





Public Opinion Survey on Human  
Reproduction and the Use of Modern  
Reproductive Technology

PUBLIC OPINION SURVEY ON HUMAN  
REPRODUCTION AND THE USE OF MODERN  
REPRODUCTIVE TECHNOLOGY

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# Public Opinion Survey on Human Reproduction and the Use of Modern Reproductive Technology



EDICIONES  
UNIVERSIDAD DIEGO PORTALES



PROGRAM ON ETHICS  
AND PUBLIC POLICIES IN  
HUMAN REPRODUCTION  
**udp**



## *Introduction*

Under the sponsorship of the Vicerectory for Academic Affairs of Universidad Diego Portales, a group of physicians, scientists and other professionals from varied fields, initiated a study group in order to examine and develop research programs with the aim of contributing to the public debate on ethical challenges and public policies regarding the use of technological advances in the field of human reproduction.

It is in this context that a “Program on Ethics and Public Policies in Human Reproduction” was formed, with the main objective of strengthening and enriching the capacities of professionals, legislators and the general public to address the ethical challenges and corresponding public policies that result from the advances in science and the extensive use of modern reproductive technologies.



Some of the most challenging topics in the field of assisted reproductive technology (ART) are related to inequality in the access to modern, safe and efficient medical treatments; the autonomy of adults to access these treatments; the biological and legal consequences of research involving embryos resulting of these procedures and certainly the lawfulness or unlawfulness of investigations and medical interventions resulting from scientific and technological findings in this field.

These challenges entail a greater connotation in an open society, i.e., in a society that under freedom of conscience and expression considers that all its members have a right to disagree and behave in accordance with their beliefs and values.

This Program seeks to contribute to society through three main tasks:

1. Explore and assess the level of knowledge and perceptions of public opinion regarding sexuality and reproduction.
2. Make available to the public, the scientific community and policy makers, the level of existing knowledge regarding these issues, and disseminate which is the status of public opinion on these matters.
3. Contribute to generate a broad educated discussion in these matters, influencing the public agenda.

As part of this initiative, we have undertaken a survey to examine public opinion concerning what people know and what their opinions are regarding human fertility and the use of scientific advances available in order to help infertile couples conceive.

More than 100,000 babies have been born in Latin America since in vitro fertilization was first used in 1984. Despite this fact, there is no study showing what people know and what people believe regarding the use of these methods to conceive.

The survey presented here is the first scientific study performed in Latin America aimed at revealing the perspective of inhabitants living in a large urban community, concerning the access and rights of people to use modern reproductive technology to build families.



## *Methodological Aspects*

A questionnaire-based survey was conducted to assess the level of knowledge on fertility and learn about the attitudes and beliefs of inhabitants in Greater Santiago regarding the use of ART. The questionnaire included questions addressing the following issues:

1. Knowledge about fertility and infertility
2. Knowledge and perception on reproduction and medical assistance to overcome problems of human fertility
3. Perception on medically assisted reproduction
4. Opinion regarding who should have access to assisted reproduction technology
5. Opinion regarding funding of assisted reproduction technologies
6. Opinion regarding status, condition and uses of human embryos

## 7. Position about the establishment of motherhood and fatherhood via gamete and embryo donation

As a part of fieldwork preparation, the questionnaire was pre-tested in order to make sure that the questions were clear and easily understood by surveyed people. Based on the information gathered through the pretesting, the final questionnaire was constructed.

Specially trained interviewers were in charge of administering the questionnaire, which consisted of 112 questions. Each interview took an average of 30 minutes. To make sure that all participants had a level of information that allowed them to respond the questions, paragraphs on certain issues such as ART, in vitro fertilization (IVF) and gamete donation were introduced. Paragraphs were written in a clear, direct and simple language, avoiding an induced answer by the respondent.

All participants read and signed an informed consent explaining that their participation in the study would be voluntary and anonymous. The study protocol was approved by the Research Ethics Committee of Universidad Diego Portales.

The study universe was composed of a population of 1,500 persons, between 18 and 65 years old, living in 34 municipalities of Greater Santiago, who were interviewed face to face. Sampling error was +/- 2.5% considering a 95% confidence interval.

The sample was probabilistic in all stages:

1. Proportionate stratified (34 municipalities of Greater Santiago)
2. Stratified by conglomerates (selected squares)
3. Random selection of households. One member per household aged between 18 - 65 was invited to participate.

The following table presents the number of surveyed people by gender, age, socioeconomic group and religion.

