

FINAL RESEARCH PROJECT

The big Business of Assisted Reproduction

*The industry's lights and shadows of making a dream
come true*

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ABSTRACT

This study aims to demonstrate the business that emerges from a significant dream, that of bringing life into the world. Questions, objectives, and hypotheses were developed for this purpose in order to lead the study process, with an emphasis on the ethical aspect of the business, which is a controversial topic these days. Furthermore, as stated in the thesis title, the inquiry is based on the costs of Assisted Reproduction treatments as well as on the positive side of the narrative. In addition, an in-depth analysis of how this industry works in Argentina, The United Kingdom, and Ukraine, was developed.

The methodology used for the investigation was based on primary data, obtained through a survey distributed through residents of Argentina regarding their perception of this issue. Furthermore, interviews were carried out with the aim of obtaining information from two professionals of the assisted reproduction industry. In addition, two intended surrogate mothers from Argentina and one surrogate mother from the United Kingdom were also interviewed to get a more in depth understanding of the practice of surrogation as a business. Likewise, secondary data was collected from relevant sources such as reports, articles, and websites.

The obtained results evidenced that assisted reproduction technology is still a young industry with a large market size that draws more investors every day. Because of the trends and lifestyles of today's culture, people tend to delay the time of deciding to start a family, prioritizing other matters such as having a professional career and economic stability. Moreover, Assisted Reproduction methods are key for single parents and same gender couples who are desiring to conceive. All these factors combined contribute to the bright future the businesses working in this industry have along with the potential opportunity for constant growth.

Keywords

Reproduction, Business, Ethics, Women, Marketing

RESUMEN

Este estudio tiene como objetivo demostrar el negocio que surge de un sueño significativo, el de traer vida al mundo. Para ello se desarrollaron preguntas, objetivos e hipótesis con el fin de liderar el proceso de estudio, con énfasis en el aspecto ético del negocio, tema controvertido en estos días. Además, como se indica en el título de la tesis, la indagación se basa en los costes de los tratamientos de reproducción asistida, así como en el lado positivo de la narrativa. También, un análisis de cómo esta industria funciona en países como Argentina, Reino Unido y Ucrania, fue desarrollado.

La metodología utilizada para la investigación se basó en datos primarios, obtenidos a través de la distribución de una encuesta en Argentina. Además, se llevaron a cabo entrevistas a dos profesionales de la industria de la Reproducción Asistida. También fueron entrevistadas dos mujeres que están buscando ser madres subrogantes en Argentina y una fue mujer que ya fue madre subrogante en el Reino Unido, con el objetivo de obtener más conocimiento acerca de la práctica de subrogación como un negocio. Por otro lado, datos secundarios fueron recolectados de fuentes relevantes como reportes, artículos y páginas web.

Los resultados obtenidos evidenciaron que la reproducción asistida es todavía una industria joven con un gran tamaño de mercado que cada día atrae más inversores. Debido a las tendencias y al estilo de vida de la sociedad de hoy en día, la gente tiende a posponer el momento de tener hijos, ya que le dan importancia a desarrollar una carrera profesional y ser económicamente estables. Además, los métodos de reproducción asistida son clave para madres y padres solteros/as y para parejas del mismo sexo, que desean concebir. Todos estos factores combinados contribuyen al gran futuro que las compañías trabajando en esta industria tienen junto al potencial de crecimiento constante.

Palabras clave

Reproducción, Negocios, Ética, Mujeres, Marketing

GLOSSARY OF KEY TERMS AND CONCEPTS

ART: abbreviation used to refer to the term of Assisted Reproductive Technology

CAGR: abbreviation used to refer to the term of Compound annual growth rate

A la carte services: it stands for referring to treatments that are offered differently, for instance individually or with a different price.

Techniques: synonym used to refer to the practice of Assisted Reproduction methods.

Procedures: synonym used to refer to the practice of Assisted Reproduction methods.

Services: synonym used to refer to the practice of Assisted Reproduction methods.

Index of contents

ACKNOWLEDGEMENTS	11
DEDICATIONS	11
1 PRESENTATION OF THE TOPIC	12
1.1 Introduction	12
1.2 Aim, Goals and Objectives	12
1.3 Research Questions.....	15
1.4 Researching Hypotheses	15
1.5 Justification	17
2 LITERATURE REVIEW	18
2.1 Selection criteria.....	18
2.2 Theoretical Framework.....	18
2.2.1 Definition of Assisted Reproduction and its Procedures	19
2.2.2 Intracytoplasmic sperm injection (ICSI)	21
2.2.3. Artificial insemination.....	22
2.2.4 In vitro fertilization	24
2.2.5 Ovarian stimulation.....	26
2.2.6 Egg freezing.....	26
2.2.7 Surrogacy.....	26
2.2.8 What type of costs are associated to Assisted Reproduction methods?	28
2.3 Assisted Reproduction as a Business Model.....	32
2.4 Assisted Reproduction from an Ethical point of view	37
2.5 Key Stakeholders for Assisted Reproduction	38
2.6 Assisted Reproduction History and how it became a Business	40
2.7 Advertising Assisted Reproduction.....	44
2.8 Ukraine and the Assisted Reproduction business.....	50
2.9 Assisted Reproduction United Kingdom	54
2.10 Assisted Reproduction in Argentina.....	57
2.11 The future of the Assisted Reproduction industry.....	62
2.12 How important are Quality Management Systems for fertility clinics?	64
2.13 Synthesis	67
3 METHODOLOGY	68
3.1 Methodological design.....	68
3.2 Unit of analysis and unit of observation	68
3.3 Sampling and participant selection.....	69
3.4 Variables mapping.....	70
3.5 Instrument of inquiry and gathering data.....	73
3.6 Processing method.....	74
3.6.1 Surveys.....	75
3.6.2 Interviews	78
4 RESULTS.....	82

4.1 Major Highlights	82
4.2 Survey results	82
4.2.1 Overview of demographic data	83
4.2.2 Level of education reached	85
4.2.3 Knowledge of Assisted Reproduction meaning	85
4.2.4 Awareness of the different types of Assisted Reproduction treatments	86
4.2.5 Acquaintanceship of people who have used these methods	87
4.2.6 Possible reasons for the application of Assisted Reproduction treatments.....	88
4.2.7 Opinions towards the ethics of accessing Assisted Reproduction treatments.....	89
4.2.8 Election of the type of clinic in Argentina.....	90
4.2.9 Decision of accessing to the treatments knowing an estimate cost.....	91
4.2.10 Making the treatment in Argentina	91
4.2.11 Level of agreement with certain affirmations	92
4.2.12 Opinions towards the financing of Assisted Reproduction treatments.....	93
4.2.13 Male vs Female	94
4.3 Interview results	97
4.3.1 Interviews with Assisted Reproduction patients	97
4.3.2 Interviews with experts	105
5 ANALYSIS AND DISCUSSIONS	113
5.1 Key findings	113
5.2 Answering research's questions	115
5.2.1 Question 1: Which is the business model that companies providing the service of Assisted Reproduction use and who are the stakeholders involved?.....	116
5.2.2 Question 2: How did Assisted Reproduction become an actual business worth billions of dollars?.....	139
5.2.3 Question 3: What is the perception health professionals have about making profits out of these practices?.....	141
5.2.4 Question 4: What are the different marketing strategies that companies use in this industry to attract clients in Argentina, Ukraine and United Kingdom?	144
5.2.5 Question 5: What is the future of this industry? Will it be affordable by many families?	164
5.3 Objective Compliance	167
5.3.1 Objective 1- Completed.....	167
5.3.2 Objective 2 – Completed	168
5.3.3 Objective 3 – Completed	169
5.3.4 Objective 4 – Completed	169
5.3.5 Objective 5 – Completed	170
5.4 Hypotheses validation.....	171
5.4.1 Hypothesis 1 – Validated.....	171
5.4.2 Hypotheses 2 – Validated.....	173
5.4.3 Hypotheses 3 – Not Validated	174
5.4.4 Hypotheses 4 – Validated.....	175
5.4.5 Hypotheses 5 – Validated.....	176
6 CONCLUSIONS	178
6.1 Conclusion 1- The Assisted Reproduction industry works as any service business	178
6.2 Conclusion 2 - The culture and lifestyle of today's society benefits the Assisted Reproduction industry	179

6.3 Conclusion 3 - Clinics in this industry employ marketing methods and technology to attract customers from all over the world.....	181
6.4 Final words.....	182
7 REFERENCES	184

Index of Figures

Figure 1. Intracytoplasmic sperm injection (ICSI): Step-by-Step guide (City Fertility, s.f.).....	22
Figure 2. Intra-Uterine Insemination (IUI): step-by-step guide (City Fertility, 2021)	24
Figure 3. The surrogacy process (Brasch, 2019)	28
Figure 4. Surrogacy fees (Nova Espero - New Hope, s.f.).....	29
Figure 5. In vitro fertilization fees (Nova Espero - New Hope, s.f.)	30
Figure 6. Clinic’s services (Nova Espero - New Hope, s.f.)	30
Figure 7. Consultation costs (IVI, 2021).....	31
Figure 8. In vitro fertilization Fresh Cycle Package costs (IVI, 2021)	31
Figure 9. In vitro fertilization Plus Package costs (IVI, 2021)	32
Figure 10. Intra –Uterine insemination costs (IVI, 2021)	32
Figure 11. Sectors of the clinical care (Scott, 2018).....	37
Figure 12. Key findings regarding the assisted reproduction industry (Fortune Business Insights, 2021)	43
Figure 13. ART Market size and Share trends (Emergen Research, 2021).....	43
Figure 14. Expert team advertising (UConn, Fertility Center UConn, 2020)	46
Figure 15. Financing advertising IVF MD website (IVF MD, 2018 - 2021).....	49
Figure 16. Some registered ART clinics in Argentina (Sistema Integrado de Información Sanitaria Argentina, 2019).....	58
Figure 17. Opinions from fertility patients (Human Fertilization and Embriology Authority, 2019)	67
Figure 18. Presentation of the survey made in Google Forms.....	75
Figure 19. First 2 questions of the survey done in Google Forms.....	75
Figure 20. Questions 3 and 4 of the survey in Google Forms	76
Figure 21. Questions 5 and 6 of the survey done in Google Forms.....	76
Figure 22. Questions 7 and 8 of the survey done in Google Forms.....	76
Figure 23. Questions 9 and 10 of the survey done in Google Forms.....	77
Figure 24. Questions 11 and 12 of the survey done in Google Forms.....	77
Figure 25. Question 13 done in the survey of Google Forms.....	77
Figure 26. Question 14 done in the survey of Google Forms.....	78
Figure 27. Question 15 done in the survey of Google Forms.....	78
Figure 28. Demographic results (Author's own elaboration)	83
Figure 29. Demographic results (Author's own elaboration)	84
Figure 30. Demographic results (Author's own elaboration)	84
Figure 31. Level of education reached results (Author's own elaboration).....	85
Figure 32. Knowledge of Assisted Reproduction results (Author's own elaboration).....	86
Figure 33. Awareness of ART methods' results (Author's own elaboration)	87
Figure 34. Acquaintanceship of people who have used ART methods' results (Author's own elaboration).....	87
Figure 35. Possible reasons for the application of ART treatments' results (Author's own elaboration).....	89
Figure 36. Opinions towards the ethics of ART treatments' results (Author's own elaboration) ..	90
Figure 37. Election of the type of clinic in Argentina results (Author's own elaboration)	90

Figure 38. Decision of accessing ART treatments knowing estimated costs results (Author's own elaboration).....	91
Figure 39. Making the treatment in Argentina results (Author's own elaboration).....	92
Figure 40. Level of agreement with statements results (Author's own elaboration).....	93
Figure 41. Opinions towards the financing of ART treatments results (Author's own elaboration).....	94
Figure 42. "Companies have as an objective obtaining money from the desperation of people for having kids" (Author's own elaboration).....	95
Figure 43. Do you think it is ethical to draw upon these methods to have children? (Author's own elaboration).....	96
Figure 44. ART treatments should not be covered neither by the State nor by the Government (Author's own elaboration).....	97
Figure 45. Canvas Model (Author's own elaboration).....	116
Figure 46. Flowchart of mapping procedure applied to the IVF treatment cycle (Fabiola C. Bento, 2016).....	117
Figure 47. IVI website FAQs (IVI website).....	120
Figure 48. IVI ISO standards (IVI website).....	120
Figure 49. IVF products' prices (IVF store).....	133
Figure 50. IVF product's prices (IVF store).....	133
Figure 51. IVF product's prices (IVF store).....	133
Figure 52. Total births per woman fertility rate (World Bank Data, 2019).....	140
Figure 53. Forsa Fertility website tourism discounts (Fertility F. , 2021).....	145
Figure 54. BioTexcom website's tourist promotion (BioTexCom, 2021).....	146
Figure 55. BioTexcom treatment's packages promotions (BioTexCom, 2021).....	147
Figure 56. BioTexcom tourist's promotions (BioTexCom, 2021).....	147
Figure 57. Nova Espero - New Hope website (Nova Espero - New Hope, s.f.).....	148
Figure 58. Nova Espero - New Hope (Nova Espero - New Hope, s.f.).....	149
Figure 59. Nova Espero - New Hope website (New Hope-Nova , s.f.).....	150
Figure 60. Nova Espero - New Hope website (Nova Espero - New Hope, s.f.).....	151
Figure 61. VittoriaVita's Instagram profile (VittoriaVita, 2021).....	152
Figure 62. IVI website (IVI, 2021).....	154
Figure 63. London Women's Clinic website (London Women's Clinic, 2021).....	154
Figure 64. Complete Fertility Centre website (Complete Fertility Centre, 2021).....	155
Figure 65. IVI UK Instagram page (IVI, 2021).....	156
Figure 66. London Women's Clinic Instagram page.....	157
Figure 67. CyroBank website (CyroBank, 2021).....	158
Figure 68. InVitro Buenos Aires website (InVitro Buenos Aires, 2021).....	158
Figure 69. InVitro Buenos Aires website (InVitro Buenos Aires, 2021).....	159
Figure 70. Seremas website (Seremas, 2021).....	160
Figure 71. Procrearte website (Procrearte, 2021).....	160
Figure 72. IVI Argentina Instagram page.....	162
Figure 73. IVI Instagram profile.....	163

Index of Tables

Table 1. Steps involved in the process of IVF (National Institutes of Health (NIH), s.f.)	25
Table 2: Variables Mapping (Author's own elaboration)	73
Table 3. Questions for experts (Author's own elaboration)	80
Table 4. Questions for ART patients (Author's own elaboration).....	81
Table 5. Questions for intended surrogate mothers (Author's own elaboration).....	81
Table 6. Interviewee Mónica Zaccaría (Author's own elaboration)	101
Table 7. First anonymous interviewee (Author's own elaboration).....	102
Table 8. Second anonymous interviewee (Author's own elaboration)	103
Table 9. Interviewee Kayleigh James (Author's own elaboration).....	105
Table 10. Interview with Jorge Santoianni (Author's own elaboration)	107
Table 11. Interview with Roxana Resnik (Author's own elaboration)	112
Table 12. Quality dimensions and indicators set in infertility care (Fabiola C. Bento, 2016)	119

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DEDICATIONS

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I, Karen Gaggero, want to specially dedicate this to my mother, father, and sister for always being there supporting me no matter what, I am so grateful to have you all.

I, Abril Santoianni, would like to dedicate this research to all my family who encouraged me and support me through this long journey. Moreover, I would like to dedicate this to every single person that is struggling with infertility problems, since they were the reason why we decided to initiate this investigation.

1 PRESENTATION OF THE TOPIC

1.1 Introduction

In order to start a family, many people need to use Assisted Reproduction methods. Therefore, businesses are getting very high profits by offering these types of services, since it is a growing market. In fact, a firm's investigation predicts that for 2026, the global industry of fertilization could gain US\$ 41,000 in millions in sales (The Economist: The fertility business is booming, 2019).

Some of the reasons why people choose Assisted Reproduction methods are female infertility, structural issues with the uterus, pre-existing conditions that make pregnancy dangerous, vital medications that are harmful to pregnancy, a history of being unable to carry full term and age.

To provide an answer, this project is about collecting answers and data from educators, students, and professionals about their perception of this issue, and provide a source of potential discussion to whoever is interested in this matter.

Dataset was produced by interviews to health professionals and google forms distributed among individuals from Argentina.

1.2 Aim, Goals and Objectives

The general purpose of the research is to clarify reasoning about the area of Assisted Reproduction and the costs of these methods as well as the benefits and profits companies make by providing these services, especially in the United Kingdom, Ukraine and Argentina. Furthermore,

an examination was made into how ethical these countries' business methods are, as well as how they make money by recruiting clients from all over the world, making it an actual business.

According to an article, more than 1 million Assisted Reproduction cycles are performed each year around the world. In the last decade, the following were the numbers in the different regions of the world (Glujovsky, 2017):

- Australia and New Zealand: more than 100,000 new-borns for fertility treatments.
- Europe: almost 550,000 new-borns due to fertility treatments.
- Latin America: 65,000 new-borns due to fertility treatments.
- USA: 1,450,000 new-borns due to fertility treatments.

More than 20% of assisted reproduction cycles are performed by women over 40 years of age, in whom the success rate is less than 20% (when using their own eggs) (Glujovsky, 2017).

The objectives of this research are:

O1: To provide a comprehensive definition of Assisted Reproduction

The logic of this objective is based on providing an initial understanding beyond authors' opinions as a starting point.

O2: To identify the benefits and consequences of the companies providing the service of Assisted Reproduction

To support the investigation of the relevance of this topic by offering a detailed scheme about the business model/benefit model of the industry.

O3: To illustrate how these practices became an actual business

By evaluating source data and conducting correspondent research of this industry, provide different types of treatments for this sort of service.

O4: To discuss, analyze and summarize the ethical point of view regarding making profits out of Assisted Reproduction methods

The ethical analysis through the collection of data from primary sources, quantitative and qualitative surveys.

O5: To explore the future of this industry such as the feasible prospective of this business.

To propose potential trends or scenarios of the study.

1.3 Research Questions

The following questions guide the investigation since the study is defined as an exploratory one. Some questions arose from initial concerns in order to create a background and direction for this research.

Q1: Which is the business model that companies providing the service of Assisted Reproduction use and who are the stakeholders involved?

Q2: How did Assisted Reproduction become an actual business worth billions of dollars?

Q3: What is the perception health professionals have about making profits out of these practices?

Q4: What are the different marketing strategies that companies use in this industry to attract clients in Argentina, Ukraine, and United Kingdom?

Q5: What is the future of this industry? Will it be affordable by many families?

This list reflects the initial state of the investigation: at the time of the Research proposal and after conducting the Literature Review this RQs list could be lengthen.

1.4 Researching Hypotheses

The following hypotheses serve as a basis for this Final Research Project. It provides orientation through its different stages, and it is useful for the potential readers, whether they are health professionals, companies, students or professors, among others since it could provide them an overall understanding of Assisted Reproduction as a business itself.

Research was conducted in order to verify or deny the validity of the affirmations shown below. After the previous statement it is not expected to use mathematical and statistics to accept or refuse the following hypotheses:

H1: The business model of companies offering Assisted Reproduction is unambiguous. People go to a consultation with a professional and they get offered different methods in order to start a family. The customers choose the method that is more suitable according to their situation and by evaluating the costs. Therefore, it can be said, that this industry works as any service company. Moreover, the stakeholders involved in Assisted Reproduction will be patients, fertility organizations, doctors, nurses, managers, scientists, lawyers, investors, and researchers.

H2: Assisted Reproduction became an actual business worth billions of dollars due to the female and/or masculine infertility, among other health problems, as well as to the decision of people to delay the age of parenthood. As the treatments are very expensive, the industry ended up as a wealthy business. This is because companies aim to obtain money at the expense of people's desperation to have a baby.

H3: Health professionals believe it is ethical to make profits by performing Assisted Reproduction methods to people who struggle to conceive, since it consummates the dream of many families.

H4: Companies who work in the Assisted Reproduction industry have as their main objective to make profits and remain competitive along time.

H5: Even though Assisted Reproduction is very expensive due to its high complexity and all the costly technology involved in the process, since it is a growing market, due to constant research and innovation, consumers (as time passes) will have more options to choose from. Therefore, more companies and entrepreneurs are going to enter the fertility market, making costs drop down so it will be accessible for many people.

1.5 Justification

This Final Research Project is relevant to the Global Business Management community because it will provide insights into Assisted Reproduction practices, focusing primarily on the business side of these practices, considering financial costs, marketing strategies to attract clients from all over the world, current and future market size, and business models used by companies in the industry.

Furthermore, this study presents an in-depth understanding of the ART industry in Argentina, the United Kingdom, and Ukraine. The analysis of these countries aids in gaining a better understanding of how businesses operate and what strategies they employ to attract customers, based on the economics and legislation of the country.

2 LITERATURE REVIEW

The aim of this chapter is to analyze different sources, using available data as a guide and broad foundation for the remaining chapters.

First, the criteria utilized to guide this research was developed by a combination of the many sources studied. To continue, the fundamental concepts required to undertake additional study are introduced. Finally, the writers provide their thesis proposition.

2.1 Selection criteria

The Literature Review was conducted based on the following set of criteria:

- 1 - By collecting available resources in English and Spanish.
- 2 - The thesis, papers, reports (based on research undertaken in Argentina, selected countries, and globally), and websites were employed as target sources.
- 3- The keywords used in order to find relevant references were “definition”, “Assisted Reproduction”, “legitimate business”, “Argentina”, “UK”, “Ukraine”, and “advertising”.
- 4- The period utilized for collecting potential sources was from 2003 onwards documents.
- 5- Access to Universities provided thesis
- 6- Consulted key speakers and professionals related to Argentinian Assisted Reproduction clinics for a general orientation.

2.2 Theoretical Framework

This section of the chapter was written using secondary data, and it contains all the material needed to comprehend the insights the authors gained prior to conducting interviews and surveys.

2.2.1 Definition of Assisted Reproduction and its Procedures

According to the World Health Organization (WHO), Infertility is a disorder of the male or female reproductive system described by the failure to achieve a pregnancy after 12 months or more of frequent unprotected sexual intercourse, according to the World Health Organization (WHO). It impacts millions of women and men of reproductive age around the world, as well as their families and communities (World Health Organization, 2020).

The WHO explains that on the one hand, Infertility in men is most usually caused by issues with sperm ejection, sperm absence or low levels, or irregular sperm form (morphology) and movement (motility).

Nevertheless, Infertility is not always a woman's problem, according to the Centers for Disease Control and Prevention. Infertility can affect both men and women.

Many couples struggle with infertility and seek help to conceive, yet infertility is generally dismissed as a woman's problem. However, in roughly 35% of infertile couples, a male factor is recognized in addition to a female factor. A male component is the only recognized cause of infertility in roughly 8% of couples. (Centers for Disease Control and Prevention, 2021)

On the other hand, infertility in women can be caused by a variety of problems with the ovaries, uterus, fallopian tubes, and endocrine system, to name a few.

Infertility prevention, diagnosis, and treatment are all covered under fertility care. In most countries, including low- and middle-income countries, equal and fair access to fertility care remains a concern. Fertility care is rarely a top priority in national health-care benefit packages (World Health Organization, 2020).

Assisted Reproductive Technologies (ART) have been available for over three decades since according to a study conducted by Rachel Simpson (1998), ART became more popular and accepted in the 1970s, when adoption as a feasible option for infertile couples became more difficult. Nonetheless, they are still mostly unavailable, inaccessible, and overpriced in many parts of the world, particularly in low and middle-income nations (LMIC). (Simpson, 1998).

Many discrepancies in access to safe and effective fertility care could be mitigated by government measures. In order to effectively manage infertility, health policies must understand that infertility is often an illness that may be prevented, reducing the need for expensive and difficult-to-access treatments (World Health Organization, 2020).

As a result, the term "Assisted Reproduction" is used to describe the treatment of infertility. It entails medical procedures that can assist a woman in becoming pregnant through a variety of treatments that are tailored to the individual's health needs.

The procedures involved are the following:

- In vitro fertilization (IVF)
- Intracytoplasmic sperm injection (ICSI)
- Cryopreservation of gametes or embryos and the use of fertility medication.
- Intrauterine insemination (IUI)
- The use of either donated sperm or eggs.

(National Institutes of Health (NIH), s.f.)

Furthermore, in simple words ART (Assisted Reproductive Technology) methods entail surgically removing eggs from a woman's ovaries, mixing them with sperm in the laboratory, and

returning them to the woman's body or transferring them to another woman (National Institutes of Health (NIH), s.f.).

In order to succeed in the pregnancy, ART procedures may use donor eggs, donor sperm, or previously frozen embryos, as well as a surrogate or gestational carrier. Depending on the treatment, artificial insemination, intrauterine insemination, In vitro fertilization, and ovarian stimulation (with medications) will be included within the ART process (National Institutes of Health (NIH), s.f.).

Consequently, the main risk of the fertility treatment is a multiple pregnancy. Nowadays, there are many ways to prevent or minimize multiple birth by promoting the elective single embryo transfer into the woman's body (National Institutes of Health (NIH), s.f.).

2.2.2 Intracytoplasmic sperm injection (ICSI)

Intracytoplasmic sperm injection (ICSI) is a technique used to inject a single live sperm directly into the center of a human egg (UCSF Health, s.f.).

Furthermore, ICSI is performed as a part of in vitro fertilization. The only difference is that in IVF the sperm is mixed with the eggs and left in order to fertilize, while in ICSI an embryo specialist will inject a single sperm into the egg. (Human Fertilisation and Embryology Authority, s.f.)

ICSI is the most successful treatment for male infertility. Some of the reasons to use ICSI are the following:

- The person has a low sperm count.
- The person's sperm are abnormally shaped, poor morphology, or they do not move normally.
- The sperm need to be collected in a surgical way from the testicles or epididymis, which is a narrow tube inside the scrotum where sperm are stored and matured. This is due to the fact that

the person may have had a vasectomy or a blockage that prevents sperm reaching the ejaculate, caused by a disease, injury, or genetic condition.

- The person has embryo testing for a genetic condition and sperm sticking to the outside of the eggs would interfere with the results.

(Human Fertilisation and Embryology Authority, s.f.)

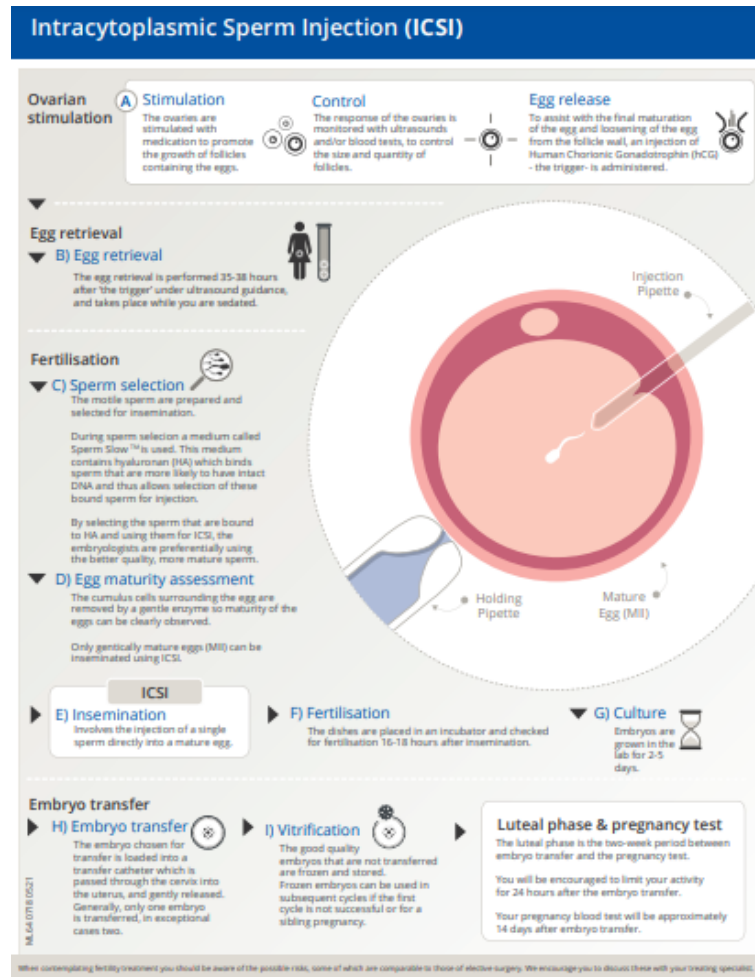


Figure 1. Intracytoplasmic sperm injection (ICSI): Step-by-Step guide (City Fertility, s.f.)

2.2.3. Artificial insemination

Artificial Insemination or Intrauterine insemination (IUI) is another option for assisting a lady in the hopes of conceiving. Simply put, it is a reproductive technique in which sperm is directly injected into the cervix or uterus through a narrow tube. These sperm are occasionally cleansed or

"processed" in order to boost the likelihood of a woman becoming pregnant. The partner's own sperm, which might be processed to isolate only the moving sperm, or donor sperm could be used in such method. (Wilson, 2017)

Even though these procedures are generally successful, it is possible that a man's sperm is not mobile enough to accomplish the desired result. In some cases, a woman's cervix may not be suitable for sperm to enter the uterus. Artificial insemination may help a woman conceive in these and other situations. (Wilson, 2017)

It is worth mentioning that IUI is helpful if the cause of infertility is related to scarring of the cervix, low sperm count, or sperm with low mobility.

While many women opt for intrauterine insemination (IUI) or intracervical insemination (ICI), others may take drugs to enhance ovarian follicle growth and improve their chances of becoming pregnant.

The use of artificial insemination is strongly advocated by doctors (Wilson, 2017):

- If a woman is over the age of 35 and has had unprotected intimate relationships for six months.
- If a lady is under the age of 35 and has had unprotected intimate relationships for a year.

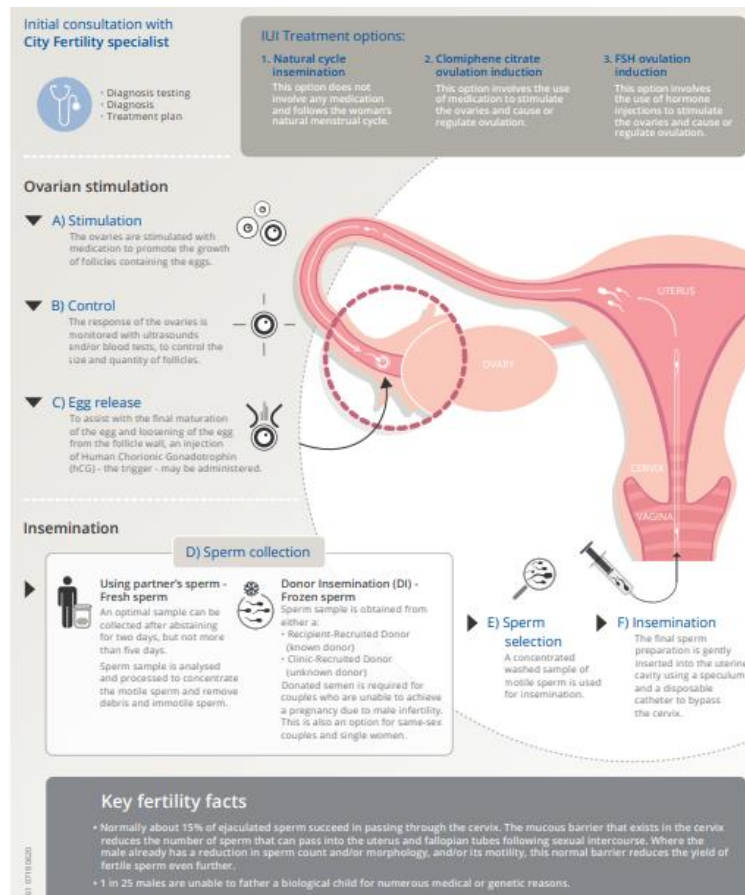


Figure 2. Intra-Uterine Insemination (IUI): step-by-step guide (City Fertility, 2021)

2.2.4 In vitro fertilization

In a natural or unassisted conception, an egg and sperm are fertilized inside a woman's body. Consequently, a baby will be born approximately 9 months after, if the fertilized egg attaches to the uterine and continues to grow. On the contrary, when natural conception fails, In vitro fertilization (IVF) or other fertility techniques, take place (Montgomery Fertility Center, s.f.).

For this scientific technique, there are two concepts to be analyzed: "In vitro" stands for "outside the body", whereas "Fertilization" explains the attachment and entrance of the sperm to an egg. Putting them together, IVF means joining a woman's egg and a man's sperm outside the lady's body, in a laboratory dish. This has the potential to create an embryo, which is subsequently

implanted in the woman's uterus. Finally, if it is successful, the process may result in pregnancy (Montgomery Fertility Center, s.f.).

According to the National Institutes of Health (NIH) there are five steps involved in the process of IVF:

STEP 1: stimulation	Fertility drugs are provided to the woman to boost egg production
STEP 2: Egg retrieval	A follicular aspiration is done, which is a minor surgery, in order to remove the eggs from the woman's body
STEP 3: Insemination and fertilization	The man's sperm is placed together with the best quality eggs. The mixing of the sperm and egg is called insemination. Eggs and sperm are then stored in an environmentally controlled chamber. The sperm most often enters (fertilizes) an egg a few hours after insemination.
STEP 4: Embryo culture	When the fertilized egg divides, it becomes an embryo. Laboratory staff will regularly check the embryo to make sure it is growing properly.
STEP 5: Embryo transfer	Embryos are placed into the woman's womb 3 to 5 days after egg retrieval and fertilization.

Table 1. Steps involved in the process of IVF (National Institutes of Health (NIH), s.f.)

2.2.5 Ovarian stimulation

Stimulating the ovaries is the next phase in the in vitro fertilization (IVF) fertility treatment. For women who are not ovulating or have irregular cycles, this process will collect as many mature eggs as possible by administering hormone injections daily. As a result, the medicine will allow numerous eggs to mature, boosting the odds of conceiving.

However, this process might have some disadvantages. Generally, ovarian stimulation is a challenging procedure due to the complexity of the natural female reproductive cycle. Therefore, it can be a very stressful experience, particularly if it is for the first time. Furthermore, there is a higher chance of multiple pregnancies, such as twins or more (University of Iowa Hospitals and Clinics, s.f.).

2.2.6 Egg freezing

Also known as “oocyte cryopreservation”, this treatment preserves a woman’s fertility while she is still young, allowing her to start a family whenever she is ready. Such process begins with a microscope examination of the eggs to determine the mature ones. Following the process, the selected eggs or oocytes will be taken from the woman's body and frozen, either through gradual cooling or vitrification (fast freezing). Once the process is completed, the eggs are kept in liquid nitrogen containers.

On top of that, it is worth mentioning that in egg freezing programs, the best chance of a live birth is when the eggs are gathered before the age of 36 (UCLA Health, s.f.).

2.2.7 Surrogacy

When intended parents want to start or grow their families but they cannot do it on their own, surrogacy takes place. It is a reproductive technology practice in which fertilization is made by the genetic parents' sperm and eggs. However, the child's gestation is carried out by a surrogate mother who is not connected to the child genetically (Ishii, 2018).

Depending on the situation, this lady, sometimes known as a "gestational carrier," conceives, carries, and gives birth to the baby of the intended parents or person. The surrogate mother must go through a legal process in which she agrees to give birth to the child of another couple or individual and to surrender the baby to the parents after birth (Neil Lunt, 2012).

In simple words, surrogacy can be divided into two categories. The first one is traditional surrogacy, which involves the use of the surrogate mother's eggs for conception. The second procedure, known as gestational surrogacy, involves transferring embryos created through in vitro fertilization with eggs from the biological mother or a donor (Ishii, 2018).

According to the American Society for Reproductive Medicine (ASRM), Donor Insemination is appropriate when the male partner has serious abnormalities in his sperm and/or reproductive system, which may be present at birth (congenital) or develop later (acquired), and in other conditions (ASRM, 2018).

The ASRM states that sperm donors should be of legal age and ideally under 40 years old in order to reduce the danger of elder male parents. Sperm donors, like egg donors, can be anonymous or identified (directed) (ASRM, 2018).

A rigorous medical questionnaire and an investigation of a donor's family medical history are the primary focus of the donor selection process. Potential donors must have a medical checkup and be screened for visible physical anomalies, as well as be tested for sexually transmitted diseases.

The blood type of the donor is documented as part of routine blood analysis. Infectious illness testing must be completed within seven days of all sperm donations, according to FDA standards (Food, Drug, and Cosmetic Act) (ASRM, 2018).

According to the ASRM, all anonymous and directed sperm donors should undergo a psychosocial evaluation and counseling by an MHP. The evaluation should look for any psychological dangers as well as financial and emotional coercion. The donor should talk about his thoughts about his name being revealed and his plans for future interaction. If necessary, psychological testing may be conducted.

A semen analysis should be performed on the sperm donor, and the test sample should be frozen and thawed for examination. Individual sperm susceptibility to freezing damage varies, as does the susceptibility of samples from the same donor (ASRM, 2018).

