FETAL TISSUE TRANSPLANTATION AND ABORTION DECISIONS: A SURVEY OF URBAN WOMEN

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Abstract • Résumé

Objective: To describe women's attitudes and predicted behaviour regarding the potential for fetal tissue transplantation (FTT) to influence abortion decisions.

Design: Self-administered questionnaire survey by mail.

Setting: Academic family practice in Toronto.

Participants: Random sample of 475 women 18 to 40 years of age selected from the family practice registry of an urban teaching hospital. Family physicians were blind to their patients' participation, and investigators were blind to the subjects' identity. Forty questionnaires were undeliverable. Of the remaining 435, 272 (62.5%) were completed. Six of the women were over 40 years of age or did not indicate their age and were excluded, which left 266 (61.1%) questionnaires for analysis.

Outcome measures: Number of women who would (a) be more likely to have an abortion if they could donate tissue for FTT and (b) feel better or worse about choosing abortion if FTT were an option, and open-ended comments about the potential for FTT to influence abortion decisions.

Results: Of the 266 respondents 32 (12.0%) reported that they would be more likely to have an abortion if they could donate tissue for FTT, 178 (66.9%) stated that they would not be more likely to do so, and 56 (21.1%) were uncertain. Of the 122 who indicated that they would consider an abortion if they were pregnant, 21 (17.2%) stated that they would be more likely to have an abortion if they could donate tissue for FTT, 77 (63.1%) replied that they would not be more likely to do so, and 24 (19.7%) were uncertain. The women 25 to 33 years of age were more likely to be influenced by FTT than the younger or older women, and the women 18 to 24 years were more uncertain about the influence of FTT on abortion decisions than the older women. In written responses some of the women felt that FTT might make abortion decisions easier; many were troubled that FTT might be used to justify a morally problematic abortion decision and felt that FTT should not be used to justify abortion.

Conclusion: The data, the first of their kind gathered from women, suggest that some women's abortion decisions may be influenced by the option to donate tissue for FTT. Further research is necessary to explore the mechanism of influence.

Objectif : Décrire les attitudes et les comportements prévus des femmes au sujet de l'effet que la transplantation de tissu foetal (TTF) peut avoir sur les décisions relatives à un avortement.

Conception : Sondage postal par questionnaire à remplir soi-même.

Contexte : Pratique familiale universitaire à Toronto.

Participantes : Échantillon aléatoire de 475 femmes de 18 à 40 ans choisies parmi la clientèle d'une pratique familiale dans un hôpital d'enseignement urbain. Les médecins de famille n'étaient pas au courant de la participation de leurs patientes et les chercheurs ne connaissaient pas l'identité des sujets. Quarante questionnaires n'ont pu être remis. Sur les 435 restants, 272 (62,5 %) ont été remplis. Six des femmes avaient plus de 40 ans ou n'ont pas indiqué leur âge et ont été exclues. Il restait donc 266 (61,1 %) des questionnaires à analyser.

Mesures des résultats : Nombre de femmes qui (a) seraient plus susceptibles de se faire avorter si elles pouvaient faire don de tissu pour une TTF et (b) se sentiraient mieux ou moins bien face au choix de l'avortement si la TTF était une option, et commentaires ouverts sur l'effet que la TTF pourrait avoir sur les décisions relatives à un avortement.

Résultats : Sur les 266 répondantes, 32 (12,0 %) ont déclaré qu'elles seraient plus susceptibles de se faire