Table 1: Characteristics of the Population Studied

Variable	Subgroup	Number	%
Gender	Men	749	50
	Women	751	50
Age	18 - 29	382	26
	30 - 44	468	31
	45 - 65	650	43
Socioeconomic group	Medium-high	420	28
	Medium	600	40
	Low	480	32
Religion <sup>1</sup>	Religious Catholic	647	43
	Non-religious Catholic	259	17
	Evangelical	222	15
	Another religion	81	5
	None	262	17
<b>Total</b>		<b>1500</b>	<b>100</b>

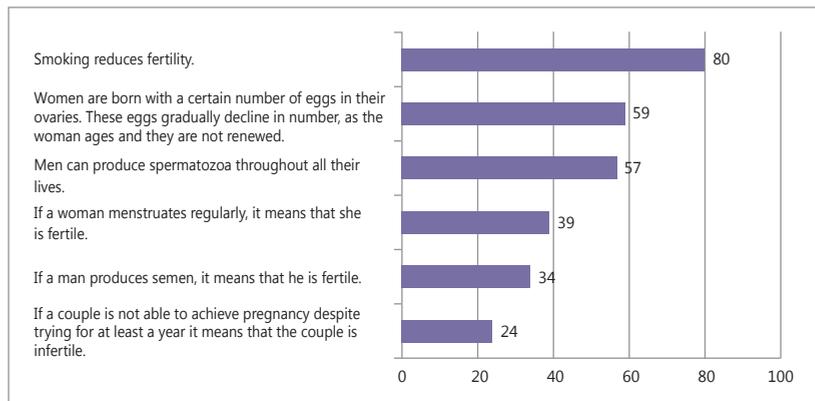
In general, charts presented below show percentages of expressed support or rejection to the statements previously presented by the interviewer. In the analysis of results there is occasional reference to the number of people that answered in an opposite way to what the figure indicates. This is done for clarity, since it may be that if a chart indicates that 20% of respondents agree with a statement it does not necessarily mean that 80% of people disagree, considering that in some questions there is a small

percentage of surveyed individuals that either declines to answer or indicates that they do not know what to answer. Because of this it may be that in a question the sum of agreements and rejections of proposed statements is not 100%.

## 1. Knowledge about Fertility and Infertility

Chart N° 1: Agreements regarding fertility

% Answers "I agree"

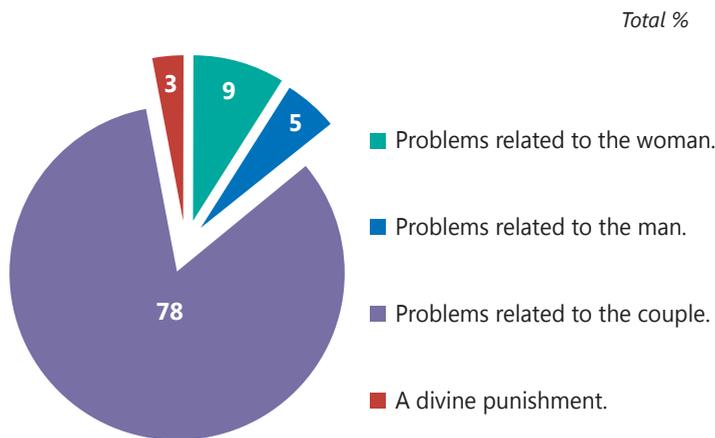


Inhabitants of Greater Santiago have correct notions about female and male fertility. For example, 80% of the respondents were aware that smoking decreases fertility. Likewise, the vast majority knew that a woman has a limited number of ova and that men produced spermatozoa throughout all their lives.

On the other hand, 55% of the participants knew that if a woman menstruates it does not necessarily mean that she is fertile, although 39% had the misconception that if a woman menstruates regularly, it means that she is fertile. Likewise, 61% knew that the sole production of semen does not assure fertility, although one third (34%) believes that if a man produces semen, it means he is fertile.

A large majority of participants had a wrong perception of infertility. Only 24% believed that if a couple is not able to conceive after trying for one year, that means that the couple is infertile. Furthermore, 71% of the respondents considered that healthy persons need more than a year to achieve pregnancy. These misconceptions may have epidemiologic consequences since they may imply that persons with fertility problems delay seeking medical assistance.

**Chart N° 2: The most frequent causes of infertility are usually associated with problems...**



*\*Don't know/No reply complete 100%.*



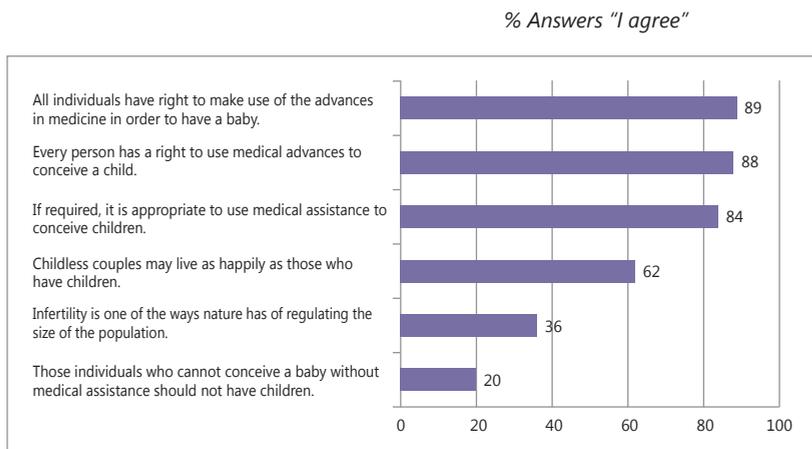
Almost 80% of respondents considered that causes of infertility relate to problems affecting the couple.