Costs vary because sperm banks and reproductive institutions set their own fees, but a vial of donor sperm typically costs \$900 to \$1,000, according to a Marketplace article (Fields, 2019). The cost of insemination is typically between \$200 and \$400, though it can be more. Many people will try twice in a cycle, double the costs. Many cryobanks charge a fee for complete sperm donor profiles. There are all of the necessary appointments and co-pays, as well as monitoring and fertility medicines, which can cost hundreds of dollars per cycle (Fields, 2019).

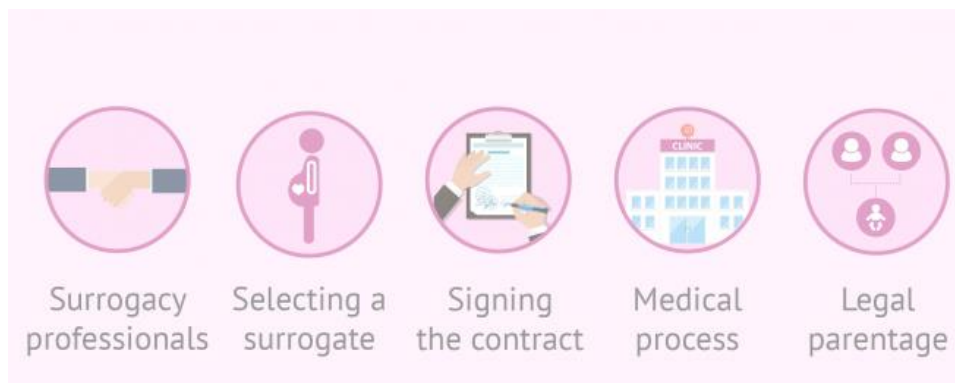


Figure 3. The surrogacy process (Brasch, 2019)

2.2.8 What type of costs are associated to Assisted Reproduction methods?

Assisted Reproduction has direct costs attributed to the provision of the treatment itself. These costs include medical consultations, ovulation stimulation drugs, laboratory, embryology

services, ultrasound scanning, medical procedures such as embryo transfer, hospital expenses, counseling and administrative services, among others. The high incidence of multiple birth pregnancies as a result of Assisted Reproduction treatment is the most challenging indirect expense (Cornelly, Hoorens, & Chambers, 2010).

Based on (Hope-Nova, Nova Espero - New Hope, s.f.) people in Ukraine who want to bear a pregnancy through a surrogate mother should budget at least USD 43.000, considering the many services and costs that may be required depending on the circumstances. These covers, among other things, surrogate mother compensation, agency fees, legal fees, and medicine costs. Furthermore, depending on the circumstances of everyone, the average cost of IVF, including egg donation, ranges from USD 9.200 to USD 10.000 (Hope-Nova, Nova Espero - New Hope, s.f.).

Surrogacy Fees		Total Cost
●	Gestational Surrogate Cost Average range for compensation, allowances and routine reimbursements	\$18,000 - \$22,000
●	IVF & Embryo Transfer Medical fees for In-Vitro Fertilization (IVF)	\$7,000 - \$8,000
●	Medical Services Pregnancy Care and Maternity Hospital fees	\$5,000-\$6,000
●	Legal Fees Legal support and supervision throughout your program	\$5,000
●	Surrogacy Agency Fees Agency fees designed to keep all parties focused on a successful surrogacy engagement	\$3,500
●	Egg Donor Program Egg Donor match and compensation	\$4,000 - \$5,000

Figure 4. Surrogacy fees (Nova Espero - New Hope, s.f.)

IVF Fees	Total Cost
<p>IVF+ICSI program (first attempt) includes: Stimulation of ovulation, OPU-oocyte puncture, cultivation of embryos and embryo transfer</p>	\$3,700
<p>Medicines Medicines cost for In-Vitro Fertilization (IVF)</p>	\$1,400 - \$1,700
<p>Egg donor matching Caucasian egg donor, Individual approach to matching a candidate, Photos and detailed information of the egg donor, Complete medical examination of the egg donor (including genetic tests), Travel expenses</p>	\$1,500
<p>Egg Donor compensation One-time compensation to the Egg Donor (see our database for matching)</p>	\$700 - \$1,500
<p>Agency Fees - Supervision throughout your program Translation of documents needed for IVF program, Notary's services, Legal counseling and coordination, Clinic matching, Meeting at the airport</p>	\$1,500
<p>Examination before IVF Consultation of reproductologist, Tests for HIV, Syphilis, Hepatitis B,C, Blood type Rh, general blood test, Coagulogram, Biochemical blood tests (Total protein, urea, creatinine, bilirubin, ALT, AST, glucose)</p>	\$300

Figure 5. In vitro fertilization fees (*Nova Espero - New Hope, s.f.*)

Detailed description	Cost, USD
Controlled oocytes stimulation under ultrasound control with doctor's consultation	\$490
Transvaginal oocytes puncture	\$585
Embryo cultivation	\$765
Embryo transfer	\$455
Intra Cytoplasmic Sperm Injection (ICSI): 1-10 oocytes	\$700
Intra Cytoplasmic Sperm Injection (ICSI): more than 10 oocytes	\$815
Sperm selection with PICSI method	\$1175
Embryo cultivation by EmbryoGen system	\$545
Preimplantation Genetic Diagnosis (PGD)	
5 chromosomes	\$2600
7 chromosomes	\$3100
9 chromosomes	\$3600

Figure 6. Clinic's services (*Nova Espero - New Hope, s.f.*)

In private clinics in Argentina, the projected expenses of Assisted Reproduction procedures range from \$3,500 to \$15,000 dollars. (Author's own estimation). Nonetheless, the country has a fertility Law (Ley 26.862) that states that every adult, regardless of sexual orientation, whether single or married, if they have social insurance or if they directly aid public hospitals, has free access to Assisted Reproduction procedures. This Law, however, only applies to a few well-established hospitals and centers and does not cover surrogacy.

For providing an estimation of the costs, the authors chose IVI, a world-renowned reproductive medical group with over 65 fertility clinics in nine countries, including Argentina

and the United Kingdom. The following are the costs of their treatments in the United Kingdom.

Initial Pre-Treatment Assessment and Consultations		
Initial Consultation	Includes Pre-Treatment Scan and Mock Embryo Transfer if required.	£200
Follow up Consultation	(If required)	£150
Mandatory Pre-Treatment Blood Tests per Partner	Screening Blood Tests (per partner) (HIV, Hepatitis B sAg and Hep B Core, Hepatitis C, Chlamydia, Gonorrhoea) - HFEA required.	£100
	Female Partner Pre-Treatment (Rubella, AMH, TSH, Full Blood Count).	£100
Diagnostic Pack	Includes First Medical Consultation, Gynaecological Examination, 3D Ultrasound Scan, Ovarian Reserve Assessment with Anti-Müllerian Hormone (AMH) Test and Mock Transfer Test if required.	£275
Diagnostic Pack Plus	Includes First Medical Consultation, Gynaecological Examination, 3D Ultrasound Scan, Ovarian Reserve Assessment with Anti-Müllerian Hormone (AMH) Test, Semen Analysis and Mock Transfer Test if required.	£400
Semen Analysis		£150

Figure 7. Consultation costs (IVI, 2021)

IVF		
IVF Fresh Cycle Package	Nurse Planning Appointment First Counselling Session Unlimited Cycle Scans (This doesn't include Pre-Treatment Scans) Unlimited Cycle Hormone Blood Tests (This doesn't include Pre-Treatment Blood Tests) Anaesthetic Consultation Egg Collection with Sedation IVF Lab Embryo Transfer Treatment Result Consultation Medications Delivery Additional Costs	£3,600
	HFEA Fee	£80
	ICSI (If required)	£1,200
	Embryo Freezing	£500
	One Year Storage Fee	£250
	EmbryoScope	£450
	Blastocyst Culture	£390
	BhCG	£50
	EmbryoGlue	£100
	Medication	Variable

Figure 8. In vitro fertilization Fresh Cycle Package costs (IVI, 2021)

IVF		
IVF PGT Plus Package	<ul style="list-style-type: none"> Pre-Treatment Consultation Nurse Planning Appointments First Counselling Session Unlimited Cycle Scans Unlimited Cycle Hormone Blood Tests <small>(This does not include Pre-Treatment Blood Tests)</small> Anaesthetic Consultation Treatment Result Consultation <p>2 x Oocyte Accumulation Cycles, including:</p> <ul style="list-style-type: none"> Egg Collections with Sedation Egg Vitrification Egg Warming <p>1 x IVF Freeze All for PGT Cycle, including:</p> <ul style="list-style-type: none"> Egg Collection with Sedation IVF Lab Blastocyst Culture Embryo Biopsy Embryo Vitrification Medications Delivery <p>Additional Costs</p> <ul style="list-style-type: none"> ICSI £1,200 EmbryoScope £450 Frozen Embryo Transfer £1,600 <small>(Additional EBO HFEA Fee)</small> PGT-A (NGS)* £500 <small>(Per embryo up to 6 embryos)</small> Medication Variable 	£9,165

Figure 9. In vitro fertilization Plus Package costs (IVI, 2021)

Intra-Uterine Insemination		
IUI Package	<ul style="list-style-type: none"> Nurse Planning Appointment First Counselling Session Unlimited Cycle Scans <small>(This doesn't include Pre-Treatment Scans)</small> Unlimited Cycle Hormone Blood Tests <small>(This doesn't include Pre-Treatment Blood Tests)</small> Insemination BhCG Treatment Result Consultation <p>Additional Costs</p> <ul style="list-style-type: none"> HFEA Fee <small>(If using donor sperm)</small> £3750 Medication Variable 	£1,200

Figure 10. Intra –Uterine insemination costs (IVI, 2021)

2.3 Assisted Reproduction as a Business Model

In order to introduce this topic, it is important to clarify the definition of a Business Model. It refers to sell a company's profit strategy, specifying the items or services that the company

intends, as well as its target market and any estimated costs (KOPP, 2020). As a result, the research on this question was valuable in the development of a canvas model.

The Assisted Reproduction industry appears to be wider than previously explained. The reproductive industry has numerous aspects that promote patient satisfaction in order to deliver the best techniques and treatments.

New and creative business models are beginning to show promise in delivering better treatment and producing higher returns, according to an article developed by McKinsey&Company (The future of healthcare: Value creation through next-generation business models, 2021).

The existence of these models, as well as their initial successes, reflect what it has been seen in the market in recent years: leading healthcare organizations are not content to simply play in appealing segments and markets, but are instead proactively and fundamentally reshaping how the industry operates and care is delivered.

The previously cited article states that while the recipe differs by vertical, improved alignment of incentives, often incorporating risk bearing, better integration of care, and the use of data and advanced analytics are all prevalent among these new business models.

Payers' new and innovative business models that include care delivery and advanced analytics to better serve individuals with more complicated healthcare demands, such as infertility, are yielding superior returns (The future of healthcare: Value creation through next-generation business models, 2021).

These models aim to shift the traditional payer paradigm away from an operational focus on financing healthcare and pricing risk and toward more integrated managed care models that better align incentives and deliver higher-quality, better-experienced, lower-cost, and more accessible care.

According to information provided by the CEO, IVI RMA Global, Richard Scott (Franchising IVF and the Changing Business Model for Laboratory Operations, 2018), Assisted Reproduction's business models are divided into variants of traditional private practice (which

includes solo practitioners and partners) and capitalizing private practices (which include equity partners and management relationships).

According to the report, such models, which include insurance companies, benefit management companies, and hospital acquisitions of referring physician practices, are driven by high start-up costs, trapped equity (meaning founders approaching retirement age), and anxiety about future access to patients.

Furthermore, according to the expert, IVF programs require a team of specific professionals. Physicians, embryologists, laboratory directors, and nurses are included in this group. It also includes staff that work at the front desk, patient scheduling, billing, bookkeeping, and marketing.

In terms of equipment, a significant investment in technology is required. Fertility clinics, for instance, require specialized software, furnishings, computers, ultrasounds, laboratories, operation rooms, employee offices, and exam rooms.

Regarding the business of the industry, it is built on both classic and modern buyout models, which will pique the interest of private equity firms. This is due to investors' contentment with rates of return, as well as availability to cash and effective management.

Furthermore, capital investments or initiatives, such as new offices, new physicians, and new key equipment, may be used to fund investments. Loans are also a type of investment because they are used to fund capital projects and capitalize future revenues. Finally, mergers and acquisitions are included in this category.

For instance, Ovation Fertility is a group of physicians and scientists who work in the field of reproductive endocrinology. In order to perfect advanced reproductive technologies (ART), such as in vitro fertilization, fertility doctors collaborate closely with very complicated laboratories. They also collaborate with major medical clinics dedicated to lowering the average cost of having a baby through IVF, by pushing the industry standard in fertility treatments (Ovation Fertility, 2021).

A variety of reproductive medications support ART therapies; nonetheless, there is a significant unmet demand in terms of product quality, especially given the low success rates for ART. Despite the great variety of disorders that might cause infertility, only a few pharmacological medicines are used to treat them (Nawrat, 2020).

GlobalData projects that the infertility drug market would expand from \$1.8 billion in 2018 to \$2.5 billion in 2028, owing to a projected increase in use of infertility drugs due to people waiting until later in life to have children, according to an article published by Pharmaceutical Technology. This expansion, according to the analytics business, will be centered on an increase in Assisted Reproductive Technology (ART) treatment rates (Nawrat, 2020).

The reproductive services market is highly fragmented, according to a London Business Wire study, with vendors pursuing M&As (mergers and acquisitions) to grow their product line and geographical footprint. Vendors spend a lot of money on R&D in order to create novel products, give value-added services, and acquire a competitive advantage in the market (Time, 2017).

Many new companies are entering the market, including Merck and Ferring Pharmaceuticals, which sell hormone treatment medications, and CooperSurgical, which sells fertility media and equipment. Collaborations among pharmaceutical companies are also resulting in the creation of novel fertility medications that incorporate technologies from all of the companies involved (Time, 2017).

As a result, Technavio, a prominent global technology research and consultancy firm, has named the top six leading suppliers in their current infertility services market in the United States report, which runs through 2021. This study also includes a list of 21 more notable suppliers who are projected to have an impact on the market throughout the forecast period (Time, 2017).

First and foremost, CARE Fertility, which is a corporation that sells a variety of fertility therapy, genetic diagnosis, screening techniques, and other fertility preservation procedures. It also offers a genetics program that includes pre-implantation genetic screening as well as genetic screening and donation.

CooperSurgical, on the other hand, provides a diverse product portfolio that includes both disposables and high-tech tools and equipment. It specializes on providing high-quality healthcare goods for women, and it manufactures and markets medical equipment and procedural solutions. Hospitals and clinics, for example, are among the places where the company sells ART goods.

Ferring Pharmaceuticals, ranked third, is a pharmaceutical company that specializes in osteoarthritis, endocrinology, gastrointestinal, urology, obstetrics, and infertility research and development. It operates nine research and development sites across the world. The business specializes in assisted reproductive technology (ART)-based fertility treatments.

Monash IVF is ranked fourth, and it provides therapies such as acupuncture, naturopathy, herbal medicine and vitamins, and counseling. It also offers egg donation, sperm donation, embryo donation, in-vitro fertilization, embryo genetic testing, and embryo freezing, as well as conception timing, ovulation induction, assisted insemination, sperm retrieval, intracytoplasmic sperm injection, vitrification, blastocysts, egg donation, sperm donation, embryo donation, in-vitro fertilization, embryo genetic testing, and embryo freezing.

Merck is the fifth company on the list, and it provides healthcare items like preventative and therapeutic drugs, neuromuscular blocking agents, and animal health products. The pharmaceuticals section offers a full range of recombinant gonadotropins, including Gonal-F, which is the most commonly prescribed gonadotropin in the world.

Finally, Vitrolife creates, markets, and develops devices and systems for the preparation, cultivation, and storage of human tissues, cells, and organs. Fertility therapies, cell therapy and tissue engineering, and organ transplantation systems are the company's main areas of concentration.

According to the research, the fertility industry is divided into several sectors, as indicated below.

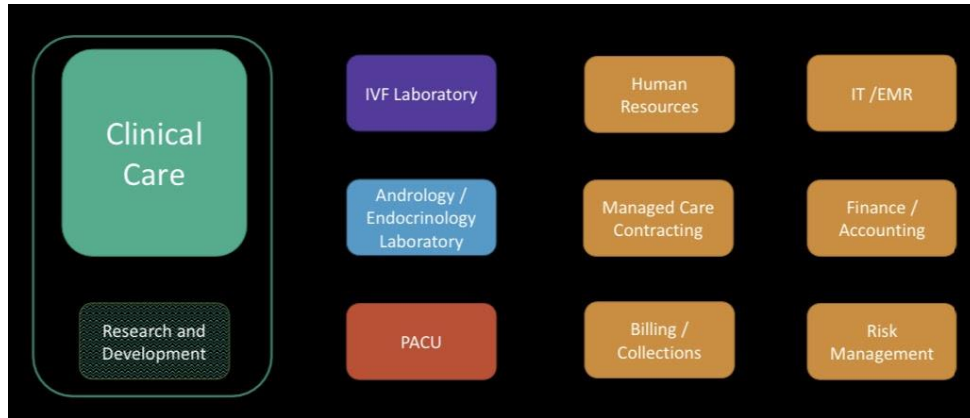


Figure 11. Sectors of the clinical care (Scott, 2018)

However, diagnostics, anesthetic, mental health, genetic counseling, media, and supplies are all included in such practices.

The expert completed his study by predicting the future of Assisted Reproduction, stating that complicated organizations and markets will be present. Nonetheless, it is expected that partnerships would expand significantly, with investment bankers and venture capitalists pursuing successful techniques.

2.4 Assisted Reproduction from an Ethical point of view

As explained before, Assisted Reproduction technologies help people who are unable to conceive naturally in realizing their dream of having their own children, if they have the financial means to do so. These treatments are costly not just because of the numerous medical supplies required, but also because the doctor's expertise must be rewarded. For some, paying exorbitant amounts to start a family is more than fair and ethical, because babies are a desire, not a necessity.

On the other hand, some people believe that paying to conceive is unethical because babies should not be considered products. When clients visit an Assisted Reproduction clinic, it functions similarly to any other business that offers a service.

The first step is to seek advice from a local specialist, in this case a physician. People are assessed by professionals to determine which service or services are best for them (In vitro fertilization, artificial insemination, surrogacy, among others).

After that, both parties agree on a price for the agreed-upon service or services, and the individuals receive their desired product, in this case, a baby or infants. As a result, viewing human reproduction as a legitimate service business in which individuals pay a fee in exchange for a product is not ethical or moral for a segment of society.

Surrogacy, in which a woman (the surrogate) is recruited to carry out a pregnancy on behalf of a couple or single men/women who decide to have children on their own for a financial incentive, is probably the most serious worry. The primary ethical dilemma stems from the fact that women are officially working with their bodies and are essentially employed by clinics to provide a service to people looking for a family.

Furthermore, some women do it because they are in desperate need for money. As a result of the social and economic disparities between men and women, some claim that women are forced to use their bodies as a last resort in order to earn money, but men are not required to do so.

Despite this, health professionals need to receive an economical reward for performing their services since, after all, it is their job, and they need to make a living out of it. In addition, clinics need to make profits, so they can keep being competitive and improve their business performance, otherwise, they could not operate on the market and stop offering ART to people who struggle to conceive. (Author's own elaboration).

2.5 Key Stakeholders for Assisted Reproduction

Stakeholders are crucial to clinic operations; hence this aspect was believed to be worth exploring. In the case of the Assisted Reproduction industry, clinics, like any other business, have many people who are directly interested in its activities.

To begin with, the company's services are requested by patients. As a result, businesses must rely on skilled health professionals, such as doctors, nurses, and psychiatrists, who are rewarded for their competence, in order to deliver various types of Assisted Reproduction services (Scott, 2018).

Furthermore, egg and sperm donors are essential to the clinic's success because several Assisted Reproductive technologies would be impossible to undertake without them (Scott, 2018).

Lawyers are also important since they examine not just the clinic but also the clients. They are necessary for legal requirements and procedures, such as surrogacy, which requires the parties to sign a contract. Because various challenges may develop in such a complicated business, lawyers are seen as crucial partners.

For instance, a known case that involved an attorney (Adam Wolf) in the industry of ART happened on 2019, when a family a family filed a lawsuit against the Institute for Reproductive Health, The Christ Hospital, and Ovation Fertility since a DNA test revealed that the baby was not biologically connected to her father (GW LAW, 2019).

Moreover, because clinics require a system to identify and keep information about their clients, donors, financial transactions, and price lists, among other things, software companies are involved.

But, most critically, Assisted Reproduction treatments necessitate significant investments in various technological resources in order to be successful. As a result, investors are critical to the company's success. Similarly, health insurance firms are important for patients because they give financial assistance, allowing them to lower treatment costs (Scott, 2018).

As a result, private fertility clinics are the primary stakeholders in this industry, as their job is to deliver such fertility treatments to their clients. Their large earnings are contingent on the excellent quality of services they deliver to customers (Emily Clark, 2021).

On the other hand, private and government entities are responsible for establishing the norms and guidelines that clinics must adhere to in order to provide services to the general public (Human Fertilization and Embriology Authority, 2019).

Finally, as it is widely known, clinical research is critical for the successful execution of medicines as well as the long-term viability of this firm. Professionals must research new medical trends and solutions on a daily basis in order to deliver the greatest outcomes and technology to their patients, whose pleasure is dependent on research and development investments. Thus, ensuring that these procedures are safe and successful is critical for the business and its image among patients.

2.6 Assisted Reproduction History and how it became a Business

It is necessary to understand the roots of Assisted Reproduction before explaining how it became a business.

When Walter Heape, a professor at the University of Cambridge, described the first example of embryo transplanting in rabbits in the 1890s, Assisted Reproduction became a reality. Gregory Pincus combined rabbit eggs and sperm in the glass top of his watch in 1934, then inserted the developing embryo in a surrogate rabbit (Kamel, 2013).

Nonetheless, it was not until 1959 that Min Cheh Chang, a Chinese reproductive scientist, achieved undeniable proof of In Vitro fertilization by producing live births from a white rabbit using eggs and sperm from black rabbits for the first time (Kamel, 2013).

Professors Carl Wood and John Leeton of Melbourne, Australia, reported the first human born from in vitro fertilization in 1973, however the embryo died prematurely. The world's first IVF babies were born between 1978 and 1979. Louise Brown was the first to be born, on July 25, 1978, at Oldham Hospital in the United Kingdom, after an elective caesarean section. This was

followed by Courtney Cross's birth on October 16th, 1978, and Alastair MacDonald's birth on January 14th, 1979. The world hailed the beginning of a new age of aided human reproductive technologies with the birth of these three infants (Kamel, 2013).

Several factors contributed to making Assisted Reproduction a billionaire international industry. To begin with, in today's society it is very important for people to develop a professional career and have a stable economic status before deciding to whether have kids or not. Therefore, it can be said that people delay the age at which they decide to start a family.

In fact, nowadays the average for women to have children in Europe is around their 30s. (World Bank Data, 2019). Furthermore, in this era people tend to have a more sedentary lifestyle, which decreases the health of most individuals, and it can lead to affect their fertility system.

The worldwide fertility rate, according to the World Bank Data (2019), is around 2.4 children per women which is half of what it was in 1950 (4.7 children per women). Developed countries are the ones with lower fertility rates, for instance, the United Kingdom has an average rate of 1.7 children per women while Argentina has an average rate of 2.3 children per women.

In addition, even governments are making campaigns to make their population be aware of Assisted Reproduction methods. This is the case of Argentina since in 2013 the government passed the Fertility Law 26.862, which allows people (whether they have or not medical insurance) to get fertility treatments in established clinics and hospitals all around the country.

Moreover, human eggs went from simple cells to valuable commodities for the companies working in the industry, who mostly target young, healthy women. Women who cannot conceive with their own eggs, same with same gender couples and surrogacy, can use someone's else eggs. A cycle of eggs can cost between \$6.000 USD and \$15.000 USD, depending on the clinic and the qualities of the egg provider (Waldby, 2019).

However, in some countries it is illegal to exchange money for eggs, but they can be donated, and the donors are compensated for the expenses. Also, people can contact clinics in less restrictive countries and buy eggs in order to achieve their desired pregnancy. In addition,

nowadays, social media plays a very important role, especially in the market of surrogation (Waldby, 2019).

In Facebook, there are groups dedicated to match intended parents with women who offer their services as surrogate mothers. Intended parents post the requirements they are looking in a surrogate mother and from there, a conversation is headed with the aim of reaching an agreement that benefits both parties.

Moreover, several of the world's most well-known corporations, such as Facebook and Apple, pay women to freeze their eggs in order to recruit more female employees to the business. In the United States, a typical cycle of egg freezing costs roughly \$10.000, with storage expenses of \$500 or more per year (Farr, 2014).

On the one hand, Facebook provides up to \$20.000 in egg freezing services for female employees, as well as adoption and surrogacy support. Apple, on the other hand, provides egg freezing and storage, as well as longer maternity leave, adoption support, and infertility therapies (Farr, 2014).

In order to estimate how big, the market size of the current companies working in this industry is, Fortune Business Insights (a consulting company) developed a report with some actual facts about Assisted Reproduction as a business, as well as some predictions for the future of this industry. Also, the research carried out by the Emergen Research group was used.

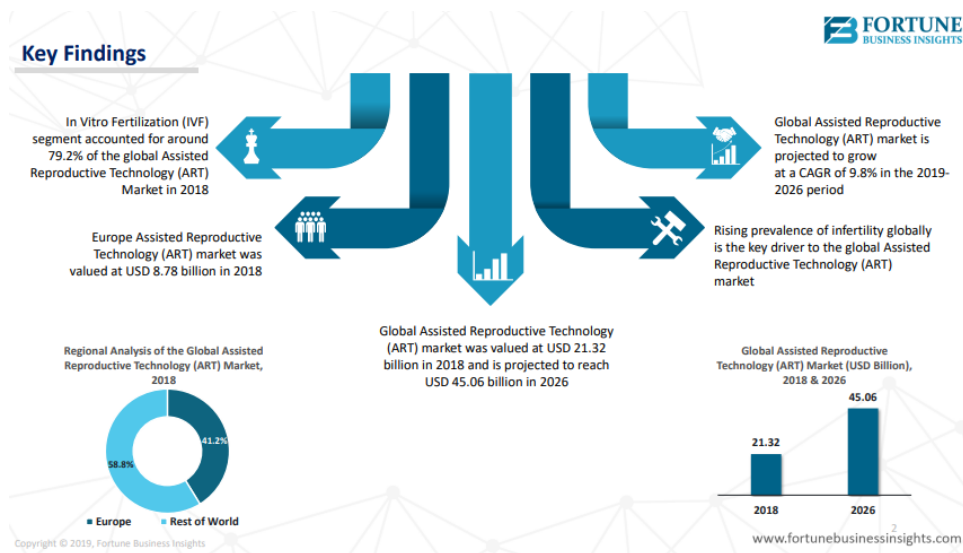


Figure 12. Key findings regarding the assisted reproduction industry (Fortune Business Insights, 2021)



Figure 13. ART Market size and Share trends (Emergen Research, 2021)

Even though the ART industry helps individuals to achieve the dream of having kids, it also has downsized and some companies take advantage of people’s desperation to conceive, since many of them ask for huge amounts from patients in order to find a donor as soon as possible and not be sent to a waiting list (Alcántara, 2018).

2.7 Advertising Assisted Reproduction

As every company, the fertility center itself is often a professionally managed, for-profit, private corporation, even though many of them are affiliated with nonprofit hospitals or academic institutions (Strodel0, 2020). Therefore, as there are many of these institutions in the market, it turns to be a competitive industry, which leads fertility clinics to engage in forcible marketing strategies to attract customers.

Such efforts involve investments in hiring marketing consultants, as well as advertisements on the radio, newspapers, magazines, billboards and of course, social media.

In order to obtain a greater campaign reach, fertility clinics use search engine optimization (SEO) and / or pay-per-click (PPC) advertising, be it on social media or on search engines themselves (Yourwebseo, 2021).

These digital marketing strategies give fertility clinics the possibility to focus effectively on their target segment. This way, patients can establish a relationship between professionals and the fertility centers.

Due to all the particularities this industry involves, it is essential to count with certain standards and protocols in order to advertise its services. Therefore, it is vital to comply with all relevant requirements and guidelines set by the Ministry of Health (World Health Organization, 2021).

In any case, whether fertility centers lead the way in ethical advertising or not is dependent on the categories and forms of ethical advertising that they employ in their marketing tactics, which are numerous. How clinics persuade patients to choose their place of treatment over competitors involves a huge range of approaches.

Every health institution differs in their style and content. Nevertheless, all of them have the same goal and objective, which is to advertise their services. Hence, fertility is seen as a business where patients make choices as consumers.

To begin with, the first impression for fertility clinics' websites is vital for their customers' segments. Those are the channels in which these private institutions persuade the people who enter their webpages, through a proper communication of what they do. Therefore, its appearance must be professional and well elaborated.

On the basis of these arguments, the features that such institutions choose to advertise, are related to what they believe that patients consider at the moment of deciding which clinic to select. This suggests that the way they advertise their value propositions can affect patients' experiences at the health institution, even if they are irrelevant to consumers' according to their needed treatments.

More surprisingly, this plays a very important role on the patients' head, since according to the information they receive from the clinic, they may remember or relate that place with, for instance, a caring one (Hawkins, 2018).

Notably, most of them have a website with vibrant colors, pictures of babies, parents, doctors and of course, information about the services they provide. These represent an important source of information for patients considering ART. In addition, reproductive clinics in Ukraine, for instance, employ multilingual staff to cater to English-speaking clientele (Fertility Clinics Abroad, 2019).

As a consequence, showing images of babies may have a huge impact on patients. As all they want is to become parents, it is possible that they associate such pictures with a successful treatment. What is more, if they associate a treatment with a successful pregnancy, it is possible that they ignore the costs of it in light of what they will receive in exchange (Hawkins, 2018).

Added to this, images of successful pregnancies are another persuasive technique which may be rewarding for fertility clinics.

Following this line, words such as "dream" or "miracle" are other important factors that give hope for patients. Such strategy is used in order to reach an emotional appeal that promises people what seems unattainable. For instance, VittoriaVita, a reproductive clinic in Kiev, Ukraine's capital, applies this marketing strategy in its Instagram profile (VittoriaVita, 2021).

Similarly, every clinic empathizes with the attributes they think will make them attractive to patients. For instance, the technology offered, or quality of their health professionals are other factors clients consider.

Since Assisted Reproduction treatments entail an emotional and stressful process, a supportive and caring approach might be very important for the patients.

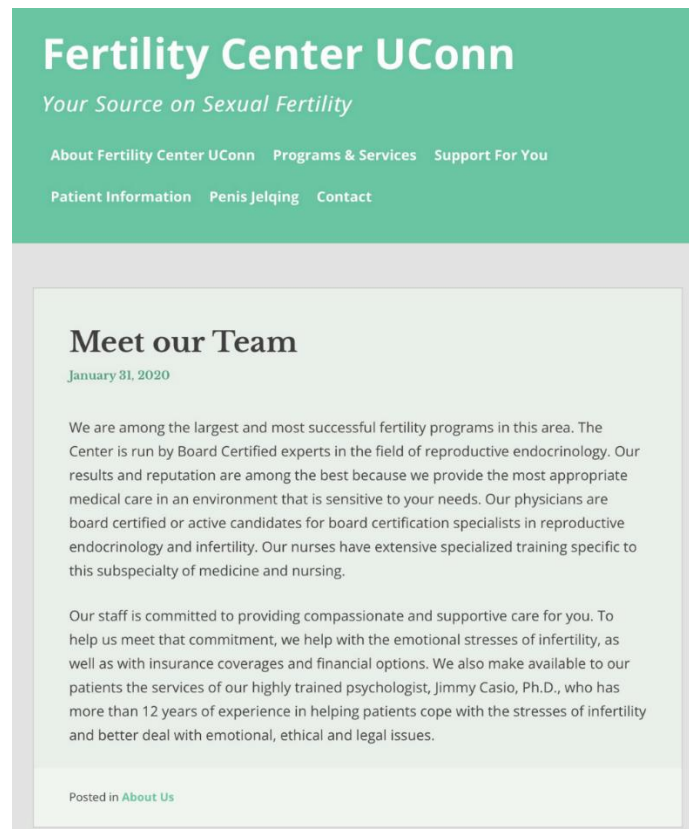


Figure 14. Expert team advertising (UConn, Fertility Center UConn, 2020)

As outlined above, the high quality of the doctors the clinic employs, is another advertising strategy that clinics' websites rely on when catching the attention of clients. Such institutions persuade patients by mentioning the certifications they gained, or even their years of experience. As shown in the image taken from the Fertility Center UConn (UConn, Fertility Center UConn, 2020), all this information can be found on an "About Us" page, which may offer more details about their physicians' backgrounds, as well as information about becoming a patient, their programs and any other useful data they may consider important for the patient.

Furthermore, patient testimonials are also a very useful technique, since it is considered as a principle of social proof, meaning that what others do have a natural propensity to be seen as more suitable or appropriate.

Equally important is to mention the fact that websites tend to be more likely to emphasize other attributes as the previously mentioned rather than their success rates. For instance, if their success rate was not the expected one or it was lower than their competitors' ones, the clinic may avoid mentioning it. Although commercial systems exist, there is little evidence to support their usage, and they just increase treatment costs.

Therefore, if such rates are not demonstrated, this may cause negative consequences since clinics may offer an optimistic outcome by ignoring how difficult and stressful the process might be. Indeed, the lived experiences from people who have gone through Assisted Reproduction treatments, are far from the idyllic experiences and outcomes that clinics promise.

Last but not least, the cost of the treatment places a major role, not to say the most important one, in the patient's head. Clinics advertise their services based on many attributes, but the way those are financed may be determinant for their clients' selection.

Prices are usually one of the most important factors in consumer transactions. The fact that most people have to pay for fertility treatments out of pocket, as well as the fact that they are costly, support this belief. Therefore, loans and insurance are crucial for clinics' advertising.

Nevertheless, some of them can only be obtained after actually seeing a doctor, since every treatment may be different according to the patients' medical issues. However, it is worth mentioning that by publishing the costs of the treatments, might make clients less inclined to seek them.

As a result, it appears that clinics are deliberately refusing to provide price information in order to divert patients' attention away from the price (Hawkins, 2018).

Moreover, many websites do not mention insurance on their pages, even though it is vital for patients. This is due to the fact that not every person has a Health Insurance that covers such

procedures. Consequently, this limited group of people is the one that can access ART treatments with their own resources.

According to a study developed in an article of Evening Standard, most clinics are not sufficiently transparent and honest about the 'true' cost of an EEF cycle (elective egg freezing), provide a skewed picture of EEF, and do not provide adequate statistics or information. Most importantly, some clinics do not strictly adhere to the HFEA's advertising and information-sharing standards (Clarke, 2021).

Owing to this, fertility clinics advertise some of their services through discounts or special promotions, making it more difficult for patients to compare prices. This is because clinics bundle their services differently. Each package, for instance, for an IVF treatment, includes different services or benefits.

Nevertheless, many fertility clinics claim being less expensive than their competitors. Below, there is an example from a fertility clinic's websites that demonstrates this statement. The important details were underlined in red.

IVFMD 1(866)483-6366 REQUEST A CONSULTATION

Financing

Financing and Promotions / Financing Options

Financing Options

- Insurance
- Free IVF
- Raffle
- Promotions

MAKING TREATMENT ACCESSIBLE

Our fees for assisted reproductive technology services are among the most competitive available. Offering various financial packages and discounts, IVFMD is committed to making our treatments and procedures accessible to all.

Because our providers treat each patient with individualized care, costs will vary depending on your personalized treatment plan. However, across the board, we guarantee our prices will always be competitive and reasonable.

- **Free second opinions for prospective patients:** US residents can obtain a second opinion to review treatment options and discuss financials – all free of charge – if you bring records from another US Reproductive Endocrinologist that are a year old or less.
- **Discounted treatment bundles without hidden fees:** Depending on your response to your stimulation protocol, medication costs can vary and are paid by you directly to the pharmacy. We are the ONLY facility in Florida offering discounted treatment bundles that include medications. Our simplified IVF packages feature all-inclusive pricing with full coverage of medications during stimulation so you pay one price for everything you need.

Translate »

Figure 15. Financing advertising IVF MD website (IVF MD, 2018 - 2021)

According to this website (IVF MD, 2018 - 2021), their prices seem to be quite competitive and that there are no hidden fees, despite the fact that neither prices nor fees are not listed. This way, consumers cannot be sure about their truthfulness. Therefore, consumers struggle to evaluate these claims since there is little pricing information available.

Consequently, the scarce pricing information makes it more difficult for patients to compare prices, which eventually cannot generate competitive pressure to lower costs.