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avorter si elles pouvaient faire don de tissu pour une TTF, 178 (66,9 %) ont déclaré qu'elles ne seraient pas plus susceptibles d'agir ainsi et 56 (21,1 %) étaient incertaines. Sur les 122 qui ont déclaré envisager un avortement si elles devenaient enceintes, 21 (17,2 %) ont déclaré qu'elles seraient plus susceptibles de se faire avorter si elles pouvaient faire don de tissu pour une TTF, 77 (63,1 %) ont répondu qu'elles ne seraient pas plus susceptibles d'agir ainsi et 24 (19,7 %) étaient incertaines. Les femmes de 25 à 33 ans étaient plus susceptibles que les femmes plus jeunes ou plus âgées d'être influencées par la TTF, et les femmes de 18 à 24 ans étaient plus incertaines que les femmes plus âgées face à l'effet que la TTF pourrait exercer sur leur décision relative à l'avortement. Dans des réponses écrites, certaines répondantes ont affirmé que la TTF pourrait faciliter leur décision face à l'avortement, beaucoup craignaient qu'on puisse utiliser la TTF pour justifier une décision relative à un avortement qui pose des problèmes d'ordre moral et croyaient qu'on ne devrait pas utiliser la TTF pour justifier un avortement.

Conclusion : Les données, les premières de cette nature tirées de réponses de femmes, indiquent que la possibilité de faire don de tissu pour une TTF pourrait avoir un effet sur les décisions de certaines femmes face à l'avortement. Il faudra des recherches additionnelles pour explorer les mécanismes de l'influence.

Research into fetal tissue transplantation (FTT) for the treatment of Parkinson's disease has led to scientific,[1-4] ethical[5-10] and political[11-14] controversies. Recently two events have encouraged proponents of FTT. One was the publication of research results suggesting that FTT can improve the signs and symptoms of idiopathic Parkinson's disease[15,16] and parkinsonism induced by MPTP (1-methyl-4-phenyl-1,2,3,6-tetrahydropyridine).[17] The second was the decision in January 1993 by US President Bill Clinton to lift the 1988 ban on the use of federal funds to support FTT-related research. Despite the scientific and political impact of these events the debate regarding the ethical acceptability of FTT continues.

Those who oppose FTT on moral grounds may object to its use for any number of reasons, the most prevalent being that abortion is wrong, or at least undesirable, and any influence that would increase the number of abortions is morally unacceptable. They further argue that it is not always possible to separate the use of fetal tissue from the choice of elective abortion. In other words, some pregnant women who are ambivalent about choosing abortion will decide to abort because of the possibility of benefiting others. For example, Bopp,[18] in a report to the director of the National Institutes of Health (NIH) in 1988, argued that "when you add a beneficent reason to the number of reasons that women consider when deciding whether or not to have an abortion, some would abort who would not have otherwise done so."

Supporters of FTT believe that a decision to undergo a legal elective abortion can be separated from the subsequent use of the tissue.[6,7] Most of the members of the 1988 NIH Research Panel reviewing the issue reported that they "regarded it highly unlikely that a woman would be encouraged to make this decision [abortion] because of the knowledge that the fetal remains might be used."[19] The panel believed that FTT and abortion could be separated, and they proposed procedures for separating the two decisions.

Canada's recent Royal Commission on New Reproductive Technologies concurred.[20]

> There is no empirical evidence to support the claim that permitting research using fetal tissue encourages abortion. . . . Nevertheless, this possibility should be guarded against by establishing a structure that creates a clear separation between the clinical care of the pregnant woman and her decision-making processes, and the researchers using fetal tissue. This separation is important in guarding against the possibility that researchers who want to obtain fetal tissue could influence a woman's decision to have an abortion. . . . Such a separation is also required by respect for the woman's autonomy, since it will ensure that women will not be subject to pressure or coercion to terminate a pregnancy.

As the Royal Commission noted, influence is a central issue in this debate. The question it concerned itself with was whether others (e.g., researchers) would influence women. Despite the proposed procedures, this may occur.[21] However, another important question is whether the idea of FTT is substantively separable from abortion in the minds of the women facing these choices. Whether the idea of FTT will influence women's abortion decisions is an unanswered empirical question because women do not yet generally have the opportunity to donate aborted fetal tissue for transplantation. To date, FTT research initiatives have been few (one in Canada[22]) and small in scope, and media coverage has been sporadic.

