9%) were young between 25-44 years old, only 6.5% were extremely concerned and 22.1% moderately concerned regarding the carbon footprint and sustainability when attending in-person events.

Respondents proposed several approaches for participating in on-line events including contacting through their associations, setting a challenge by the organizers, put callender addons and offer discounts on products with a 50.6% reporting they learn about a new conference through e-mail communication.

The majority of both participants and event planners reported there are less networking opportunities in on-line medical conferences.

Lastly, the majority of participants (61%) reported the new norm will be both on-line and in-person events, event planners (62.5%) also reported the events will be on-line, hybrid or both from now on.

The on-line medical conferences were found to be very beneficial at the beginning of Covid-19 pandemic with advantages like less costly and location flexibility, however, the connectivity issues, the less networking opportunities and the platform fatigued divide participants in two camps. Furthermore, there is not enough evidence presented about the efficiency of online conferences compared to traditional face-to-face events.

## Chapter 8

## Recommendations

*“Declare the past, diagnose the present, foretell the future.” Hippocrates*

The debates about on-line medical conferences' benefits and limitations are still on going. However, the majority of physicians agreed that continuing learning education and exchanging of knowledge never ends and the event industry must be prepared for future disruptions. The following recommendations are suggested based on the survey findings of this study and a review of the current literature.

- 1- A specific number of conferences should be regulated from medical associations, in order to avoid repetition. The high number should be limited per country and/or per continent for every specialization.
- 2- Planning the content to be more concise and well-structure in order to maintain high attention. Limited time of every session will help limit screen-time exposure.
- 3- Highly qualified and respected speakers for each specialty. Choose between the most important sessions with high academic presentations for more interesting discussions.
- 4- Higher number of hybrid organizations than only on-line or in-person events for the participants who still want to travel and meet colleagues onsite and for participants they prefer their comfort of their homes.
- 5- Always offer recorded sessions for a specific period of time for participants from different time zones.
- 6- Create discounts on sponsors' products for higher participation. Organization of sponsor's summit to brainstorm and identification of any potential opportunities.
- 7- Enriched virtual experiences including the creation of virtual travels for the participants missed or are disable to travel.
- 8- Connectivity issues and technical problems should be addressed.
- 9- Organizing/scientific committee with collaboration with event planners could consider creating challenges for participants in on-line conferences in order to attract and engage the audience.
- 10- Design sessions for creative communication and social interaction among invited speakers, delegates, sponsors and event planners.

## Chapter 9

### Limitation and future research

This study has limitations which should be stated. First, the sample of the research is small while the generalizability of the results is limited. Second, the questionnaire was sent only to physicians; however physicians were encouraged to recruit other colleagues by resending the link to their contacts. A portion of respondents have self-selected themselves into the study via social media, which may be prone to selection bias. The survey was designed for all specialties and did not allow further analysis of physicians according to different medical or surgical specialties. Therefore a further research needed from each medical and surgical specialty in order to have different and in-depth results. The opportunity of a more active patient inclusion in medical conferences should be also discussed in a future research. The new technologies and the user experience can limit the participation in medical conference, therefore a further research regarding this knowledge needed. The Accreditation Council for Continuing Medical Education provide CME credits for continuing medical education for physicians. The importance of the number of CMEs the physicians receive from each conference and how this affect their participation needed a further research.

# Chapter 10

## Conclusions

Medical conferences have been impacted significant from the last technological changes and from face-to-face meetings to on-line organizations due to the current pandemic of Covid-19. Both physicians and event planners in this study showed mostly satisfaction with this change and ready to continue by completing and perfecting these new methods. While the majority reported fatigue and overwhelmed with the number of conferences, increasing the time for more effective communication could be a solution. Furthermore, the planning of more hybrid conferences than only on-line or only in-person would satisfy both, participants who prefer to participate without moving and those who need to travel, meet colleagues in-person and promote networking opportunities. The findings and recommendations from this study highlight the importance for further studies to refine all the conference's tools.

## APPENDICES

### APPENDIX A

#### Interview Questions for Event Professionals

Dear participants,

I am a postgraduate student in the Master in Business Administration at the Open University of Cyprus and I am conducting my dissertation with the subject: Digital Transformation in the Events Industry. A Marketing Approach.