Overall, these marketing strategies demonstrate the fertility industry's determination to prioritize its own interests over the ones of its patients. As a result, even experts who work in

reproductive clinics know that the content, features, and benefits on websites are used as advertising by the clinics.

"Many of these techniques have only one goal in mind: to make money. They take advantage of the perfect storm that thousands of couples are in dire need of miracle therapies and are really anxious to find them. They use marketing campaigns to capitalize on the patient's desperation, falsify treatment numbers, and recommend any of these approaches to the general public. At the end of the day, we have a captive population of external factors such as the business."

(Gynecologist Rafael Bernabeu, medical director of the Instituto Bernabeu and head of Reproductive Medicine at the Miguel Hernández de Elche University Faculty of Medicine.)

(Bernabeu, 2021)

To conclude, it is important to mention that clinics must respect a guidance which was written in partnership with the Human Fertilization and Embryology Authority (HFEA) and the Advertising Standards Authority (ASA). The ASA has also issued an enforcement warning to clinics on how they advertise their services, especially on their own websites. The purpose of the new guidance is for customers to be able to make informed judgments about the effectiveness and cost of various clinic treatments (Human Fertilization and Embryology Authority, 2019).

2.8 Ukraine and the Assisted Reproduction business

Because surrogacy is permitted in Ukraine, it is one of the most popular destinations for the procedure. As a result, it is a massive industry. According to the European Society of Human

Reproduction and Embryology (ESHRE), Ukraine has around 30 IVF clinics, but this number is expected to rise as Eastern Europe becomes a popular destination for reproductive treatment.

Surrogacy treatments currently cost roughly \$50,000 USD or more, according to New Hope-Nova Espero, a fertility facility in Ukraine (Hope-Nova, Nova Espero - New Hope, s.f.). Pricing and services, however, differ from one clinic to the other. The majority of private clinics employ medical specialists who have received training in Europe and the United States, as well as cutting-edge technology based on Western medical standards.

In contrast to other nations, Ukrainian surrogacy clinics offer 'a la carte' services at extremely low prices, with 'concierge' services added according to the Intended Parents' preferences and circumstances (Hawkins, 2018). On a regular basis, special offers are made accessible. Some clinics provide "guarantee" plans, which allow patients to have as many IVF cycles and embryo transfers as they want until they have a healthy pregnancy and delivery. Parents use online forums to find out which clinics have the best reputations and to share their experiences, either good or bad.

Despite the fact that costs are high, this country has relatively low prices when compared to other countries such as the United States or Canada, where prices can double or even treble (Nova Espero - New Hope, s.f.). As a result, Kiev, the country's capital, is a global hotspot for commercial surrogacy. In addition, regulations are more adaptable. The processes entail a surrogacy contract, in which the intending parents choose and sign the surrogate mother. As a result, there are two contracting parties (buyer and purchased), as well as a single outcome (the baby) (Nova Espero - New Hope, s.f.).

According to BBC estimates, surrogate women can earn more than 15,000 euros (\$ 20,000 dollars) as surrogate moms or donors, which is less than half of the treatment cost. Nonetheless, the estimations also state that given the country's economic standards (the economy was in serious recession in 2014 and 2015), this amount is sufficient for them, as it is equivalent to a five-year income in Ukraine. As a result, the reasons why women choose surrogacy range from one another. In general, they anticipate big earnings in return.

According to an article about the Assisted Reproduction industry in Ukraine (Espartero, 2018), when a couple or individual hires a surrogate mother, they can choose from a variety of fees, ranging from basic to premium. The difference in cost between choices can be as much as € 20,000. The most expensive option includes, among other things, the ability to choose the gender of the baby, as well as preimplantation genetic diagnosis and the capacity to choose the pregnant woman.

Apart from the fact that it is legal, Ukraine's liberal policies attract tourists, allowing for surrogacy tourism. (Iajollaivf, 2012).

It recognizes biological parents from the moment of conception and places no cap on how much a surrogate can be paid, thereby creating an open market where women can demand whatever price they desire.

For instance, BioTexCom is a key player in Ukraine's surrogacy sector, which is increasing due to the country's poverty and instability (BioTexCom, 2021). Another example of this, is the Forsa Fertility clinic, which also offers discounts to tourists who decide to fly to their nation to begin fertility treatments (Fertility F. , 2021).

This does not, however, imply that it is straightforward. Depending on where people come from, such as the United Kingdom, the procedure of actually moving the baby out of Ukraine can be highly bureaucratic, with families needing to stay in Ukraine for months (Espartero, 2018).

Nonetheless, according to an article, surrogacy should be kept independent from markets since doing so would undermine the practice by turning it into a commodity, degrading human values. Furthermore, opponents of surrogacy referred to it as "baby selling" and "womb renting," according to the research presented in this article, accusing surrogacy agencies of exploiting women and breaching children's rights (Scandals, morality wars, and the field of reproductive surrogacy in Ukraine, 2020).

As this article stated, there are three types of actors in the Ukrainian surrogacy industry: assisted reproduction clinics that perform medical testing, fertilization, and embryo transfers; lawyers or legal firms that draft surrogacy contracts and assist foreign parents in obtaining birth

certificates and exit documents; and various brokers (some of whom are referred to as "surrogacy agencies") that assist in recruiting and matching prospective parents and surrogate mothers and managing remarriage. Medical, legal, and organizational/relational surrogacy are represented by these three sorts of actors.

In response to the rapid increase in the number of foreign couples and new agencies, Ukrainian fertility clinics "in-sourced" – setting up their own surrogacy agencies to provide legal and relational services in-house (Scandals, morality wars, and the field of reproductive surrogacy in Ukraine, 2020).

The reason for "in-sourcing," according to the investigation provided in the previously cited article, is that there are too many agencies with little track record and questionable practices; clinics do not know whom to trust, and they do not want to risk their reputation by working with untrustworthy partners. The development of a large number of newcomers who do not share the incumbents' views on surrogacy or who may not follow the field rules endangers the clinics' ability to maintain market control.

However, there is another motivation to insource: the potential for increased revenue. Medical tourism is becoming a more important part of Ukraine's ailing economy. Around 60,000 foreign patients visited Ukraine in 2018, generating \$150 million in income, according to the Ukrainian Association of Medical Tourism. Fertility clinics, on the other hand, want "a piece of the pie" (Scandals, morality wars, and the field of reproductive surrogacy in Ukraine, 2020).

Nevertheless, publicly embracing surrogacy commerce contradicts the clinics' and UARM's efforts (Ukrainian Association of Reproductive Medicine) to develop and sustain medical conceptions of control, implying that clinics are embracing the commercial aspect of surrogacy, casting doubt on the dogma that surrogacy is a last-resort medical procedure.

The fertility profession, its professional association UARM, and the Ukrainian Ministry of Health have organized the field of surrogacy in Ukraine, with the latter outlining who can commission surrogacy and who can act as a surrogate. The focus is shifted away from the

commercial side of surrogacy and downplays the basic moral tension between intimacy and reproduction on the one hand, and money and markets on the other.

2.9 Assisted Reproduction United Kingdom

In 1991, the United Kingdom established the Human Fertilization and Embryology Authority (HFEA). It was the world's first regulatory agency for the treatment and research of human embryos used in assisted reproduction. The fertility sector has expanded dramatically since the HFEA was created. While roughly 6.700 IVF cycles were registered in approved fertility clinics in the United Kingdom in 1991, the number of cycles has increased to over 69.000 in 2019 (Human Fertilization and Embryology Authority, 2019).

Furthermore, nowadays more same gender couples of single parents have the option to start a family. Although treatment with a male partner still dominates in IVF treatment (94% in 2019), there are an increasing number of cycles involving patients in female same - gender relationships or with no partner (Human Fertilization and Embryology Authority, 2019).

Currently, there are around 70 IVF clinics registered in the UK. These clinics are known for their world class treatment standards and because they are also carefully and strictly regulated by the HFEA. It is worth mentioning that most patients looking for fertility treatments in the United Kingdom are natives (Human Fertilization and Embryology Authority, 2019).

For the marketing investigations in this country, the focus was on well-known clinics such as IVI, the London Women's Clinic website and the Complete Fertility Centre website.

Patients can choose between two options, they can either pay for a private treatment or see if they are eligible for free treatment through the National Health Services (Fertility Clinics Abroad, 2019).

According to a report, the UK IVF market was worth \$514 million in 2018 and is expected to reach \$928 million by 2026, representing a 7.6% CAGR during the study period (Sanjivan Gill & Kavita Joshi, 2019).

This could be due to the rising age at which men and women have kids, diminishing male fertility, and increased social acceptance of fertility therapy as a means of beginning a family, particularly among individuals who have put off starting a family or are in same-gender relationships.

However, as stated in this report, ethical concerns raised by social and religious organizations, as well as the cost of treatment, are projected to stifle the UK IVF market's expansion (Sanjivan Gill & Kavita Joshi, 2019).

The UK IVF market is divided into two categories: cycle type and end user. On the one hand, IVF cycles and donor egg IVF cycles are the two types of cycles available in the UK IVF market. On the other hand, fertility clinics, hospitals, surgery centers, and clinical research institutions are the end users in the UK IVF market (Sanjivan Gill & Kavita Joshi, 2019).

Because of the challenges involved in such operations, regulation is essential for fertility clinics, since they must adhere to the law as well as the regulations and standards established. As a result, they must abide by the Human Fertilization and Embryology (HFE) Act 1990 (as modified), the HFE Act 2008, and a slew of other laws, as previously mentioned (Human Fertilization and Embryology Authority, 2019).

Fertility clinics in the UK use a variety of delivery methods, which include sharing resources, using a quality management system, and being co-located.

Furthermore, many clinics are looking for new and cost-effective ways to provide services. Consolidation among service providers can help with this, especially in the reproductive industry, where patient demand outstrips supply, by attaining economies of scale, replicating clinical care, and expanding the scope of their services.

Although the UK has no regulatory powers over mergers or financial structures, the responsibility of private clinics in guaranteeing high-quality care for patients means that they are aware of the positive and negative consequences of consolidation on the services they provide (Strodel0, 2020).

Furthermore, consolidation might diminish competition among providers, resulting in higher costs for patients. This could be a problem in the UK reproductive market if any providers have a monopoly in one or more of the UK's nations or regions. As a result, the surviving smaller stand-alone providers that still want to provide local fertility services may face financial or commercial issues, putting their survival in jeopardy.

The numerous group structures in the current UK fertility market are based on distinct categories, such as the Federated model, which gives individual clinics (and lead clinicians) autonomy while providing central services with consent and when it makes sense (for instance, marketing, website, IT and purchasing) (Human Fertilization and Embriology Authority, 2019).

Another key area in the UK market is location specific. It entails a significant number of shared processes and functions.

Moeover, franchising plays a significant role, as it is based on a consultant-led model inside the independent hospital operating model, with great local autonomy and only central marketing and legal services.

Similarly, the Integrated model is built on a shared operating system with a high level of central control.

Last but not least, there are freestanding clinics, which function independently in all aspects of delivery, similar to how clinics have traditionally operated.

Although fertility services are regulated across the UK, commissioning is devolved to the national level. Clinical commissioning groups (CCGs) in England commission fertility services on a local level (with the exception of fertility services for those in the armed services). What is more, treatments paid for by the NHS (National Health Service) can be gotten from both the NHS and the

private sector (Fund, 2021). Also, financial remuneration is forbidden for people who decide be sperm or eggs donors. (Lynnette Nathalie Lyzwinski BA, 2013).

Commissioning in Scotland, Wales, and Northern Ireland, on the other hand, follows a distinct pattern. Fertility services in Scotland are commissioned from four NHS providers by 14 regional health boards using a £12 million central grant, according to a report (The state of the fertility sector 2017 - 2018, 2018).

Clinical and social qualifying requirements are established centrally in these services, and patients are entitled to three full rounds of IVF.

2.10 Assisted Reproduction in Argentina

In 2013 it was sanctioned in Argentina the Law 26.862, which establishes that any adult can access in a free way to the techniques of Assisted Reproduction. With this law, people are allowed to access four treatments of low complexity and three treatments of high complexity per year in established centers only (Gobierno de Argentina, 2013).

Since the Law was sanctioned, the access doubled up to the point in which 400 out 1.000.000 habitants accessed them. There are more than 21.000 cases of Assisted Reproduction per year, which have a growth rate of the 24% (Gobierno de Argentina, 2013).

The Latin American Association of Assisted Reproduction gathered data in 2015 about the techniques of ART in 175 institutions from 15 different countries in Latin America and the results showed that Argentina is the second country of the region with more clinics specialized in Assisted Reproduction as well as the place where more treatments are made with 409 cycles per every million habitants.

In addition, the most used techniques in Argentina are the following: artificial insemination, in vitro fertilization and ICSI (Caeme, 2019).

LISTADO DE ESTABLECIMIENTOS DE SALUD CON PRESTACIÓN FERTILIZACIÓN ASISTIDA SIN Y CON BANCO DE GAMETOS

01/10/2019

Fuente: REGISTRO FEDERAL DE ESTABLECIMIENTOS DE SALUD (REFES)

Código del Establecimiento	Nombre	Tipología (código)	Tipología (descripción)	Banco de Gametos	Dependencia	Provincia	Departamento
10020012315256	HOSPITAL ITALIANO DE BUENOS AIRES	ESCIG	Establecimiento de salud con internación general	NO	Privado	CABA	COMUNA 5
10020012515209	HOSPITAL DE CLINICAS JOSE DE SAN MARTIN	ESCIG	Establecimiento de salud con internación general	NO	Universitario público	CABA	COMUNA 2
10060562100237	HOSPITAL INTERZONAL GENERAL DE AGUDOS DR. JOSE PENNA	ESCIG	Establecimiento de salud con internación general	NO	Provincial	Buenos Aires	BAHÍA BLANCA
10060562300114	CLINICA PRIVADA FUMEBAL HOSPITAL PRIVADO DEL SUR	ESCIG	Establecimiento de salud con internación general	NO	Municipal	Buenos Aires	CHACABUCO
10062102206839	HOSPITAL MUNICIPAL NUESTRA SEÑORA DEL CARMEN	ESCIG	Establecimiento de salud con internación general	NO	Provincial	Buenos Aires	GENERAL PUEYRREDÓI
10063572100227	HOSPITAL INTERZONAL GENERAL DE AGUDOS DR. OSCAR ALENDE DE MAR DEL PLATA	ESCIG	Establecimiento de salud con internación general	NO	Privado	Buenos Aires	LA MATANZA LA PLATA
10064272316509	CLINICA DIM RIVADAVIA HOSPITAL INTERZONAL GENERAL DE AGUDOS DR. SAN MARTIN	ESCIG	Establecimiento de salud con internación general	NO	Provincial	Buenos Aires	TRENQUE LAUQUEN
10064412100235	CLINICA PRIVADA DR. PEDRO GARCIA SALINAS	ESCIG	Establecimiento de salud con internación general	NO	Privado	Buenos Aires	CAPITAL
10068262300106	HOSPITAL ANGELA IGLESIA DE LLANO	ESCIG	Establecimiento de salud con internación general	NO	Provincial	Chaco	SAN FERNANDO
10180212139021	HOSPITAL DR. JULIO CECILIO PERRANDO	ESCIG	Establecimiento de salud con internación general	NO	Privado	Chaco	SAN FERNANDO
10221402126044	SANATORIO ANTARTIDA CENTRO MEDICO PARA LA MUJER S.R.L.	ESCIG	Establecimiento de salud con internación general	NO	Provincial	Chubut	BIEDMA
10221402326072	HOSPITAL ZONAL ANDRES ISOLA	ESCIG	Establecimiento de salud con internación general	NO	Provincial	Chubut	ESCALANTE
10260072129040	HOSPITAL REGIONAL COMODORO RIVADAVIA	ESCIG	Establecimiento de salud con internación general	NO	Privado	Chubut	ESCALANTE
10260212129011	SANATORIO ASOCIACION ESPANOLA DE SOCORROS MUTUOS SA	ESCIG	Establecimiento de salud con internación general	NO	Provincial	Entre Ríos	PARANÁ
10260212329044	HOSPITAL SAN MARTIN	ESCIG	Establecimiento de salud con internación general	NO	Provincial	La Pampa	CAPITAL
10300842142059	ESTABLECIMIENTO ASISTENCIAL DR. LUCIO MOLAS	ESCIG	Establecimiento de salud con internación general	NO	Provincial	La Rioja	CAPITAL
10420212153025	HOSPITAL REGIONAL ENRIQUE VERA BARRIOS	ESCIG	Establecimiento de salud con internación general	NO	Provincial	La Rioja	CAPITAL

Figure 16. Some registered ART clinics in Argentina (Sistema Integrado de Información Sanitaria Argentina, 2019)

The desire for a child is sometimes a lucrative economic opportunity for clinics that provide a service that does not completely support women who undergo fertilization procedures.

As previously said, due to changes and alterations in family patterns, an increasing number of women are choosing to confront the parenting project on their own, and Assisted Reproduction procedures can help them achieve that goal. However, the fertilization processes they go through on a regular basis might be distressing.

As a result, a woman's desire to become a mother evolves throughout time. Many women choose personal and professional growth above motherhood as a way to postpone childbearing. According to data from the Valencian Infertility Institute (IVI), over 2,000 women worldwide sought treatment for infertility between 2018 and 2019, a figure that is increasing year by year.

Today, there are a number of Assisted Reproduction therapies that may be tailored to the needs of each woman who wants to become a mother, whether with or without a male figure. In all

circumstances, the sperm donor's number is crucial, as is the egg bank's number if egg donation is necessary for treatment.

On a global scale, an increasing number of women are opting for clinical tests that will inform them for sure whether they have a chance of becoming mothers in the near or medium term, and questions regarding egg freezing are on the rise. However, not all of these experiences are positive.

The administrative procedures are straightforward and trouble-free, but the hassles begin when the therapy is administered, as it is a very invasive operation that can have a considerable impact on women.

María, a lady who decided to freeze her eggs when she was about to reach 40 years old, remarked in this article (Deseo vs negocio: el lado oscuro de los tratamientos de fertilización, 2021):

"After going through the procedure, I've come to know that it's still a harsh business. I received a Mother's Day card after my fertilization therapy failed, even though the embryo had not 'switched on' in my case."

(Maria, 2021)

She stated as a result of this encounter:

"I have a lot of criticisms regarding the system; the information they provide you with and the clauses are extremely abusive."

(Maria, 2021)

María noted that the process is arduous and that the accompanying information provided by certain clinics is insufficient due to the scarcity of information.

"To go through that circumstance, you must have a strong desire to have a kid; at first, they offer you a very lovely conversation, but you soon understand that they benefit from people's infertility. They neglect a lot of things; they don't

offer you enough information, and they don't think about your feelings or anxieties."

(María, 2021)

Despite these facts, an investigation conducted by an Argentine fertility clinic and a Spanish reproductive clinic (IVI from Buenos Aires and Barcelona) found that Argentina provides a better quality of life for infertility patients than European countries. This is because patients have better access to psychological consultations as well as comprehensive treatment coverage (Télam, 2019).

The goal of this study (Télam, 2019), which took place in 2017, was to assess the well-being of patients who had had Assisted Reproduction therapies. Therefore, in Argentina, the Government recommended emphasizing the training of the health team through telemedicine, of patients who are going to carry out reproductive medicine studies or procedures (Argentina, 2020).

As previously stated, Law 26.862 is another important aspect that influences people with infertility issues' perceptions of a decent quality of life in Argentina.

Such advantages granted in the country, lead to additional benefits that impact positively on the country. For instance, fertility centers offered touristic packages for IVF treatments during some time, whose cost was half than in other countries. Likewise, many Argentinian clinics use different marketing strategies to attract customers, as it was previously explained. Some of them are Procreate, Seremas, CyroBank, InVitro Buenos Aires and IVI Argentina that are good at persuading customers.

Overall, Argentina is an appealing destination for Assisted Reproduction treatment due to reduced costs, the quality of doctors, and a legal vacuum.

The depreciation of the Argentine peso in early 2002, in the middle of a serious social and economic crisis, prompted the country to take the first big step toward becoming a destination for therapies such as sterility and infertility treatments. Prices became an enticing consideration for potential patients from that point forward (Reproducción Asistida ORG, 2009).

According to experts, in vitro fertilization treatments, which are the most popular among foreign couples, cost between \$ 3,000 and \$ 4,000 in Argentina, which is half or even less than in industrialized nations, as already stated.

Furthermore, for couples from other countries, notably from Europe, the professionalism and good treatment provided by Argentine institutes is a plus.

The country's tourist attraction is also a factor to consider, and some institutions have leveraged it to mix medical care with sightseeing trips for couples who typically spend 10 days on IVF treatments (Clarín.com, 2021).

Patients come from all over the world, including Latin America, the United States, and Europe, particularly Spain. This is because couples opt to travel to advance their desire of becoming babies based on waiting times in Europe.

As a matter of fact, the COVID-19 pandemic had devastating economic implications around the world.

According to data provided by IVI Buenos Aires, a fertility clinic in Argentina, a noticeable result of this was a considerable increase in fertility preservation treatments: egg freezing in Argentina increased by 20% to 137%.

Meanwhile, according to the Halitus Medical Institute, consultations to preserve fertility by vitrification of eggs climbed by 60% during the pandemic, with procedures conducted increasing by 20% in comparison to 2019.

"The pandemic and the risks of getting Covid-19 have meant that many women and couples have postponed their search for pregnancy."

(Fernando Neuspiller, IVI's medical director, 2021)

IVI spokespeople emphasized that, with the exception of legal exclusions, these treatments are carried out in a specific method.

"The Health Insurance companies cover treatment in cases of medical necessity, such as oncology, but not preservation for social reasons."

(IVI spokespeople, 2021)

As a result, the egg vitrification therapy in several specialized institutions in Buenos Aires starts at around \$ 150,000 (Clarín.com, 2021).

Nevertheless, despite the approval of the law, some ART techniques are not covered by IOMA (Instituto Obra Médico Asistencial), forcing patients to pay \$ 100,000 or more just for that procedure, or to go to court to get coverage. (Constanza Be, 2021). Moreover, due to the outbreak of COVID, people had to adjust to current economic crisis, leaving them with less money to affront the costs of ART. (Infobae, 2020)

In addition, it is important to point out that not everyone is on favor of the fertility law passed, which is the case the Catholic Church since they claimed that the legislation is designed to favor fertilization clinics (Smink, 2013). Also, Father Rubén Revello, a bioethics expert at the Argentine Catholic University (UCA) that the law basically opened the opportunity for clinics to profit out of the human life.

Last but not least, regarding subrogation (which is not included under the Argentine Fertility Law), on November of the current year, a single man was the first one in the country to become a father through the method of surrogation, with the authorization of Judge Mónica Parello. (Ninci, 2021)

2.11 The future of the Assisted Reproduction industry

According to the World Bank Data it is a fact that women's fertility rates have fallen over time, particularly in affluent countries, and that many people today choose to postpone motherhood.

As a result, demand for Assisted Reproduction treatments has risen in recent years (World Bank Data, 2019).

The ongoing growth and enhancement of technology plays a significant role in defining the future of this business, as it reduces the likelihood of human error while increasing the success rate of treatments. This is precisely what draws investors to the industry: technology lowers cost and enhances the efficiency of the services offered to clients. For instance, the development of the Ava bracelet helps women to identify 5 out of 6 most fertile days per cycle. (AVA, 2021).

Furthermore, the sedentary lifestyle most people have nowadays, since almost everything can be done with Wi-Fi connection and a smartphone, may lead to infertility problems in the future, benefiting clinics as well as the tendency for people to first have a professional career and economic stability before having kids.

However, when more investments are made, the tensions between shareholders and health professionals will grow as their interests diverge:

“When you sell to a private equity firm, the decisions are being made jointly by the physician and your new business partner. Physicians are very used to being the sole owners of their practices and being able to make those decisions on their own. Physicians go into medicine to take care of patients and provide the best care that they can. I think [private equity] firms are looking at that as well, but they are also looking at the return on investment that they are getting from putting money into this.”

(Cantrell, 2019).

Therefore, in order for this industry to have a bright future it is extremely important that the values and the working culture of the professionals aligns with the values and working culture of the investors (Cantrell, 2019).

In addition, according to a market research report developed by Fortune Business Insights the predictions regarding the future of the industry of Assisted Reproduction are the following (Fortune Business Insights, 2021):

“Global Assisted Reproductive Technology market was valued at \$21.32 billion USD in 2018 and it is projected to reach \$45.96 billion USD in 2026.”

(Fortune Business Insights, 2021)

“Rising prevalence of infertility globally is the key driver to the global Assisted Reproductive Technology Market.”

(Fortune Business Insights, 2021)

Furthermore, according to the 10th Congress of the Asia Pacific Initiative on Reproduction (2021), Artificial Intelligence (AI) will play a big role in the ART industry by making improvements on the machines that play a vital role in fertility treatments.

Considering everything discussed above, the business of Assisted Reproduction certainly has a future, owing to rising levels of infertility, delayed parenthood, increased investor interest in the field. Also, ART procedures allow couples and individuals to choose when they want to start a family, letting them plan the future they wish. Therefore, the “fertility clock” may no longer be an issue for people in the future due to the possibility to freeze their eggs and sperms when they are young as well as the possibility of hiring a surrogate mother.

2.12 How important are Quality Management Systems for fertility clinics?

The quality manager's position is critical in ensuring that a clinic's QMS is functional and effective, and clinics must provide training, skills, and support to ensure that this key duty is carried out (Human Fertilization and Embriology Authority, 2019).

The fertility industry must recognize the necessity of a properly implemented quality management system, as well as effective auditing and learning embedding. As a result, it is critical to improve in this area by focusing more on audit quality and learning, especially in terms of

resource allocation. When auditing, it is crucial to think about the scope and motivations for the primary areas of concentration so that targeted learning can emerge and drive clinics to keep improving (Fabiola C. Bento, 2016).

Such health institutions must adhere to legislative standards and instructions in order to ensure patient satisfaction. This enables patients to observe how well each clinic adheres to their requirements. As a result, the fertility industry appears to be operating at a high level in general.

According to a report provided by the Human Fertilization and Embryology Authority (The state of the fertility sector 2017 - 2018, 2018), a quality management system (QMS) is a set of processes and procedures that clinics are required to have in place to continuously monitor and improve practice, such as auditing, maintaining up-to-date procedure documents, ensuring medicines are recorded and administered correctly, and having equipment checked on a regular basis.

As the Human Fertilization and Embryology Authority stated, non-compliances are classified into several categories. On the one hand, a critical noncompliance is an area of practice that provides a significant risk of harm to a patient, donor, embryo, or child who may be born as a result of treatment services.

An area of practice, on the other hand, that poses an indirect risk in the previously listed categories is regarded substantial. Furthermore, if the person responsible (PR) fails to carry out his or her legal obligations, it will be a major non-compliance.

Clinics must comply with legal regulations and recommendations when it comes to procuring, recording, handling, using, and storing standard and restricted medications. They must also preserve reliable records that detail the medication that each patient is prescribed (Fabiola C. Bento, 2016).

As a result, clinics must utilize validated equipment, maintain and store it properly to reduce the risk of harm to patients and/or personnel, and have suitable processes in place in the event that something goes wrong.

Even more, clinics must have a documented and suitable protocol in place to verify that all eggs and sperm are properly procured, processed, and transported.

This subject encompasses a wide range of needs, including the suitability of the buildings and equipment, the leadership and staffing team's suitability, and the compatibility of clinical practices (such as reducing multiple births or the quality management system) (Fabiola C. Bento, 2016).

On the basis of these arguments, third-party agreements are essential for ensuring the quality of extra services provided by clinics, and they may include areas of practice that are critical to the safety of patients' sperm, eggs, and embryos (for instance, transport of eggs and sperm). As a result, clinics must have solid and up-to-date third-party agreements that reflect the most recent evidence to ensure that risks are minimized.

The finest third-party agreements, according to the previously cited report from the Human Fertilization and Embryology Authority, are compliant with the T111-T117 license condition requirement and other license condition requirements applicable to the service supplied. This ensures that the third party is aware of the service specifications and allows the clinic to successfully audit the service delivery against those specifications.

Resulting from all these complaints, clinics receive feedback on their performance in order to discover, report, and learn from faults in order to improve the sector. This keeps the focus on these areas so that progress can be tracked and collaboration with clinics may continue through stakeholder engagement, inspections, and assistance for sharing best practices.

The Human Fertilization and Embryology Authority reported that there were multiple examples to patients believing their clinic was deceiving them or acting unethically after conducting extensive research (The state of the fertility sector 2017 - 2018, 2018).

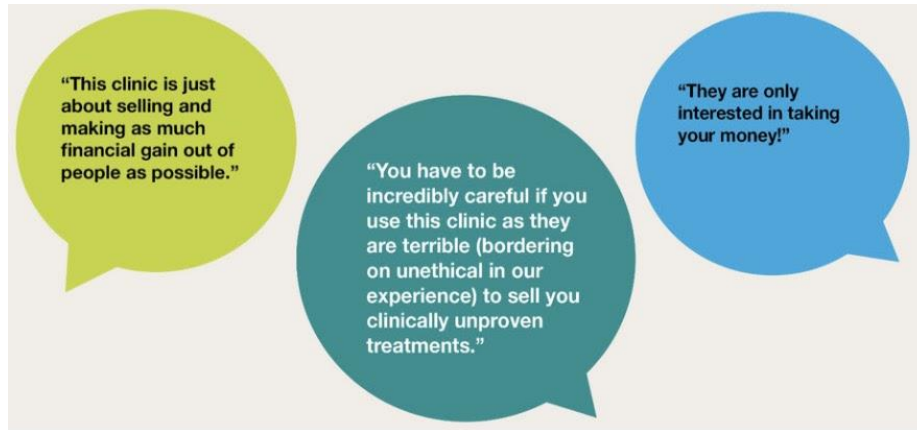


Figure 17. Opinions from fertility patients (Human Fertilization and Embriology Authority, 2019)

Patients can file a complaint with their clinic if they are unhappy with their treatment. Every clinic should have a complaints policy in place that is followed in these situations. If consumers have gone through the clinic's complaints process and are still unhappy, trust is broken, and the patient has a poor quality of experience.

Finally, for fertility clinics to commit to ensuring that patients receive ethical and honest information about their treatment options, feedback and Quality Management Standards are critical. Above all, the satisfaction of the patients is paramount.

2.13 Synthesis

The goal is to inform readers about the industry's key effects and repercussions (either positive or negative) of Assisted Reproduction Treatments, as well as to predict potential future implications by analyzing this current business in Argentina, The United Kingdom and Ukraine.

Taking everything into consideration, it can be almost assured that these Reproduction treatments will be consistent in time and will continue to evolve thanks to the constant development and technology, making it easier for companies to access social media marketing and everyday attract more potential customers and investors.

3 METHODOLOGY

The purpose of this chapter is to provide an overview of how the research was conducted, as well as the reasons behind each decision. It details the study's design, as well as the definitions of the unit of analysis and unit of observation. It also mentions the participants and how they were sampled. The devices utilized for data collection, as well as the techniques used to complete it, are outlined.

3.1 Methodological design

For this project it was decided to follow exploratory, descriptive, and non-experimental approaches.

First, in order to investigate the financial costs associated with the business of Assisted Reproduction as well as how companies make profits out of it, exploratory research was conducted.

In addition, for interviewing health professionals and people who had kids through these methods, descriptive research was carried out.

Since no experiments have been conducted, the information has been retrieved from primary analysis and secondary sources.

Having established the basis of the methodology, quantitative research has been obtained through a survey. Furthermore, qualitative information has been obtained through interviews in order to address the problematization regarding the ethics of Assisted Reproduction, among other subjects.

3.2 Unit of analysis and unit of observation

The purpose of this research is to analyze the considerable business of the Assisted Reproduction Industry. Therefore, as the unit of observation aims to be what we observe in order

to learn something about our unit of analysis, our target variables consulted were health professionals, people who had children through Assisted Reproductive Technology and Argentinian habitants who have no professional involvement to the subject in order to get different perspectives from people external to the reproductive industry's business.

The phenomenon under investigation was people's knowledge and attitudes concerning Assisted Reproduction as an actual business. This includes an emphasis on ethics and the reasons whether they would draw upon ART methods or not.

3.3 Sampling and participant selection

Considering the selected units of observation, the sampling included male, female, and any other identity from Argentina, UK or Ukraine. Moreover, the selection criterion was also comprehended by people from all generations. The importance of studying this segment was based on the collection of primary data in order to gather information about different opinions regarding this topic. Therefore, a survey was created and distributed through social media. Moreover, different interviews were conducted through different channels.

For the purpose of this Research, the focus was on people who drew upon Assisted Reproduction treatments, as well as on health professionals in this area. In order to get a better understanding about ART processes and formal agreements, two women who are in the journey of becoming surrogate mothers in Argentina were interviewed, plus one that has gone through this process twice in the UK.

In addition, a woman who had a daughter through these methods was also interviewed with the aim of gathering information about the business in general. Therefore, by interviewing people who lived the experience of becoming parents this way and two experts on the area, the unit of observation acts as a robust data source throughout the research, providing a deep and very useful understanding on Human Reproduction.

3.4 Variables mapping

In order to conduct the needed survey, the following variables, concepts and questions were selected:

Concept	Source	Measurement	Purpose
Gender	Closed question	Male	The identity variable serves the purpose of analyzing tendencies and opinions according to gender and identity, in order to see if importance on a certain topic is a matter of gender or not.
		Female	
		Other	
		Prefer not to say	
Age	Closed question	Less than 18 years old	The age serves the purpose of differentiating their knowledge and opinions about ART, as well as their willingness to apply them, according to their ages
		18 – 25	
		25 – 35	
		35 – 50	
		More than 50 years old	
Origin	Open question	Focused on Argentina	This variable is relevant to make a comparison with other countries and to analyze whether they would make the ART treatment here or abroad
Level of education reached	Closed question	Primary school complete/incomplete	This variable serves the purpose of identifying their knowledge and opinions about applying an ART treatment according to their social level
		Secondary school complete/incomplete	
		Tertiary education complete/incomplete	
Definition of Assisted Reproduction	Closed question	Yes	This variable is crucial to see how many people are aware of it
		No	

Which are the types of Assisted Reproduction treatments that you know?	Closed question	In Vitro Fertilization	This variable is relevant to know how many of these treatments are known
		Artificial Insemination	
		Surrogacy	
		All of them	
		None of them	
Do you know someone that has drew upon these methods to have kids?	Closed question	Yes	This question helps us to analyze how many people has applied ART approximately
		No	
For what reason(s) do you think people draw upon Assisted Reproduction Methods?	Closed question	Infertility	This question serves the purpose of analyzing the different reasons why people would become a client of this industry
		Same sex couples	
		Single mother or father	
		Advanced age	
		I do not know	
		Other(s)	
Do you find these practices ethical?	Closed question	Yes	This variable is important to analyze the percentage of people that see ART as ethical
		No	
		Maybe	
If you had to draw upon an ART treatment, would you do it at a Public or private hospital in Argentina?	Closed question	Private	This question helps us to identify which type of clinic is considered as better in Argentina, according to people's opinions
		Public	
		I do not know	
Knowing that the approximate cost of these methods is between 3,500 to 15,000 dollars in private clinics in Argentina, would you do the treatment?	Closed question	Yes	This question serves the purpose of analyzing the willingness to draw upon ART knowing the costs of the treatments
		No	
		I do not know	
		Yes	

Do you find it fair to pay such amount in order to fulfil the dream of having a baby?	Closed question	No	This question helps us to have an idea of people's opinions towards paying an ART treatment
		I do not know	
"If necessary, it is appropriate to use medical assistance to conceive"	Closed question	I totally agree	This statement is important to analyze the degree of agreement towards using ART
		I agree	
		Neither agree nor disagree	
		I disagree	
		I totally disagree	
"The lifestyle of a person influences the decision to employ assisted reproduction"	Closed question	I totally agree	This statement is to analyze whether lifestyle is a threat to clinics or not
		I agree	
		Neither agree nor disagree	
		I disagree	
		I totally disagree	
"The context in which we live today favors that people delay the moment of being parents"	Closed question	I totally agree	This statement serves the purpose of understanding if this is an opportunity or a threat to the ART business
		I agree	
		Neither agree nor disagree	
		I disagree	
		I totally disagree	
"Companies aim to obtain money at the expense of people's desperation to have a baby"	Closed question	I totally agree	This statement is vital to either validate or not our hypothesis
		I agree	
		Neither agree nor disagree	
		I disagree	
		I totally disagree	
Do you think that the State / Health Insurance should finance Assisted Reproduction treatments?	Closed question	Yes, the State should help but only to people who cannot finance it	This question is to analyze people's opinion towards the financing of ART
		Yes, to everyone	

		No, the State should not incur such expenses	
		Health Insurance must cover these treatments completely	
		Health Insurance should NOT cover these treatments completely	

Table 2: Variables Mapping (Author’s own elaboration)

3.5 Instrument of inquiry and gathering data

Primary and secondary data were used as a mean to collect the necessary information for this research.