On the other hand, only 3% believes that infertility is the result of a divine punishment.

With respect to this question, answers between men and women did not show significant differences. No significant differences were found among different age or socioeconomic groups.

## 2. Reproduction and Medical Assistance

**Chart N° 3: Agreements regarding reproduction and medically assisted reproduction**



Results shown above indicate that there is great openness in the population of respondents towards the use of medical assistance in human reproduction.



Almost 90% of respondents support the use of medical advances or medical assistance to conceive children.

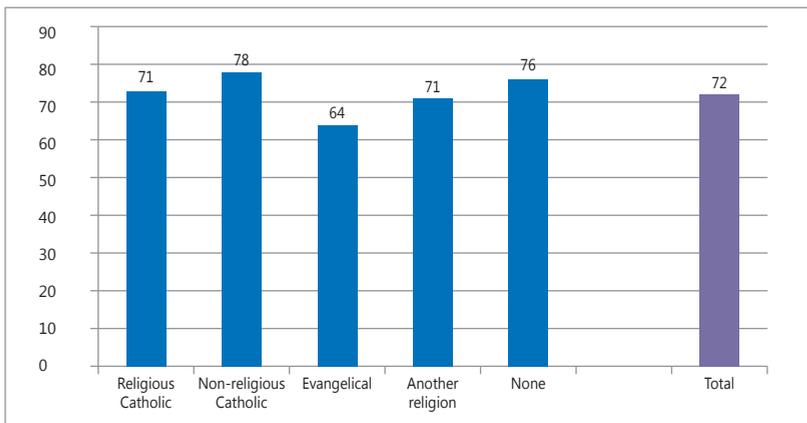
Interestingly, although 62% of participants believe that couples may be happy without having a child, almost 90% consider that individuals have the right to make use of the medical advances to conceive children. Respondents value the right to use science in order to conceive and express respect for individual autonomy concerning reproductive decisions.

Only 20% consider that people who cannot conceive children spontaneously should not conceive. This statement is stronger in respondents of the lowest socio-economic group and those older than 45 years.

### 3. Perception on Assisted Reproductive Technology (ART)

**Chart N° 4: Support to in Vitro Fertilization (IVF)**

*% Answers "I support + I strongly support" according to religious beliefs*



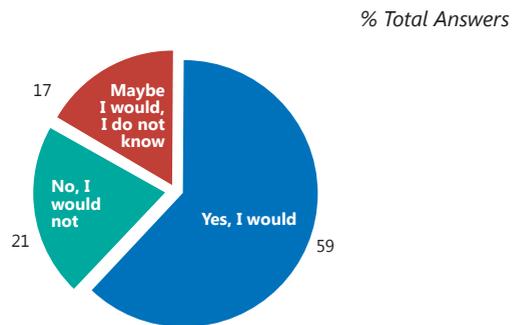
To learn specifically which was the position of Chileans regarding medically assisted reproduction, we investigated the support or opposition to in vitro fertilization. Before addressing this issue, the interviewer read aloud the following introduction: "As you may probably know, assisted reproductive technology

treatments refer to medical procedures that allow fertilization outside the woman's body. Once fertilization has taken place, one or more embryos are transferred into the uterus, so that pregnancy can occur. The most widely used technique is in vitro fertilization (IVF)."

The answers received confirm that 72% of respondents support in vitro fertilization (IVF). When answers are stratified by age and socioeconomic categories, this position is stronger among people of medium-high socio economic groups and those under 44 years. Also, non-religious Catholics and those of other religions/no religion showed a stronger support when compared with Evangelicals.

It is worth mentioning that support to IVF is quite high among people who profess religions that officially oppose to medically assisted reproduction, such as Catholics (71%)<sup>1</sup> and Protestants (64%).

#### Chart N° 5: Would you consider using in vitro fertilization (IVF)?



*\*Don't know/No reply complete 100%*

<sup>1</sup> Distinction was made between religious Catholics and non-religious Catholics. The former assessed themselves as religious people and feel closeness to the Catholic religion; the latter, do not assess themselves as religious, but they do feel closeness to the Catholic religion.