I invite you to participate in my research by answering in the following interview questions. Your contribution to insight is precious. The aim of this research is to investigate Event Professionals' point of view when organizing in virtual conferences.

This research is solely for academic purposes, and your assistance in completing the following questionnaire will be greatly appreciated. With the consent given by answering this survey, your participation and information will remain confidential, anonymous and only be used for the following research purposes.

Email\*

.....

1. Can you please tell us the name of the company you are currently working and your position within the company?

.....

2. Have you organized digital conferences and if yes, how many (approximately)?

.....

3. Do you prefer to organize on-line or in-person conferences and why?

.....

4. According to your opinion, what need to be changed in on-line medical conferences in order to achieve higher engagement of participants?

.....

5. What is the biggest challenge you more frequently face with the participants in online conferences?

.....

6. In your opinion, do you have effective communication with the delegates during the online conferences? Is there enough time for this communication?  
.....
7. According to your opinion, which is the marketing strategy the organizers need to implement from now on to market their events? (ex: create an attention-grabbing event page, use keywords to boost your search potential, make the most of email marketing, ask your sponsors and partners to spread the word, leverage social media across platforms etc)  
.....
8. After Covid-19 outbreak, have you or the company you work, implemented new ways to promote your online events in order to have higher number of registrations?  
.....
9. In your opinion, what are the advantages and disadvantages of the digital conferences for the company?  
.....
10. In your opinion, what are the advantages and disadvantages of the digital conferences for the participants?  
.....
11. Do you believe there are less networking opportunities for the participants in online conferences and why?  
.....
12. What is your assessment for the future regarding digital events? Is the new norm or you believe you will go back to in-person when the pandemic is over?  
.....
13. Please write any comments you might have regarding the online medical conferences  
.....

Thank you once again for participating in this survey. If you would like a summary of the results when they become available, please e-mail at [alkistis.evangelidou@st.ouc.ac.cy](mailto:alkistis.evangelidou@st.ouc.ac.cy)

## APPENDIX B

### Survey for medical conferences' participants

Dear participants,

I am a postgraduate student of the Master in Business Administration at the Open University of Cyprus and I invite you to participate in this survey by filling in the following questionnaire. The aim of this research is to have an insight from the participants in on-line medical conferences and identify the changes that must be done in order to achieve higher engagement. The questionnaire will require approximately 5-7 minutes to complete and your contribution is precious.

This research is solely for academic purposes, and your assistance in completing the following questionnaire will be greatly appreciated. With the consent given by answering this survey, your participation and information will remain confidential, anonymous and only be used for the following research purposes. Thank you in advance for your cooperation.

1. In how many on-line medical conferences you have participated
  - No, I have never participated in an on-line conference
  - Yes, in 1-5 on-line conferences
  - Yes, in 6-10 on-line conferences
  - Yes, in 11-20 on-line conferences
  - Over 20
2. In on-line conferences you participate as (check as many as they apply):
  - Delegate without presentation
  - Oral/Abstract presenter
  - Poster presenter
  - Invited Speaker
  - Member of the Organizing/Scientific committee
  - None of the above
  - I have never participated in an on-line conference

2.1. Please indicate in case of different participation
3. In your opinion, there are less networking opportunities in an on-line conference
  - Totally disagree
  - Disagree
  - Neither agree or disagree

- Agree
  - Totally agree
4. You participate in a digital conference from the comfort of your office/home. Regarding the missed travel opportunity you feel
- Totally dissatisfied
  - Dissatisfied
  - Neither satisfied or dissatisfied
  - Satisfied
  - Totally satisfied
5. The reduced costs are an important factor for your participation in an on-line conference
- Not at all important
  - Low importance
  - Neutral
  - Moderately important
  - Extremely important
6. The quality of academic presentations and discussions is important in order to participate in an on-line conference?
- Not at all important
  - Low importance
  - Neutral
  - Moderately important
  - Extremely important
7. In your opinion, the on-line conferences are as effective as the conferences with physical presence
- Totally disagree
  - Disagree
  - Neither agree or disagree
  - Agree
  - Totally agree
8. In your opinion, you have effective communication with the organizers and other delegates during the online conferences
- Totally disagree
  - Disagree
  - Neither agree or disagree
  - Agree