On the one side, primary data was collected from a survey and interviews. Quantitative data was gathered through a web-based electronic survey that was created using Google Forms. It included closed questions in the form of multiple choice. Consequently, it was easier for the authors to get a deeper understanding on what people think about the business of Assisted Reproduction.

Google Forms was chosen as the survey's development tool. This is because it is simple to use and has no cost. Furthermore, it enables us to collect enormous amounts of data in a structured manner for the analytical process.

The survey was shared on social media platforms such as Instagram and Facebook. Moreover, it was also shared to all our contacts through WhatsApp. The assessment was created in Spanish since all our contacts were Spanish speakers.

On the other side, the qualitative data was gathered thorough different interviews following a series of open questions.

All the interviews were written in a Microsoft Word document. It was then forwarded to the people that had been questioned to respond in writing, through voice recording, or via email.

Three of them were conducted through WhatsApp so that the interviewees could send voice notes and express themselves freely. However, they were free to choose the way in which they would respond.

The three interviews left were conducted through Facebook, which offers the option of sending instant messages through Messenger.

The interviewees were given entire freedom in terms of answering questions and deciding whether to reveal their identities or not.

Secondary data, on the other hand, was used to gain a better knowledge and overview of the subject at hand. It was obtained through papers, articles, and reports because it was the type of information that we would not have been able to get from primary sources.

3.6 Processing method

For the data collection, the following procedure was used.

People were asked to fill out a survey through Google forms with pre-determined alternatives. The results were shown using the platform's statistics and graphics provided by the platform itself, while interviews were done in a similar manner in order to compare the responses.

Once all the data was acquired and collected, it was filtered and evaluated in order to connect it to the information retrieved from the interviews and survey, all while keeping in mind the research objectives, questions, and hypotheses.

The questionnaire utilized was specifically developed to be useful in terms of answering it and comparing responses across respondents from various backgrounds.

3.6.1 Surveys

This section This section depicts the questions that were asked in the surveys through Google Forms.

Final Research Project

The objective of the following survey is to gather data about the Industry of Assisted Reproduction in Argentina. This present survey will be useful for the development of the Final Research Project for the Bachelor in Global Business Management at UADE.

The survey will not take more than 5 minutes to be completed and it is anonymous. The results obtained will not be shared with third parties or used for commercial purposes. Furthermore, the survey does not contain topics that may be offensive to the respondent.

Thank you for your collaboration!

Figure 18. Presentation of the survey made in Google Forms

Please select your gender

- Female
- Male
- Other

Please, select your age

- Less than 18 years old
- Between 18 and 25 years old
- Between 25 and 35 years old
- Between 35 and 50 years old
- More than 50 years old

Figure 19. First 2 questions of the survey done in Google Forms

Province of residence in Argentina

Tu respuesta

Which is your reached level of education?

- Primary education incompleted
- Primary education completed
- Secondary education incompleted
- Secondary education completed
- Superior education incompleted
- Superior education completed

Figure 20. Questions 3 and 4 of the survey in Google Forms

Do you know what assisted reproduction is?

- Yes
 - No
-

Which of the following assisted reproduction methods do you know?

- In vitro fertilization
- Artificial insemination
- Subrogation
- All of them
- None of them

Figure 21. Questions 5 and 6 of the survey done in Google Forms

Do you know anyone who had kids through these methods?

- Yes
 - No
-

Which motive/motives do you believe makes people draw upon these methods ?

- Infertility
- Same sex couple
- Single mother/father
- Adavanced age
- I don't know
- Otro: _____

Figure 22. Questions 7 and 8 of the survey done in Google Forms

Do you think it is ethical to draw upon these practices to have children?

- Yes
- No
- Maybe

If you had to do a treatment to achieve a pregnancy, would you prefer to do it at a private clinic or at public hospital in Argentina?

- Private Clinic
- Public Hospital
- I don't know

Figure 23. Questions 9 and 10 of the survey done in Google Forms

Knowing that the estimated costs for these treatments are between \$3.500 USD and \$15.000 USD at private clinics in Argentina. Would you draw upon them?

- Yes
- No
- I don't know

Do you think it is fair to pay these prices for achieving the dream of having a child?

- Yes
- No
- I don't know

Figure 24. Questions 11 and 12 of the survey done in Google Forms

If you had to make use of these methods, would you do it in Argentina?

- Yes
- No, I would rather do it abroad
- I don't know

Figure 25. Question 13 done in the survey of Google Forms

How much do you agree with the following affirmations

	Totally agree	Agree	Neither agree or disagree	Don't agree	Totally disagree
In case of being necessary, it is appropriate to use medical assistance to achieve a pregnancy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The lifestyle of a person influences on the decision of drawing upon assisted reproduction methods	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The context in which we live nowadays favors people who delay the time of having kids	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The objective of companies is to obtain money with the desperation of people for having a baby	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Figure 26. Question 14 done in the survey of Google Forms

Do you think that the Government or private medical insurances should finance assisted reproduction treatments?

- Yes, the government should finance only the people who cannot afford it
- Yes, for everyone
- The government should not spend money on such matters
- Private medical insurances should cover these treatments
- Private medical insurances should not cover these treatments

Figure 27. Question 15 done in the survey of Google Forms

3.6.2 Interviews

This section displays the questions asked to the experts and to people who draw upon an Assisted Reproduction treatment.

It is worth mentioning that the interviews were conducted online due to the Covid-19 pandemic. All the people who were contacted agreed to be interviewed, either by sending an email, leaving a voice message, or making a phone call.

Questions for experts	
1. What is your profession? How long have you been exercising it? What branch of Assisted Reproduction do you perform?	6. Knowing that women receive a financial incentive either for surrogacy or for donating eggs, is it possible that clinics try to hide this fact in some way to preserve the reputation of the business?
2. What do you think of this industry? Does it seem ethical to you to do business with such a personal subject?	7. Do you think that clinics or companies aim to make money out of people's desperation to have a baby?
3. Why are these treatments so expensive? Is it related to the relationship between quality and price? (Meaning that patients associate an expensive treatment with one of higher quality or better professionals)	8. Do you think professionals see results as incomes or to help people fulfill the dream of having a child? (Other reasons that you consider are also valid)
4. In a survey we carried out in which the interviewees were asked to express their degree of agreement in the statement that "The context in which we live today favors people delaying the moment of being parents", 75 individuals have totally agreed with it. How do you think	9. Do you think that this business has a future? (For instance, with more investors)

we should interpret this answer? Do you think this fact can be an opportunity for clinics?	
5. According to the clinics, there is a high percentage of probability of success in the treatments. Are these estimations true? Or is it just a marketing strategy to attract more clients to their clinics?	10. Do you think Assisted Reproduction treatments will stop being so expensive at some point?

Table 3. Questions for experts (Author's own elaboration)

Questions for an ART patient	
1. Which treatment did you get?	6. Knowing that you might have to try more than once to get pregnant, did these attempts have an extra cost? Were they included in the indicated price?
2. Have you ever felt pressure from health professionals to perform a treatment? Did they advise you that getting a treatment was the only way to get pregnant?	7. Why did you decide to do the treatment in Argentina?
3. Before starting the treatment, were you informed about the success rate?	8. Could you give us an estimated cost of the treatment? Were you aware of the Law 26.862? Did your medical insurance cover it?
4. Which elements led you to choose a specific clinic?	9. What is your opinion about Assisted Reproduction? Do you think that clinics do it for the happiness of their patients?
5. Were you offered a way to finance the treatment? (For instance, a special promotion or	

a package with a certain number of treatments included).	
--	--

Table 4. Questions for ART patients (Author’s own elaboration)

Questions for intended surrogacy mothers	
1. Could you please tell us where you live and your age?	4. Through which means do you offer your services? (For instance, social media, email, websites, or others)
2. Why did you decide to offer your services as a surrogate mother?	5. Could you describe the process of reaching an arrangement with the people who desire your services? What costs should they cover?
3. Do you work for an Assisted Reproduction clinic or by yourself?	6. Do you consider that being a surrogate mother is a legitimate and dignifying job?

Table 5. Questions for intended surrogate mothers (Author’s own elaboration)

4 RESULTS

The results of the research procedure are presented in this chapter. First and foremost, the important highlights of the procedure were discussed. The investigation's, survey, and interview findings were then presented for additional study.

4.1 Major Highlights

The most interesting and surprising aspects discovered during the investigation carried out to gather primary data will be portrayed in this segment.

Firstly, the number of responses collected on the survey was fairly enough to be considered as a sample size, considering the authors distributed it through their social media accounts. Moreover, most of the respondents were women, while a small percentage were men. Since the survey was distributed mostly on Instagram, the majority of the answers came from people between the ages of 18 and 25 years old.

The next point to mention is that a large percentage of the respondents were aware of Assisted Reproduction and that the majority of them knew someone who had children using these procedures.

Furthermore, a reasonable amount of the respondents claimed that they would draw upon Assisted Reproduction methods, even though it costs around \$3.500 USD and \$15.000 USD in Argentina. Nevertheless, a huge part of the survey's participants answered that it is not fair to pay that price in order to conceive and many of them claimed that medical insurances should cover these treatments.

4.2 Survey results

The online survey was distributed among people from Argentina, receiving a total of 161 answers. Because the surveys and interviews were conducted in Spanish, the findings were translated into English so that they could be properly compared. This sample size was considered as the “n” for this research.

4.2.1 Overview of demographic data

Respondents were asked to answer with which gender they feel identified. Out of 161 people, 128 were women (80%) and 33 were men (20%). The other possible options were not selected by any of the individuals.

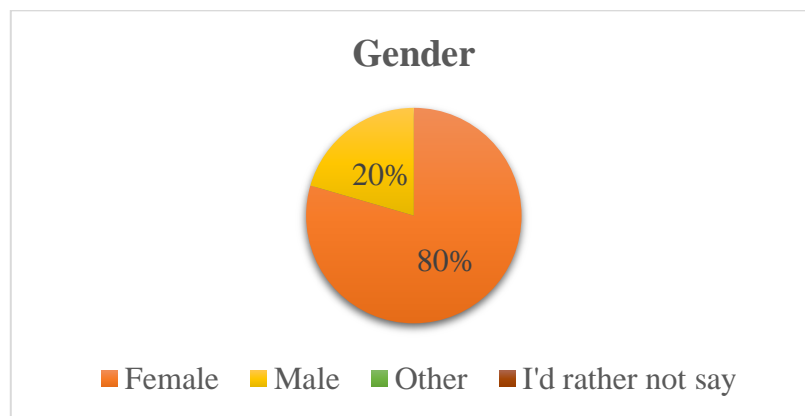


Figure 28. Demographic results (Author's own elaboration)

Regarding the province of residence, 95% of the them were from the province of Buenos Aires, while the other 5% were from the provinces of Neuquén and Rio Negro. Nevertheless, 6 participants did not answer this question.

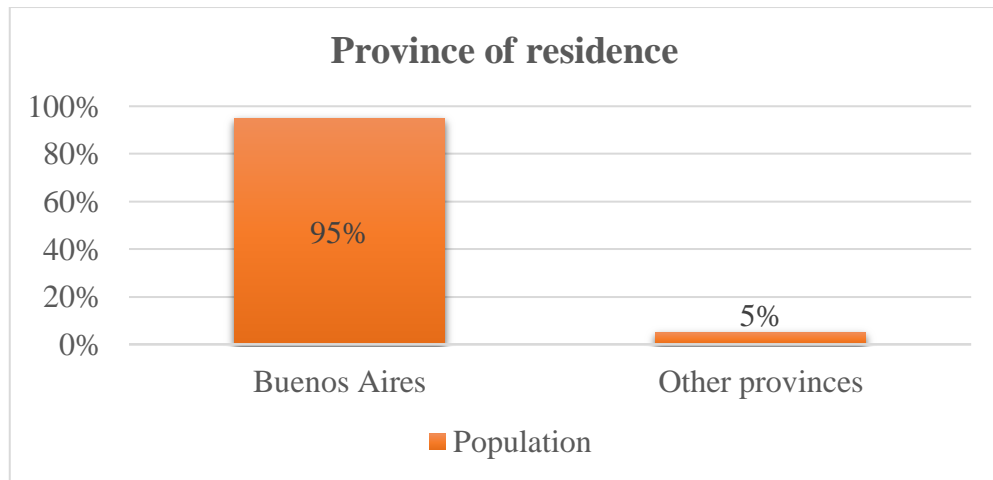


Figure 29. Demographic results (Author's own elaboration)

Furthermore, the respondents were grouped according to their age range, these ones being: less than 18 years old; 18-25 years old; 25-35 years old; 35 –50 years old; more than 50 years old. The prominent age range was the second group counting with 84 respondents (52.2%), followed by the fourth group which obtained 44 respondents (27.3%). Consecutively, the first group got 6 respondents (3.7%), the third group obtained 15 respondents (9.35) and the fifth group 12 respondents (7.5%).

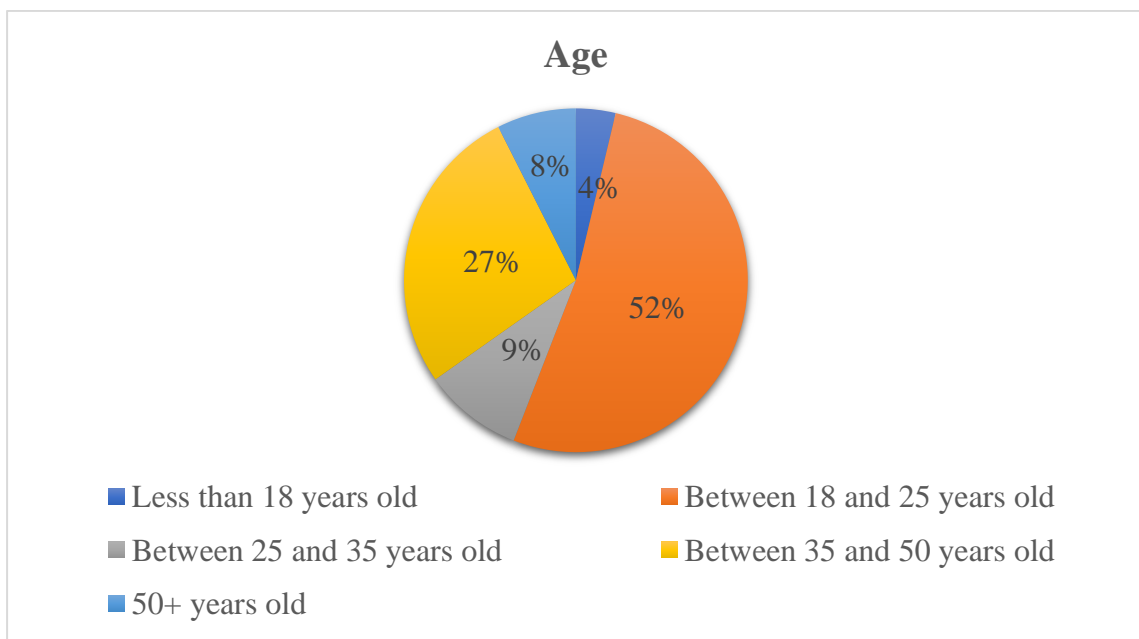


Figure 30. Demographic results (Author's own elaboration)

4.2.2 Level of education reached

The question was answered by 161 people. Most of them, 46%, were still at university, or had their degrees incomplete. This might have been because the survey was distributed mostly among friends and classmates. Following this statistic, 26.1% of the people had completed their superior studies. This could be explained by the responses of family members and other individuals, who received this survey as well. Furthermore, 19.9% of the population has already finished high school, compared to 6.8% who have not. Finally, only 1.2% had not completed primary school.

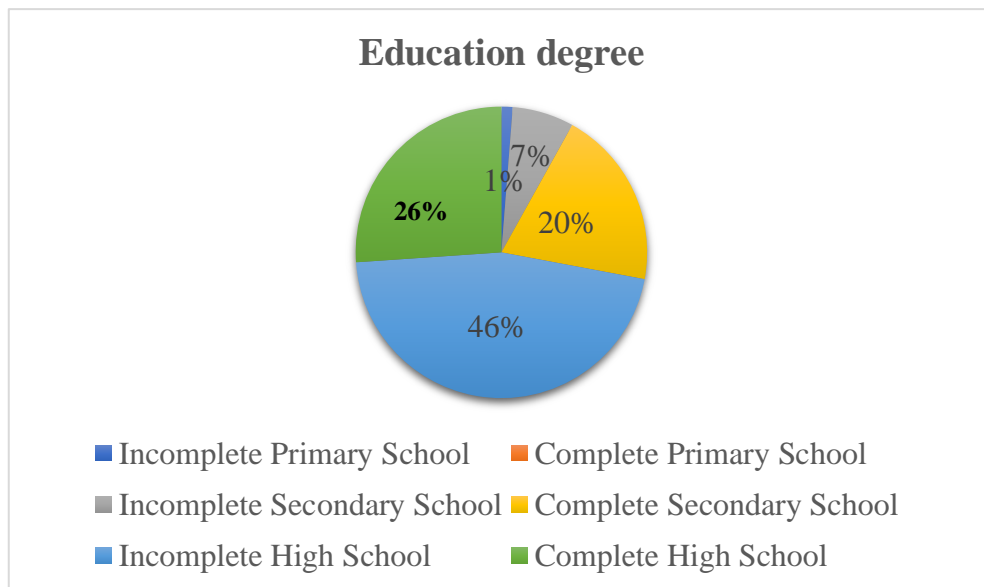


Figure 31. Level of education reached results (Author's own elaboration)

4.2.3 Knowledge of Assisted Reproduction meaning

Out of 100% of the sample, 88.8% answered “yes” when asked whether they knew the meaning of Assisted Reproduction or not. Only 11.2% of the people who answered did not know what this practice means. However, the survey provided a definition of it in order to offer a better understanding of the topic.

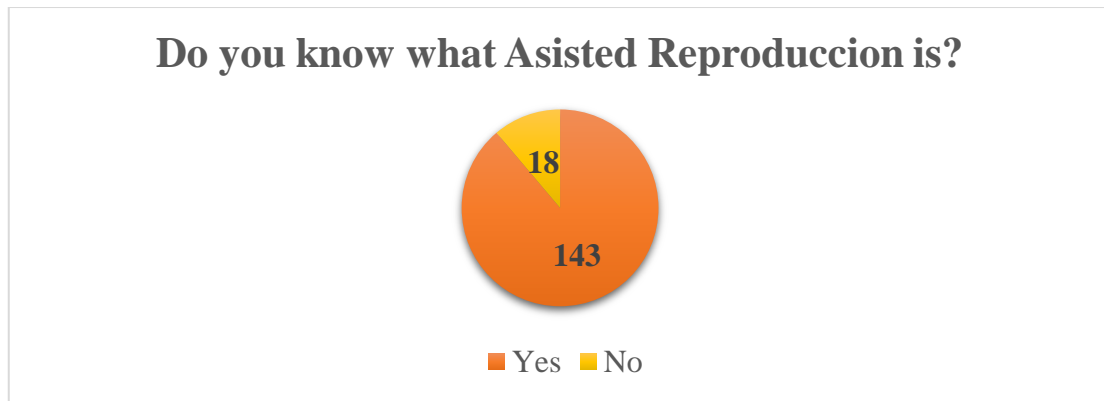


Figure 32. Knowledge of Assisted Reproduction results (Author's own elaboration)

4.2.4 Awareness of the different types of Assisted Reproduction treatments

This question included a series of options about different types of treatments, in which the interviewees could select as much options as they wanted.

Most of the people who answered the survey, 73.3%, affirmed knowing all the different treatments provided in the options. This is an equivalent of 118 people.

Artificial insemination aims to be the second in line as the most known for the people, representing a 30.4% of them. This percentage equals to 49 people.

In the third place, In vitro Fertilization was selected by a 25.5% of the population, which corresponds to 41 individuals.

In the fourth place, 19.3% out of 100% answered Surrogacy as one of the different types of treatments known. This result represents 31 people.

Finally, only 5 individuals (3.1%) affirm knowing none of the different options provided by the authors.

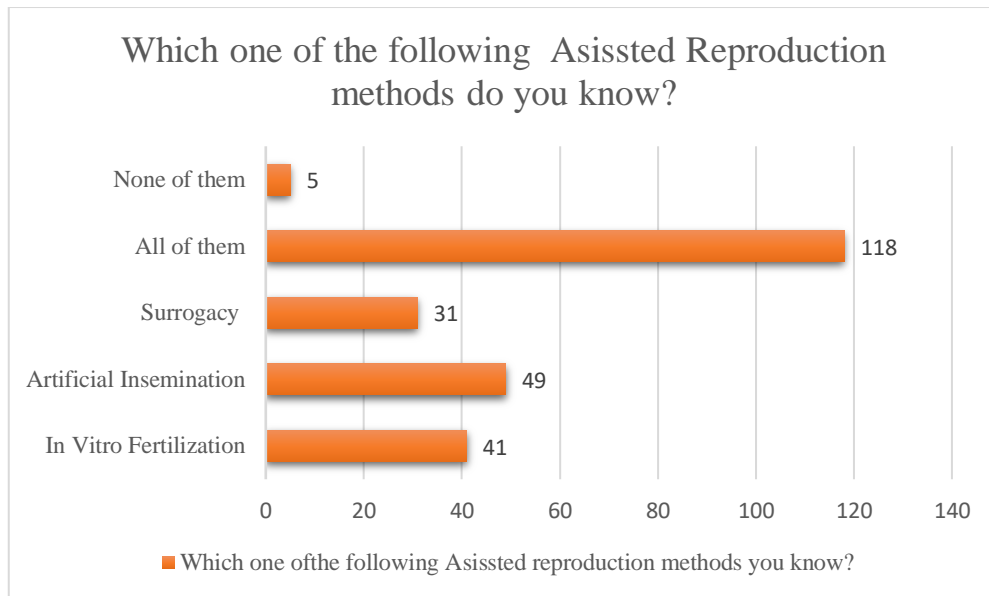


Figure 33. Awareness of ART methods' results (Author's own elaboration)

4.2.5 Acquaintanceship of people who have used these methods

Surprisingly, most of the responses, 62.7% were positive, meaning that most of the people who answered the survey knew someone who has applied these methods to have a baby. In contrast, 37.3% have not met anyone who had the necessity to go through one of these treatments yet.

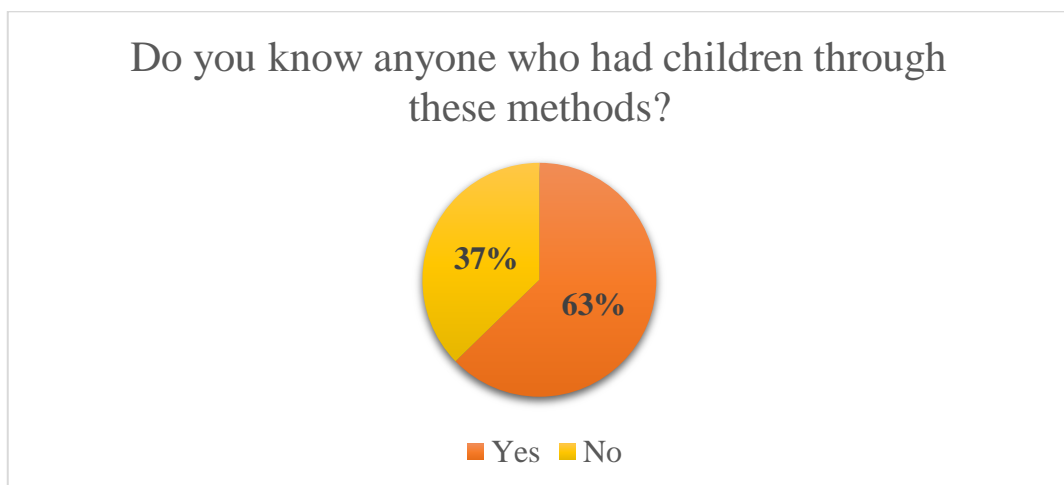


Figure 34. Acquaintanceship of people who have used ART methods' results (Author's own elaboration)

4.2.6 Possible reasons for the application of Assisted Reproduction treatments

People were asked which were the possible reasons they thought individuals would apply these medical methods. Therefore, they were provided with many options for which they could select as many as they preferred.

As expected, most of them selected Infertility as one of the possible reasons for the application of Assisted Reproduction treatments, being 95% out of 100%. This percentage represents 153 people out of 161.

With a 77% of the responses, 124 people chose same-gender couples as another of the possible reasons of drawing upon these treatments. Besides, the option of single mother or father got 62.1% of the responses, which equals to 100 individuals.

Then, 63 people (39.1%) chose “advanced age” as an answer for the question previously explained.

Notably, only 3 persons (1.9%) declared not knowing why people would draw upon Assisted Reproduction methods.

Additionally, a person gave his/her opinion adding other possible reasons for this question. “Difficulties in the adoption” was one of them, as well as “incompatibilities” and “risks during the pregnancy because of endometriosis, thrombosis or inherited illnesses.”

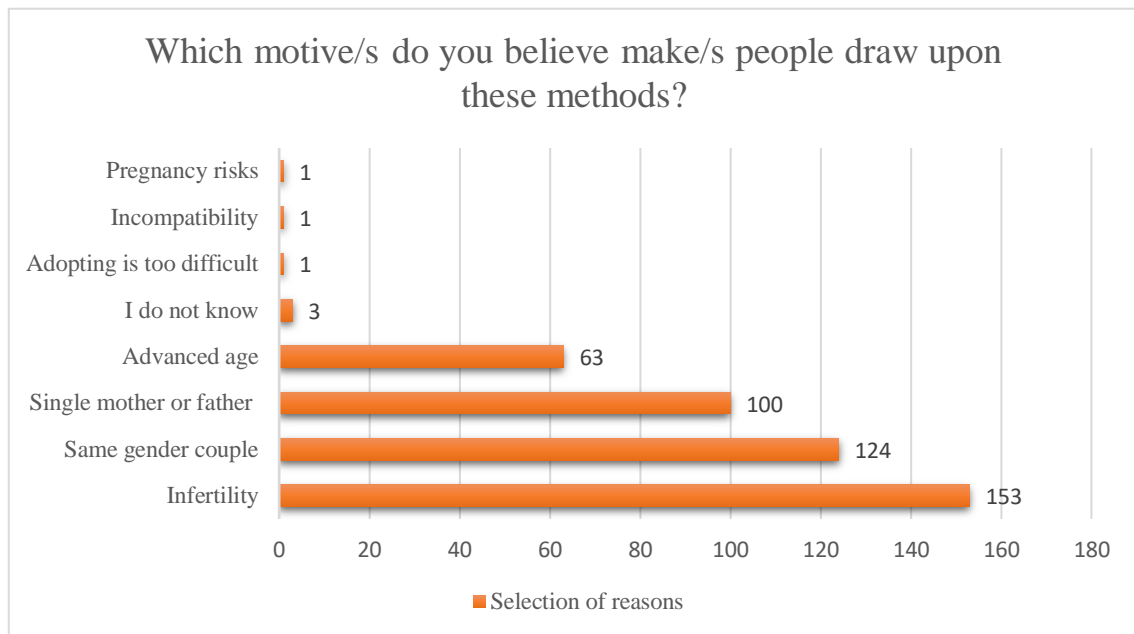


Figure 35. Possible reasons for the application of ART treatments' results (Author's own elaboration)

4.2.7 Opinions towards the ethics of accessing Assisted Reproduction treatments

Before analyzing the obtained responses, it is worth clarifying that it is considered misinterpreted. Authors assume that this is due to the formulation of the question, since it was carried out with the intention of knowing the opinion of people about whether they consider it ethical or not to profit from the desire of individuals to have a baby.

For this reason, the majority of 87.6% see appealing to Assisted Reproduction treatments as ethical. Despite this, a 10.6% of the people are still unsure whereas this topic is ethical or not, for which they chose “I do not know” as an answer. Further, 1,8% see these practices as unethical.

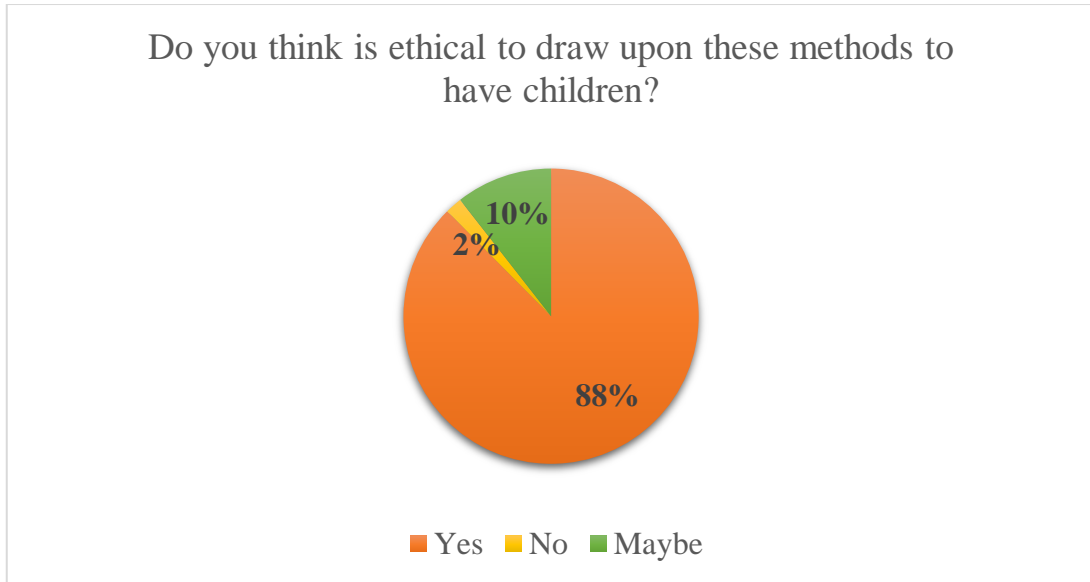


Figure 36. Opinions towards the ethics of ART treatments' results (Author's own elaboration)

4.2.8 Election of the type of clinic in Argentina

The interviewees were asked whether they would choose either a private or public clinic in Argentina, in case of appealing to Assisted Reproduction treatments.

The majority of 80.1% of the individuals would do them in a private clinic, whereas a 16.1% do not know yet. On the contrary, 3.8% of the people would assist to a public hospital.

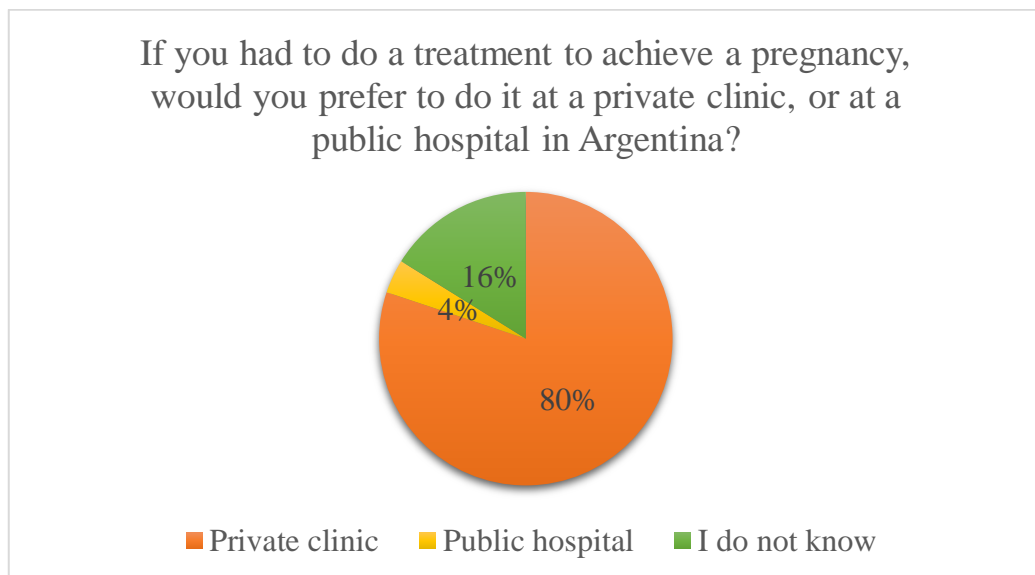


Figure 37. Election of the type of clinic in Argentina results (Author's own elaboration)

4.2.9 Decision of accessing to the treatments knowing an estimate cost

Interviewees were provided with an approximate cost of the treatments between 3,500 and 15.000 dollars. Knowing this, they were required to reply whether they would access to Assisted Reproduction treatments or not, if needed.

A percentage of 47.2% replied they would appeal to them anyway, whereas 40.4% of them do not know. On the other side, 12.4% would not make any treatment under these costs.

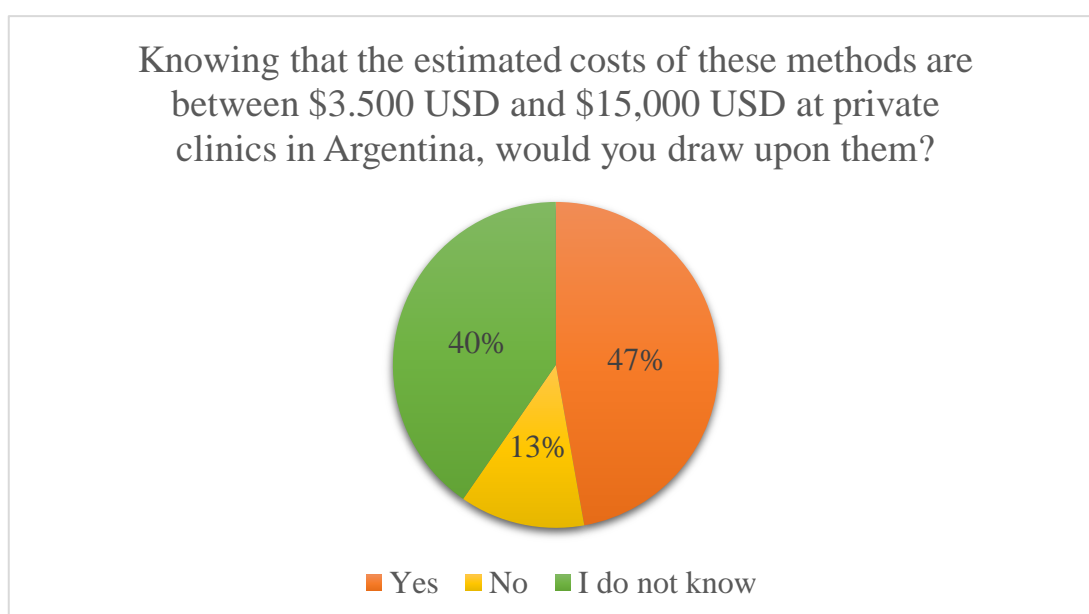


Figure 38. Decision of accessing ART treatments knowing estimated costs results (Author's own elaboration)

4.2.10 Making the treatment in Argentina

People were asked if, in case of having to make an Assisted Reproduction treatment, they would do it in Argentina or not. On the one hand, 47.8% of the interviewees would do the treatments in Argentina, whereas a 27.3% of them would not. On the other hand, 24.8% do not know whether they would do them in Argentina or abroad.

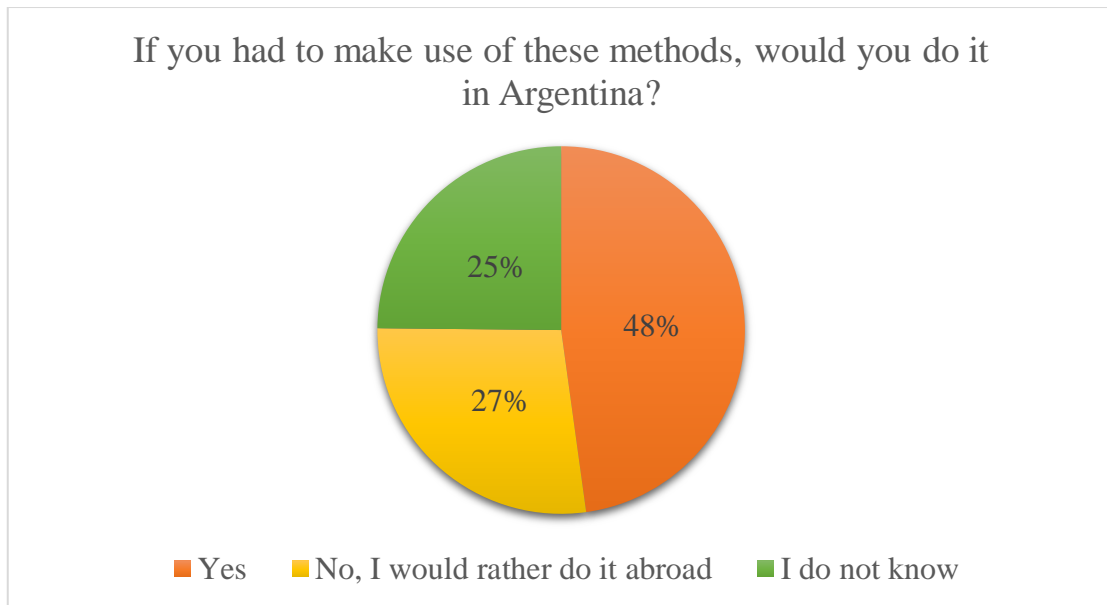


Figure 39. Making the treatment in Argentina results (Author's own elaboration)

4.2.11 Level of agreement with certain affirmations

Interviewees were asked to rate their level of agreement with several statements about Assisted Reproduction. People's reactions to them were helpful in addressing some of our study questions as well as confirming or refuting some of the theories we had previously stated.