Women are best situated to respond to this question of potential influence. They can be asked what they think the influence of FTT might be if it becomes a widely available therapeutic option. The answers may support the belief that, in the minds of women, FTT and abortion are either separable or inseparable. The purpose of this paper is to report what we believe is the first empirical study of women's attitudes and predicted behaviour regarding FTT and abortion decisions.

Methods

Sample selection

This exploratory study involved women 18 to 40 years of age who were patients in the family practice unit of a

teaching hospital in Toronto. The sample size was determined from an estimate of the number of subjects required for three-way tabulations of key variables. We anticipated that 65% of the women would respond, and the goal was to have 300 women participate in the study.

A random sample of 165 women from each of three age strata (18 to 24, 25 to 33 and 34 to 40 years) was selected from the patient registry by the systems manager. Family physicians in the unit vetted the lists of their patients to determine whether any should be excluded for emotional or physical reasons (e.g., psychiatric disorder, recent abortion or difficult life circumstances). They excluded 20 women from the sample. Address labels were generated for the remaining 475 women.

Study design

This study was a cross-sectional questionnaire survey. The survey packages were mailed according to a modified Dillman technique.[23] Each package included a letter of introduction from the woman's physician, a cover letter from the investigators describing the study and inviting the woman to participate, a prestamped return envelope addressed to the investigators for the completed questionnaire and a prestamped reply postcard addressed to the family practice unit.

The women were requested to send the completed questionnaire anonymously to the investigators and to mail the reply card to notify the family practice unit that the package had been received. If a reply card was not returned within 6 weeks of the mailing a reminder was sent. The women were assured that there would be no further attempts to contact them.

The design protected the confidentiality of the women at two levels. The investigators did not have access to the names and addresses of the women, and the family physicians did not know who among their patients were participating and were unable to see the completed questionnaires. The protocol and survey questionnaire were approved by the University of Toronto Review Committee on the Use of Human Subjects and the Sunnybrook Health Science Centre Research Ethics Committee.

Questionnaire development

The initial content of the questionnaire was based on a review of the relevant clinical and ethics literature.[10,24–28] It was first pretested in a sample of 20 women, then revised and retested in a second group of 15 women. The second pretest confirmed that the questionnaire was clear and comprehensible, had content validity and was not emotionally burdensome. The final version contained 16 questions to obtain information on the women's demographic characteristics and reproductive history and 3 questions to elicit their attitudes regarding abortion and FTT.

There were two primary research questions: Theoretically, would the option to donate tissue for FTT make it more likely for a woman to choose an abortion? How would the possibility of donating tissue for FTT make a woman feel about having an abortion? These questions appeared after the following information paragraph.

> Today treatment for Parkinson's disease is only partially helpful. Medical scientists have been searching for a way to treat Parkinson's disease. It may soon be possible for doctors to treat the disease with brain tissue from fetuses. Doctors take some tissue from the fetus after an abortion and place it into the brain of a Parkinson's patient. This can only be done if the woman who has had the abortion agrees to this use of the tissue.

The final question was open-ended: "The use of fetal tissue: What do you think?"

Statistical analysis

The responses were coded and entered into a database by the investigators. Univariate and bivariate analyses of the responses were performed. Bivariate analysis consisted of χ^2 tests, the level of significance being a p value of less than 0.05.

The responses to the open-ended question were analysed according to the method of constant comparisons, as described by Hammersley and Atkinson[29] and Strauss and Corbin.[30] Specifically, the responses were read several times and fractured into concepts unconstrained by theory. Themes that emerged from these concepts were identified and sorted into key issues or theoretic categories. The comments were re-examined for further evidence of the identified categories and for evidence of new issues or ideas not identified during the first interpretation. This process was repeated until the data yielded no new information.