- Totally agree
9. In on-line conferences, you usually have enough time for your questions after the presentations
- Totally disagree
  - Disagree
  - Neither agree or disagree
  - Agree
  - Totally agree
10. You feel fatigued (mental exhaustion that occurs after a day of videoconferencing) with the platforms you need to use for conferences and meetings (zoom, Teams, EventsAir, Cvent etc)
- Totally disagree
  - Disagree
  - Neither agree or disagree
  - Agree
  - Totally agree
11. To avoid platform fatigue in on-line conferences you usually (check as many as they apply)
- Limit the duration of your participation
  - Choose the sessions are most important
  - Take frequent breaks
  - Reduce distracting noise
  - Other (please specify).....
12. Web atmospherics (colors, icons, music, design) play important role for your participation in a virtual conference
- Totally disagree
  - Disagree
  - Neither agree or disagree
  - Agree
  - Totally agree
13. In your opinion, digital/hybrid events are the new norm
- Yes, there are the new norm from now on
  - No, when the pandemic is over, we will go back to in-person conferences
  - Both digital and in-person will be the new norm
  - I prefer not to say
14. You usually learn about a new conference you would like to attend by
- Email communication
  - Newsletter
  - Poster in hospitals

- Social media
- Word of mouth
- Other (please specify).....

15. Can you propose another approach from organizers and event planners in order to participate in their on-line conference?

16. You are concerned about your carbon footprint when attending in-person events

- Not at all concerned
- Slightly concerned
- Neutral
- Moderately concerned
- Extremely concerned

17. For in-person events, it is important for you the host city/country where the conference is held

- Not at all important
- Low importance
- Neutral
- Moderately important
- Extremely important

18. What is your age

- 18-24 years old
- 25-34 years old
- 35-44 years old
- 45-54 years old
- 55-64 years old
- Over 65

19. What is your gender

- Male
- Female
- Prefer not to say

20. What is your country of residence

21. What is the highest degree or level of school you have completed

- High school degree or equivalent
- Bachelor's degree
- Diploma of general education in medical sciences
- Specialty (general medicine, radiologist etc)

- Master's degree (e.g. MA, MS, Med)
- Doctorate (e.g. PhD, EdD)
- I prefer not to say

If you have any comments, please indicate

.....

Thank you once again for participating in this survey. If you would like a summary of the results when they become available, please e-mail at [alkistis.evangelidou@st.ouc.ac.cy](mailto:alkistis.evangelidou@st.ouc.ac.cy)

## Bibliography

Abakumova T.R., Safina A.F., Ziganshina L.E., (2015), Clinical conferences for physicians: Who sets the agenda? *Int J Risk Saf Med.* 2015;27 Suppl 1:S91-2. DOI: 10.3233/JRS-150703. PMID: 26639730

Abdelaal M., Khater M., Zaki M., (2018), Digital Business Transformation and Strategy: What Do We Know So Far? DOI: 10.13140/RG.2.2.36492.62086

Alexander H., (2019), The Different Types of Events. A Comprehensive List. Eventbrite. Available at: <https://www.eventbrite.co.uk/blog/the-different-types-of-events-ds00/>

Ali, Ameer. (2021). Quantitative Research Tools. DOI: 10.13140/RG.2.2.30033.25442

Anon. (2018), Economic Impact research, Events Industry Council. Available at: <https://www.eventscouncil.org/COVID-19/Economic-impact-research>

Boggia, A., Massei, G., Paolotti, L., Rocchi, L., & Schiavi, F. (2018). A model for measuring the environmental sustainability of events. *Journal of Environmental Management*, 206, 836–845. <https://doi.org/10.1016/j.jenvman.2017.11.057>

Bowdin, G., Allen, J., Harris, R., McDonnell, I. and O'Toole, W., (2012). *Events management*. New York, Routledge, pp.8-29

Cai, M., Tang, J.N., Griese, K.M., (2014), Green Meeting: A Sustainable Event, 1073-1076:2815-2821, DOI: 10.4028/www.scientific.net/AMR.1073-1076.2815