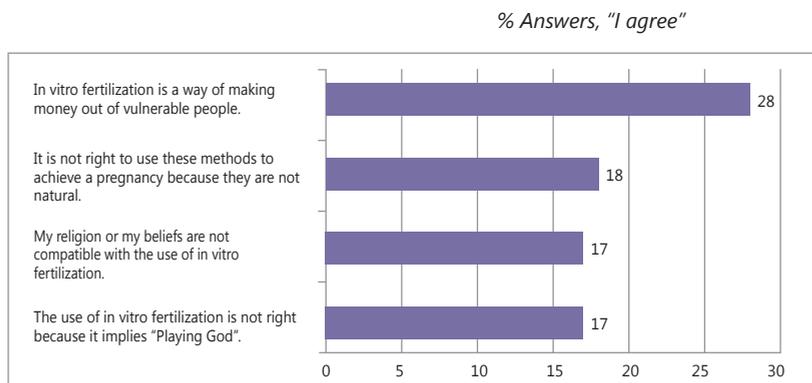
After asking respondents on their support or rejection of IVF, they were more directly inquired by asking them "if after some time of trying to conceive a child you were unsuccessful, would you consider the use of IVF?"

Almost 6 out of 10 participants responded affirmatively: 59% would consider using IVF if they could not have a child. This position is stronger among women and among respondents aged between 30 and 44. Answers to this question show few variations associated with religious beliefs.

On the other hand, only 21% of participants stated they would not consider using IVF. Respondents in this group are mainly people older than 45 years. In this age category, 27% responded they would not consider using IVF.

To further investigate the perception on IVF, a number of negative statements regarding IVF were presented and participants were requested to respond whether they agreed or disagreed. As shown in the chart, agreements with negative statements referred to IVF are quite low and, as seen before, figures are consistent with a high public approval rate.

**Chart N° 6: Other agreements regarding in vitro fertilization (IVF)**





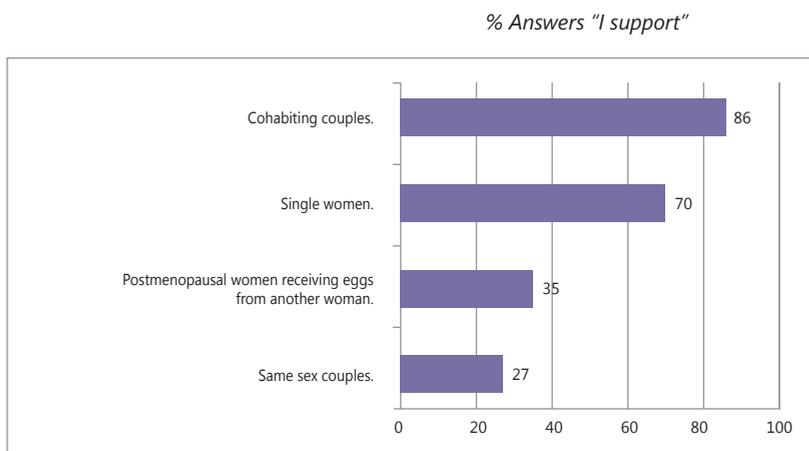
Even though 83% of respondents identified themselves with a religion, and 60% indicated they are Catholic, only 17% agreed with the statements: “my religion is not compatible with IVF” and “The use of IVF is not right because it implies “Playing God”.

In the case of Evangelicals the numbers are slightly higher: 23% stated that their religion is not compatible with IVF.

Only 28% of respondents considered that IVF was a way to make money out of vulnerable people. This proportion is higher in low socioeconomic groups and much lower in medium-high socioeconomic respondents. This may reflect inequality in access to fertility treatments.

## 4. Who Should Have Access to Assisted Reproductive Technology (ART)?

Chart N° 7: Support to use of in vitro fertilization (IVF) by:

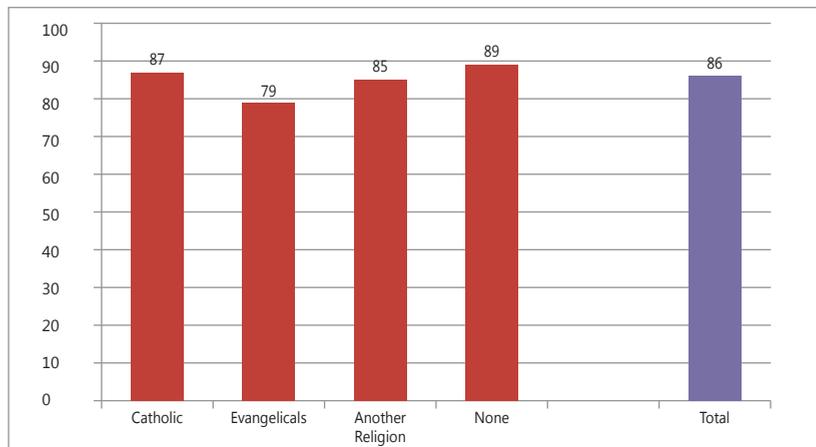


Once support for IVF was established, we addressed the issue of who should have access to this form of ART. People surveyed provided a quite clear opposition to the use of treatments by same sex couples and postmenopausal women, while respondents expressed strong support to the use of these therapies

by heterosexual cohabiting couples and by single women. There is a high degree of acceptance towards the establishment of families by heterosexual cohabitant couples (86%) and single women in their reproductive age (70%). These levels of acceptance, however, show clear limits: only 35% of respondents supported the use of ART in postmenopausal women (and 60% opposed). Likewise, only 27% supported the use of ART in same sex couples (closeto 70% opposed).