Results

Quantitative data

Forty of the 475 survey packages could not be delivered to the addresses given and were returned to the family practice unit. Of the remaining 435 questionnaires 210 (48.3%) were completed and returned after the first mailing; an additional 62 (14.3%) were returned after the reminder letter was sent. Six of the respondents were over 40 years of age or did not give their age and were excluded from the analysis; this left 266 (61.1%).

Responses to the demographic and reproductive history questions are presented in Table 1. The mean age of the respondents was 28.7 (standard deviation 6.9) years. All three age strata were roughly equally represented.

Table 1: Characteristics of 266 female patients in a family practice unit who responded to a questionnaire on fetal tissue transplantation (FTT) and abortion decisions

Characteristic	No. (and %) of respondents
Age group, yr	
18–24	94 (35.3)
25–33	83 (31.2)
34–40	89 (33.5)
Education level	
Secondary school	40 (15.0)
Some college or university	122 (45.9)
University degree	104 (39.1)
Marital status	
Single, separated, widowed or divorced	143 (53.8)
Married or equivalent	123 (46.2)
Religion	
Catholic	50 (18.8)
Protestant	141 (53.0)
Jewish	14 (5.3)
Hindu or Muslim	6 (2.3)
Other	55 (20.7)
Frequency of worship	
1–11 times per year	134 (50.4)
> 11 times per year	57 (21.4)
Never, no comment or did not respond	75 (28.2)
Currently pregnant	
Yes	12 (4.5)
No	251 (94.4)
Did not respond	3 (1.1)
Currently using birth control	
Yes	145 (54.5)
No	120 (45.1)
Did not respond	1 (0.4)
Wants to become pregnant	
Yes	185 (69.5)
No	67 (25.2)
Did not respond	14 (5.3)
Previous pregnancy	
Yes	94 (35.3)
No	172 (64.7)
Outcome of previous pregnancy	*n* = 94*
Miscarriage	24 (25.5)
Abortion	26(27.7)
Delivery	64 (68.1)
Delivery, then adoption	2 (2.1)
Friend or relative with Parkinson's disease	
Yes	53 (19.9)
No	194 (72.9)
Uncertain	19 (7.1)

*The sum of the numbers is greater than 94 because some of the women had more than one previous pregnancy.

The women were well educated. Almost half (45.9%) had some postsecondary education, and 39.1% had completed a university degree. Approximately half (46.2%) were married or living with a partner at the time of the survey. Most (69.5%) stated that they wished to become pregnant in the future. Almost two thirds (64.7%) reported that they had never been pregnant, and 12 (4.5%) were pregnant at the time of the study. Of the 94 women who stated that they had been pregnant 26 (27.7%) had had an abortion and 64 (68.1%) had delivered and kept the baby.

When asked if they would consider having an abortion if they became pregnant 122 (45.9%) of the women chose Yes (Table 2). When asked whether they would be more likely to have an abortion if they became pregnant and knew that tissue from the fetus could be used to help someone suffering from Parkinson's disease, 32 (12.0%) chose Yes.

Table 3 presents the factors determined through χ^2 analysis to have had a significant effect on whether FTT would influence a decision to have an abortion. The first significant factor was the women's attitude toward abortion in general. Of the women who stated that they would consider having an abortion if they became pregnant, 21 (17.2%) replied that they would be more likely to do so if tissue could be used for FTT and 24 (19.7%)

Table 2: Responses to questions regarding FTT and abortion decisions

Question	No. (and %) of respondents
If you became pregnant would you consider having an abortion?	*n* = 266
Yes	122 (45.9)
No	80 (30.1)
Uncertain	64 (24.1)
If you became pregnant and knew that tissue from the fetus could be used to help someone suffering from Parkinson's disease, would you be more likely to have an abortion?	*n* = 266
Yes	32 (12.0)
No	178 (66.9)
Uncertain	56 (21.1)
(For those who would consider abortion) If you became pregnant and knew that tissue from the fetus could be used to help someone suffering from Parkinson's disease, how would you feel about having an abortion?	*n* = 182*
Better	83 (45.6)
Worse	4 (2.2)
No different	70 (38.5)
Uncertain	25 (13.7)

*Responses were given by women other than the 122 who indicated that they would consider an abortion if they became pregnant.

were uncertain; the corresponding figures were 2 (2.5%) and 12 (15.0%) for the women who stated that they would not consider an abortion, and 9 (14.1%) and 20 (31.2%) for those who were uncertain whether they would consider having an abortion (χ^2 = 17.74, 4 degrees of freedom [df], p = 0.0014).