Chan, A., Cao, A., Kim, L., Gui, S., Ahuja, M., Kamhawy, R. and Latchupatula, L. (2021) "Comparison of perceived educational value of an in-person versus virtual medical conference", *Canadian Medical Education Journal*, 12(4), pp. 65–69. DOI: 10.36834/cmej.71975

Colombo, A., Marquesleniamarques, L., (2019): Motivation and experience in symbiotic events: an illustrative example grounded in culture and business events, *Journal of Policy Research in Tourism, Leisure and Events*, DOI: 10.1080/19407963.2019.1657437

Cornelissen, Scarlett & Bob, Urmilla & Swart, Kamilla. (2011). Sport mega-events and their legacies: The 2010 FIFA World Cup. *Development Southern Africa.* 28.3, 307-318, DOI:10.1080/0376835X.2011.595990

Costa M., (2020), How events embraced digital transformation overnight. Raconteur Media. Available at: <https://www.raconteur.net/digital-transformation/digital-transformation-2020/events-industry-virtual>

Dogan, G., Christina G. Ch, (2020), Effects of COVID-19 pandemic on hospitality industry: review of the current situations and a research agenda, *Journal of Hospitality Marketing & Management*, 29:5, 527-529, DOI: 10.1080/19368623.2020.1788231

Dua, Nick & Fyrenius, Mattias & Johnson, Deborah & Moos, Walter. (2021). Are in-person scientific conferences dead or alive?. *FASEB BioAdvances.* 3. 10.1096/fba.2020-00139.

Falk, M.T., Hagsten, E. (2021), When international academic conferences go virtual. *Scientometrics* 126(1), 707–724. DOI:10.1007/s11192-020-03754-5

- Foramitti, J., Drews, S., Klein, F., Konc, T., (2021), The virtues of virtual conferences, *Journal of Cleaner Production*, 2021, Volume 294, ISSN 0959-6526, <https://doi.org/10.1016/j.jclepro.2021.126287>
- Fotiadis, A., Polyzos, S., & Huan, T. (2021). The good, the bad and the ugly on COVID-19 tourism recovery. *Annals of tourism research*, 87, 103117. <https://doi.org/10.1016/j.annals.2020.103117>
- Gajuryal, Sharad & Shrestha, Resha & Satyal, Narayan & Pant, Basant. (2020), Organizing a Medical Conference: Management Perspective. *Nepalese Medical Journal*. 3. 328-331. DOI: 10.3126/nmj.v3i1.28650
- Getz, D., (2005), Event Tourism: Definition, evolution, and research. *Tourism Management*, Volume 29, Issue 3, pp. 403-428 DOI : 10.1016/j.tourman.2007.07.017
- Getz, D. and Page, S.J., (2019), *Event studies: Theory, research and policy for planned events*. Routledge, p.576, DOI: 10.4324/9780429023002
- Hall, S. ed. (1997), *Representation: Cultural representations and signifying practices (Vol. 2)*. Sage.
- Herschdorfer R., (2019), *Marketing your meetings and events*, MPI, Available at: <https://www.mpi.org/blog/article/marketing-your-meetings-events>
- Heyao Yu, Lindsey Lee, Iuliana Popa, Juan M. Madera (2021), Should I leave this industry? The role of stress and negative emotions in response to an industry negative work event, *International Journal of Hospitality Management*, Volume 94, 102843, ISSN 0278-4319, <https://doi.org/10.1016/j.ijhm.2020.102843>
- Holmes, K., Hughes, M., Mair, J., & Carlsen, J. (2015), *Events and Sustainability (1st ed.)*. Routledge. <https://doi.org/10.9774/gleaf.9781315813011>
- Ibrahim, I., Abdelkarim, A., Al-Hashel, J. Y., (2021). Physicians' attitude towards webinars and online education amid COVID-19 pandemic: When less is more, <https://doi.org/10.1371/journal.pone.0250241>
- International Congress and Convention Association. (2018), *A modern history of International Association Meetings - UPDATE: 1963-2017*. Available at: <https://www.iccaworld.org/knowledge/benefit.cfm?benefitid=5230>
- Ioannidis JPA. (2012), Are Medical Conferences Useful? And for Whom? *JAMA*. 2012;307(12):1257–1258. doi:10.1001/jama.2012.360
- Johnson, J. (2010). *Marketing special academic events to college professors and students (Order No. 1483439)*. Available from ProQuest Dissertations & Theses Global. (822239433). Retrieved from <https://www.proquest.com/dissertations-theses/marketing-special-academic-events-college/docview/822239433/se-2?accountid=36196>
- Karki, Samikshya. (2022). A Quantitative Study on the response of youth regarding Mental Health based on their Experience. 10.13140/RG.2.2.25017.49765
- Levy, N., (2014), The centenary of the first medical meeting in Eretz Israel--the Trachoma Conference of 1914, *Harefuah*. 2014 Mar-Apr;153(3-4):219-22, 235. Hebrew. PMID: 24791570
- Madray, J.S., 2020. The impact of COVID-19 on event management industry. *International Journal of Engineering Applied Sciences and Technology*, 5(3), pp.2455-2143
- Martin-Gorgojo, A., Bernabeu-Wittel, J., Linares-Barríos, M., Russo-de la Torre, F., Garcia-Docal, I., del Río-de la Torre, E., (2020), Attendee Survey and Practical Appraisal of a Telegram-Based Dermatology