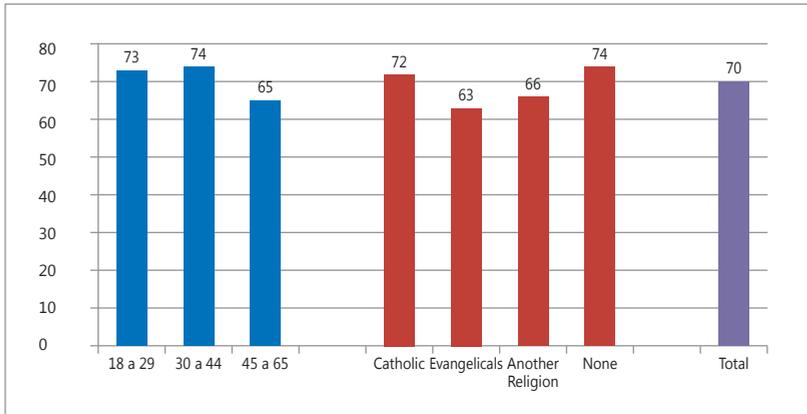
**Chart N° 8: Support to the use of in vitro (IVF) by cohabiting couples**

*% Answers, "I support" according to religion*



## Chart N° 9: Support to the use of IVF by single women

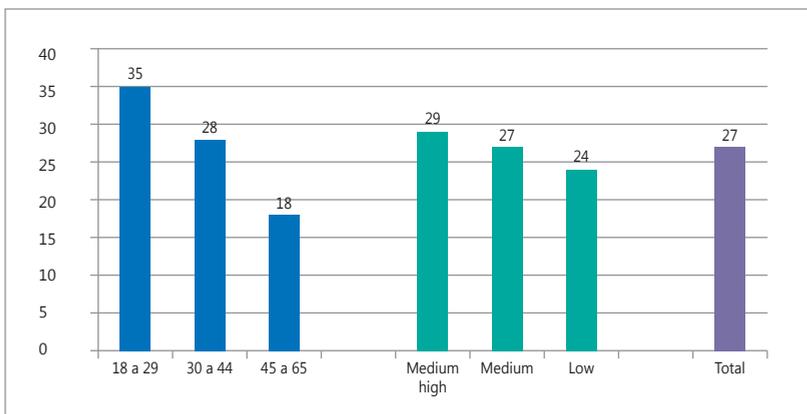
*% Answers, "I support" by age and religion*



Support to the use of in vitro fertilization by cohabiting couples is transversal to all religions. The same phenomenon occurs with IVF in single women. As expected, support is lower in people older than 45 years and in Evangelicals; however, 65% of respondents aged between 45 and 65, and 63% of Protestants agree with the use of IVF by single women.

## Chart N° 10: Support of IVF use by same sex couples

*% Answers "I support" by age and socioeconomic group*



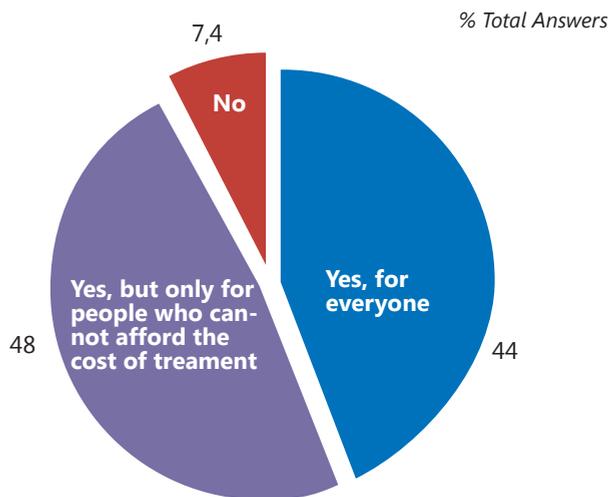
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Approximately 70% of surveyed people opposed to the use of IVF in same sex couples. This result is consistent with findings of the “Survey on Public Opinion” carried out by the Universidad Diego Portales , which revealed that only 22% of surveyed people considered that an homosexual couple should have the right to adopt a child. When answers were stratified by age and socioeconomic group, support is stronger among young people and those of high socioeconomic level. Concerning religion, the group most supportive of reproduction among same sex couples are those who do not profess a religion.

In summary, support to the use of ART among the population is high for use of technologies by married couples, cohabiting couples and single women.

## 5. Funding of Assisted Reproduction (ART)

Chart N° 11: Should the government fund assisted reproduction therapies through the public health system?