Statement number 1: "If necessary, it is appropriate to use medical assistance to conceive".

For this affirmation, 107 people were totally agreed, being this the majority. On the contrast, only 3 individuals totally disagree.

Statement number 2: "The lifestyle of a person influences the decision to employ assisted reproduction".

Continuing, 52 individuals said to totally agree, whereas only 4 voted for the opposite option.

Statement number 3: "The context in which we live today favors that people delay the moment of being parents".

75 individuals have totally agreed with this affirmation, whereas 5 have not.

Statement number 4: "Companies aim to obtain money at the expense of people's desperation to have a baby".

Being one of the most important statements, most of the participants (48) said to neither agreed nor disagreed. However, the most voted option following in line was "I agree", with 44 votes. On the contrary, 8 people have totally disagreed.

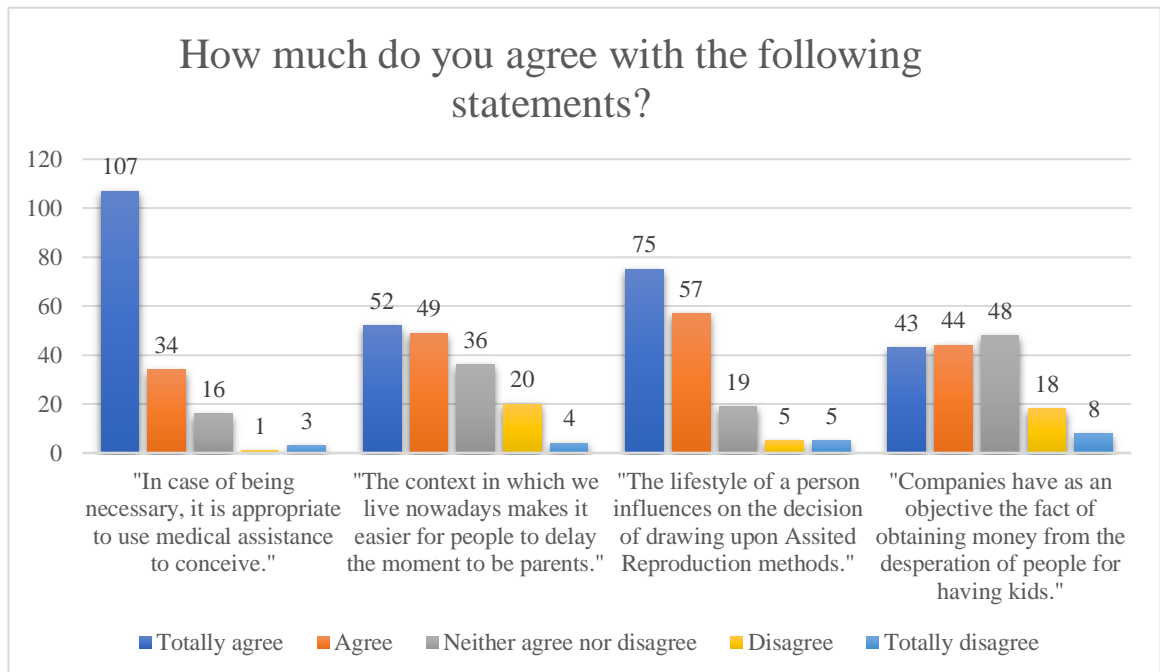


Figure 40. Level of agreement with statements results (Author's own elaboration)

4.2.12 Opinions towards the financing of Assisted Reproduction treatments

Participants were asked whether Health Insurances or the State should cover treatments' costs or not.

The majority of 45% strongly believe that private insurance companies should cover Assisted Reproduction treatments completely. Additionally, 19.3% think that the Government should cover these treatments for everyone.

On the contrast, 17.4% answered that the State should not incur in such expenses, whereas 13% believe that the State should provide help, but only to people who cannot finance it.

Finally, only 6% of the individuals think that Health Insurance should not cover these treatments.

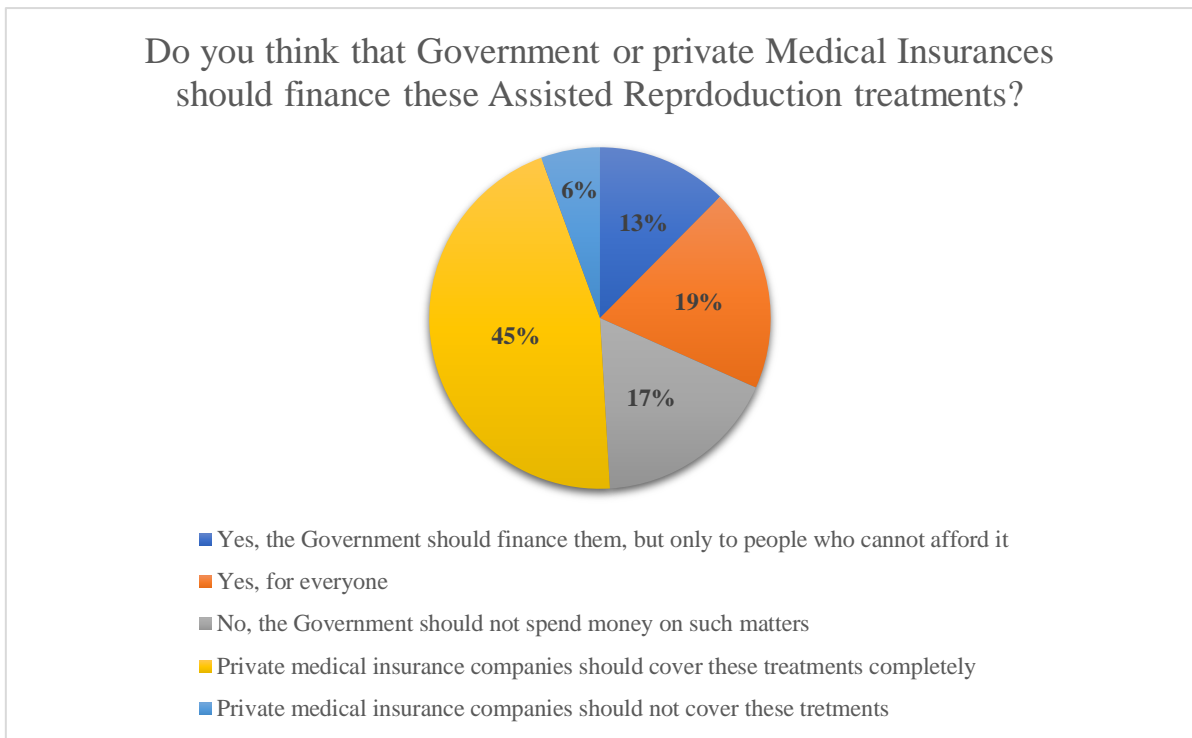


Figure 41. Opinions towards the financing of ART treatments results (Author’s own elaboration)

4.2.13 Male vs Female

The following section aims to exhibit the differences in behavior among those individuals who identify themselves with the female and male gender. The total amount of them accounts for 161, which was regarded as the total amount or participants for this section.

In order to get a sense of how people feel about Assisted Reproduction as a business, respondents were asked how much they agreed with the following statement: “Companies have as an objective obtaining money from the desperation of people for having kids.”

Therefore, only the affirmative responses were analyzed, in order to filter the answers. The comparison between both genders showed that women are more likely to agree with this affirmation, with 55% (72) of them stating “I agree” or “I totally agree”. On the contrary, 45% of

men (15), agreed with the same statement, being a lower percentage in comparison with female answers.

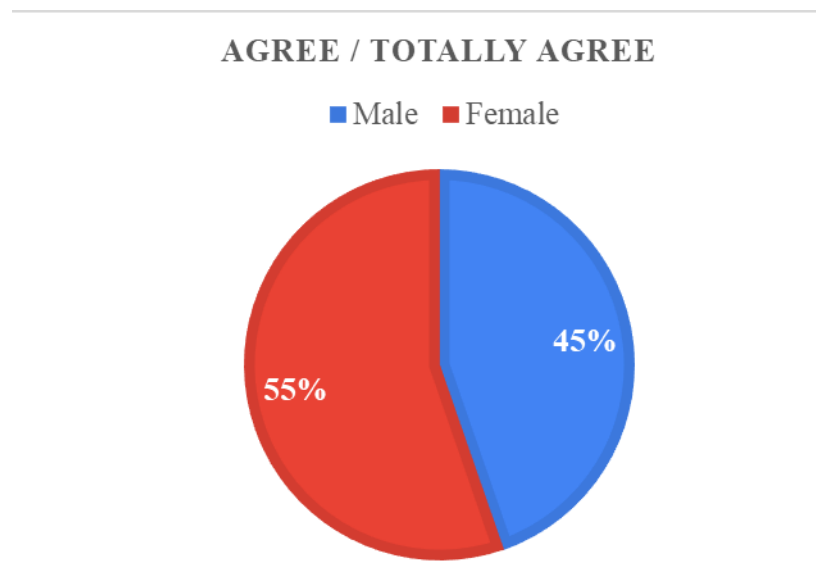


Figure 42. "Companies have as an objective obtaining money from the desperation of people for having kids" (Author's own elaboration)

When analyzing this topic from an ethical standpoint, it is crucial to remember what has already been said. Even though people voiced their opinions, it is believed that the subject was misunderstood because it was not made clear that this question refers to the fact of profiting from Assisted Reproduction.

According to the findings, despite the fact that there were only three of them, some women do not believe that using these procedures is ethical, even though the percentage is not representative enough. Men, on the other hand, are more likely to deem these tactics ethical, with 28 out of 33 voting "Yes" and none voting for "No," in contrast to some women who did vote for that alternative. The remaining respondents chose "Maybe."

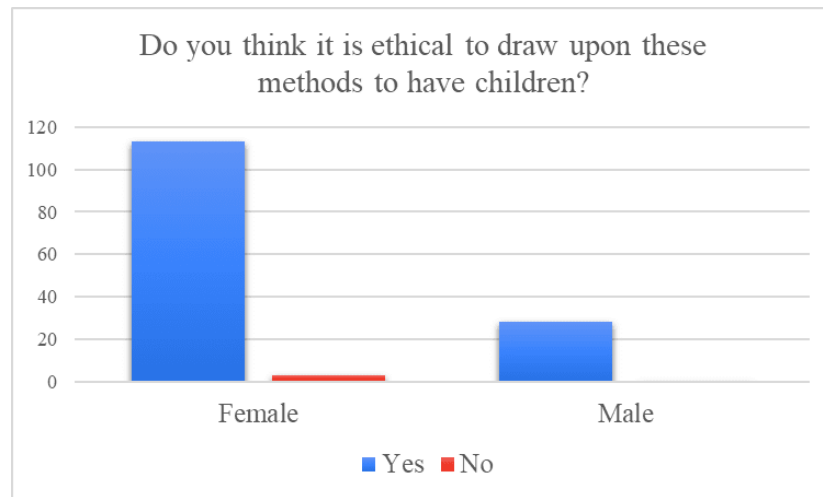


Figure 43. Do you think it is ethical to draw upon these methods to have children?
(Author's own elaboration)

Finally, it was thought that it would be interesting to look at whether ART treatments should be covered by the state or the government depending on gender. As a result, when asked about this in the survey, respondents were given many answers. To get a direct response, the alternatives "No, the government should not spend money on such matters" and "Private medical insurance companies should not cover these treatments" were chosen. Despite the fact that the majority of people agreed that ART treatments should be covered, as previously stated, some people considered that such approaches should be paid for by individuals.

According to the findings, men were more inclined than women to believe that ART treatments should not be paid by any institution, with 11 out of 33 voting against external funding. On the other hand, 26 women out of 128 voted against as well.

However, when expressed as a percentage, 33,33% of men agree that ART treatments should not be covered, compared to 20,31% of women.

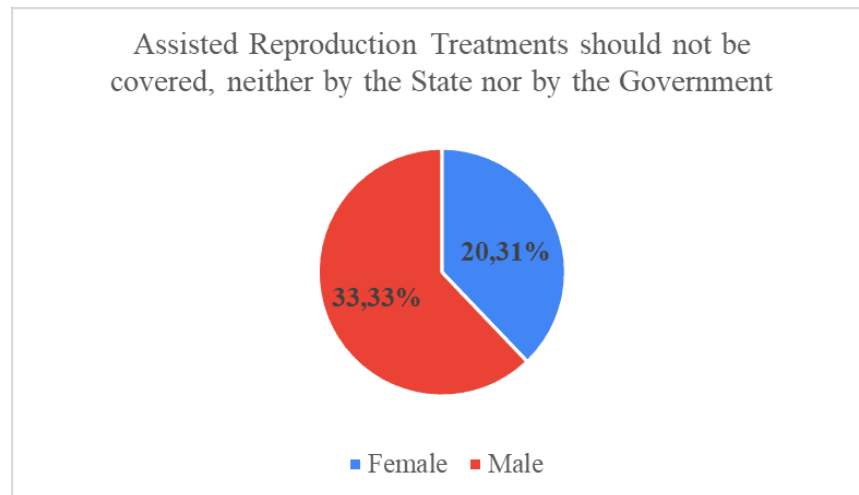


Figure 44. ART treatments should not be covered neither by the State nor by the Government (Author's own elaboration)

4.3 Interview results

The following section of the chapter was separated into two sections. On the one hand, interviews with people who have had Assisted Reproduction treatments and, on the other hand, interviews with professionals. The findings were presented in different ways in order to better illustrate the qualitative insights gained. The interviewees' informal language was retained, and everything was translated from Spanish to English for the purpose of this research.

4.3.1 Interviews with Assisted Reproduction patients

As it was previously explained, this section displays the different interviews that were done to people who have had an experience with Assisted Reproduction. Those who have spoken more freely and given more opinions on the matter were highlighted in “Black” (on top of the columns were their names were detailed).

4.3.1.1 Interview with Monica Zaccara

In this case, a woman who had a daughter through in-vitro fertilization was interviewed. The aim of this interview was to collect information regarding the costs of the treatment, which promotions and means of financing she was offered by the clinic and how, as well as whether her medical insurance was involved in covering some of the costs of the treatments or not.

<i>Questions</i>	Monica Zaccara
1. Which treatment did you get?	"The treatment I got is called "ICSI" (Intra Cytoplasmic Sperm Injection). Basically, it is when the sperm penetrates de egg, but it was not an in vitro fertilization. It was done through a micro needle (injection). When the cells start to reproduce, they are passed to the uterus and, if it is successful, the pregnancy begins."
2. Have you ever felt pressure from health professionals to perform a treatment? Did they advise you that getting a treatment was the only way to get pregnant?	"Yes, I was offered a treatment that I knew it was harmful for me. It was also very expensive. What is more, I wanted to get tested for thrombophilia, but in order to do it, it was a requirement for me to first prove I had miscarriages. I found it awful."
3. Before starting the treatment, were you informed about the success rate?	"No, professionals did not give me information about the success rates. It was a matter of trying and seeing if the treatment was successful or not."
4. Which elements led you to choose a specific clinic?	"When you first enter to the clinic I assisted, you see many pictures of babies. In fact, they show you all the ones that were born on that clinic. This gave me more illusions. I was

	<p>even told to take pictures of my daughter to the clinic once she was born, so that they could expose them. At that time, social media was not very present. Everything you had, were the website and brochures, which, if you looked at them, you would realize that they were all about hope. You knew that your dream would come true."</p>
<p>5. Were you offered a way to finance the treatment? (For instance, a special promotion or a package with a certain number of treatments included).</p>	<p>"Yes, I was offered a way to finance the treatment. However, we decided to pay everything in cash. Moreover, they were very insistent on me performing an Ovo donation, which costed more money. But I knew I did not need it, so I did not do it."</p>
<p>6. Knowing that you might have to try more than once to get pregnant, did these attempts have an extra cost? Were they included in the indicated price?</p>	<p>"I did not get pregnant at the first opportunity. As I told you before, I was offered an additional hormone injection treatment that I knew I did not need, because it damaged my uterus. In addition, each procedure had a cost of \$1000 (pesos), which at that time was very expensive, since I had to perform it around 13 times. Faced with this situation, my doctor offered me a "2x1" treatment package, which included different types of procedures. But when I got to the clinic, the treasurer (a woman) told me that if I had to undergo through another treatment, I would have to pay an additional cost. She asked me for evidence from the doctor (a prescription) that he gave me to avoid that payment. Such prescription allowed me not to pay it twice, but I know that with my case the doctor</p>

	<p>made an exception. In fact, my sister also visited the clinic, and she was not offered the same."</p>
<p>7. Why did you decide to do the treatment in Argentina?</p>	<p>"At that time, doing it abroad was not so trendy. Everything I needed to get pregnant was here in Argentina. I knew I could succeed in that with "ICSI", since I suffered from endometriosis."</p>
<p>8. Could you give us an estimated cost of the treatment? Were you aware of the Law 26.862? Did your medical insurance cover it?</p>	<p>"When I did the treatment, my Health Insurance did not cover anything, and the Law did not exist yet. I do not remember exactly, but I paid around \$30.000 (pesos). At that moment it was quite expensive. Nowadays, I do not know how much it costs."</p>
<p>9. What is your opinion about Assisted Reproduction? Do you think that clinics do it for the happiness of their patients?</p>	<p>"I strongly believe this is a business. But I realized it when I analyzed my situation in a different way, with a "cool head". When you are looking for a child, you do not see it like that, your mind is set on becoming a mother. The first time I tried a process to get pregnant, I did not like the way I was treated. Besides, the treatment was unsuccessful. It was then when I decided to look for another clinic, the one where I ended up getting pregnant. But it is true that clinics make profits out of your hope and desire to have a baby. I remember that the first question I was asked when I first arrived at the clinic, was how much I earned at my job. The only thing they cared about was whether I could pay the treatment or not. Once they knew I could pay it, they started with the medical questions. It is a very big emotional burden."</p>

Table 6. Interviewee Mónica Zaccarúa (Author’s own elaboration)

4.3.1.2 Interview to intended surrogate mothers

It is important to clarify that these two women decided not to disclose their identity and remain anonymous. Nowadays, they are trying to reach agreements with other people in order to carry the pregnancy on their behalf. For both, it will be their first time as surrogate mothers. Both women were given the same questions.

It is worth mentioning, that neither of them decided to answer to the question of “What things do you take into account at the moment of establishing your desired economical reward?”.

The first interviewed woman decided to answer in a more general way, not per question.

<i>Questions</i>	First intended surrogate mother
1. Could you please tell us where you live and your age?	"I am 25 years old."
2. Why did you decide to offer your services as a surrogate mother?	"I decided to offer my services as surrogate mother because I always wanted to help other people to start a family but, most importantly, I need the money."
3. Do you work for an Assisted Reproduction clinic or by yourself?	"I do not work for a clinic in Argentina, I do it by myself."
4. Through which means do you offer your services? (For instance, social media, email, websites, or others)	"I promote my services through Facebook groups."

<p>5. Could you describe the process of reaching an arrangement with the people who desire your services? What costs should they cover?</p>	<p>"For now, I have not reached an agreement with other people but so far, I got two offers. The first ones offered me \$1.000.000 pesos and \$25.000 pesos per month. The second ones offered me \$800.000 pesos and \$25.000 pesos per month. However, I am more interested in receiving the economical reward in American dollars due to the economy of the country."</p>
<p>6. Do you consider that being a surrogate mother is a legitimate and dignifying job?</p>	<p>"I believe that is great that women offer themselves as surrogate mothers since they help other people to achieve the dream of having kids."</p>

Table 7. First anonymous interviewee (Author's own elaboration)

<i>Questions</i>	Second intended surrogate mother
<p>1. Could you please tell us where you live and your age?</p>	<p>"I am 32 years old, and I live in the province of Buenos Aires."</p>
<p>2. Why did you decide to offer your services as a surrogate mother?</p>	<p>"I decided to offer my services as a surrogate mother because I want to help more people to start a family. I am also very interested in the economical reward I can get."</p>
<p>3. Do you work for an Assisted Reproduction clinic or by yourself?</p>	<p>"I offer my services by myself, so I am not working for any clinic at the moment."</p>
<p>4. Through which means do you offer your services? (For</p>	<p>"I offer my services through different social media."</p>

instance, social media, email, websites, or others)	
5. Could you describe the process of reaching an arrangement with the people who desire your services? What costs should they cover?	“To reach an agreement it is important to know first what each part expects and wants to get in return. Both sides must be committed to comply with the agreement. The intended parents oversee covering all my medical expenses during the nine months of my pregnancy, plus the economical reward I expect to get in return of my service.”
6. Do you consider that being a surrogate mother is a legitimate and dignifying job?	“I do not consider subrogation as an actual job since I already have a stable one. However, I think there is a growing demand for surrogate mothers, therefore, it should be more regulated to avoid scams and exploitation.”

Table 8. Second anonymous interviewee (Author’s own elaboration)

<i>Questions</i>	Kayleigh James, surrogate mother
1. Could you please tell us where you live and your age?	"I live in Wiltshire; UK and I am 35 years old."
2. Why did you decide to offer your services as a surrogate mother?	"I wanted to help a couple become a family and have what I have myself."
3. Do you work for an Assisted Reproduction clinic or by yourself?	"No, I don't work with anyone anymore. I did once work with an organization, but I left them. So far, I have worked twice for the same couple "
4. Through which means do you offer your services? (For	"Social media"

<p>instance, social media, email, websites, or others)</p>	
<p>5. Could you describe the process of reaching an arrangement with the people who desire your services? What costs should they cover?</p>	<p>“You have a GTK (get to know) with the person or couple you would like to help. You chat about everything and go through an agreement to make sure everyone is on the same page.”</p>
<p>6. Do you consider that being a surrogate mother is a legitimate and dignifying job?</p>	<p>“A surrogate in the UK IS NOT HIRED. You match as a team. In the UK a surrogate can only claim expenses, you cannot make a profit because it's against the law.”</p>
<p>7. What costs should the people that hire you carry the pregnancy on their behalf cover?</p>	<p>“There isn't such a thing. In the UK a surrogate works out her own expenses.”</p>
<p>8. What things do you take into at the moment of establishing your desired economical reward?</p>	<p>No answer was provided for this question.</p>
<p>9. Could you give us an approximate cost of the whole method of subrogation in your country?</p>	<p>“The cost is different for every couple, depending on what type of surrogacy you do. By doing Traditional surrogacy, you use the surrogates eggs whose cost can be anywhere between £6k to £25k. Gestational surrogacy, which involves IVF, can cost from £15k to £45k+, depending on how much IVF is needed.”</p>
<p>10. Do you consider that being a surrogate mother is a legitimate?</p>	<p>“NO, I do not, as you aren't allowed to do that in the UK.”</p>

Do you see it as an actual business/ economical transaction?	
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Table 9. Interviewee Kayleigh James (Author’s own elaboration)

4.3.2 Interviews with experts

For this section, a geneticist and a doctor specialized in gynecology were interviewed with the purpose of knowing their opinion about whether it is ethical to make profits out of Assisted Reproduction methods or not. Moreover, these interviews were useful to get more information about the marketing strategies that clinics use to advertise their services and attract possible clients to their business.

Likewise, professionals were also asked about the possible future of this industry in order to provide an answer for our research question. Finally, they were asked to interpret one of the results obtained in the survey that was distributed online.

The conducted research contributed to the hypotheses that were developed previously to the performance of the interviews. Moreover, as previously explained, it provided extra data to answer more accurately the research questions stated at the beginning of this project.

<i>Questions</i>	Jorge Santoianni
1. What is your profession? How long have you been exercising it? What branch of Assisted Reproduction do you perform?	"I am a Biochemist and I have worked in this profession for 44 years. I was dedicated to male infertility related to seminal infections."

<p>2. What do you think of this industry? Does it seem ethical to you to do business with such a personal subject?</p>	<p>"I find it awful to take advantage of the despair of couples who cannot conceive."</p>
<p>3. Why are these treatments so expensive? Is it related to the relationship between quality and price? (Meaning that patients associate an expensive treatment with one of higher quality or better professionals)</p>	<p>"I believe that many centers profit from this issue, it has nothing to do with the relationship between quality and price."</p>
<p>4. In a survey we carried out in which the interviewees were asked to express their degree of agreement in the statement that "The context in which we live today favors people delaying the moment of being parents", 75 individuals have totally agreed with it. How do you think we should interpret this answer? Do you think this fact can be an opportunity for clinics?</p>	<p>"Yes, totally. The delay in parenthood is an opportunity for clinics to make profits."</p>
<p>5. According to the clinics, there is a high percentage of probability of success in the treatments. Are these estimations true? Or is it just a marketing strategy to attract more clients to their clinics?</p>	<p>"It is only a Marketing strategy. You are told that the treatment failed, and you must pay again for another try. It always fails the first time."</p>
<p>6. Knowing that women receive a financial incentive either for surrogacy or for donating eggs, is it possible that clinics try to hide this fact in some way to preserve the reputation of the business?</p>	<p>"Yes, totally."</p>

7. Do you think that clinics or companies aim to make money out of people's desperation to have a baby?	"Undoubtedly. Because it is a way of making profits by taking advantage of people's dreams."
8. Do you think professionals see results as incomes or to help people fulfil the dream of having a child? (Other reasons that you consider are also valid)	"I believe they see results only as a profit. It is more because of the income they get, than for the people's happiness."
9. Do you think that this business has a future? (For instance, with more investors)	"Yes, because there will always be people desperate to conceive."
10. Do you think Assisted Reproduction treatments will stop being so expensive at some point?	"No, I do not think so, but I hope it will."

Table 10. Interview with Jorge Santoianni (Author's own elaboration)

<i>Questions</i>	Roxana Resnik
1. What is your profession? How long have you been exercising it? What branch of Assisted Reproduction do you perform?	"I am a gynecologist. I graduated as a doctor in 1993, and 4 years later as a gynecologist. In 1998 I took a course in Assisted Reproduction and since then I have dedicated myself to that."
2. What do you think of this industry? Does it seem ethical to you to do business with such a personal subject?	"Although there is a bit of business with the subject, it is carried out by Health Insurance companies, since they are the ones who cover it. Doctors who work for them, get paid very little and sometimes nothing. What is more, I have even gone from having a negative balance and

	<p>having to pay for the treatment of a patient.</p> <p>Some Health Insurance companies are called "modulated", which are those that impose the medication to be administered to the patient. If the person needs more medication, it comes out of the doctor's fees (which are low), and by subtracting the ampoules of the injectable medication (to stimulate ovulation), which is very expensive, in two or three ampoules the fees of the doctor are none. Therefore, if you prescribe 4 of them to the patient, you end up losing and having to pay out of your pocket.”</p>
<p>3. Why are these treatments so expensive? Is it related to the relationship between quality and price? (Meaning that patients associate an expensive treatment with one of higher quality or better professionals)</p>	<p>“Treatments are expensive because they require high complexity, such as an institution that has an embryology laboratory, numerous machines, means of cultivation, incubators, microscopes, and liquid nitrogen machines to freeze eggs, embryos and sperm. Also, constant monitoring is required, since the treatments are not simple. The patient must be controlled because women can have complications, and the aspiration of eggs is performed in the operating room, which also has its cost. It is not necessarily an expensive treatment, but if it is done by a good professional, it will give better results. Now that</p>

	<p>Health Insurance companies have gotten in the way, the treatments are of poorer quality, and that is why I stopped working with them. This is because for you to have a good income, you have to provide the patient with the worst quality medications so that they are not subtracted from your fees, since everything you prescribe to the patient comes from there. As most of the Health Insurance companies do not want to pay for medicines, some of them make a “combo”. For instance, (with easy numbers):</p> <p>You are paid as a doctor \$10 pesos for the treatment. If the patient gives you \$ 8 for the drugs, the doctor keeps \$2; and if the patient pays \$12 for the drug, the doctor owes \$2. It is an aberration. In addition, I commit myself and get involved a lot with the cases and with the patients, wherewith to work so as not to gain anything and deal with the monitoring, ultrasound, anguish, and with the problems of the patients, the truth is that it does not justify doing it for such a low income. Unless you are a professional who does not care if the patient becomes pregnant or not."</p>
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<p>4. In a survey we carried out in which the interviewees were asked to express their degree of agreement in the statement that "The context in which we live today favors people delaying the moment of being parents", 75 individuals have totally agreed with it. How do you think we should interpret this answer? Do you think this fact can be an opportunity for clinics?</p>	<p>"It is true that the world has changed and now women study or have their profession. They postpone their motherhood for different reasons, be it social, that they do not have a partner or because they want to make other plans first. When they want to become mothers, their eggs are already old. Therefore, they are less fertile, have a lower ovarian reserve and lower quality eggs. For this reason, if a woman has decided that she is going to be a mother after her 40 years old, she must freeze eggs as soon as possible."</p>
<p>5. According to the clinics, there is a high percentage of probability of success in the treatments. Are these estimations true? Or is it just a marketing strategy to attract more clients to their clinics?</p>	<p>No answer was provided for this question.</p>
<p>6. Knowing that women receive a financial incentive either for surrogacy or for donating eggs, is it possible that clinics try to hide this fact in some way to preserve the reputation of the business?</p>	<p>"I don't know what the financial incentive to surrogate is like, because surrogation in Argentina has recently begun. Such treatments were made in other countries. Similarly, women who can have children on their own, do not want to surrogate. In general, women want to get pregnant, but those who donate eggs are paid very little."</p>

<p>7. Do you think that clinics or companies aim to make money out of people's desperation to have a baby?</p>	<p>“It does not seem to me that clinics want to become millionaires at the expense of a patient's fertility. But it is true that there is a lot of commerce with it, and there are people who work in a way that is not ethical, where the only thing that matters to them is money. However, there are also people like me, where we do tariff treatment for patients who cannot afford it. In addition, I was "ex-sterile", meaning that my son is the result of a fertility treatment. Therefore, I know what it feels like to be an assisted reproductive patient and not having the money to pay for the treatment. I did it in 1998, and at that time the treatments were not covered by Health Insurance companies. It was very expensive, and, in fact, my grandmother paid for it. "</p>
<p>8. Do you think professionals see results as incomes or as a way to help people fulfil the dream of having a child? (Other reasons that you consider are also valid)</p>	<p>“On the one hand, medicine is a profession, and you need to earn money to cover your needs. But on the other hand, in my opinion, a treatment that is not successful is a huge frustration, while one that is, gives me a lot of happiness and eternal joy. Unfortunately, not everyone thinks like me."</p>

<p>9. Do you think that this business has a future? (For instance, with more investors)</p>	<p>"Yes, I think it is a business that has a future, since there are more and more fertility problems either because people postpone motherhood increasingly, or for different reasons. In addition, the new generation does not want to have children, neither now, nor ever."</p>
<p>10. Do you think Assisted Reproduction treatments will stop being so expensive at some point?</p>	<p>"A few years ago, this was much more expensive than now, because as equipment is amortized, purchased and techniques are optimized, costs go down. Competition also lowers costs, but by getting involved, Health Insurance companies transform everything into a real mess, since they are the ones that establish which studies can be requested, what treatments can be done, how long to wait between one and the other, among other reasons. Such companies get into things that they do not know and that do not correspond to them. "</p>

Table 11. Interview with Roxana Resnik (Author's own elaboration)

5 ANALYSIS AND DISCUSSIONS

The aim of this chapter is to interpret and analyze the primary and secondary data gathered throughout the research, in order to explain the accomplishment of objectives. Moreover, key findings, study questions, and hypotheses were all covered in this section.

5.1 Key findings

According to the survey results, Assisted Reproduction is well-known among the general public, with the majority of respondents being women who claimed to be familiar with all of the therapies offered by the authors.

As a result, at least in Argentina, ART is rather common. This is due to the fact that when asked about their familiarity with people who have employed such approaches, 63% of the responses were positive.

The fact that the majority of the respondents were between the ages of 18 and 25 was even more surprising. Even if they had an estimate of the expense of the therapies, it was discovered that this group of persons would seek ART treatment if necessary. Because the authors expected older adults to respond in this way, it may be argued that age has no bearing on the decision and desire to use these treatments.

It was remarkable to learn that in Argentina, the majority of them would use these techniques. However, the participants were not given the information they needed to compare the many options and treatments available in different nations. Even if they are aware that Assisted Reproduction is used all over the world, they may be unaware of the differences in industrialized countries such as the United Kingdom.

Despite the fact that treatment costs were not mentioned in order to persuade participants' responses, but rather to uniform them in order to receive accurate ones, the majority said they would

access ART treatments, despite the fact that many of the interviewees were still in university or had not completed their studies yet. As a result, it appears that a person's socioeconomic status has no bearing on whether or not these treatments are used.

Surprisingly, there was a dissensus between those who thought these actions were ethical and those who thought it was fair to pay high rates for them.

Regarding the ethics of such treatments, the majority of the responses were positive. On the contrary, the majority of respondents thought it was unjust to pay such large sums of money for them, even though they stated that they would pay the authors' price if necessary.

There is a significant dissensus in the responses, with the majority of individuals believing that the government should not spend money on treatment coverage. Participants, on the other hand, thought it was unfair to pay expensive rates for therapies, even though they were also opposed to obtaining financial assistance from the government.

Authors believe that the disagreement over whether or not the therapies are ethical could be due to a misunderstanding of the topic, given that it was not specified that "ethics" relates to how ethical it is to profit from these health conditions.

Private clinics, as expected, have a superior image in the minds of patients, as 80% of them said they would prefer to receive their treatment in a private clinic rather than a public hospital.

Another interesting finding is that the majority of respondents feel that the current environment has a significant impact on the delay in starting a family. Similarly, it is widely acknowledged that lifestyle has an impact on such significant decisions.

In response to one of the most essential questions or statements, the majority has not developed an opinion regarding perceiving ART as a business, in which firms profit from people's desperate desire to have children, even though the disparities between replies were not significant.

There was a disagreement between the two professionals that were questioned for the interviews. Even though they were all asked the same questions, their responses were vastly different.

Both were asked if they believed clinics profited from the use of Assisted Reproductive Technology. On the one hand, Jorge Santoianni (2021) argued that exploiting couples who are unable to conceive is unethical.

Roxana Resnik (2021), on the other hand, responded that the business side is handled by medical insurance companies because they are the ones who pay for the treatments, and doctors are just employees that execute ART tasks on their behalf.

As a result, it is apparent that professionals have differing viewpoints when it comes to recognizing this field as a business. In this scenario, Jorge Santoianni has retired from the reproductive sector, although Roxana Resnik continues to work in this field.

In addition, the intended surrogate mothers from Argentina shown a consensus on the fact that they consider surrogacy neither as a job, nor as a business. Furthermore, there was agreement on the response given as to why they opted to provide their services as surrogate mothers, which was to assist others in starting families. Both were, however, highly interested in the monetary compensation they would receive.

It appears that the industry is considered a business by those who are not directly involved in Assisted Reproduction, but not by those who are still involved.

5.2 Answering research's questions

The aim of this section is to answer the Research Questions that were used as the basis and foundation for the Research Project. In order to answer these, data collected through surveys and interviews was used.

5.2.1 Question 1: Which is the business model that companies providing the service of Assisted Reproduction use and who are the stakeholders involved?

Taking into account the definition of business model provided by (KOPP, 2020) on the Literature review, the authors began the development of the following Canvas, utilizing the information gathered on Chapter 2 as well.