Congress During Covid-19 Confinement, Vol. 111. Issue 10. pages 852-860 (December 2020), DOI: 10.1016/j.adengl.2020.10.026

McMenemey, W. H. (1967). International Congress Of Medicine 1867 And Some Of The Personalities Involved. *The British Medical Journal*, 3(5563), 487–489. <http://www.jstor.org/stable/20389228>

Mendelson D., (2016), The Event Planning Associations, Bizzabo, Available at: <https://blog.bizzabo.com/event-planning-associations>

Milic M., (2010), The history and development of meetings industry, SeeBTM, Available at: <https://www.seebtm.com/en/the-history-and-development-of-meetings-industry/>

Mishra S. (2016). Do medical conferences have a role to play? Sharpen the saw. *Indian heart journal*, 68(2), 111–113. DOI: 10.1016/j.ihj.2016.03.011

Mohanty, P., Dhoundiyal H., Choudhury, R., (2021) Events Tourism in the Eye of the COVID-19 Storm: Impacts and Implications

Mohanty, P., Himanshi, & Choudhury, R. (2020). Events Tourism in the Eye of the COVID-19 Storm: Impacts and Implications. In S. Arora & A. Sharma (Eds.), *Event Tourism in Asian Countries: Challenges and Prospects* (1st ed.): Apple Academic Press.

Nabavi, N., Vincenzo, P., Tracy, D.K., (2020), You're on mute: How to organise a virtual medical conference, *BMJ* 2020; 371; m4942, DOI:10.1136/bmj.m4942

Newman, C., (2021). Post-COVID-19 scientific conferences: virtual becomes the new reality. *Developmental Medicine & Child Neurology*. 63. 493-493. DOI: 10.1111/dmcn.14823

Nolan, E., (2020), Modifying the conceptual model of site selection in the organisation of association conference, *Journal of Convention and Event Tourism*, pp. 438-457, DOI: 10.1080/15470148.2020.1810188

Polyzos, S., Samitas, A., Spyridou, A., (2021) Tourism demand and the COVID-19 pandemic: an LSTM approach, *Tourism Recreation Research*, 46:2, 175-187, DOI: 10.1080/02508281.2020.1777053

Raby CL, Madden JR. (2021), Moving academic conferences online: Understanding patterns of delegate engagement. *Ecol Evol.*, 15;11(8):3607-3615. DOI: 10.1002/ece3.7251. PMID: 33898013; PMCID: PMC8057334

Raby CL, Madden JR. (2021), Moving academic conferences online: Aids and barriers to delegate participation. *Ecol Evol.* 2021 Mar 16;11(8):3646-3655. doi: 10.1002/ece3.7376. PMID: 33898017; PMCID: PMC8057330.

Radu, I.M., (2020). "Designing A Plan For Keeping A Conference In Covid-19 Context," *Business Excellence and Management*, Faculty of Management, Academy of Economic Studies, Bucharest, Romania, vol. 10(5), pages 136-146, October.