\* Answers: I do not know / No reply complete 100%.

With respect to government funding for these techniques, 44% considered that everybody in need should receive financial support, whereas 48%

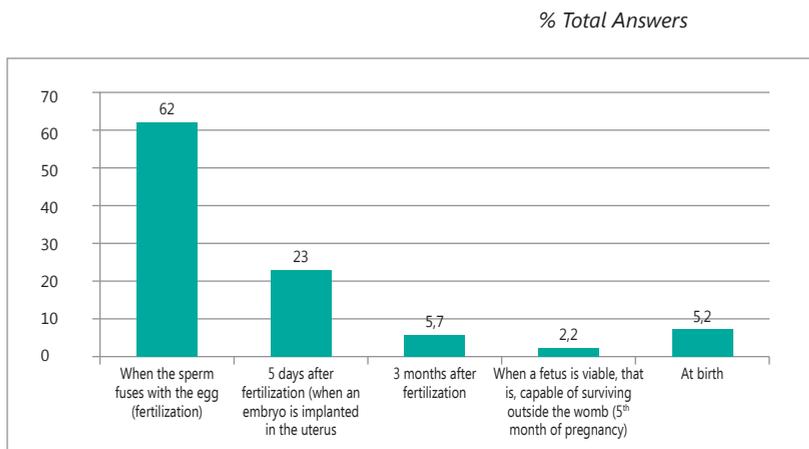


considered that governmental funding should be restricted to those with socioeconomical needs. Only 7.4% considered that there should be no financial aid.

Participants considered that equal provision of funding should be available to married couples, cohabiting couples and single women seeking treatments. Consistent with previous answers, the vast majority of respondents disagree with the proposition that government funding be provided to women older than 50 years and homosexual couples. Respondents from low socioeconomic groups emphasized that funding should be provided to all people (54%), while those from medium-high socioeconomic groups believe that funding should be directed only to people who cannot afford the cost of treatments (57%).

## 6. Conditions and Uses of Human Embryos

**Chart N° 12: Which of these stages do you believe mark the beginning of a new person?**



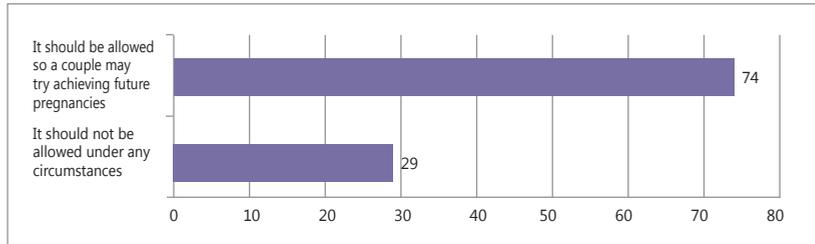
Sixty two percent of respondents believe a new person exists from the moment of fertilization (when the sperm fuses with the egg).

Twenty three percent stated a new person exists when the embryo implants (5 days after fertilization).

Therefore, 85% of respondents consider that there is a new person within the first five days after fertilization.

**Chart N° 13: Under which of the following circumstances should embryo freezing be allowed?**

*% Answers "Yes"*



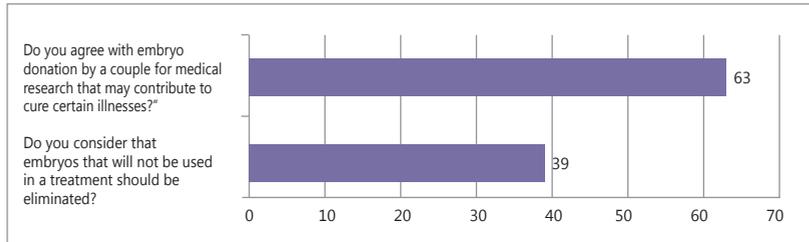
Despite 85% of respondents agreed that a new person exists within 5 days after fertilization, 74% of surveyed people support embryo freezing if the procedure is performed to allow future pregnancies. Therefore, embryo freezing is supported if the couple or the woman will be benefited from the procedure.

Only 29% disagree with embryo freezing under any circumstances.

These are interesting figures showing that the majority of people interviewed value more a real and actual person- in this case represented by the infertile couple- than a pre-implantation embryo. In other words, inhabitants of Greater Santiago consider that the balance between risks and benefits of this type of medical interventions applies differently to the infertile couple than to the embryo.

