The Desire to have Children and the Preservation of Fertility in Transsexual Women: A Survey

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Abstract

A survey was conducted among transsexual women to ask their opinion about the option of freezing sperm, before the start of any medical treatment. We received responses from 121 women. The vast majority feel that the availability of freezing sperm should be discussed and offered by the medical world. A smaller majority would indeed have frozen their own sperm, or at least have seriously considered doing so, if this had been an option. Most women in favour of the idea of sperm freezing were under 40 years of age and identified as lesbian or bisexual. A minority of respondents expressed concern about possible risks of genetically transmitting transsexualism to their children, or considered the whole idea of sperm freezing to be in conflict with their female core identity. Many women expressed regret that they could not become pregnant and have a child themselves.

Keywords: sperm, cryopreservation, male-to-female, transsexual, survey

Introduction

Transsexual women and transgender individuals, who undergo feminising hormone treatment, are confronted with the loss of their fertility. This has been considered a ‘price to pay’, and was sometimes thought to be beneficial for the transitioning process. Breaking completely with the past as a male and losing the possibility to ‘father’ a child, often was, and still is, considered a psychological prerequisite for a successful transition into the female role. However, times have changed, and the ideas about what are essential prerequisites for a successful transition for transsexuals have evolved. Individuals who are already parents are no longer excluded from treatment, transsexual women who are sexually attracted to women are no longer excluded, and transsexual women who have a rather masculine build are no longer excluded. And fortunately, most therapists now agree that the loss of fertility is not a prerequisite for a successful transition anymore (Meyer et al., 2001).

Modern reproductive techniques easily allow sperm freezing and insemination or in vitro fertilisation in order to have a child with a female partner. This would allow a transsexual woman to have her own genetic child within a future lesbian relationship (Lawrence et al., 1996). Many fertility centres currently offer treatment to lesbian couples and in a growing number of countries same-sex marriages or unions are now legally accepted. We therefore believe that sperm freezing should be discussed and offered to every transsexual woman, prior to hormonal treatment, similar to men undergoing treatment for a malignancy (De Sutter,
Although sperm freezing is quite readily available, many transsexual women are still uninformed about this possibility and are not counselled about the possibility of preserving their reproductive potential, despite the recommendations as set forward in the Standards of Care (Meyer et al. 2001). The purpose of the present survey was to raise this topic with a representative sample of the community of transsexual women themselves, and to try to analyse their opinions on this subject.

**Materials and Methods**

We developed a semi-structured questionnaire, which consisted of questions on elementary demographic data, sexual preference, present partnership, past fertility, potential future desire to have children, the impact of fertility loss on transitioning, and opinions concerning the offering of sperm freezing prior to treatment. All but one of the questions were multiple choice, the last question provided space for additional remarks in the respondents’ own words, so that they might elaborate further on certain questions, if they chose to.

The survey was advertised on Internet websites visited by, and in mailing lists read by transsexual women, asking for their participation. We tried to limit the project to the Netherlands, Belgium, France, and the United Kingdom. Individual respondents also offered to further disseminate the survey. We launched the survey in April 2002, and closed it in September 2002. The questionnaire was available in three languages (English, French, and Dutch).

The purpose of using the Internet as a vehicle for the survey was to reach as many individuals the process of transition as possible, and who might be interested in this issue. We expected that transsexual women who transitioned many years ago and who sometimes live ‘stealth’ (unrecognised), would be less interested in this survey. It is known that Internet sites and mailing lists offering support to transsexual people are mainly frequented by individuals in the midst of their transitioning process. Moreover, this was exactly the group we wanted to reach. We wanted to obtain a minimum of 100 valid answers in order to allow statistical analysis.

The answers to the questionnaire were initially submitted to a cluster analysis in order to detect relationships among the answers to the different questions. Then, we analysed the relationships between specific questions using contingency tables when appropriate.