Age group was another significant factor related to the influence of FTT on abortion decisions (χ^2 = 12.20, 4 df, p = 0.16) (Table 3). The women 25 to 33 years of age were more likely to be influenced by FTT than the younger or older women (14 [16.9%], 10 [10.6%] and 8 [9.0%] respectively). The women 18 to 24 years of age were more uncertain about the influence of FTT on their decisions than those 25 to 33 and those 34 to 40 (30 [31.9%], 14 [16.9%] and 12 [13.5%] respectively).

The second research question, which asked how women would feel about having an abortion if they knew the tissue could be used to treat someone with Parkinson's disease, was directed to the 122 women who stated that they would consider an abortion; however, 182 responded. Almost half (83 [45.6%]) stated that they would feel better (Table 2). Compared with the respondents who were married or living with a partner, those who were single were more likely to feel "No different" (47 [43.9%] v. 22 [29.7%]) and less likely to feel "Uncertain" about having an abortion if the tissue could be used for FTT (10 [9.3%] v. 15 [20.3%]) (χ^2 = 8.018, 3 df, p = 0.046).

No other demographic data were significantly related to responses to the primary research questions. This suggests that factors such as religion, degree of religious observance and pregnancy history were unlikely to have been important contributors to the findings.

Qualitative responses

Two hundred and fifty-three (95.1%) of the women responded to the open-ended question. The responses varied in length from one sentence to three pages. The respondents addressed various topics including the value of FTT research, the morality of abortion, the current status of the law and the value of bioethics research.

Many (98 [38.7%]) commented in stark black-and-white terms. These women were clearly either for or against FTT. However, the most striking aspect of the responses was that so many women (98 [38.7%]) grappled with the subject and indicated that they felt uncertain and troubled by the issue. Their responses were characterized by words such as "traumatic," "uncomfortable," "disturbing," "fear," "worried," "barbaric," "leery," "unsettling" and "gruesome." One woman captured the uncertainty of the responses with the comment: "This information somehow disturbs me." The emotional tone of the comments provided a context within which the substance of the comments had to be considered.

Many (99 [39.1%]) of the women provided responses that related specifically to the potential influence of FTT on abortion decisions. Specific attitudes regarding influence were organized into six categories. Several articulate comments are presented here as examples for each of the categories.

1. FTT *would not* influence my/a woman's abortion decision (18 respondents [18.2%]).

These women commented, in a straightforward fashion, that potential tissue use would not influence their abortion decisions. For example,

> It's great that fetal tissue can be used in Parkinson's patients; however, it would not induce me more than before to consent to an abortion.

> I do not believe that women will decide on abortion more or less if the fetus is used for some other reason.

Table 3: Bivariate analysis of women's responses regarding influence of FTT on abortion decision

Factor	Would be more likely to have an abortion if tissue could be used for FTT		
	Yes	No	Uncertain
Would consider an abortion if pregnant			
Yes	21 (17.2)	77 (63.1)	24 (19.7)
No	2 (2.5)	66 (82.5)	12 (15.0)
Uncertain	9 (14.1)	35 (54.7)	20 (31.2)
Age group, yr			
18–24	10 (10.6)	54 (57.4)	30 (31.9)
25–33	14 (16.9)	55 (66.3)	14 (16.9)
34–40	8 (9.0)	69 (77.5)	12 (13.5)

2. FTT *would* influence some women's abortion decision (19 [19.2%]).

These women viewed the "good" that FTT could provide as some kind of trade-off, which in their view, would justify an abortion decision. For example,

> This would provide a way to justify an abortion in the minds of some people.