## Chart N° 14: Agreement with the disposal or use of embryos for research purposes

% Answers "YES"

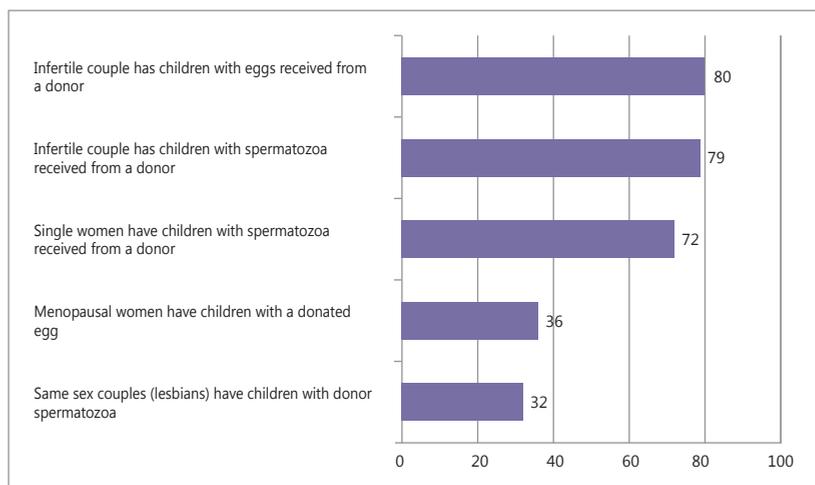


The same applies to embryo donation for research purposes. 65% of respondents support a couple's decision to donate embryos for research that may lead to treat certain illnesses. People seem to place a higher value in persons who can benefit from research than in the value of embryos.

## 7. Establishing Motherhood and Fatherhood Via Gamete and Embryo Donation

Chart N° 15: Agreement regarding gamete donation

% Answers "I agree"



Results reveal that 8 out of 10 participants favor gamete donation so an infertile couple may have

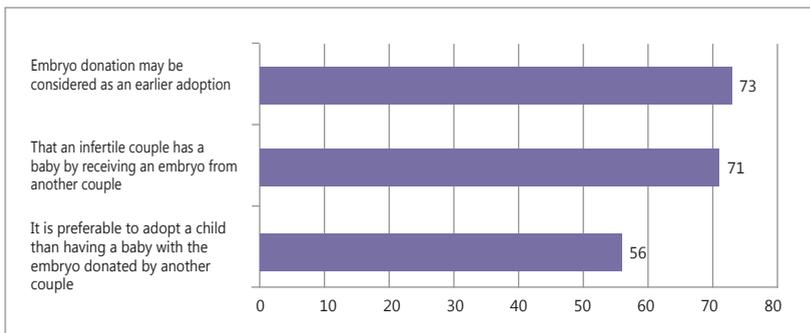
children, and no difference was revealed for eggs or spermatozoa donation.

Likewise, support to sperms donation to help single women become mothers is also quite high (72%).

Again, as shown by other answers, inhabitants of Greater Santiago do not approve that postmenopausal women and lesbians have children via gamete donation.

### Chart N° 16: Agreement with embryo donation

*%Answers "I agree"*



Seven out of 10 respondents support embryo donation to an infertile couple and considers this procedure as an early adoption.

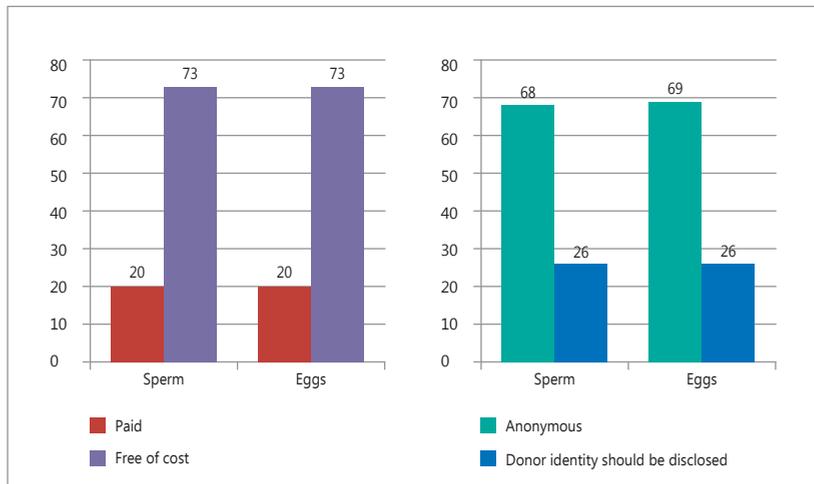
However, 56% of respondents said that they would rather adopt a child than have a baby with a donated embryo.

Given the wide acceptance of gamete and embryo donation, it may be deduced that the majority of respondents do not see in the lack of a genetic link a limitation to building a family.

Nowadays there are two big controversies in relation to gamete and embryo donation. The first is whether gamete donors should be economically compensated. The second is whether donation should be anonymous or donor identity should be disclosed.