**Results**

We received answers from 121 individuals from 11 countries. Most respondents lived in France ($n=37$), followed by the UK ($n=27$), the Netherlands ($n=20$) and Belgium ($n=12$). We analysed the results as a function of the language used by the respondents, rather than of the country of residence. Forty-eight individuals answered the questionnaire in English, 46 in French, and 27 in Dutch. Neither language nor country showed any significant relationship to any of the questions. Seventy per cent of all respondents were between 30 and 50 years of age.

Three respondents identified as transgender (having no wish to proceed to hormonal and/or surgical reassignment), the rest as transsexual. Twenty-six individuals had not yet started hormonal treatment, 56 were undergoing hormonal treatment (usually for less than two years) but were still waiting for gender confirmation surgery, and 36 respondents had already undergone sex-reassignment surgery. Most post-operative transsexual women underwent surgery after 1998. Only 10.7% of the individuals had undergone treatment more than five years earlier, indicating that our goal – to reach primarily the group of transsexual women who transitioned recently or who were in the middle of their transition – had been met.

Of 120 women answering the question concerning their sexual orientation, 22 considered themselves to be asexual, 30 heterosexual (being attracted to men), 34 lesbian (being attracted to women) and 34 bisexual. This strongly correlates ($\chi^2: 30.8, \text{d.f.}=3, p=10^{-6}$) with the answers to the question on present partnership: 67 of the respondents had no partner, 39 lived together with a woman (of whom 10 were transsexual women) and only 14 with a man (one of whom being a transsexual man). Sexual orientation was not equally distributed with starting ages at transition ($\chi^2:22.8, \text{d.f.}=12, p=0.03$); asexual respondents were generally older, while bisexual and heterosexual respondents were on average somewhat younger, lesbians were in between.
Of all respondents, 48 had biological children either from the present relationship, or, more often, from a previous relationship, while 73 women had no biological children. Logically, late transitioning respondents were more likely to have children ($\chi^2$:18.3, d.f.=4, p=0.001). Of those who had no children, 40% would still like to have children one day, 40% would not and 20% did not have an opinion. Of the ones with children, half would not want children again, 40% would, and 10% did not have an opinion. This slight difference was not significant, however ($\chi^2$:1.88, d.f.=2, p=0.39).

In response to the question of whether they would prefer a future (female) partner to be pregnant from their own sperm, previously frozen, or from donor sperm, opinions were divided. Half of the respondents would prefer to have their own biological child, half would not care. Although there was a small difference between women who had or had not children with their own sperm, (60% versus 47%), this difference was not significant ($\chi^2$:1.70, d.f.=1, p=0.19). Sexual orientation was also not a factor in preference for use of own sperm ($\chi^2$:4.05, d.f.=3, p=0.26). If anything, heterosexual women were more likely to prefer donor sperm, whereas the lesbian women were more likely to prefer to use their own sperm ($\chi^2$:23.6, d.f.=9, p=0.005). Age was also not a factor ($\chi^2$:3.12, d.f.=5, p=0.68).

More than 90% of the respondents stated that loss of fertility was not an important reason to delay their transition. The rest were still wrestling with the problem of losing their fertility and a few wanted to wait with all forms of treatment until they had children.

As to the question whether sperm freezing should be offered to all transsexual women before hormonal treatment, 77% answered affirmatively, 9% negatively and 14% had no opinion. The 11 women, who answered "no", were not a random subgroup ($\chi^2$:16.7, d.f.=6, p=0.01), as nine were post-operative and qualified as heterosexual or bisexual (Figure 1).

Figure 1: Distribution of the opinions on the offering of sperm freezing, according to sexual orientation of the respondents

However, if sperm freezing would had been a possibility, only 51% would have seriously thought about it or actually done it, whereas 45% would have refused, while the remaining 4% answered that they did not know. However, there is a clear relationship between the answer to this question and the age of the respondent. Under the age of forty, 67% would have frozen sperm, whereas over forty, only 35% would have done so ($\chi^2$:12.6, d.f.=5, p=0.027). Whether or not the respondents already had children, did not influence their choice ($\chi^2$:0.37, d.f.=1, p=0.54). Again, most lesbian and bisexual women (56%) would, if possible, have frozen their sperm or considered it, whereas only 13% of asexual and heterosexual women would have either done it or considered it (see Figure 2; $\chi^2$:23.6, d.f.=9, p=0.005).