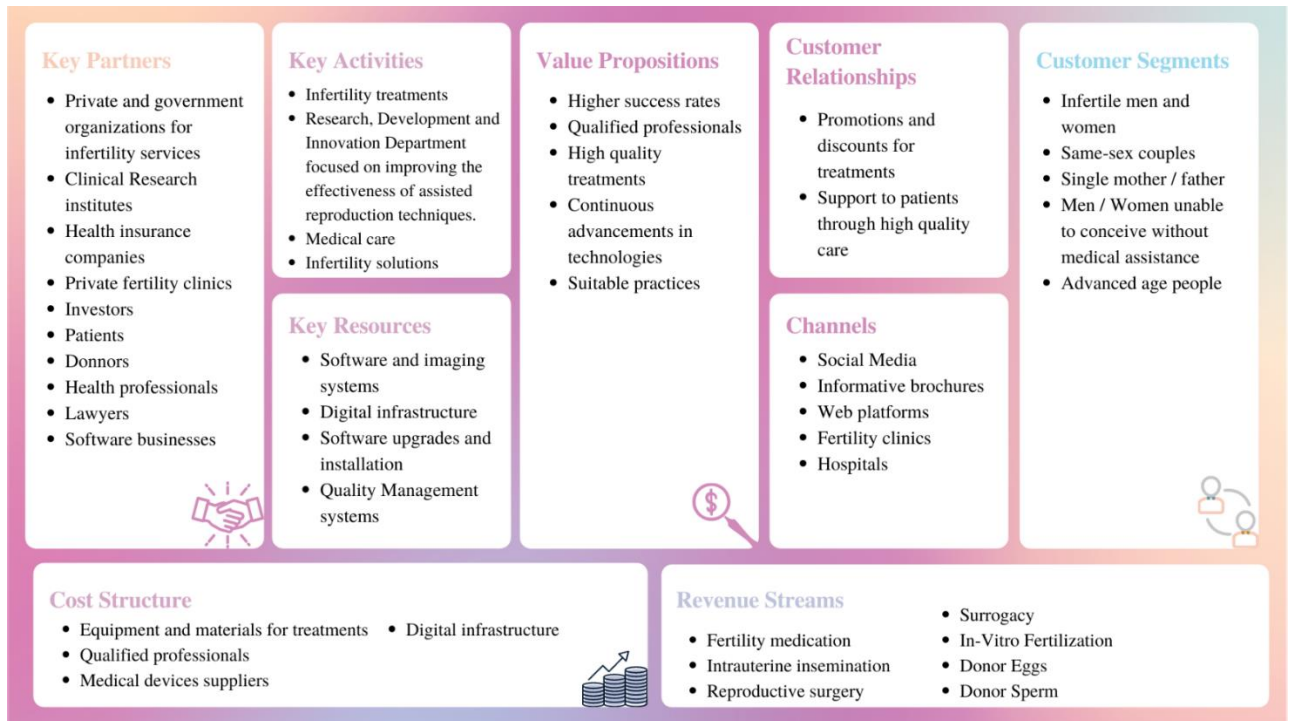


Figure 45. Canvas Model (Author's own elaboration)

In this case, according to the research conducted by the authors, the commerce of the Assisted Reproduction Industry, once considered niche and boutique, seems to be more significant than expected. Having revolutionized the Health Business, ART treatments' purpose for existing is to provide people who cannot conceive by themselves with the best practices in order to achieve their goals of becoming parents. Therefore, the first thing to be clear about, is what this industry's value proposition is.

As expressed by one of the interviewees (Mónica Zaccarúa, 2021), every time patients visit infertility clinics, all they see are pictures of babies with the promise of making their dream come

true. This is tied to their high success rates in their treatments which may be not always established, though, depending on the clinic.

Moreover, infertility clinics count with licenses in order to assess high quality standards of the service, as well as compliance with law and guidance statements (Fabiola C. Bento, 2016).

Equally important is the advancement of science and technology in Reproductive Medicine, which is also part of their value proposition. Consequently, clinics can improve their techniques in the area, which will eventually attract more patients (Author's own elaboration).

ART's customer segment is based on people struggling with infertility issues, either because they cannot conceive, or because they may need help from professionals to achieve their goal. What is more, same-gender couples, as well as single women or men who are still waiting for their partner to start a family or have decided to do it alone, are also part of the customer segment (Author's own elaboration).

Last but not least, advanced age people are also part of this segment, since the delay of maternity has been one of the main keys for the Assisted Reproduction business to explode. It is due to these personal traits that this business exists, being global (The Economist: The fertility business is booming, 2019).

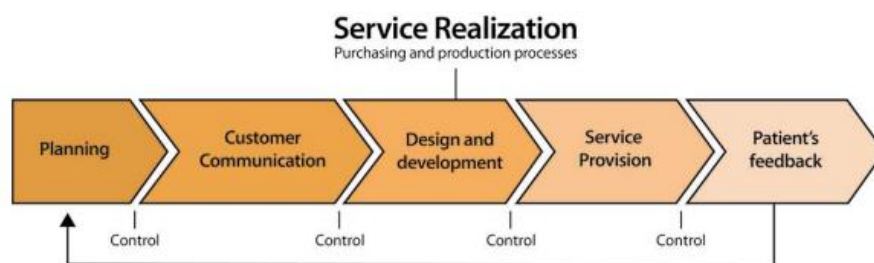


Figure 46. Flowchart of mapping procedure applied to the IVF treatment cycle (Fabiola C. Bento, 2016)

In order to reach its customer segment, according to the research it is reasonable to conclude that Assisted Reproduction's main channel are Fertility clinics and hospitals, as the industry's business model is based on Human Reproduction treatments. These places connect professionals

with patients through their websites and social media platforms, where people can contact experts in the area to start their treatments.

Furthermore, as it can be seen in clinics' websites, they also offer informative brochures where individuals can find all the information needed regarding the services offered, as well as their costs.

Regarding the Assisted Reproduction's key resources, technological systems such as software developments are fundamental for the clinic's day-to-day operations. IT enables the functioning of the website platforms for the marketplace, advertising services, but most importantly, they are vital for its key activities, such as their fertility treatments (The future of healthcare: Value creation through next-generation business models, 2021) .

These practices require an excellent software and maintenance for the usage of machines and equipment implemented throughout the treatments.

Another essential point to mention is their Quality Management Systems. It is described as a set of processes and procedures that clinics are required to follow in order to continually monitor and improve their practices (Fabiola C. Bento, 2016).

Such compliances include auditing practices, keeping procedure documents up to date, ensuring medicines are recorded and administered correctly, or that the equipment needed for treatments is checked regularly. Therefore, this key resource fertility clinics have, are critical to achieve a higher patient's satisfaction (Fabiola C. Bento, 2016).

A fertility center must be able to demonstrate that it meets high quality criteria. This implies the pregnancy rate, which is the most often used measure of quality in IVF, for instance. Moreover, the estimation and the monitoring of indicators makes it conceivable to document the quality of care, as well as empowering comparisons (benchmarking) over time and between places (different fertility centers) (Fabiola C. Bento, 2016).

In addition, QMS permits judgments and the setting of needs and supports patient choice of suppliers. Such factors should not be overlooked by reproductive care professionals, as they have

the potential to affect not only patients' decisions when looking for a fertility facility, but also their adherence to the treatment plan. For this reason, QMS represent a key resource for fertility clinics. Many reproductive clinics throughout the world have already adopted a QMS based on ISO 9001 standards (Fabiola C. Bento, 2016).

Quality dimension	Quality indicator	Type of indicator*
Safety	Number of fresh ART cycles with severe complications (OHSS, bleeding, infection, complaints of serious pain) resulting from the fertility treatment, which require hospitalization relative to the total number of ART cycles during a certain time period	Outcome indicator
	The number of fresh ART cycles with complications (OHSS, hemorrhage, infection) as a result of MAR relative to the total number of fresh ART cycles during a certain time period	Outcome indicator
	The number of MAR cycles in which gametes or embryos get lost as a result of an accident, human error or mistake relative to the total number of MAR cycles during a certain time period	Process indicator
	The number of reported mistakes or incidents caused by all care providers relative to the number of treatment cycles during a certain time period	Process indicator
Effectiveness	The number of treated patients who go home with a live born baby relative to the total number of treated patients during a certain time period	Outcome indicator
	The number of patients who after a maximum of three fresh ART cycles (oocyte aspiration actually performed) had a live birth (the expulsion or extraction of minimally one fetus showing evidence of life) relative to the total number of patients starting an ART cycle during a certain time period	Outcome indicator
	The number of live births (the complete expulsion or extraction of a product of fertilization that shows evidence of life) after a fresh ART cycle with embryo transfer relative to the total number of fresh ART cycles with embryo transfer during a certain time period	Outcome indicator
	The number of pregnancies in women younger than 36 years old as a result of a fresh ART cycle relative to the total amount of fresh ART cycles in women younger than 36 years old during a certain time period	Outcome indicator
Patient-centeredness	The number of patients of a fertility clinic to whom psychosocial counselling was offered relative to the total number of patients of that fertility clinic during a certain time period	Process indicator
	The regular organization of a multidisciplinary meeting of the fertility clinic in which the psychosocial context of the patient can be discussed if necessary during a certain time period	Structural indicator
	The provision of the offer to patients of psychosocial counselling at a certain moment in time	Structural indicator
	The number of patients who opinionated that their personal experiences and wishes were actually heard relative to the total number of interrogated patients during a certain time period	Process indicator
Efficiency	The number of patients undergoing a very thorough diagnostic phase and reaching a diagnosis prior to starting MAR relative to the total number of patients starting MAR during a certain time period	Process indicator
	The existence of a website of the fertility clinic containing all the basic information, contracts and information about studies and FAQs at a certain moment in time	Structural indicator
	The provision of the use of an electronic patient record containing all relevant clinical information and allowing the extraction of letters and reports at a certain moment in time	Structural indicator
	The total number of FTE care providers relative to the total number of treated patients per type of care provider during a certain time period	Structural indicator
Timeliness	The average duration of the waiting time per new patient between the asking and the getting of the first appointment during a certain time period	Process indicator
	The average duration of the waiting time during MAR per patient between having the need for and attending an urgent consultation in case of unexpected negative results (e.g. fertilization failure) during a certain time period	Process indicator
	The average duration of the waiting time per patient between the first appointment and the start of the first treatment cycle during a certain time period	Process indicator
	The average duration of the waiting time in the waiting room per patient between the agreed time to start a consultation and actual starting time of the consultation during a certain time period	Process indicator
Equity	The number of patients who opinionated that she/he is being respected by her/his physician relative to the total number of interrogated patients during a certain time period	Process indicator
	The provision of clearly described in- and exclusion criteria for MAR in the fertility clinic (among others taking into account the national legislation) at a certain moment in time	Structural indicator
	The provision of a clearly explained vision of the fertility clinic concerning ethical limitations (e.g. no surrogacy) of which at no time nor for no reason (e.g. power, money) can be deviated at a certain moment in time	Structural indicator
	The provision of protocols that are in accordance with international guidelines/ recommendations of care concerning equity and taking account of the universal needs at a certain moment in time	Structural indicator

Table 12. Quality dimensions and indicators set in infertility care (Fabiola C. Bento, 2016)

For instance, IVI which is a world-renowned reproductive medical group, has a specific section within its website that establishes the accordance with international standard ISO 9001. The main aspects of the website picture were underlined in red.

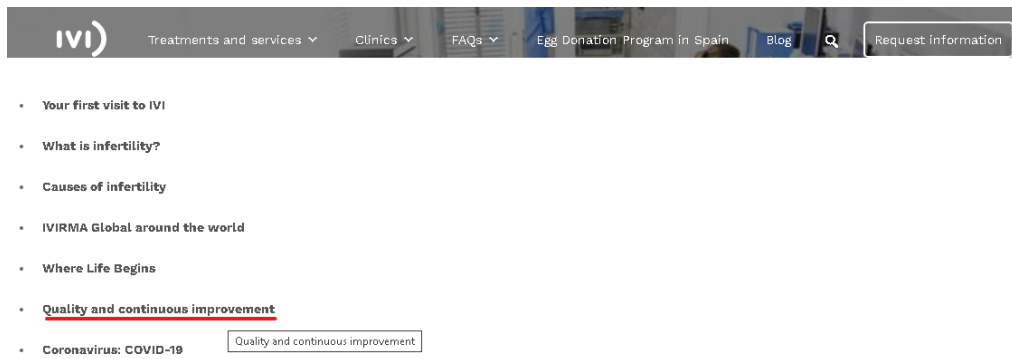


Figure 47. IVI website FAQs (IVI website)

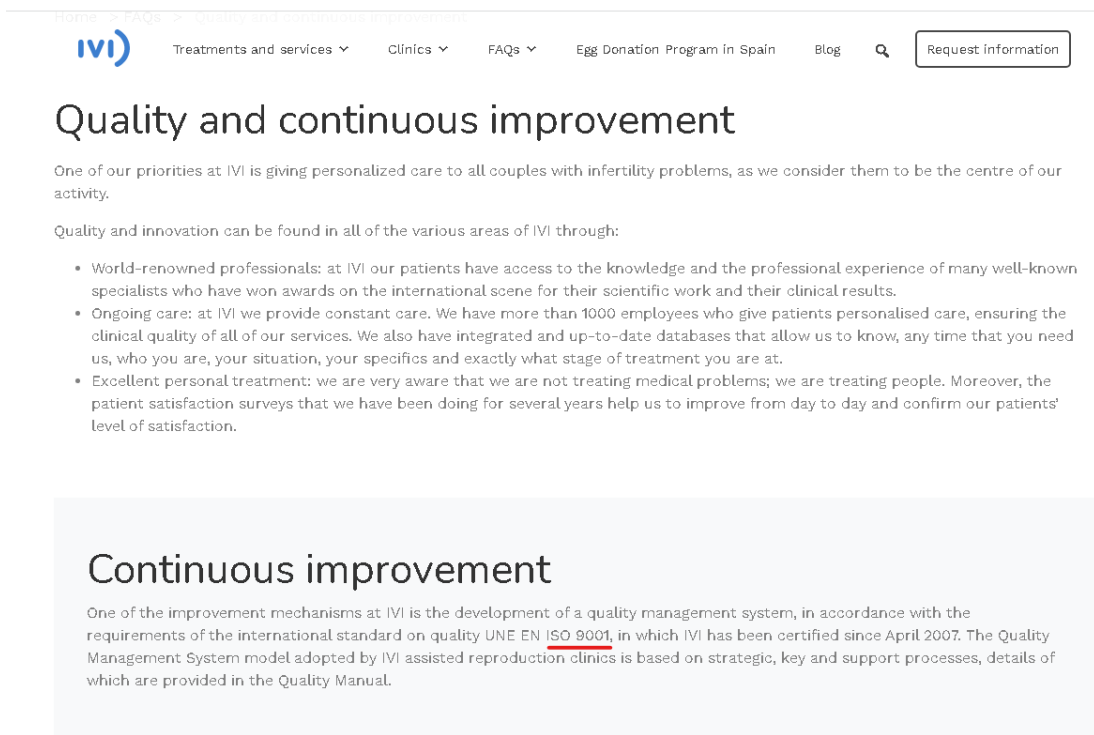


Figure 48. IVI ISO standards (IVI website)

When it comes to Assisted Reproduction’s key activities, several must be mentioned. It consists in delivering the best service as possible to their clients in the form of infertility treatments. In order to achieve this, fertility centers are constantly investing in Research and Development ensuring secure and effective medical practices for their patients. Innovation Departments have also an important role in this business, since they ensure supportive, fast and reliable responses and solutions to infertility issue through the incorporation of new technologies and medicines that

improve patients' satisfaction (The future of healthcare: Value creation through next-generation business models, 2021).

Additionally, since treatments could be a painful and emotional experience, medical care and support are vital for the image of fertility centers to be recommended. In fact, frequent reasons why patients would advise someone their clinic, include staff's traits such as professionalism, care, friendly, compassionate, involved in treatment decisions and with opportunities to ask them as many questions as possible (Hawkins, 2018).

What is more, a proper organization and communication within the different areas of the medical centers, are also highly evaluated by patients at the moment of analyzing the treatment received at it (Fabiola C. Bento, 2016).

As cited by Monica Zaccarúa, the woman who was interviewed due to her experience with Assisted Reproduction treatments:

“The first time I tried a process to get pregnant, I did not like the way I was treated. Besides, the treatment was unsuccessful. It was then when I decided to look for another clinic, the one where I ended up getting pregnant.”

(Mónica Zaccarúa, 2021)

As revealed by an ART patient, to be effective, an IVF clinic must first understand the needs of its clients. Customers that are dissatisfied with the service they receive are doomed to fail. Therefore, it is quite clear that Fertility centers, regardless of their size or whether they are public or private, considerably benefit from instituting Quality Control in accordance with quality management standards (Human Fertilization and Embriology Authority, 2019).

Regarding key partners, it is important to mention the role of the government and private organizations for fertility services. According to the data gathered, it is no secret that In-Vitro

fertilization and other modern reproductive procedures are costly, and many people, particularly in developing countries, may be unable to afford them.

Beyond, in some cases there are some side effects such as multiple births or other issues throughout the infertility treatments, which poses increased health risks, costs and may hamper demand for artificial reproductive technology. As a result, government activities and regulations that encourage market revenue development are critical. The advancements on technological developments of the business have mostly been fueled by private finance. Consequently, such advancements have reduced IVF costs and many babies have been born healthy (The Economist: The fertility business is booming, 2019).

As previously explained in the Value proposition, patients' satisfaction is extremely important. For this reason, public expenditure on healthcare and advanced technologies, are expected to stimulate market growth, as well as to drive regional business growth in the population. For instance, in Argentina, according to the fertility law passed on 2013, specified public hospitals and private clinics provide free assisted reproduction methods, weather the patients have medical insurance or not. (Gobierno de Argentina, 2013)

Contributing to this topic, as stated by World Health Organizations (WHO) at its website, WHO is the United Nations agency that connects nations, partners and people to promote health, keep the world safe and serve the vulnerable – so everyone, everywhere can attain the highest level of health (World Health Organization, 2021). Therefore, as fertility care services is one of the core elements of reproductive health, WHO is committed to addressing it through many ways.

One of the most important ones, is the collaboration with relevant stakeholders, such as academic centers, ministries of health, other UN bodies, non-state actors (NSAs), and other partners, to improve political commitment, availability, and health system capacity to provide fertility care globally.

Nevertheless, as Assisted Reproduction is known as a lucrative market, private equity firms are also key partners in this industry, since they pour money into building national chains of fertility

clinics. As detailed in ART marketing strategies, many private clinics spend on splashy advertising and a deliberate strategy of reaching out to young women who are not yet trying to conceive.

Venture capitalists get into the business too, tallying millions of dollars that flow into start-ups developing fertility products, such as a test on rating of a woman's fertility, among others (Strodel0, 2020). This way, many benefits can be seen for patients, since clinics join their forces into national chains by sharing best practices in order to introduce new technologies, as well as offering flexible payment plans for customers.

However, there are always shadows, indeed. Comparing this business to a Boston Consulting Group Matrix, it represents a Cash cow (Emergen Research, 2021). This is because these are services with a high market share that constitute a source of cash for the healthcare industry, since the amount of investment they require is relatively low. Therefore, this may lead to clinics pressuring people to undergo unneeded testing and procedures as the interviewees have previously expressed in their testimonies.

“I was offered an additional hormone injection treatment that I knew I did not need, because it damaged my uterus.”

(Mónica Zaccarúa, 2021)

Many private fertility clinics have formed strategic alliances similar to Ovation Fertility, as mentioned in the Literature Review. These collaborations between prominent IVF clinics and other type of specialisation, have the potential to improve fertility care in the future (Franchising IVF and the Changing Business Model for Laboratory Operations, 2018) .

Due to a shortage of reproductive endocrinologists and clinics, private equity firms must purchase existing facilities as add-on acquisitions in order to operate in the fertility market (Franchising IVF and the Changing Business Model for Laboratory Operations, 2018).

As huge organizations gain considerable market share, there is a trend in both expansions and horizontal integration of fertility service providers. Unlike hospitals other team care facilities,

fertility clinics have traditionally operated as independent providers. That is why private equity firms have shown interest in reproductive clinics, and as a result, investors clearly perceive the possibility (The Economist: The fertility business is booming, 2019).

In some circumstances, physicians nearing retirement take advantage of the opportunity to sell their clinic assets in order to boost their own financial stability while also benefiting from the business skills of new investors. However, some clinicians are concerned that external investors may encourage the clinic to focus more on adding more clients rather than on how this could influence patient care. In a chain supported by private equity investors, such flexibility like granting a discount to a lady returning for a second or third session of IVF would be impossible (Fabiola C. Bento, 2016).

The expanding chains do not supply what the sector really needs, which are more economical solutions that would allow lower-income people to get fertility treatments (Fabiola C. Bento, 2016).

In this market, health insurance firms are also important partners. This is due to the fact that fertility treatments are costly and frequently not covered by insurance. Insurance benefits, on the other hand, may pay for diagnostic testing, therapy, or drugs. It could include some or all of these possibilities. Nonetheless, therapeutic options such as IUI (Intrauterine Insemination) and IVF, which are more expensive, have relatively minimal coverage (Fabiola C. Bento, 2016).

As a result, insurance companies frequently fund diagnostic tests but not treatment. Treatment costs will be borne by the patient and can run into thousands of dollars. As a result, it is also crucial to know if any co-payments are required and if the benefits are subject to any restrictions (Fabiola C. Bento, 2016).

Despite this, just a few clinics use insurance to advertise their services on their websites. Worst still, it is shocking that some websites do not include insurance on their main pages, even though it is an essential means of payment for fertility treatment. For the most part, access appears to be wide open for affluent individuals who can afford to pay directly for these services, which are

those with private health insurance that provides infertility benefits, with restrictions dependent on the patient's capacity to pay co-payments or for non-covered procedures (The Economist: The fertility business is booming, 2019).

Because insurance mandates only apply to people who have private health insurance, they are often wealthier and more likely to be employed than the general population. Since these are generally the same people who can afford ART on their own, the marginal advantage of insurance coverage does not seem to boost use among the insured (Emergen Research, 2021).

When intending parents use Assisted Reproductive Technology (ART), such as egg donation or gestational surrogacy, to start a family, fertility attorneys seek to safeguard their parental rights. Fertility legislation is very important for a surrogacy arrangement to go smoothly. A fertility lawyer drafts the surrogacy contract in this manner, ensuring that both intended parents and gestational surrogates are aware of all terms of the arrangement (Ishii, 2018).

Individuals' security and peace of mind during assisted reproduction transactions are jeopardized unless fertility lawyers' endeavor to ensure the inviolability of ART and surrogacy contracts. Fertility lawyers are well-versed in the intricacies of their respective jurisdictions' fertility laws (Human Fertilization and Embriology Authority, 2019).

As a result, written agreements allow patients to have a positive ART experience. Because a reproduction agreement involves numerous parties and human emotion, it is critical to keep all components of the agreement in writing. This ensures that the intended parent(s) receive their parental rights to the resulting infant and prevents future arguments over the child's well-being (Human Fertilization and Embriology Authority, 2019).

Because various challenges may develop in such a complicated business, lawyers are seen as crucial partners. For example, on August 7th, 2019, a family filed a lawsuit against the Institute for Reproductive Health, The Christ Hospital, and Ovation Fertility for misconduct during their child's birth. A home DNA test revealed that the baby was not biologically connected to her father

(GW LAW, 2019). Adam Wolf, an attorney and partner at Peiffer Wolf, the legal firm that brought the claim on the family's behalf, said:

"We think of fertility clinics as highly professional organizations governed by strict rules and staffed by caring experts. But the truth is some of them are simply business people making billions of dollars in profits."

(Adam Wolf, attorney and partner at Peiffer Wolf, 2019)

As previously stated in preceding chapters, Argentina's Congress passed a law in 2013 guaranteeing free access to Assisted Reproductive treatments to any adult who wishes to become parents through these methods.

The costly therapies, which had previously been paid for by people wishing to have a child, were made available free of charge through social assistance, private health insurance, and the public health system beginning that year.

Unlike the provincial law, which only allows couples with infertility problems who are between the ages of 30 and 40 to receive treatment, the Argentine national Law (26,862) benefits any adult who wants to receive treatment, regardless of whether they are infertile, their age, or their marital status. It is also advantageous to same-gender couples.

It is crucial to note, however, that the Catholic Church has questioned the law's approval, claiming that the legislation is designed to favor fertilization clinics (Smink, 2013). As Adam Wolf stated in the previously explained case, Father Rubén Revello, a bioethics expert at the Argentine Catholic University (UCA), said:

"They opened the market for human life to everyone. Now the fertilization clinics, which are presented as the great solutions to the life of families, are made

of an impressive box, since the Health Insurance companies, and the collapsed health system public will have to bear the very high costs of benefits that can hardly be described as therapeutic. "

(Father Rubén Revello, bioethics expert at the Argentine Catholic University (UCA), 2013)

Fertility clinics have found a huge business to profit from the desire of those who wish to initiate their ways in the parenthood world. Many of them demand large quantities of money from patients in order to obtain a donor "fast," and if they do not pay, they are placed on a waiting list that can take up to a year for a donor to become available for that lady or expectant person (Alcántara, 2018).

When confronted with this, the state turns a blind eye, despite complaints filed with the Superintendency of Health Services and the hundreds of injunctions that must be issued to ensure the law's broad coverage. (Alcántara, 2018).

Due to a lack of information and education on the matter, fertility therapy has become a stigma for many women. When individuals are subjected to abuse and abuses of their rights, the procedure becomes a source of physical and mental pain (Constanza Be, 2021).

Anyone who enters the area of Assisted Reproduction faces huge challenges in conducting any normal investigation or receiving a diagnosis. After obtaining the necessary information, the Health Insurance Company may take months to authorize the therapies, which in terms of fertility are never ending (Scott, 2018).

According to an article, even when they are guaranteed by national law, some techniques are not covered by IOMA (Instituto Obra Médico Asistencial), forcing patients to pay \$ 100,000 or more just for that procedure, or to go to court to get coverage, which requires relying on resources that not everyone has, as well as time and physical and emotional exhaustion (Constanza Be, 2021).

This same article states that IOMA also refuses to authorize some past research, forcing it to launch exception procedures or even document letters when the legislation does not allow it (Constanza Be, 2021).

This serves as an adjustment mechanism because it entails the provincial government saving millions of pesos belonging to IOMA (that is, the affiliates, who are the Buenos Aires public workers), which it can then use for other purposes, as part of a policy aimed at ensuring the payment of the fraudulent provincial external debt (Constanza Be, 2021).

According to the investigation, it can be said that denying coverage and allowing clinics to profit from the desire of individuals who want to have a baby is also a type of violence against women and pregnant people, and the state is mostly to blame. That is why lawyers play such an important role in this market, ensuring that these wrongdoings do not persist.

Notwithstanding, as the title of this in-depth investigation implies, it is not just about shadows. Fortunately, there are lights in the scene as well. In order to help illustrate the important role of legal persons and procedures as key partners, it is worth mentioning a recent case that occurred in Argentina in November of 2021. In it, Judge Mónica Parrello granted a 40-year-old man (whose name was preserved) permission to surrogate in order to have a child, making this the first instance in Argentina to allow a single man to become a father through surrogacy. (Ninci, 2021)

What is more, there were no financial arrangements between the parties because the surrogate mother is a friend of the patient. (Ninci, 2021).

Despite this, the petitioner's initial plan was to begin the process in California, USA.

"The plan was to do it in California, but the costs were between \$100,000 and \$120,000 dollars, without considering the expenditures of legal papers to bring the baby to Argentina, nor my living expenses there."

(Petitioner, 2021)

In his desperate attempt to find a surrogate mother, the man received various surrogacy offers on the black market.

“There are always options for doing things differently. However, the fact is that I have never inquired as to how much I should pay because it was never my desire to fit in that manner (...). The crucial point is that if you have a legal safeguard, you will have full health insurance coverage for the entire therapy, which is provided by the Assisted Reproduction Law.”

(Petitioner, 2021)

Overall, as it was previously explained, this is the first time in Argentina that an intended single father has been granted permission to begin the surrogacy process. As a result, it is critical to have a thorough understanding of the legal bureaucracy that may be engaged in the process, as some of them (depending on which authorizations are required) take only a few months.

Mónica Parrello, the judge in this case, expressed her thoughts on the matter.

“It is illegal to rent bellies in Argentina because it implies monetary reward. We know some laboratories do it, even though we do not have evidence of it, but we know they do it. As far as we are aware, they charge more than \$50,000 dollars.”

(Judge Mónica Parrello, 2021)

Moving to cost infrastructure, an expert would consider factors such as facilities, capital assets, and the labor force required to operate a fertility practice. As the gynecologist interviewed, Roxana Resnik, said:

“Treatments are expensive because they require high complexity, such as an institution that has an embryology laboratory, numerous machines, means of cultivation, incubators, microscopes, and liquid nitrogen machines to freeze eggs, embryos and sperm. Also, constant monitoring is required, since the treatments are not simple. (...) The aspiration of eggs is performed in the operating room, which also has its cost. It is not necessarily an expensive treatment, but if it is done by a good professional, it will give better results.”

(Roxana Resnik, 2021)

As a result, while calculating the exact costs required to reproduce a fertility technique, an expert must be cautious. That is why cost approaches to assessing innovative or unprofitable activities are crucial.

However, if we go back to the beginning of the business, the expenses to consider tend to be the same, even though the investment costs vary depending on the place of origin, and of course, on inflation and other factors. In addition, to the cost structure that fertility clinics faced, the global pandemic must be added. Assisted reproductive technology market has been impacted significantly due to the COVID-19 pandemic, since the implementation of lockdown disrupted ongoing ART procedures and the sector witnessed long term repercussions. Disruption in the economy has altered the economic condition of several couples and limited their capacity for expensive procedures (Infobae, 2020).

Hospital institutions have found it necessary to rethink their strategies with respect to the supply chain, from production to the times and modes of transfers. Due to high demand and the

pandemic, many international medical supply providers were unable to distribute their products, including drugs and scanners (Infobae, 2020).

Faced with a crisis such as the current one, it is the responsibility of all agents involved in the production of medical material, both from the private and public sectors, to guarantee the production circuit. Due to this scarcity, many companies, with production capacity and raw materials, have joined the effort to create medical items that can be utilized during a health emergency, implying the formation of a new type of supplier, even if it is only temporary (Emergen Research, 2021).

Therefore, it is important to have a collaborative model that contributes to the acquisition of the necessary medical items and their safe transport to the institutions that require them.

The necessity to digitally alter various components of hospital supply chains has become apparent during the health crises. This meant that fertility clinics had made significant investments, which had an impact on their cost structure. For example, inventory management needed to be standardized, preferably across the network, and the ability to geolocate shipments in real time needed to be managed (Emergen Research, 2021).

By properly knowing stock availability and managing a forecast of actual demand, shipping supplies can be done efficiently, especially to critical points where they are urgently needed. This also has a positive impact on the recovery of surplus drugs or mobile equipment that can be used in other services and institutions.

Dr. Roxana Resnik explains that constant monitoring costs are a must for reproductive clinics, and this technology implemented enables for the individualized growth of each embryo to be observed without altering its culture conditions.

These expenditures enable all patients to benefit from cutting-edge technologies, resulting in a higher pregnancy rate. The employment of software and an imaging system to track the growth of embryo monitors is an example of technological advancement. Most crucially, this was done with the intention of not affecting the treatment's cost (Bernabeu, 2021).

Similarly, as previously stated, the government of Argentina advocated prioritizing the training of the health team through telemedicine, as well as the training of patients who will be undergoing reproductive medicine investigations or procedures. (Argentina, 2020).

Personnel costs are another essential factor to consider. A thorough treatment center will have a licensed endocrinologist on staff, as well as highly trained nurses who can answer questions regarding drugs and offer support along the journey. There will also be a team of wellness professionals on hand to offer guidance on diet, stress management, emotional support, and more (Scott, 2018).


At least two biologists, a gynecologist, a nurse, a nursing assistant, an anesthetist, and an administrator are required in Assisted Reproduction (The future of healthcare: Value creation through next-generation business models, 2021).

A major investment by IVF clinic leadership is necessary to take full advantage of the expertise and skills of a modern embryologist, which is associated with a significant return on IVF success. Embryologists, on the other hand, must keep up with new research and breakthroughs. Mentors, on the other hand, must alter the curriculum in order to better train high-quality embryologists (The future of healthcare: Value creation through next-generation business models, 2021).

Some traditional methods, such as embryo annotation and embryo biopsy, have changed as a result of technological advancements. With such developments, embryologists' basic abilities had to be polished in order to make greater use of the new technology and automation. As a result, clinics have had to spend a lot of money on staff training in order to improve patient care and satisfy patient wishes effectively and promptly (Emergen Research, 2021).


Furthermore, it is worth noting that the costs of fertility clinic products vary based on the retailers from where they get them. The prices they have to pay for the materials utilized in the treatment's procedure, are shown below as an example.

FEATURED PRODUCTS




PROMOTION

TAGS FOR CRYO CANES
Brooklyn Tool
\$11.99 ~~\$40.00~~
★★★★★ 8 reviews




ME A TESTED

EPPENDORF PIPETTE TIPS - BIOPUR EPT.I.P.S. (RACKED)
Eppendorf
From \$179.97
★★★★★ 4 reviews



ME A TESTED

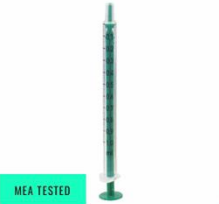
EPPENDORF PIPETTE TIPS - BIOPUR EPT.I.P.S. (INDIVIDUALLY WRAPPED) - IN STOCK
Eppendorf
From \$43.17 ~~\$59.99~~
★★★★★ 1 review



INTERNATIONAL SHIPPING


S-CRYOLOCK® VITRIFICATION DEVICES - ON BACKORDER
Biotech
\$699.00 ~~\$700.00~~
★★★★★ 3 reviews

Figure 49. IVF products' prices (IVF store)



ME A TESTED


NORM-JECT DISPOSABLE SYRINGE
Henke Sass Wolf
From \$19.97



PROMOTION


ME A TESTED

FALCON DISPOSABLE POLYETHYLENE TRANSFER PIPETS - IN STOCK
Falcon
From \$130.97 ~~\$219.00~~
★★★★★ 1 review



ME A TESTED

MALE-FACTOR PAK
Apex Medical Technologies
From \$139.34
★★★★★ 1 review



PROMOTION

ME A TESTED

IVF PASTEUR PIPETTES
Hunter Scientific
From \$119.00 ~~\$209.00~~
★★★★★ 1 review

ALL FEATURED PRODUCTS >

Figure 50. IVF product's prices (IVF store)

IVF CERTIFIED DISHES



ME A TESTED

ICSI/BIOPSY LOW WALL IN VITRO FERTILIZATION (IVF) DISH (353655)
Falcon
From \$146.40



PROMOTION

ME A TESTED

NUNC IVF ICSI DISH (150265) - IN STOCK
Nunc
\$169.99 ~~\$219.00~~
★★★★★ 1 review



PROMOTION

ME A TESTED

NUNC DELTA TREATED 4 WELL IVF CERTIFIED DISH (144444)
Nunc
\$505.00 ~~\$663.40~~
★★★★★ 1 review



ME A TESTED

NUNC 35MM DISH IVF CERTIFIED DISHES (150255)
Nunc
\$549.00

VIEW ALL >

Figure 51. IVF product's prices (IVF store)

In conclusion, except for select circumstances, where investments were made with the promise that they would not affect the price of treatment, clinics, like any other business, must account for all of these structural costs. This helps to explain why they are so costly to patients. The Assisted Reproduction institutions must recoup their high-risk initial investments, which leads to the third and final component of the assisted reproduction business model, the revenue streams.

Analyzing all the data gathered so far, it can be argued that Assisted Reproductive Technology (ART) refers to a set of procedures that are costly for clinics (in terms of capital investments) as well as for patients (who pay for the treatments provided by this business). Patients are required to pay enormous quantities of money in exchange for the service because of all they entail, such as surgical extractions, analysis, and drugs, to name a few. This is why clinics are able to generate substantial revenue streams.

The prices of treatments vary depending on the clinic and place of origin, as already mentioned in earlier chapters. For instance, patients pay between 600 and 5000 euros for each attempted pregnancy at various European health institutes (Fertility Clinics Abroad, 2019).

IVF is the most expensive, as it is a longer procedure that necessitates more processes and medicalization. Furthermore, egg freezing is an additional procedure that costs between 2,000 and 3,000 euros in Europe (Fertility clinics abroad, 2020).

However, within the Assisted Reproduction Industry, the portfolio of services comprises a wide range of options based on the patients' demands, all of which come at a high cost and require significant investment. Clinics, like any other business, generate revenue from the services they give. However, sometimes the therapies recommended are "just in case," with the sole purpose of increasing revenues.

“(...) I was offered an additional hormone injection treatment that I knew I did not need, because it damaged my uterus. In addition, each procedure had a

cost of \$1000 (pesos), which at that time was very expensive, since I had to perform it around 13 times.”

(Mónica Zaccarúa, 2021)

Moreover, the gamete and uterine trade is another revenue source for private fertility clinics. Because both the donors and the surrogate mothers receive financial compensation, these types of operations generate many repercussions. Yet, according to the research, this type of practice is not deemed a business in the United Kingdom since it does not constitute a trade or a purchase. In fact, Kayleigh James, a surrogate mother from the United Kingdom who had been previously interviewed, confirmed this information. Her responses can be seen in Chapter four.

“A surrogate in the UK IS NOT HIRED. You match as a team. In the UK a surrogate can only claim expenses, you cannot make a profit because it's against the law. Intended parents over all pregnancy related costs.”

(Kayleigh James, surrogate mother, 2021)

In addition, as previously stated, the fertility industry provides a variety of diagnostics to detect potential problems with reproduction as well as egg preservation. More importantly, if a patient receives multiple treatments, they may end up spending tens of thousands of dollars. According to surveys and to in-depth research, this occurs mostly because families are built later in life.