**Chart N° 17: Compensation of gamete donation and donor anonymity**

*% Total Answers\**



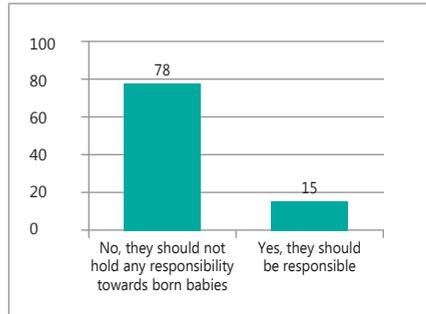
*\*Don't know/NR complete 100%.*

A large majority of surveyed people considers that there should be no payment for gamete donors (73%). Only 20% believe it should entail payment. Answers are identical for egg and sperm donation.

In comparison to men, women are more supportive of free gamete donation. Respondents older than 45 and those of medium socioeconomic groups support altruistic donation, while younger respondents favor an economic compensation for gamete donation.

Likewise, almost 70% consider that donation should be anonymous.

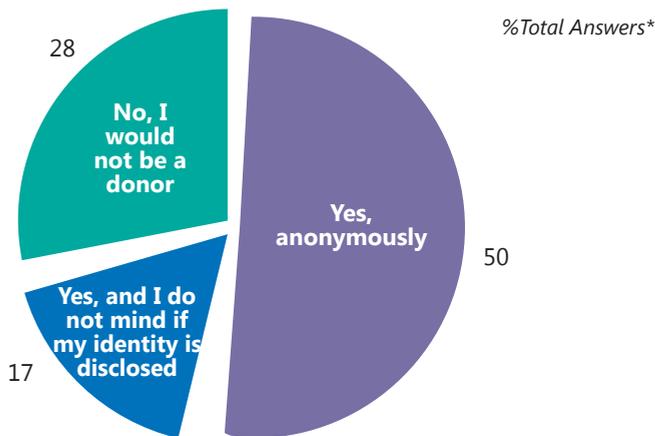
**Chart N°18: Obligations of donors**



*\*Don't know/NR complete 100%.*

In relation to obligations of the donors, 78% considers that the donor should not hold any responsibility towards the person born as a product of his/her donation.

**Chart N° 19: Would you be a gamete donor?**



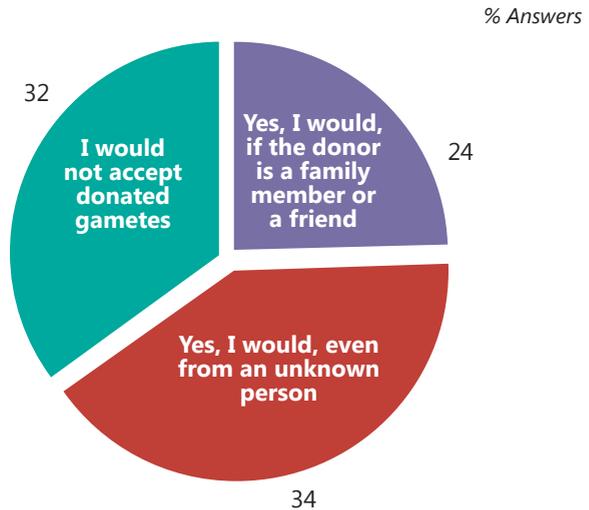
*\*Don't know / NR complete 100%.*

67% of participants said they would be donors. Of these, the majority would do so anonymously.

Evangelicals are more reluctant to donate (38% state they would not donate). However, 58% of surveyed

people state that they would be willing to become a mother or father by receiving gametes from a donor if they did not have their own gametes.

**Chart N° 20: Would you be a gamete recipient?**



*\*Don't know/No reply complete (100%).*

The 58% of people who are willing to receive some kind of gamete donation is slightly lower than the 67% who would be willing to be a donor.

Similarly, as shown by results in the previous chart, the majority of respondents would prefer to receive gametes from an unknown donor.

## 8. Conclusions

Considering the information that was acquired and analyzed in this survey, and the objectives that were set for this research, it is possible to conclude that:

1. A broad support to the use of medical interventions in reproduction was detected, specifically through:
  - a. The use of medical assistance in reproduction: 88%
  - b. In vitro fertilization: 72%
  - c. Reproduction in single women: 70%
  - d. Gamete donation: 79%
  - e. Embryo donation: 71%
2. There are few differences in the opinions between men and women.
3. Broad acceptance of ART among religious people

- 
4. Respondents were shown to be knowledgeable on fertility issues and the most commonly used methods.
  5. Surveyed people support the used of ART by married couples, cohabiting couples and premenopausal single women. Support is less for the use of ART by postmenopausal women and lesbian couples.
  6. Strong support to cryopreservation of embryos and their donation for research purposes.
  7. Broad agreement to gamete and embryo donation in order to have children.
  8. Respondents consider that there should be no payment for gamete donors, it should be anonymous and impose no obligations on the donor.
  9. Respondents with the highest tolerance to these issues were :
    - Younger respondents (18 – 44 years)
    - People from medium-high socioeconomic levels
    - Non religious people
  10. Less acceptance is seen among:
    - Older respondents (>45 years)
    - Religious people (Catholics and Evangelicals)