Figure 2: Distribution of the opinions on the freezing of own sperm, according to sexual orientation of the
The respondents who answered that they still wanted to have children were much more inclined to store sperm, or at least to consider it, than respondents who no longer wanted to have children ($\chi^2$:17.9, d.f.=2, p=0.0001). However, wanting to have children in the future wish was not correlated with the question of whether or not sperm storing should be offered to every transsexual woman prior to the start of the hormone therapy ($\chi^2$:1.27, d.f.=4, p=0.87).

We also asked whether the respondent would rather feel like a ‘father’ or a ‘mother’ if they ever had a child obtained through their frozen sperm. Half of them answered they would feel like a ‘mother’. 27 would feel like a ‘father’ (however, half of these respondents would consider this unbearable), and 25 individuals did not think this was an important issue. This question relates significantly to another one: asking whether storage of frozen sperm would mean that one cannot break with one’s past as a ‘male’ ($\chi^2$:33.1, d.f.=4, p=10^{-6}$). Only one third of all women answered this question affirmatively, meaning that most women would not have major psychological problems knowing their sperm was stored for possible future use. As expected, the women who believed sperm freezing should not be an option, were also the ones having most emotional concerns about not being able to break with their male past ($\chi^2$:23.4, d.f.=2, p=10^{-5}). Finally, one third of the respondents said they would never be able to masturbate in a hospital to produce sperm samples for freezing, whereas two thirds would do it when necessary, although half of these would find it emotionally difficult.

**Discussion**

The first question to be answered is: “Are the respondents a representative sample for the whole community of transsexual people?” The answer is clearly no, but our intended target group of transsexual woman who recently transitioned or soon are going to transition was met, as almost all respondents were pre-hormone or pre-surgery transsexual women, or if post-operative, had undergone their surgery recently. The language distribution fits with the population that the survey was aimed at. The age distribution reflects that the Internet-active transitioning transsexual woman is around 40 years of age and that younger and older transsexuals are under-represented in our survey. This, of course, is at the same time a limitation of the present study, since nothing can be said about the opinion of transsexual women who do not surf the Internet, or if they do, are not interested in support sites for transsexuals, or who simply chose to ignore the survey.

The same bias was found in the sexual preference and partnership answers. More than half of the respondents claimed to be lesbian or bisexual, meaning that they could in theory benefit from sperm freezing in case they would plan a pregnancy with a possible future female partner. From many literature reports, it seems that a large proportion of transsexual women is indeed lesbian or bisexual, but surely not as large as in this survey (Leavitt and Berger, 1990: Main, 1993). Of the women living with a partner, three-quarters live in a lesbian relationship and only one-quarter lives with a man. This could mean that lesbian or bisexual women, in particular, answered the present survey, because it could be of interest to them, as a future or present partner could become pregnant with their stored sperm in the future, something less easy to arrange for heterosexual women.

Keeping these limitations in mind, this survey still sheds an interesting light on the opinions and feelings of the respondents towards the subject of sperm freezing. Concerning their potential desire to have children in the future, there seems to be no difference whether the respondents already had children or not ($\chi^2$:1.88, d.f.=2, p=0.39). Many of them leave all possibilities for future relationships open, and would not exclude the desire to have a(nother) child, be it through adoption or donor insemination. This correlates well with the answers to the questions on the origin of the sperm to be used and with the finding that the majority of heterosexual women would prefer donor sperm.

The fact that the vast majority of the respondents answered that the problem of fertility loss was not a reason for delaying transition could also reflect a bias. Indeed, most women answering the questionnaire were in the middle of, or shortly after their transition (almost 80%), and as such had already decided to ‘sacrifice’ their future fertility. What the survey does not show, is how many individuals in the population have decided not to transition because of loss of their fertility, since it is not likely that we have reached these individuals as they might search for a different kind of information than the target group of our study.