Because most therapies are not covered by public health systems, people are compelled to pay a significant amount of money in order to conceive. Likewise, medications provided to patients are another highly lucrative business for the industry, since their costs are not included in the treatments. Regardless of the procedure to be carried out, each stage of the process requires a different type of medication. This raises the cost of treatment, requiring patients to spend more money than they anticipated (Scott, 2018).

It is due to these factors that in 2018, investment funds and venture capital for fertility companies reached \$ 624 million (The Economist: The fertility business is booming, 2019).

As a result, fertility clinics are more interested in expanding their business, investing more in research and technology in order to attract a larger clientele. The more treatment cycles they provide, the higher their revenue streams.

According to a recent study conducted by Emergen Research, the global market for Assisted Reproductive Technology is predicted to reach \$ 54.75 billion by 2028, with revenue growing at a 9.7% CAGR (Assisted Reproductive Technology (ART) Market Size, Share, Trends, By Procedure, By Technology, By End-use, and By Region Forecast to 2028, 2021).

As previously stated, this is owing to the rising use of in vitro fertilization (IVF) and artificial insemination, among other technologies, by individuals and couples.

Furthermore, as previously indicated, corporations such as Google and Facebook contribute to the growth of this industry by providing treatments as an incentive to their staff. (Farr, 2014)

In addition, technology is an important component of this industry's revenue streams. Scientific methods are continually evolving in order to improve the success rate of inseminations and other therapies. Technology businesses contribute to the market as a result of their partnership by storing genetic data in the cloud, encrypting data using specialized technologies, and developing other forms of software for these purposes (AVA, 2021).

However, technological businesses are not the only ones benefiting from Assisted Reproduction revenue; banks also play a key part in this industry by financing treatments. On the other hand, there are insurance companies that help finance a portion of them (Scott, 2018).

Many technological firms are attempting to break into the Assisted Reproduction market. Med Answers, for example, is built on delivering video conferencing with professionals to aid people going through the reproductive treatment process. As a result, the number of users grows by hundreds each week. Fertility clinics or 'cloud-based' management systems are being created

alongside these types of 'applications' for laboratories working with the genetic material of hundreds of patients (Hawkins, 2018).

There are numerous services that provide these types of services. Hundreds of smartphone applications are available to assist people in the long process of conception. Real-time data is employed in various circumstances, depending on the application. The Ava bracelet, as an example, monitors female fertility at night. It is estimated to cost around € 300, depending on the country in which it is acquired (AVA, 2021).

All of these technologies and services, however, are consumed and priced differently in different countries. The truth is that not all of them are legal. Access to some Assisted Reproductive technologies is prohibited in several countries for a variety of reasons. Because of the differences in regularities between countries, reproductive tourism arose, becoming one of the various ways for the reproduction sector to create revenue (Iajollaivf, 2012).

Reproductive tourism is defined as the movement of persons from one country to another to receive treatment of this sort (Iajollaivf, 2012). Individuals who want to become parents through these procedures require countries with more permissive legislation and better hygienic standards. In this way, the economies of the countries where these procedures are conducted, as well as the income of private clinics, benefit greatly.

As it was previously explained, surrogacy is, once again, one of the key causes for these reproductive health journeys. Many countries have made this approach illegal because of its implications (an economic contract with a woman to carry a baby). As a result, there are a variety of organizations dedicated to working with various agents, including IVF clinic intermediaries, lawyers, and medical tourism firms, among others.

These are designed to ensure that customers have a successful surrogacy experience by establishing a uniform and standardized business that connects multiple places and their stakeholders to achieve commercial goals. The same templates, contracts, and instructions are created for other regions of the world through these agencies, with the challenge of adapting these

services to local situations. Therefore, local agents and intermediaries play a crucial part in the medical tourism industry (Neil Lunt, 2012).

While financial remuneration is forbidden in some countries, such as in the United Kingdom, as Kayleigh James previously noted, compensation plays a crucial part in other surrogacy markets. In this case, the fact that some countries, such as France, allow altruistic donations without remuneration, limits the number of donors resulting in interminable treatment wait lists. As a result, people seek additional opportunities in other countries (Lynnette Nathalie Lyzwinski BA, 2013).

On the other hand, in nations like the United States, altruistic and financial reasons for oocyte donation or surrogacy are essential.

Just as surrogacy generates tourist trips, so do gametes and embryos that are traded across borders. For this, a particular permit, as well as the requisite technologies to preserve them during the transfer, are required. (Iajollai, 2012).

All of these factors support reproductive tourism by facilitating the cross-border movement of commodities such as laboratory equipment, medical expertise, consumers, and reproductive workers, among others, through transnational agreements.

To conclude with this exceptional business model, it is worth noting that the private sector, which includes both the licensing of private clinics and corporations looking to create novel reproductive therapies, operates on a high-income basis. With all the endeavors that people undertake to have a pregnancy, Assisted Reproduction generates significant flows of dollars. Each treatment has a cost, and the private clinics benefit from it.

In addition, families who fail despite multiple treatments face tens of thousands of dollars in hospital fees.

Unregulated marketing (a later developed topic) and novel infertility services, which bring ethical and political considerations, are the sources of these massive revenue streams. Many infertile couples' emotional despair might lead to harmful yet uncontrolled tactics in a multibillion-dollar industry.

5.2.2 Question 2: How did Assisted Reproduction become an actual business worth billions of dollars?

Assisted Reproduction began a long time ago, when scientists began conducting trials on artificial insemination and surrogacy in rabbits, as noted in the Literature Review. These approaches have resulted in the birth of healthy animals, which has led health specialists to focus on people. Louise Brown, the first baby created with IVF, was born in 1978 after thousands of attempts and failures in thousands of women (Waldby, 2019).

The rapid advancement of Assisted Reproductive Technology (ART) for the treatment of infertile couples was one of the world's most remarkable healing achievements.

As social acceptability of single parenthood and financial allowances grew, the number of kids provided for adoption decreased (Simpson, 1998). Since that time, ART technology has advanced rapidly, and infertile couples now have a variety of options. Furthermore, one of the main drivers of the assisted reproduction industry's growth has been the postponement of maternity.

The various procedures that succeeded over time brought with them illusions and failures, and only those that produced the best outcomes were accepted into medical practice. Since then, great, and startling breakthroughs have been made, particularly in the reproduction laboratory and embryo culture media, which have significantly increased the treatment options for each therapy on a very simple premise.

People nowadays choose to postpone starting a family until after they have completed their academic degree, have a professional career, and are financially secure. Furthermore, thanks to the ongoing advancement of technology, which allows individuals to accomplish more things from their homes every day, today's culture is increasingly sedentary, which contributes to obesity issues. As a result of all of this, the fertility rate has been declining in recent years. (World Bank Data, 2019)

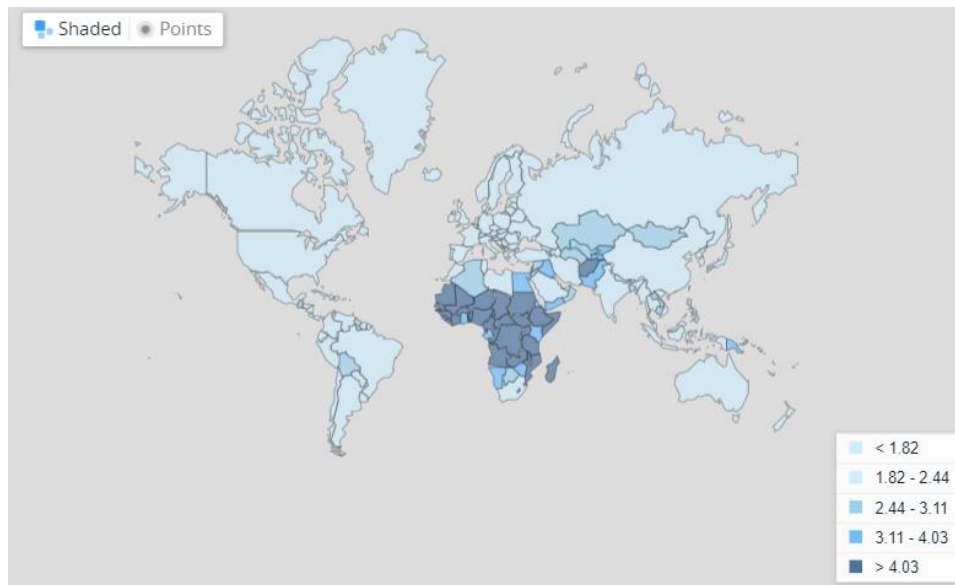


Figure 52. Total births per woman fertility rate (World Bank Data, 2019)

In a study conducted by the authors, interviewees were asked to express their level of agreement with the statement "The context in which we live today favors people delaying the moment of being parents", and 75 people said they completely agreed. As a result, a professional biochemist and a gynecologist were asked to interpret the results, and their response was:

"Yes, totally. The delay in parenthood is an opportunity for clinics to make profits."

(Jorge Santoianni, 2021)

"Nowadays, women postpone their maternity due to different reasons such as completing their studies, maybe they do not have a partner yet or they first want to be economically stable. Therefore, when they decide to have children, their eggs are old and less fertile. So, I advise to my patients that if they decided to have kids after the age of 40, they should freeze their eggs when they are younger"

(Roxana Resik, 2021)

Furthermore, 47% of those who responded to the survey chose the option "totally agree" in response to the affirmation offered above, while 35% chose "agree." As a result, the modern society's established lifestyle helps the Assisted Reproduction industry, making it a business that is always growing and attracting new investors every day.

In addition, market research conducted by Fortune Business Insights revealed how large the market size of the industry's companies is:

“In vitro fertilization segment accounted for around 79.2 % of the global Assisted Reproductive Technology (ART) Market in 2018. Europe Assisted Reproductive Technology (ART) market was valued at \$8.78 billion USD in 2018” (Fortune Business Insights, 2021).

Although there are no promises of success given the number of Assisted Reproductive treatments accessible today, it is important to note that research is ongoing and that new and better options are being developed on a daily basis.

To summarize, infertility has been a social taboo for centuries; with changing circumstances and rapid advances in contemporary science, our philosophies have developed with time, but the desire for a child, a family successor, remains a key issue.

The researchers proceeded to make significant progress on a journey that began centuries ago and resulted in advancements in modern medicine, providing a ray of hope to millions of infertile couples seeking treatment choices.

As a result of the considerable refining of procedures in the field of Assisted Reproductive technology, prospects for discovering answers to fertility problems for a larger population became available, which were previously thought to be unsolvable.

5.2.3 Question 3: What is the perception health professionals have about making profits out of these practices?

A large number of professionals with various skills and capacities work in the assisted reproduction industry. Because it is their profession, they all require monetary compensation for their knowledge and experience. Furthermore, therapies are costly because they require a high level of sophistication, patients must be regularly controlled, and institutions must have an embryology laboratory, culture equipment, incubators, microscopes, and liquid nitrogen machines capable of freezing eggs, embryos, and sperm. Furthermore, private health insurance companies are now involved in offering these services to patients who are having difficulty conceiving.

As a result, treatments are now of inferior quality as doctors are forced to deliver less expensive prescriptions in order to make a living. It is deducted from doctors' fees if they want to deliver more effective medications. Consequently, many health experts prefer to work independently, without the use of health insurance as intermediaries, in order to give more effective treatments.

“Physicians are probably not the most business-savvy people. They went to medical school and residency to take care of patients and allowing a business-focused entity to come in helps alleviate the burden.”

(Cantrell, 2019)

For the purpose of these research, a biochemist dedicated to male infertility related to seminal infections and a gynecologist specialized in Assisted Reproduction were interviewed. When experts were asked if clinics or companies are trying to profit off people's desperate desire to have a kid, they said:

“It doesn't seem to me that clinics want to become millionaires at the expense of a patient's fertility. But it is true that there is a lot of commerce with it, and there are people who work in a way that is not ethical, where the only thing that matters to them is money. However, there are also people like me, where we do tariff treatment for patients who cannot afford it. In addition, I was

"ex-sterile", meaning that my son is the result of a fertility treatment. Therefore, I know what it feels like to be an assisted reproductive patient and not having the money to pay for the treatment. I did it in 1998, and at that time the treatments were not covered by Health Insurance companies. It was very expensive, and, in fact, my grandmother paid for it."

(Roxana Resnik, 2021)

"Undoubtedly. Because it is a way of making profits by taking advantage of people's dreams."

(Jorge Santoianni, 2021)

In addition, the following affirmation was provided to the respondents on the survey: "Companies have as an objective the fact of obtaining money from the desperation of people for having kids" and 27% of people totally agreed, 28% agreed and only 4% totally disagreed with the statement.

Furthermore, the biochemist and the gynecologist were also asked in the interviews if they think professionals see results as incomes or to help people fulfil the dream of having a child. The responses obtained by both of them were the following:

"On the one hand, medicine is a profession, and you need to earn money to cover your needs. But on the other hand, in my opinion, a treatment that is not successful is a huge frustration, while one that is, gives me a lot of happiness and eternal joy. Unfortunately, not everyone thinks like me."

(Roxana Resnik, 2021)

"I believe they see results only as a profit. It is more because of the income they get, than for the people's happiness."

(Jorge Santoianni, 2021)

Considering all the opinions and the perceptions shared by the professionals interviewed and survey's respondents, it can be noticed that people have different thoughts about making profits through Assisted Reproduction methods. Furthermore, it may be argued that professionals who are still in the industry are hesitant to consider it as a business.

5.2.4 Question 4: What are the different marketing strategies that companies use in this industry to attract clients in Argentina, Ukraine and United Kingdom?

As previously stated, while discussing the Assisted Reproduction industry in Ukraine, it is growing in popularity among persons who choose to have IVF treatment outside of the country. As explained in the Literature Review, Ukraine has around 30 IVF clinics, but this number is expected to rise as Eastern Europe becomes a popular destination for reproductive treatment. This is due to the fact that fertility clinics in Ukraine cater to English-speaking patients by employing staff who are multilingual (Fertility Clinics Abroad, 2019).

The key reason for choosing Ukraine is the lower cost of treatment compared to the United Kingdom and the United States. This, together with the legislation governing donor egg treatment, makes it appealing to a large number of people. Furthermore, in Ukraine, there is no legal age limit for IVF therapy (Fertility Clinics Abroad, 2019).

However, there are other costs to consider, such as lodging and transit. It is, however, still inexpensive. Clinics offer packages that include assistance with travel and accommodation arrangements, relieving patients of worry. Below are two examples of discounts offered by different

Assisted Reproduction clinics in Ukraine to tourists who decide to fly to their nation to begin fertility treatments.

The crucial information that exemplifies what has been discussed was highlighted in red in the second example, taken from the Biotexcom website.

The screenshot displays the Forsa Fertility website's header and a main promotional banner. The header includes contact information (+38 098 488 44 88, info@forsa-ivf.com), a 'Request Consultation' button, and social media icons. The main banner features the Forsa Fertility logo, navigation links for 'Treatments' and 'Webinars', and a large promotional message: 'IVF In Ukraine. 10% Discount. Benefit Your Summer Vacation'. Below this, it asks 'Plan to get pregnant using IVF (In vitro fertilization)?' and encourages users to 'Benefit Your Summer Vacation To Beat Infertility!'. The text details that international air flights are renewed, PCR tests and insurance are required, and a 10% discount is offered for treatment starting in the summer. It also mentions 4-star hotel accommodation and free doctor consultations. A '10% discount' badge is overlaid on an image of a child playing on a beach. A 'Apply for a discount' button is located at the bottom of the banner.

+38 098 488 44 88 info@forsa-ivf.com Request Consultation English

forsa fertility Treatments Webinars

IVF In Ukraine. 10% Discount. Benefit Your Summer Vacation

Plan to get pregnant using IVF (In vitro fertilization)?

Benefit Your Summer Vacation To Beat Infertility!

International air flights from Europe to Kiev are renewed. For patients coming from abroad is necessary to have the PCR test and insurance. We welcome you to start IVF treatment in one of the leading Ukrainian fertility clinics. For patients, who plan to start treatment this summer we offer 10% discount. Motherhood is possible with Forsa Fertility! 4 stars hotel accommodation included for patients from abroad! As well as free fertility doctor consultation. Promo offer is valid from 22nd June till 31st August 2021


10% discount

Apply for a discount

Figure 53. Forsa Fertility website tourism discounts (Fertility F. , 2021)

biotexcom.com

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BioTexCom – Center of Human Reproduction

WHY Biotexcom?

We have been creating miracles for over 10 years. As a leading European destination for fertility tourism and travel, our fertility center offers hope to patients all around the world.

Regardless of your situation, our specialists will develop a personalized fertility treatment plan, including IVF, egg donation, surrogacy, PGD and other fertility options.

We use advanced methods and technology. But the greatest testimonies to our work are the thousands of babies born as a result of our efforts.

THERE IS NO ABSOLUTE INFERTILITY!

We have a good reason to say so and work under such slogan.

Biotexcom is the only clinic in the world that provides 100% guaranteed results even for those clients who have already lost any hope for successful treatment. We are proud of being faithful to this principle for already almost 10 years.

100% guaranteed result is provided even for those clients who had unsuccessful infertility treatments in other clinics all over the world.

Our "All-inclusive" system means that all expenses and possible risks are covered by the clinic. We take care of all exciting moments during your residence here so you don't have to worry about anything. All you have to pay for are your air tickets. We cover all other relevant expenses, all medical expenses including fees for surrogate mother and egg donor. All unforeseen and urgent expenses such as preterm birth, caesarian section, and rehabilitation are also covered by the clinic.

Biotexcom provides you with the guidance of a manager who speaks your language, who can understand your mentality peculiarities and prevent your needs.

This is a person who guides you during all medical manipulations and

Figure 54. BioTexcom website's tourist promotion (BioTexCom, 2021)

Regardless, surrogacy is a multibillion-dollar global business. It provides a natural window into a theoretical subject of great interest to economic sociologists: the role of morality and moral framings in shaping and sustaining economic trade, because it commodifies a behavior that belongs to an intimate sector of the family and mixes babies and money.

In Ukraine, however, it is allowed to promote surrogacy services, recruit surrogate mothers, and pay surrogate moms. As previously stated, the country has risen to prominence as a leading provider of low-cost international surrogacy.

BioTexCom is a key player in Ukraine's surrogacy sector, which is increasing due to the country's poverty and instability.

The organization sets itself apart from other fertility clinics and surrogacy services by providing all-inclusive packages, including a "Guaranteed Success" IVF package that includes a money-back guarantee if no pregnancy lasts more than twelve weeks after five rounds (BioTexCom, 2021).

BioTexCom provides a luxury experience for potential consumers, including lodgings in "high-class hotels," meals, a driver, and even a local cell phone, all provided by the clinic. Their €64,900 "VIP Package" includes gender selection, extra compensation for surrogates carrying twins, and a leap to the front of the line, in addition to the usual all-inclusive surrogacy arrangement, which costs €34,900, less than four months wait versus up to a year in the standard surrogacy package (BioTexCom, 2021).




All Inclusive STANDARD	All Inclusive STANDARD +	All Inclusive VIP
		
Without baby's sex selection Waiting time - up to a year	2 attempts of baby's sex selection Waiting time - up to 6 months	Unlimited number of attempts for baby's sex selection Waiting time - up to 4 months Pediatrician services 24/7
€39.900	€49.900	€64.900
download .pdf	download .pdf	download .pdf

Figure 55. BioTexcom treatment's packages promotions (BioTexCom, 2021)

biotexcom.com

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- ⊖ Accommodation

All our clients stay in comfortable apartments and are provided with housemaid, cook and babysitter. Our attendant staff speaks English. The only thing that depends upon the type of package you choose is how large your apartment will be and if you will share it with other couples or stay separately.
- ⊖ Meals

There will be a cook who cooks dishes according to your tastes: home cuisine, fresh farm products and balanced menu with no limitations – every day throughout your program.
- ⊖ Transportation

Biotexcom has its own car fleet with drivers who know the peculiarities of clinic's work and your transportation.

Figure 56. BioTexcom tourist's promotions (BioTexCom, 2021)

These all-inclusive packages are backed up by a huge full-service organization. Not only does BioTexCom own and administer the clinic, but it also owns and operates apartments, hotels, a logistics staff, and private cars and drivers. Even at cross-border surrogacy companies that specialize in "reproductive tourism," this type of "vertical integration" is uncommon in the fertility sector.

In order to attract as many patients as possible, fertility clinics employ a variety of tactics, as discussed in Chapter 2. Some of them were, in fact, advertisements for high-tech products and highly skilled professionals.

They meet all of these criteria and more, according to New Hope - Nova Espero, another reproductive facility in Ukraine. These reproductive clinic's advertising strategies may be described as a push marketing strategy, in which they aim to get their patients to use their services in any manner possible. As a result, some examples of how they persuade their clients are attached below. Once more, the most important points were underlined in red.

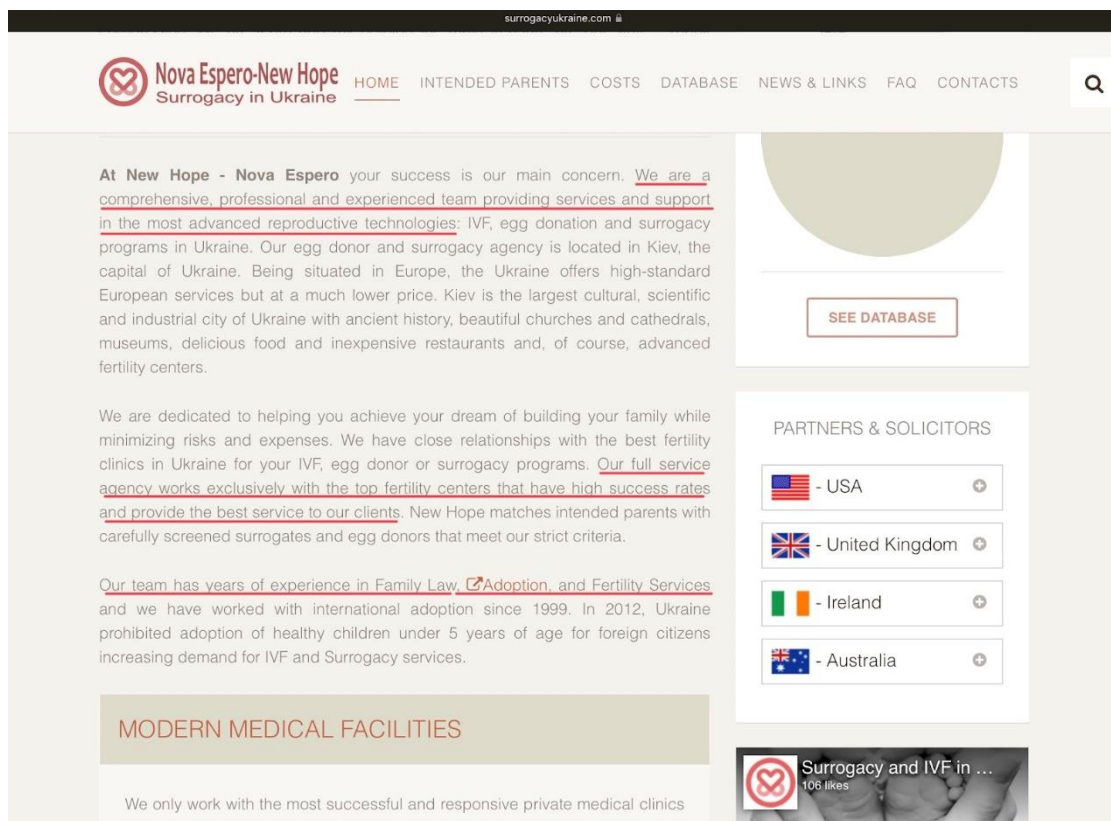


Figure 57. Nova Espero - New Hope website (Nova Espero - New Hope, s.f.)

It may be seen in this scenario how the clinic persuades prospective patients with skilled professionals and high success rates. Furthermore, these identical traits are mentioned again in the next example for their sophisticated medical facilities.

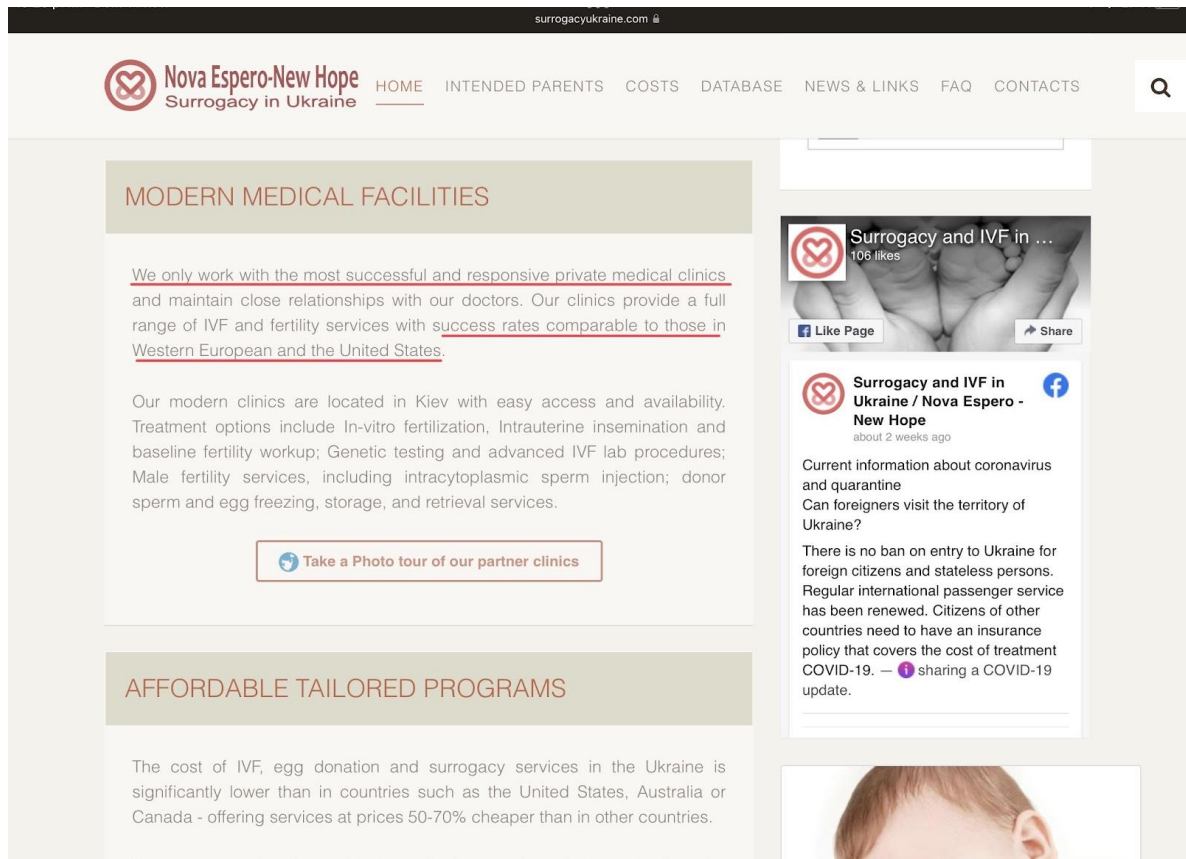


Figure 58. Nova Espero - New Hope (Nova Espero - New Hope, s.f.)

The comparison of fertility clinics to other nations was another marketing approach previously discussed. As a result, as can be shown next, this same website is proof that similar practices are still used in this competitive business. Specific statements were highlighted in red once more.

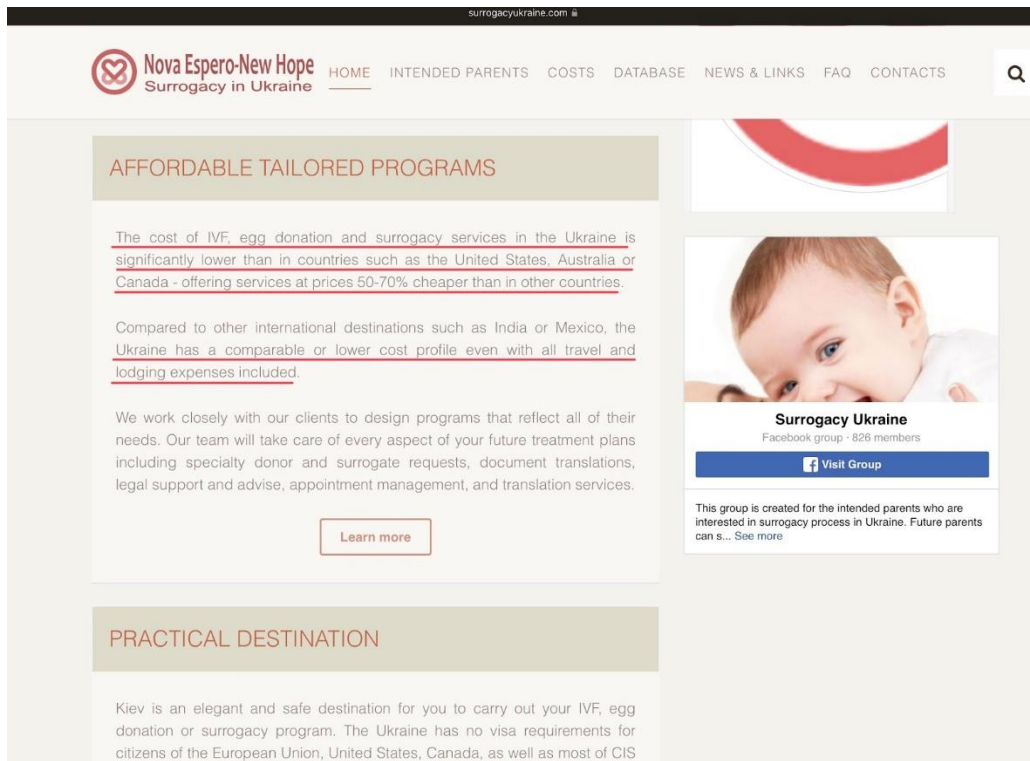


Figure 59. Nova Espero - New Hope website (New Hope-Nova , s.f.)

Last but not least, it appears that fertility clinics, particularly in Ukraine, use the environment of their country as additional means of enticement. Furthermore, as previously stated, they may provide some coverage for tourism-related activities. As a result, Nova Espero - New Hope has not stayed behind, as shown in the figure below.

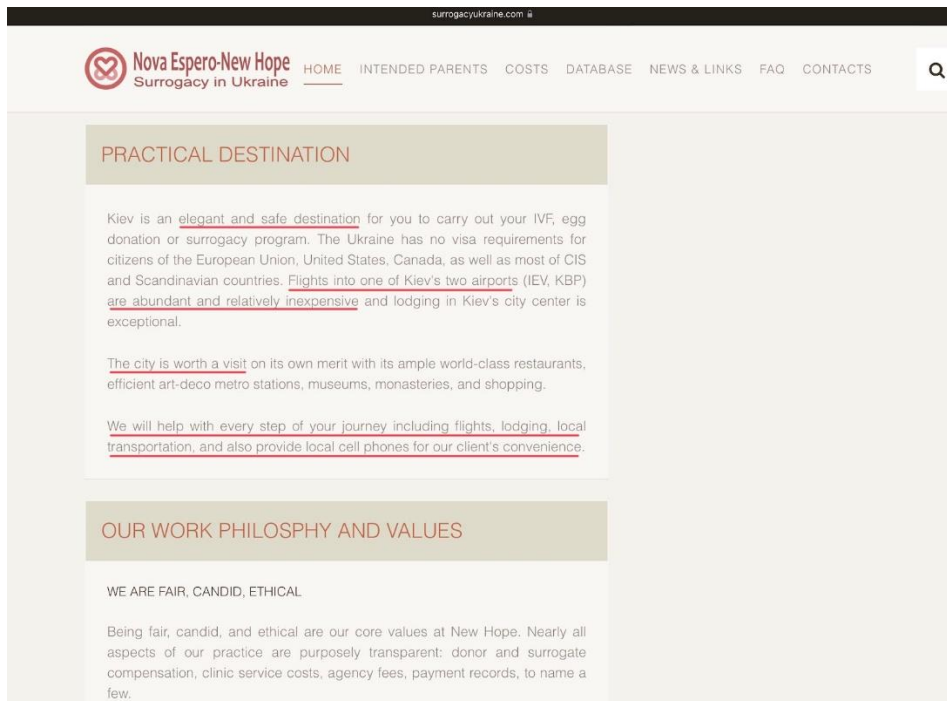


Figure 60. Nova Espero - New Hope website (Nova Espero - New Hope, s.f.)

As a result, clinics employ a variety of marketing methods in order to attract the attention of their target market. Similarly, they employ the similar methods on social media platforms such as Instagram, where they post photographs of new-borns and utilize the word "dream" to persuade their patients. Another example may be seen on the Instagram profile of VittoriaVita, a reproductive clinic in Kiev, Ukraine's capital.

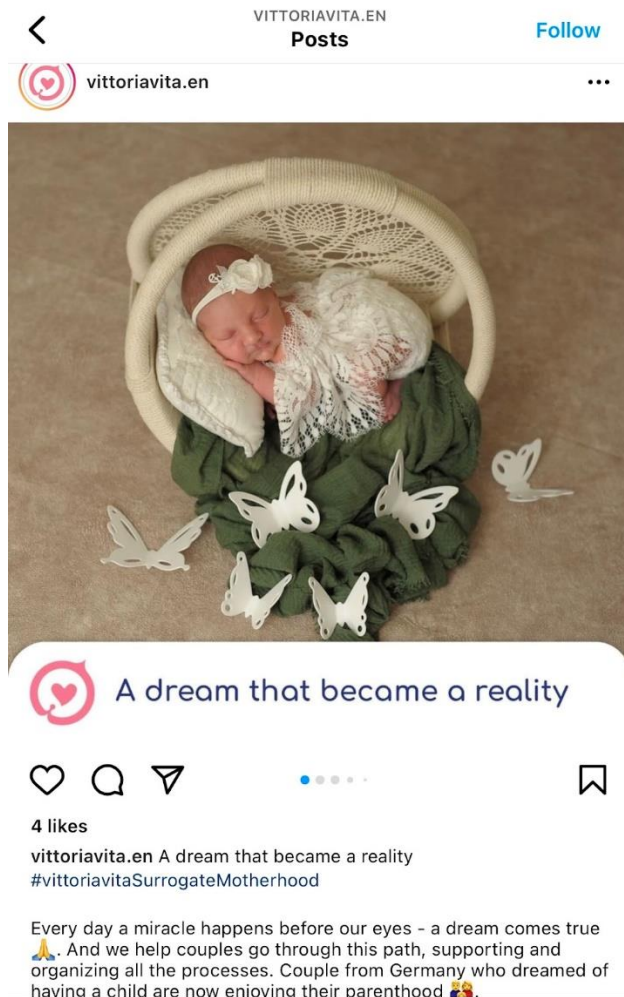


Figure 61. VittoriaVita’s Instagram profile (VittoriaVita, 2021)

In terms of fertility market advertising in the United Kingdom, the Human Fertilization and Embryology Authority, for example, offers a free information brochure on assisted reproduction. Furthermore, the Internet provides access to a wealth of information.

Content analysis, systematic cost analysis and comparison, and quality analysis examined the information available on egg freezing and its compliance with the Human Fertilization and Embryology Authority's requirements (HFEA).

Most clinics are not adequately explicit and honest about the 'real' cost of an EEF cycle, give a skewed picture of EEF, and do not provide adequate statistics or information, according to this study. Most critically, none of the clinics follow the HFEA's advertising and information-sharing requirements to the letter (Clarke, 2021).

These findings require immediate attention as the EEF industry, which is now dominated by private clinics, continues to grow. Clinics must improve the quantity and quality of EEF material on their websites so that potential patients may make well-informed decisions, and this article offers a checklist of 10 essential requirements (Clarke, 2021).

It has been recommended that, in order to avoid over commercialization of the fertility sector, HFEA should be given more economic regulatory powers.

It was written in collaboration with the Human Fertilization and Embryology Authority (HFEA) and spells out clinics' legal responsibility to treat individuals fairly and to educate IVF patients on their consumer rights.

According to new recommendations issued by the competition regulator, fertility clinics must be transparent with patients about their success rates and fees (Human Fertilization and Embryology Authority, 2019).

The Competition and Markets Authority (CMA) has released the first-ever guidance on IVF to address concerns about ambiguous pricing and deceptive success rates (Clarke, 2021).

Clinics have been informed that if they do not obey the requirements, they may face legal action.

They must offer the information that patients require in order for them to make an accurate comparison among clinics, including pricing and success rates, and they must ensure that they do not mislead patients about the effectiveness of their therapies or the price they will pay.

Clinics must also verify that they do not sell therapies such as "add-ons," which may cost up to £2,500 each cycle and are offered by some clinics (Clarke, 2021).

The following are some examples from various fertility clinics in the United Kingdom, with key points highlighted in red.

Are there any additional fees?