Many of these women commented that donating tissue would "relieve guilt," "outweigh objections," make the decision "easier" or "cause some people to feel differently (better) about abortion." Some viewed this negatively, expressing their fear that FTT would serve as a justification for abortions; they felt strongly that FTT must not be used to justify abortions. One woman put it this way.

> I feel it would give undecided women an *excuse* to have an abortion, a way to relieve a potentially "guilty" conscience.

3. FTT *should not* influence women's abortion decisions (31 [31.3%]).

Women in this subgroup shared the belief of many in category 2 that FTT should not justify an abortion. However, these women commented more specifically that, in their opinion, tissue use should not influence women's abortion decisions even in the smallest way. As one woman wrote,

> I approve of the use of fetal tissue, but this should not be used as a tool in deciding whether or not to have an abortion. The two issues should be completely separate.

A few women regarded "personal" reasons as acceptable justification for abortion but did not provide specific examples. For instance,

> An individual should not make this decision [to abort] based on what will happen to the fetus — that's irrelevant. [They should] make the decision based on their own personal needs.

Most women did not mention acceptable justifications for abortion, only that the decision ought to be made "irrespective" of potential uses for the tissue. For example,

> It should not be a determining factor (or even contributing) in decision to abort.

4. FTT *should not be used* to influence women's abortion decisions (7 [7.1%]).

The specific comments in this category were that physicians should not discuss tissue use with pregnant women until after they have made a firm decision to have an abortion.

> The issue of fetal tissue should not be part of the abortion decision. Doctors should not discuss it at all with people deciding about an abortion. It should be discussed after or be part of the consent forms signed prior to the abortion.

These women expressed the fear that FTT may be used by physicians to manipulate women, unethically, into choosing to have an abortion they might not otherwise have had. This manipulation was considered by these women to be possible, dangerous and impermissible.

5. A combination of the first three categories (12 [12.1%]).

Some women considered the decision, the emotions and the ethical justifications to be intertwined in a complex manner. Parts of their responses could be categorized into one of the previous four categories, but other parts fit into a different category. One 19-year-old respondent presented an extremely complex set of considerations.

> To decide to go through with an abortion is an emotional and often scary experience. So, in all honesty, what doctors [do] with the fetus' tissue would be the last thing on my mind at the moment. There are too many other emotions and issues to consider at the time. I think it would be insensitive and unwise to ask a scared teenager, who has to face her family, her boyfriend and herself, whether she wants to contribute to the progress of science by donating her fetus' tissue and signing all kinds of papers. I don't think I would want to imagine what happened to the fetus, where it was taken, how it was cut, was it still alive, etc. So you see, donating a fetus is not like donating an organ after you die; it would be like donating the body of someone you just decided to kill. Consequently, there are a lot more moral issues involved, because abortion is still a very controversial procedure.

6. Other issues (12 [12.1%]).

The responses of these women did not fit any of the previous categories. For example,

> How do you make sure people don't have abortions just to use tissue or sell it? Or, do we have a right to judge such a thing? I don't know.

Discussion

The results of this study are important. Although the respondents were speaking about hypothetical cases, or about women in general, for the first time the attitudes

of women are available to inform debate on this contentious issue. To our knowledge, only one other study has examined women's attitudes toward FTT, but it did not ask about the relation between FTT and abortion decisions.[31] In addition, many of the women we surveyed did not speculate about others but, rather, grappled with their own perspectives and offered their own beliefs and values.

Although two thirds of the respondents in our study indicated that FTT would not influence their abortion decision, our findings reveal that FTT may influence some women. A small but substantial group (12% of the total sample) reported that they would be influenced by the option to donate tissue for FTT to the extent that they would be more likely to have an abortion. Furthermore, of the women who would consider abortion and those who were uncertain whether they would consider abortion, 17% and 16% respectively reported they would be more likely to have an abortion if they could donate the tissue for FTT. On the other hand, almost all of the women who would not consider abortion if they were pregnant would not be influenced by FTT.