Although the vast majority of respondents believed sperm freezing should be offered, only half of them would actually have done it for themselves. The respondents who would have used the option to store sperm, or at least would have considered it, were younger than the ones not wanting to use it ($\chi^2$:12.63, p=0.0001).

The vast majority of respondents believed sperm freezing should be offered to every transsexual woman prior to the start of the hormone therapy ($\chi^2$:17.9, d.f.=2, p=0.0001). However, wanting to have children in the future wish was not correlated with the question of whether or not sperm storing should be offered to every transsexual woman prior to the start of the hormone therapy ($\chi^2$:1.27, d.f.=4, p=0.87).
A small group of women disagrees with offering the option of sperm freezing to every transsexual woman, and a larger group would not have done it themselves if it had been possible. These two groups of women seem to have more psychological problems with the ‘male’ aspects of the sperm freezing procedure. They would find it emotionally impossible to masturbate, and having their sperm frozen would be a difficult thought for them, not enabling them to leave their male past behind them. In general, these women are older, heterosexual and many of them are already post-operative. This would mean that this group of women is the least concerned by the possibility of sperm freezing.

Another distinguishable group of women, mainly lesbian or bisexual, likely realise that the option of storing their sperm would enable them to have their own genetic child one day, in a possible future lesbian relationship. This group has no major emotional problems with masturbation and with the thought of ‘remnants’ of their male past to be frozen. These women are younger and still not as advanced in their transition. This is exactly the group of women to whom we believe sperm freezing should be offered.

Interestingly, particularly the women who were against the idea of sperm freezing made many additional comments (to explain their answer), while most of those in favour did not. One woman had the opportunity to freeze sperm, but deliberately chose not to as she was afraid that her transsexualism might be a genetic condition. There were two other members of the family on her mother’s side who also were transsexual, and she did not want to risk passing on a genetic condition to her child, and to put a child through what she had endured in her life, as she put it. This is an interesting remark, because several respondents expressed this fear. Moreover, this reported case of familial transsexualism fits the hypothesis of transsexualism being a genomic imprinting disorder, as proposed by Green and Keverne (2000). Also, recent research by Landen et al. (2000) indicates that genetic components could play a role in developing transsexualism. The issue of passing on ‘bad’ genes (quote from one respondent) is not unique for transsexual women; this is also a point of discussion among other groups of people who carry ‘bad’ genes in whatever form.

Other individuals believe they would not be good parents and would therefore choose not to have children anyway. They believe the psychological trauma they had to go through because of their gender dysphoria would impair a normal parent-child relationship. Others mentioned the bad financial situation of many transsexual people, having to pay for medication, surgery, electrolysis etc. Someone also found society to be so unfriendly to transsexual people, that rearing children would be very hard, on top of all prejudices transsexual people have to fight against already. To this remark one can object that studies have shown that most transsexual individuals are very well adapting to their post-transition life (Cohen-Kettenis and Gooren, 1999) and are capable of establishing a normal relationship with children, both from their pre-transition life as from thereafter. Moreover, the well being of children conceived in lesbian relationships has now been well established (Brewaeys et al., 1997; Chan et al., 1998). However, these remarks touch upon an important point: that there is a need for psychological help and counselling for transsexual women, even after all medical treatments have been completed. One respondent even suggested that a transsexual woman would require much more counselling to prepare for motherhood than she had received in order to be able to transition. Of course, any desire to have children is a highly personal drive and free choice, and it depends on so many factors, all of which cannot be discussed here (Robertson, 1998).