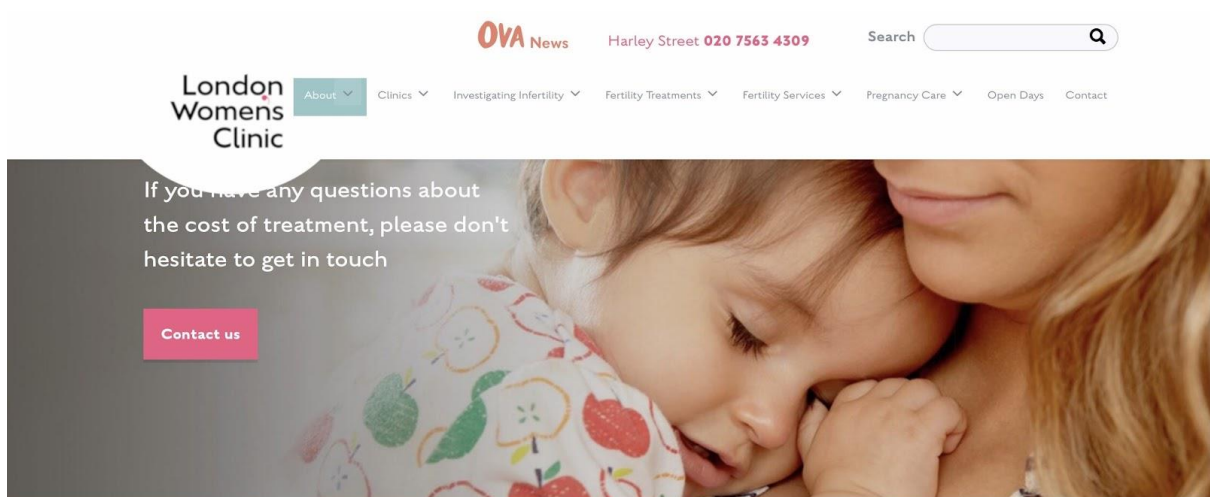
In our price list, you will find a **complete list of our fees**. This allows you to accurately calculate an estimate cost of treatment before you visit IVI, with no hidden surprises later on.

Investigations, blood tests and medication can vary from patient to patient. That is why we must charge these separately. After your first consultation, you will be provided with a personalised treatment quotation which includes a costed breakdown of your treatment from start to finish. For investigations, additional blood tests and medication, **we recommend you budget between £ 1,000 – £ 2,000 in addition to the cost of the package.**

The Human Fertilisation & Embryology Authority (HFEA) issues guidance to help patients understand treatments or services which may be offered by a fertility clinic in addition to a routine fertility treatment. These are known as treatment add-ons.

At IVI, we offer additional treatments and services to specific groups of patients which they have the option to integrate into a routine fertility treatment. Whether an additional treatment or service is recommended is based on a patient's personal circumstances, such as their medical history. We will never recommend an additional treatment or service to any patient without clinical evidence that it improves the likelihood of successful pregnancy or live birth. Where an additional treatment or service is recommended by a consultant, it will be explained in detail so that the patient has all the information they need to make an informed decision.

Figure 62. IVI website (IVI, 2021)



Prices

At the London Women's Clinic we understand that the cost of fertility treatment can be a substantial financial commitment. Our price lists have been put together to show a complete transparency of costs and no unexpected add-ons throughout your journey with us. Across our network of clinics we offer a number of affordable treatment packages designed to give you the best chance of having a successful pregnancy.

Figure 63. London Women's Clinic website (London Women's Clinic, 2021)

Cost Of Fertility Treatment

We are delighted to offer our services to both **self-funding** and **NHS patients**. Below are our private fertility treatment costs.

Fertility Treatment Price Lists

At Complete Fertility Centre we have developed highly competitive fixed-price packages for our main fertility treatments and services to make it clear for you to see what is included in our packages and what is excluded, with the intention to avoid any unexpected add-ons during your fertility journey with us.

We have packages detailing costs for IVF and ICSI, IUI, FET, egg sharing, egg and embryo recipient treatment, egg freezing and thawing, surgical sperm retrieval and fertility check-ups. We also offer **interest-free payment plans** to allow you to pay for your IVF, ICSI, FET and IUI treatment in affordable instalments.

Figure 64. Complete Fertility Centre website (Complete Fertility Centre, 2021)

Furthermore, as previously mentioned, some clinics sell their services by emphasizing their primary successful qualities and mentioning their success rates. Some of them, as demonstrated in the example below, use their Instagram pages to implement these strategies and use the website as a marketing tool.

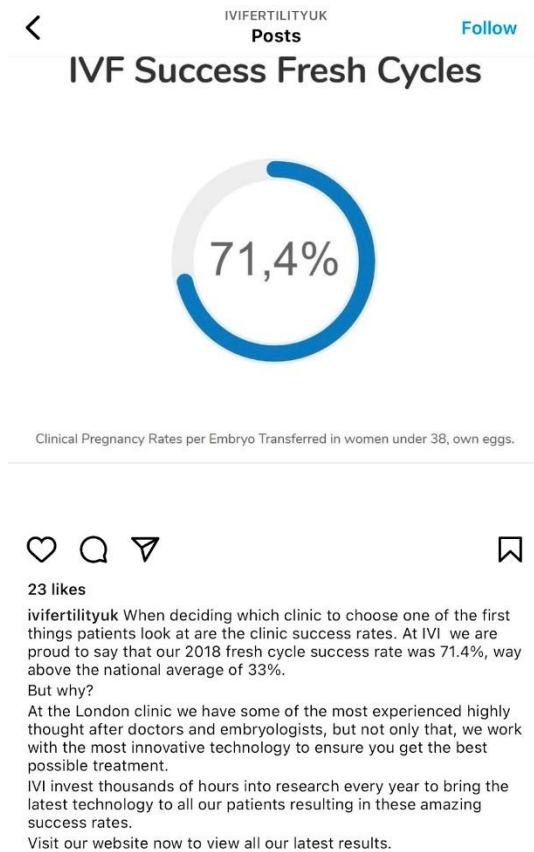


Figure 65. IVI UK Instagram page (IVI, 2021)

Last but not least, patient testimonies are considered as a potential kind of promotion. Obviously, any clinic that provides patient testimonials includes the good ones, in which patients praise the clinic's best qualities. As previously stated, this marketing strategy is intended to foster social acceptance by encouraging patients to choose a clinic based on the recommendations of others.



Figure 66. London Women's Clinic Instagram page

Regarding Argentina, there are some marketing methods in the country that are similar to those used in previously developed countries. The use of the word "dream," for example, is a common occurrence among fertility clinics around the world. Below is an example of a reproductive clinic in Buenos Aires, Argentina, called CyroBank. "We assist you in realizing your dream," says the website's main page.



Figure 67. CyroBank website (CyroBank, 2021)

Furthermore, this is not the only fertility clinic that makes this claim. InVitro Buenos Aires, for example, is an example of this, as shown below.



Figure 68. InVitro Buenos Aires website (InVitro Buenos Aires, 2021)

The statement "We make your dreams come true" invariably plays a significant influence in the minds of patients. That is why it is utilized in Assisted Reproduction clinics all over the world.

“When you first enter to the clinic I assisted, you see many pictures of babies. In fact, they show you all the ones that were born on that clinic. This gave me more illusions. I was even told to take pictures of my daughter to the clinic once she was born, so that they could expose them. At that time, social media was not very present. Everything you had, were the website and brochures, which, if

you looked at them, you would realize that they were all about hope. You knew that your dream would come true."

(Mónica Zaccaría, 2021)

Furthermore, in Argentina, marketing methods such as quality in technology and skilled professionals are frequently used. A few samples from various fertility centers were presented below for the sake of this assertion.

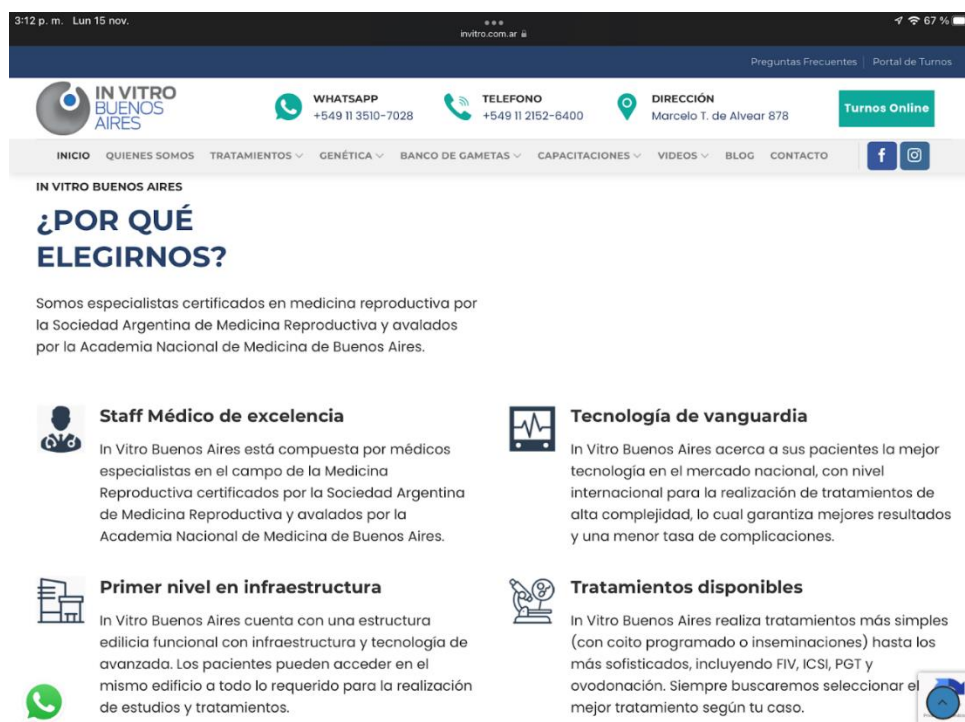


Figure 69. InVitro Buenos Aires website (InVitro Buenos Aires, 2021)

InVitro Buenos Aires highlights the excellence in experts, technologies, and infrastructure in this scenario. Furthermore, they ensure that their treatments are "sophisticated" in order to persuade the patient.



Figure 70. Seremas website (Seremas, 2021)

Similarly, Seremas fertility clinic persuades its clients by touting their pleasant facilities, as well as their specialized personnel, security, and experience, in order to "fulfil their aspirations of having a baby."



Figure 71. Procreate website (Procreate, 2021)

Finally, Procreate provides a number of reasons why people should select them, including the fact that they have been leaders in Argentina for over 20 years, their proximity due to the large number of professionals present, and their individualized treatment for patients.

The goal of such organizations is to highlight their most important and successful characteristics in order to persuade patients to choose their clinics as the starting point for their long journey to become parents.

Nonetheless, there were some discrepancies between Argentina's fertility promotion and those of other countries, such as Ukraine and the United Kingdom.

The reason for this disparity is that treatment fees in Argentina are not displayed on their websites. Despite the fact that they name the Health Insurance companies that work with them, people must schedule an appointment with the clinics in order to learn more about treatment finance.

However, some fertility clinics, such as IVI Buenos Aires, advertise savings for specific therapies in order to persuade potential customers.

“(...) Faced with this situation, my doctor offered me a "2x1" treatment package, which included different types of procedures.”

(Mónica Zaccarúa, 2021)

An example from the Instagram profile of IVI Argentina is presented below to demonstrate this.



Figure 72. IVI Argentina Instagram page

For this publication, it can be seen how IVI hopes to attract patients by offering them a 30% discount on an online consultation with the institution's experts. It also indicates the possibility of paying for IVF and Ovo donation treatment in three installments with no interest. Despite this, they do not disclose precise information about the treatment's cost, such as an actual price.



Figure 73. IVI Instagram profile

More importantly, when it comes to time, social media sends a clear message to women: their biological clock is ticking. The picture of a clock, as well as the words "tic tac," are powerful persuasions for women to freeze their eggs, which, of course, means spending money.

In addition, numerous fertility clinics throughout the world utilize the hashtag "#freetime" to entice women to stop time by freezing their eggs and be able to become mothers whenever they prefer (Hawkins, 2018).

To summarize, words like "dream" or "miracle," as well as posts of baby images, may mislead consumers into associating clinic therapy with success. However, the Human Fertilization and Embryology Authority (HFEA), for example, might particularly prevent member clinics from utilizing such approaches by forbidding such behavior in its advertising rules. This is because it is critical to promote ethical advertising in the fertility market in order to increase competitiveness.

Moreover, publishing success rates may not be the ethically acceptable, as the expert interviewed declared.

"It is only a Marketing strategy. You are told that the treatment failed, and you must pay again for another try. It always fails the first time."

(Jorge Santoianni, 2021)

Fertility clinic websites are set to play an increasingly important part in how patients choose their clinic as more people turn to the Internet for health information. As a result, encouraging accurate advertising and increasing access to ART is critical, and both the government and the business have a role to play in promoting responsible behavior.

5.2.5 Question 5: What is the future of this industry? Will it be affordable by many families?

For the purposes of this study, it was decided to ask the interviewed health experts if they considered this business had a bright future, and the following responses were obtained:

"Yes, I think it is a business that has a future, since there are more and more fertility problems either because people postpone motherhood increasingly, or for different reasons. In addition, the new generation does not want to have children, neither now, nor ever."

(Roxana Resnik, 2021)

"Yes, because there will always be people desperate to conceive."

(Jorge Santoianni, 2021)

Furthermore, according to a Fortune Business Insights market research analysis, the following are projections for the future of the Assisted Reproduction industry:

“Global Assisted Reproductive Technology market was valued at \$21.32 billion USD in 2018 and it is projected to reach \$45.96 billion USD in 2021.” (Fortune Business Insights, 2021).

“Rising prevalence of infertility globally is the key driver to the global Assisted Reproductive Technology Market” (Fortune Business Insights, 2021).

What is more, the interviewees were asked if they thought that costs of these treatments will drop down and be more affordable for people in the future:

“A few years ago, this was much more expensive than now, because as equipment is amortised, purchased and techniques are optimised, costs go down. Competition also lowers costs, but by getting involved, Health Insurance companies transform everything into a real mess, since they are the ones that establish which studies can be requested, what treatments can be done, how long to wait between one and the other, among other reasons. Such companies get into things that they do not know and that do not correspond to them.”

(Roxana Resnik, 2021)

“No, I do not think so, but I hope it will.”

(Jorge Santoianni, 2021)

As it was stated before on Chapter 2, according to the 10th Congress of the Asia Pacific Initiative on Reproduction (ASPIRE,2021), Artificial Intelligence (AI) will play a huge role in the ART industry by making constant improvements on the machines that play a vital role in fertility treatments.

“Eventually, every step of an Assisted Reproductive cycle will be automated resulting in reduced costs, greater work efficiency, and minimized human subjectivity and variability. This will result in assisted reproduction being more accessible and the number of IVF cycles will consequently skyrocket.” (ASPIRE, 2021).

However, taking into account the ASPIRE (2021) it can be said that robots cannot take over fertility clinics since the human touch is still needed to run the laboratories and that patient safety remains at the forefront of accessibility and treatment.

This industry, without a doubt, has a bright future ahead of it. The rising infertility rate, the postponement of parenthood/motherhood, the sedentary lifestyle most people today lead to health issues such as obesity, and the fact that people will always struggle to conceive for a variety of reasons, all contribute to the industry's continued growth, development, and expansion.

Fertility clinics grew in popularity as a result. They used to only provide hope to heterosexual couples who were having trouble conceiving. Single women, same-gender couples, and women pursuing a professional vocation (or who are yet to find a suitable partner) have all recently joined the captive audience.

Infertility treatments have somehow transcended the realm of health care to address societal challenges of reproduction in the absence of infertility.

The exceptional accomplishments of this field have aided its global spread and piqued investors' attention. As explained in the canvas model provided in question number 1, investors are pouring money into companies that offer to help people conceive (The fertility business is booming, 2019).

The urge to have children is universal. More than one in every 20 children is born as a result of IVF in some countries, and fees of €10,000 or more per cycle are not uncommon. As a result, the financial world is naturally ecstatic. In the last few of years, the worldwide IVF sector has seen a surge of private investments and a rise in private equity firms. (The Economist: The fertility business is booming, 2019).

Furthermore, modern technology aids in the advancement of ART procedures' efficiency and efficacy. Because technology is increasingly replacing human hands, costs are likely to fall in the future, making these therapies more accessible to a wider range of people.

What is more, various government and non-profit organizations in both developed and developing countries are launching public awareness efforts to educate the general public about cost-effective reproductive treatments, as developed in the advertising of such techniques. These are some of the most important Assisted Reproductive technologies market trends that are expected to boost the ART industry's growth.

5.3 Objective Compliance

In this part of the chapter, the completion, or lack thereof, of the objectives stated in Chapter 1, were explained.

5.3.1 Objective 1- Completed

The first objective was to provide a comprehensive definition of Assisted Reproduction, for which a proper definition was provided on Chapter 2 (Literature review).

The goal was to build a backdrop as a starting point so that future readers would have a general understanding of these notions, which are quite complex and difficult to grasp if the reader has no prior knowledge of the subject.

The therapy of infertility was described as Assisted Reproduction. The authors consider that this definition is simple and straightforward enough for the purpose of the study.

In addition, the concept of Assisted Reproductive technology was introduced, which entails surgically removing eggs from a woman's ovaries, mixing them with sperm in the laboratory, and returning them to the woman's body or transferring them to another woman.

The authors were able to provide a historical background, as well as accurate data regarding the evolution of this industry, which was combined with the information gathered from experts.

5.3.2 Objective 2 – Completed

The second objective was to identify the benefits and consequences of the companies providing the service of Assisted Reproduction.

The goal of this objective was to gain a better understanding of how the ART industry operates today by comparing it to contemporary business models and determining whether it runs as a legitimate organization or not. Doctors and fertility clinics, as is well known, must make a profit in order to survive. As a result, an inquiry was conducted to determine how these tactics accomplish their objectives.

In order to accomplish it, a detailed strategy concerning the business model of this large industry was devised, with the goal of finding patient advantages and emotional burdens.

All the data obtained throughout the study led to the discovery of a bright spot in the realm of infertility: the birth of a healthy, live baby. Assisted Reproduction procedures are the only way to give the illusion of becoming a parent when medical assistance is required.

Furthermore, because clinics must establish a high reputation for value, they focus all of their efforts on R&D initiatives, as well as qualified technology and skilled personnel, in order to provide the greatest possible outcomes and patient satisfaction. Lights are noteworthy for such an industry in this manner.

However, it was proved during the investigation that the flip side of the coin is simply a large shadow that hides all of the industry's secret aspects beneath an image of a baby on a clinic's website.

Even while the outcomes are usually excellent, the process is quite time-consuming. The business is a major shadow for the patients because of the expenses and the repeated times that

various treatments may take. It has been widely established that businesses benefit on people's delusions, even advertising it on social media as if it were a standard service to provide.

Assisted Reproduction is undeniably a business that gains billions of dollars off infertility problems.

5.3.3 Objective 3 – Completed

The third objective was to illustrate how these practices became an actual business.

The aim behind this objective was to provide readers with an understandable background of the business of Assisted Reproduction.

As a consequence, the goal has been met because the authors were able to offer a full overview of the topic, from its beginnings to where it is now, by analyzing source material and conducting correspondent research on the industry.

Due to the ongoing changes in the world and how people interpret life, ART has become a large industry, based on all the information obtained. Trends change all the time, and life is not what it used to be.

Parenthood is postponed, and infertility troubles persist. As a result of the ongoing advancements in technology and medicine, fertility clinic investments are fairly substantial, leading to the establishment of exorbitant treatment prices.

5.3.4 Objective 4 – Completed

The fourth objective was: To discuss, analyze and summarize the ethical point of view regarding making profits out of Assisted Reproduction methods.

The purpose of this objective was to gather information about people's opinion regarding this topic, in order to get a better understanding about the perception of this business.

Such objective was developed using data from primary sources as well as quantitative and qualitative surveys. The Literature Review was used to explain this goal, and extra information was acquired through interviews with Roxana Resnik (a gynecologist who specializes in ART) and Jorge Santoianni (biochemist specialized in male infertility).

Chapter 3 was used to develop the interviews, and Chapter 4 was used to publish the responses to the questions that were asked. In addition, a survey was done for this purpose using Google Forms. The opinions on whether it is ethical or not to profit from people's inability to conceive were varied.

On the one hand, Roxana Resnik (2021) claimed that doctors, as most people need to charge for their job because they need to make a living out of it. Also, doctors count with many skills and expertise due to their many years of studying and they need to be rewarded for that.

On the other hand, Jorge Santoianni (2021) believes that professionals only see results as incomes, rather than as a way of helping their patients to make their dream of conceiving come true.

Finally, the conducted survey shown that people have not a formed a concrete opinion of this topic yet.

5.3.5 Objective 5 – Completed

The fifth objective was to explore the future of this industry such as the feasible prospective of this business.

The aim behind the last objective was get an insight of how this industry will evolve, since so far it was expected to grow its market size.

To achieve this goal, extensive study was carried out, which necessitated the use of both primary and secondary data.

Through the analysis of secondary data, the authors were able to present an accurate picture of what the Assisted Reproduction Industry is like nowadays. Furthermore, regarding primary data professionals in the field were interviewed in order to get a full idea of what the industry is likely to become from their perspective.

The authors were able to conclude based on all of the information gathered that this industry has a bright future ahead of it. The rising infertility rate, the deferral of parenthood/motherhood, the sedentary lifestyles that most people today lead to health issues like obesity, and the fact that people will always struggle to conceive for a variety of reasons all contribute to the industry's continued growth, development, and expansion, as previously stated.

5.4 Hypotheses validation

In this part of the chapter, the hypotheses previously stated in Chapter 1, were validated, or not validated, using both primary and secondary sources.

5.4.1 Hypothesis 1 – Validated

The hypothesis that was set stated that “The business model of companies offering Assisted Reproduction is unambiguous. People go to a consultation with a professional and they get offered

different methods in order to start a family. The customers choose the method that is more suitable according to their situation and by evaluating the costs. Therefore, it can be said, that this industry works as any service company. Moreover, the stakeholders involved in Assisted Reproduction will be patients, fertility organizations, doctors, nurses, managers, scientists, lawyers, investors and researchers.”

After analyzing data gathered, both through primary and secondary data, this hypothesis was validated.

The information gathered revealed that the Assisted Reproduction sector operates like any other business around the world. Customers scheduled a meeting with professionals in order to seek a solution to their infertility issues, as was predicted. In exchange, the doctors will provide them with the best available answers based on their unique circumstances, which varies from person to person, as well as the costs associated with such therapy.

Moreover, according to the survey carried out 80,1% of the respondents would rather do an ART treatment in a private clinic in Argentina than going to a public hospital, which is key for the industry since it means more profits.

Furthermore, private fertility clinics, as any business working in the service industry, offer special promotions. For instance, as it was mentioned before, Ukraine is a very popular destination for couple looking to have a baby through surrogacy, due to the country’s low regulations and affordable prices. BioTexCom, a very important surrogacy business located in Kiev, provides a luxury experience for potential clients, including accommodations in boutique hotels, meals, a driver, and even a local cell phone.

Also, they have a €64,900 "VIP Package" which includes gender selection, extra compensation for surrogates carrying twins, and a leap to the front of the line, in addition to the usual all-inclusive surrogacy arrangement, which costs €34,900, less than four months wait versus up to a year in the standard surrogacy package (BioTexCom, 2021).

Therefore, it is clear that the business is conducted in the same manner throughout the world. Although some marketing methods, such as how fertility clinics offer their services, may differ, the end result is the same. They all have discounts, provide the same services, and have similar attributes, among other things. As a result, the main aim of clinics, such as most businesses, is to make profits.

Nonetheless, like most businesses, stakeholders are extremely important for the clinic's operations. Clinics rely on experienced professionals such as doctors, psychiatrists, and nurses, who are rewarded in exchange for their knowledge. Also, lawyers are needed for the necessary legal requirements involved in procedures, such as the case of surrogacy in which both parties involved must sign a contract. In addition, investors are crucial since clinics need to work with the latest technology available, which can be very expensive, in order to provide the best quality treatments to their clients. Furthermore, constant research regarding new medicines and medical trends are key for the clinics working in the assisted reproductive industry.

5.4.2 Hypotheses 2 – Validated

The second hypothesis was: “Assisted Reproductive Technology became an actual business worth billions of dollars due to the female and/or masculine infertility, among other health problems and to the decision of people to delay the age of parenthood. As the treatments are very expensive, the industry ended up as a wealthy business. This is because companies aim to obtain money at the expense of people's desperation to have a baby.”

According to the information gathered by the authors, the worldwide fertility rate has decreased over the years and there's an ongoing tendency of obesity alongside society, that affects the condition of people to conceive naturally. In addition, people nowadays tend to decide to start conceiving at an older age than years ago, around their 30s (World Bank Data, 2019). In addition to these issues, taking into consideration the survey carried out, 75 people out of 161, totally agreed

with the following statement "The context in which we live today favors people delaying the moment of being parents"

All these factors, encourage people to draw upon ART. As a result, because the procedures involve human health, there may be several difficulties during treatment. That is why fertility clinics must invest in Research and Development, as well as highly trained personnel and top-of-the-line equipment. Furthermore, the pharmaceuticals given to patients must come from reliable sources, providing the highest possible quality for the patients.

Another factor to consider is clinic upkeep. For patients to be happy and content, the facilities must be in outstanding condition.

Overall, laboratory costs, treatments, supplies, and personnel, among other resources, make this a very expensive enterprise, because none of the previously described characteristics are low cost.

Finally, every year, people will be faced with infertility challenges, forcing them to seek out Assisted Reproduction treatments in the hopes of becoming parents. Private clinics will once again be required to disburse enormous sums of money, which they will be eager to recoup through revenue.

Therefore, the hypothesis stated by the authors is validated.

5.4.3 Hypotheses 3 – Not Validated

The third hypothesis stated: "Health professionals believe it is ethical to make profits by performing Assisted Reproduction methods to people who struggle to conceive, since it consummates the dream of many families."

In order to provide an accurate response to this hypothesis, two professionals in the filed were interviewed regarding this issue.

As previously exposed, on the one hand, Roxana Resnik, the gynecologists, claims it is completely ethical to receive an economical reward in exchange for her services. She bases her affirmation on the fact that as any other profession, doctors should have an income for their daily basis.

On the other hand, Jorge Santoianni, the specialist in male infertility, believes that it is not ethical to charge people who are desperate to conceive. In fact, he is totally against this business.

Despite this, people who are willing to conceive and struggle to do it naturally, will draw upon on these methods, as long as they have the financial resources to do it. Considering the survey made, 87.6% of the respondents would consider ART as a way of having children and 47.2% of them answered that they would get the treatments even though it costs around \$3.500 USD and \$15.000 USD in Argentina.

Therefore, because of the difficulties in gathering primary data and the dissensus between the health professionals interviewed, the authors were not able to validate the hypothesis, making them unable to arrive to a conclusion.

5.4.4 Hypotheses 4 – Validated

The fourth hypothesis was: “Companies who work on the Assisted Reproduction industry have as their main objective to make profits and remain competitive along time.”

In order to be able to either validate or refute the hypothesis, a deep investigation along with a survey and interviews were conducted.

The survey included a specific question regarding this matter, in which the following statement was provided: "Companies have as an objective the fact of obtaining money from the desperation of people for having kids."

The answers obtained in this question shown that 27% of the people who responded totally agreed with it, whereas 28% agreed, and only 4% totally disagreed with it. However, 47.2% of the respondents answered that they would be willing to pay between \$3.5000 USD and \$15.000 USD in order to get a treatment in Argentina but 51,6% of them do not think that paying those prices in order to conceive, it's fair. Nevertheless, even though people do not think it's fair to pay such elevated prices, they are still willing to do it, and this benefits clinics.

Furthermore, both specialists interviewed agreed that businesses must make a profit in order to continue offering services and to maintain the most up-to-date technology in terms of the equipment required to execute procedures on people.

Digging deeper, the research conducted by the authors make them able to affirm that this statement is completely validated, since companies utilize all their possible strategies in order to make profits.

From creating strategic business models to hard marketing campaigns, the industry monopolizes large number of customers every year, despite having a limited segment. Even more, as previously stated, the business is expected to keep growing, reaching \$ 54.75 billion by 2028, with revenue growing at a 9.7%. (Emergen Research, 2021)

5.4.5 Hypotheses 5 – Validated

Finally, the last hypothesis stated: "Even though Assisted Reproduction is very expensive due to its high complexity and all the costly technology involved in the process, since it is a growing

market, due to constant research and innovation, consumers (as time passes) will have more options to choose from. Therefore, more companies and entrepreneurs are going to enter the fertility market, making costs drop down so it will be accessible for many people.”

The following hypotheses was validated through the information provided by the 10th Congress of the Asia Pacific Initiative on Reproduction (ASPIRE, 2021) and by the information gathered from the interviews performed to the two professionals.

Overall, they all agree on the fact that the constant development and improvement of technology will make the treatment costs drop down in the future, making it more accessible for people, since with technology, human errors are avoided, and fewer human resources will be needed to perform the services.

As it was developed in the Literature Review, according to a market research report developed by Fortune Business Insights the predictions regarding the future of the industry of Assisted Reproduction is that “Global Assisted Reproductive Technology is projected to reach \$45.96 billion USD in 2026.”

That being said, the ART industry has a bright upcoming future since the current society lifestyle makes people draw upon Assisted Reproduction methods and this provokes that more people get interested in the industry and decide to start investing on it.

6 CONCLUSIONS

The purpose of the following chapter is to provide a brief summary of all that has been analyzed throughout this research. Research questions were developed on Chapter 1, and they had all been answered. Furthermore, objectives have been completed and hypotheses were validated except for one after conducting an intensive analysis of the information gathered from the surveys, interviews, and secondary data.

6.1 Conclusion 1- The Assisted Reproduction industry works as any service business

Following the investigation, it was determined that the Assisted Reproduction industry operates similarly to any other business that provides a service in exchange for a monetary reward.

To begin, these companies display marketing strategies to attract clients, considering their target market, primarily through the internet, as do most business services nowadays, because most people decide to first look for information about a service by conducting a simple Google search before hiring it. After conducting their research, potential clients are more likely to select the company that they believe best suits them and request additional information about the service they are considering.

Clinics have a staff of health professionals with various specialties that advise clients on which service is best for them, such as artificial insemination, in vitro fertilization, and egg freezing, ICSI, among other things, based on their medical condition. The clients then ponder and select the choice they believe is best for them, and clinics explain the costs involved in providing the treatment. If the clients agree on a price, both sides come to an agreement, and the clients receive the service in exchange for an economical reward.

Furthermore, clinics in the assisted reproduction sector strive to make a profit in order to remain commercially and financially viable for the long term. In fact, one of the experts interviewed

(Jorge Santoianni, 2021) claimed that businesses in this particular industry seeks to make profits out of the desperation that people had for conceiving and starting a family. In addition, in the survey carried out 27 % of the respondents totally agreed with the following statement: "Companies have as an objective the fact of obtaining money from the desperation of people for having kids."

However, for most businesses, whether they work in the service industry or not, making money and being competitive and sustainable over time is critical.

Companies that provide a variety of services, on the other hand, must maintain a high level of quality because their brand reputation depends on it.

As a result, clinics must have a well-developed quality management system that establishes processes and procedures for constantly monitoring and improving current business practices, such as conducting regular audits, keeping all documents up to date, ensuring that all medications are administered properly, and having all technological equipment used for Assisted Reproduction techniques checked on a regular basis to ensure that they are in good working order.

Furthermore, clinics must also follow legal guidelines for the management of their premises, technical equipment, and the storage and administration of various pharmaceuticals.

To summarize, companies that engage in the Assisted Reproduction industry have the same operating structure as other businesses that provide a different sort of service. They must use various marketing tactics to attract customers, persuade them to use their services, and come to an agreement with both sides, taking into consideration all the costs involved.

6.2 Conclusion 2 - The culture and lifestyle of today's society benefits the Assisted Reproduction industry

The rapid advancement of technology has resulted in significant changes in society's lifestyle. Many things may now be done from the comfort of your own home, including working

full-time online, maintaining bank accounts, transferring money, attending classes at various academic levels, and purchasing items such as clothing, furniture, and computers, to name a few.

However, the fact that people can do practically everything with their phones, computers, or tablets leads to a more sedentary lifestyle, which can contribute to infertility-related health issues.

Furthermore, as it was mentioned in Chapter 4, in today's society, it is critical for people to establish a professional career, which requires obtaining a bachelor's degree and, more likely, a master's degree, as well as being financially secure, before starting a family.

In fact, 75 participants out of 161 in the survey said they completely agreed with the following statement: "The context in which we live today favors people delaying the moment of being parents."

All of these variables contribute to postponing motherhood and a drop in fertility rates as a result of health issues. As a result, those who are unable to conceive naturally owing to age, fertility issues, or a desire to have a child without a partner must use Assisted Reproductive technology.

Furthermore, ART has thrown a wrench in the concept of "fertility clocks," (an example was provided in Chapter 5, question 4) as people can now store their own eggs or sperm and use them anytime, they want, regardless of their age. As a result, ART allows people to become parents whenever they wish, ensuring that this sector has a promising future.

However, it is true that these treatments are not accessible to everyone these days due to the fact that they require highly complex machines, fertility specialists, and additional medication to improve the success rate, all of which make these techniques extremely expensive, even though some countries, such as Argentina, have laws that encourage public access to ART.

It is also worth noting that, in recent years, medical insurance companies have become involved in this market by covering, in some cases, these therapies for their members. However, according to the doctor interviewed, Roxana Resnik (2021), insurance companies try to keep costs as low as possible, and in order to do so, they provide patients with low-quality medications and do

not have access to the most up-to-date technological tools and equipment necessary for a successful treatment.

As a result, taking into consideration the interview performed to Dr. Roxana Resnik (2021), many health specialists choose to work independently, without the use of medical insurance as intermediaries, in order to increase their profit margins and give better quality treatments to their patients, resulting in higher success rates.

6.3 Conclusion 3 - Clinics in this industry employ marketing methods and technology to attract customers from all over the world.

Companies in the Assisted Reproduction industry, like any other business, have a target market, which includes people who are unable to conceive naturally due to health issues or advanced age, single parents who want to raise a child on their own, same-gender couples, and young people who choose to freeze their eggs/sperms.

Marketing plans are established with the goal of attracting potential clients interested in their services, considering the target market. Clinics engage in marketing consultants as well as advertisements in magazines, billboards, and social media in order to implement effective marketing tactics.

Because certain organizations operate primarily with international clientele, such as Ukraine, whose most well-known service is surrogacy, digital marketing is critical for this industry. Unlike other countries, Ukrainian surrogacy clinics offer 'a la carte' services at exceptionally low pricing, with 'concierge' services added based on the Intended Parents' tastes and circumstances. Furthermore, since Ukraine has more flexible regulations towards ART treatments, Kiev, the country's capital, has become a hotbed for commercial surrogacy around the world.

As a result, fertility clinics use search engine optimization or pay-per-click advertising to attract overseas clientele. All clinics advertise its content in different methods and styles, but they

all have the same goal: to lure new clients to their facilities in the hopes of signing an agreement. (Yourwebseo, 2021)

Websites are highly significant because they allow potential clients to see all the information about the clinic, including its history, testimonials from previous patients, the services they provide, the pricing associated with each treatment, and how to contact them.

Moreover, images of infants are broadcast on all the clinics' social media pages since they have such a significant emotional impact on patients that they may overlook treatment fees because all they want is to start a family.

In addition, according to the interview performed to Monica Zaccara (2021), when she went to the fertility clinic itself, she saw many pictures of babies hanging on the walls. In fact, all the babies that were born at that clinic were shown all over the place. This gave her more illusions. She was even told to take pictures of her daughter to the clinic once she was born, so that they could expose them.

In addition, two essential terms are employed in treatment advertising: "dream" and "miracle," which appeal to the emotional side of the patients.

Taking everything into account, it is reasonable to conclude that customers are drawn to clinics primarily through their websites, from which they can access their social media accounts, which are designed to communicate and persuade them in order to establish a personal relationship, rather than to provide critical information.

6.4 Final words

The authors concluded after four months of research that Assisted Reproduction Technology is still a young industry with a large market size that draws more investors every day. Because of the trends and lifestyles of today's culture, this industry also has a bright future with the potential for growth.

Two industry professionals, a gynecologist, and a biochemist, as well as two intended surrogate mothers who preferred anonymity and a lady who had previously been a surrogate mother, were interviewed. A survey was also conducted and circulated among Argentina residents in order to have a thorough understanding of the Assisted Reproduction industry in the country.

Because the interviews were conducted in Spanish and subsequently translated to English, some of the responses may have been tampered with.

Considering all of the preceding factors, the authors feel that this study serves as a description of the large-scale Assisted Reproduction industry, with an emphasis on Argentina, the United Kingdom, and Ukraine.

Hopefully, the thesis's ideas and facts will inspire more investigation into the issue.

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