Reshef, O., Aharonovich, I., Armani, A.M. et al. (2020), How to organize an online conference. *Nat Rev Mater* 5, 253–256, <https://doi.org/10.1038/s41578-020-0194-0>

Rogers, E. (2003), *Diffusion of Innovations*. Fifth edition. Free Press: New York.

- Rowe, N., (2019). The Economic Cost of Attending Educational Conferences. 10.6084/m9.figshare.8718569
- Rutledge, Pamela & Hogg, Jerri. (2020), In-Depth Interviews. 1-7. 10.1002/9781119011071.iemp0019.
- Saad, A., Giliayru, S., Gulia, A., Vemuri, NV., Botchu, R., (2021), The Impact of Coronavirus Disease 2019 on Medical Conferences and Continuing Medical Education, Indian J. Musculoskelet Radio, 2021:3(1):70-1
- Santus K., (2020), Impact of Covid-19 pandemic on tourism: Recovery proposal for future tourism, Geojournal of Tourism and Geosites 33(4slp):1486-1492, DOI: 10.30892/gtg.334spl06-597
- Sayabek, Ziyadin & Suiubayeva, Saltanat & Utegenova, A.. (2020). Digital Transformation in Business. DOI: 10.1007/978-3-030-27015-5\_49
- Schmidt I., C. Blasé, (2020), What are digital events and their advantages and disadvantages? Available at: <https://morethandigital.info/en/what-are-digital-events-and-their-advantages-and-disadvantages/>
- Semenchuk, K., Nechyt, D., (2021), "Project Management According to Event Industry Trends", Odessa National Maritime University, Development of Management and Entrepreneurship Methods on Transport (ONMU) p.76-86
- S'harin Binti Mokhtar, Yi-Shin Deng, (2015), "Attributes of Sustainable Event," International Journal of Environmental Science and Development vol. 6, no.11, pp. 868-875
- Shemke H., (2020), A Brief History of Event Management: Event Planning Then and Now. Local Hop. Available at: <https://getlocalhop.com/a-brief-history-of-event-management-event-planning-then-and-now/>
- Smith, Brett & Sparkes, Andrew & Tenenbaum, Gershon & Eklund, Robert & Boiangin, Nataniel. (2020), Qualitative Research. 999-1019. 10.1002/9781119568124.ch49.
- StudyMoose. (2017), History of the Event Industry. [Online]. Available at: <https://studymoose.com/history-of-the-event-industry-essay>
- Swash, Michael & Lees, Andrew. (2018). Medical conferences: Value for money?. Journal of Neurology, Neurosurgery & Psychiatry. 90. jnnp-2018. 10.1136/jnnp-2018-319248
- Tkachenko T., Dupliak T., Zabaldina Yu. (2020), Event Industry and Tourism in the World Economy, Journal of Herald of Kyiv National University of Trade and Economics, DOI: 10.31617/visnik.knute.2020(132)04
- Tešić, Dejan. (2020). Measuring dimensions of service quality. Strategic Management. 25. 12-20. 10.5937/StraMan2001012T
- UNWTO, (2020), Tourism back to 1990 levels as arrivals fall by more than 70%. Available at: <https://www.unwto.org/news/tourism-back-to-1990-levels-as-arrivals-fall-by-more-than-70>
- Wang M., Vishwanath A., Sitaraman R., Mareels I., (2020), Organizing Virtual Conferences through Mirrors: The ACM e-Energy 2020 Experience, arXiv:2008.08318 [cs.CY]
- Welfens, Paul J. J. (1989) : The globalization of markets and regional integration, Intereconomics, ISSN 0020-5346, Verlag Weltarchiv, Hamburg, Vol. 24, Iss. 6, pp. 273-281, DOI: 10.1007/BF02924734

Wyatt J., (1999), Organising a medical conference.  
Emergency Medicine Journal 1999;16(3):223-226. DOI: 10.1136/emj.16.3.223

Zargaran, D., Zargaran, A., Phillips, G., Atkins, J., (2020), COVID-19: A unique opportunity to upgrade medical conferences, Journal of Plastic Reconstructive & Aesthetic Surgery 74(3), DOI: 10.1016/j.bjps.2020.08.135