Finally, quite a few women answered that having their own child is one thing, but that being pregnant and giving birth is what they would love most of all. Many transsexual women feel that the impossibility of biological motherhood is one of the major features missing from their femaleness. They would be more interested in future options of uterine transplantation techniques than in sperm freezing. Many regard being able to live through a pregnancy and delivery to be superior to the purely genetic bond with a possible future child. One respondent said that if she could not bear her child herself, she would rather adopt one. This is a very interesting remark, since also in infertility clinics this issue is crucial to the acceptability of the use of donor gametes. Some patients would do anything to be able to have their own genetic children, whereas other individuals believe social and psychological parenthood is as important as genetic or biological parenthood.

An issue that was not discussed in our survey is the financial aspect of long-term sperm preservation. Indeed, sperm storage is often a costly procedure, especially since social security or insurance coverage is probably not to be expected for this indication. For many transsexual people this would increase the financial burden of transitioning and it is possible that some people would abstain from sperm preservation for this reason. Another interesting issue is the question of legal paternity or maternity after possible use of
cryopreserved sperm in the scenarios here discussed. It is not sure whether parenthood could be legally claimed without genetic testing or legal proceedings. Of course, this would not be any different from the parenthood issues of homosexual couples, which are also not legally regulated in most countries today. In countries where legal change of sex of birth is not possible, however, parenthood claims should not pose problems at all.

In conclusion, 76.2% of the respondents indicated that they would favour that at least all transsexual woman are made aware of the possibility to store sperm before starting hormonal treatment. Half of all the respondents would prefer their own sperm to be used. The results of this survey demonstrate that there is a significant part of pre-transition transsexual women who would benefit from the possibility of freezing sperm. It is a free personal choice to freeze or not to freeze sperm, but transsexual women ought to be counselled on this important choice.

Appendix: Survey questions

1. You live in:
   □ The UK.
   □ The USA.
   □ Elsewhere, namely

2. Your age:
   20> □.
   39–30 □.
   49–40 □.
   59–50 □.
   60 □ or older.

3. You are:
   □ Pre-op, not yet started hormones.
   □ Pre-op, taking hormones since 19… / 20…
   □ Post-op, surgery in 19… / 20…
   □ Transgenderist.

4. Your current sexual preference is:
   □ Not interested (asexual).
   □ You prefer women (lesbian).
   □ You prefer men (heterosexual).
   □ You like both (bisexual).

5. You currently have a fixed partner:
   □ No.
   □ A biological man.
   □ A biological woman.
   □ A transsexual woman.
   □ A transsexual man.

6. You have your own (biological) children:
   □ No.
   □ Yes.

7. The loss of your fertility was / is for you an important reason to (possibly) delay your transition.
   □ no
   □ Yes, but I have progressed since then.
   □ Yes, this holds me back for the moment.
   □ Yes, I want children first.

8. If possible, would you in the future want to have a(nother) child (e.g., through adoption, artificial insemination, possibly with donor sperm):
   □ No.
   □ Yes.
   □ I don’t know.

9. Do you believe that freezing of sperm should be offered to anybody wanting to start hormonal treatment?
   □ No.
10. If it were / had been possible, you would definitely have (had) your sperm frozen:
   - No.
   - Maybe, I would have considered it.
   - Yes.
   - I don’t know.

11. Would you feel like a ‘father’ if you had a child, conceived through inseminations with your own frozen sperm?
   - No, rather a ‘mother’.
   - Yes, but I don’t mind.
   - Yes, I mind, but I would choose to use the sperm anyway.
   - Yes, I couldn’t endure that thought.
   - No idea, is this important?

12. Would you (psychologically) be able to produce a sperm sample through masturbation to have it frozen in a hospital?
   - No, impossible.
   - Yes, but emotionally it would be hard.
   - Yes, no problem at all.

13. The conservation of frozen sperm for possible later use means that you cannot break with your past as a ‘man’.
   - I do not agree.
   - I agree.

14. Does it matter to you whether your (potential future) partner would be able to conceive using your own sperm or from a donor?
   - No, it does not matter.
   - Yes, I want a child which is genetically mine.

15. If you have other remarks on this subject, please use the space below:

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References


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