A substantial porportion of the respondents indicated that the opportunity to donate tissue for FTT would make them feel better about deciding to have an abortion. As some women wrote, it is possible that such a donation could "bring good out of bad." They considered this a way to alleviate potential guilt for choosing to have an abortion.

Remarkably, nearly all of the women took the time to write a response to the open-ended question; this showed that the women had a strong interest in giving opinions on the issue. Many used language that reflected uncertainty and concern, which suggested that FTT is a personally troubling and thorny issue.

Over a third of the women who responded to the open-ended question commented on the potential for FTT to influence abortion decisions. Of these, some felt that FTT would not have any influence, whereas others felt that it definitely would. A third group, the largest, felt that FTT should not influence any woman's decision. They indicated that donating tissue for FTT may make some women feel better about abortion; specifically, that donating tissue for FTT might help to relieve any guilt that a woman might feel for choosing abortion. This is consistent with the group of women whose response to the second research question indicated that FTT would make them feel better about an abortion decision.

The potential for guilt relief was not viewed solely as a blessing; many women feared that this might make a morally troubling abortion decision easier. These women were concerned that FTT might justify an abortion decision in some women's minds, a justification that they felt was morally unacceptable.

It is difficult to sort out the link between feeling better about a decision and the influence of such a feeling on the decision itself. In this study, a small number of women felt that their abortion decision would be influenced by FTT, and a large number felt that donating tissue for FTT would make them feel better about their abortion decision. The ethics literature has focused on the influence that people in authority (e.g., physicians) may exert on people who are susceptible to this influence (e.g., patients).[32] However, our study highlights the influence that a compelling idea (donating tissue for FTT), or an incentive (guilt relief), may have on individuals (some pregnant women). The link between the power to make a person feel better and the power to influence a decision is unclear and is not specifically addressed by our findings. Future studies are needed to understand that link. Furthermore, given the comments of many of the women surveyed, the ethical acceptability of FTT's potential to influence abortion decisions also requires further examination.

This was an exploratory study involving a sample of women selected from a middle and upper socioeducational group. Therefore, the generalizability of the results is limited. A nonresponse bias cannot be excluded; women who did not respond may have chosen not to because of attitudes, which, if included, may have altered the results. Also, social desirability bias is always a risk in this type of research; subjects may have given responses they thought were expected of them rather than their true beliefs. Finally, prediction bias may have occurred; since the subjects were answering questions about a hypothetical future situation, their attitudes and behaviour might have differed if they were faced with the actual situation.

Conclusion

Opponents argue that FTT and abortion are morally and psychologically inseparable and, therefore, that the option to donate tissue for FTT will influence at least some women's abortion decisions and increase the number of abortions. Our data, the first of their kind gathered from women, suggest that FTT may indeed influence some women's abortion decisions. Further research is needed to explore the link between FTT's helping women to feel better about an abortion decision and its actual influence on that decision. If FTT can influence abortion decisions, this influence may be morally questionable, and this requires greater examination. The availability of FTT may contribute to decisions to abort that would otherwise not have been made.

Two prestigious research bodies (the NIH Research Panel in the United States and the Royal Commission on New Reproductive Technologies in Canada) have

proposed procedures to prevent individuals from influencing women's abortion decisions.[19,20] However, the influence that our data identified is that of a compelling idea, and the influence link is psychologic, personal to the women. If supported by more definitive studies now under way, our findings suggest that the procedures proposed to control potential influence may be ineffective in some cases.

This study was supported by grant 806-92-0010 from the Social Sciences and Humanities Research Council of Canada. The Centre for Bioethics, University of Toronto, is supported by grant 03006 from the Ontario Ministry of Health and by the Bertha Rosenstadt and William C. Harris Estates.

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