

# 'Gift without a price tag': altruism in anonymous semen donation

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## TABLE OF CONTENTS

- Introduction
- Semen donation in Canada
- Altruism and anonymity by law
- Cash incentive and altruism in health care
- Egotistic or altruistic donors
- Emotion and cognition in altruism
- Compensation-based or non-remuneration model
- Donation motivation and demographic profiles
- Donor recruitment strategies
- Institutionalization of semen collection
- Public awareness campaign
- Towards an altruistic donor recruitment model
- Conclusion
- References

Commercialization of human gametes is now legally prohibited in Canada under the Assisted Human Reproduction Act 2004, making semen donation in Canada altruistic and anonymous by law. Donors must be altruistically motivated to donate gametes without receiving monetary rewards. Globally speaking, Canada is neither the first nor the only country in the world that has legislation to support altruistic gamete donation. Other countries have advocated similar systems either through legislative changes or implementation of best practice models. This paper is a review of literature assessing the differences in donation behaviours under paid and altruistic donation models. It provides contextual information of the current semen donation situation in Canada, while drawing upon relevant literature and research data from other countries as references. The author also attempts to re-conceptualize the meanings of altruism through exploring the complex interplay between psycho-social and institutional factors in influencing donors' behaviours. Although there is a substantial amount of research studying the impacts on donor recruitment when payment is withdrawn, very few research studies are found that focus on exploring altruistic donor recruitment strategies. It is unrealistic to expect the altruistic donation culture to emerge spontaneously in Canada without any multi-level efforts to coordinate the recruitment strategies. Research programmes are greatly needed to generate empirical knowledge that can guide the development of altruistic donor recruitment models geared to the current socio-cultural environment and legislative framework in Canada. The findings will be invaluable when the legislation comes up for parliamentary review in the near future.

**Key words:** semen donation / altruism / donor recruitment model / third-party conception / Assisted Human Reproduction Act

## Introduction

The Assisted Human Reproduction Act (AHR Act), Bill C-6, received royal assent from the Canadian Parliament on 29 March 2004. Remuneration through monetary payments or benefits-in-kind to gamete

donors is prohibited, except for a reasonable reimbursement of receipted expenditures incurred during the course of gamete donation as determined by the regulations (Health Canada, 2005), which are still under development (Health Canada 2006). Purchasing or advertising for the purchase of gametes is now illegal in Canada, with the highest

criminal sanctions of a fine not exceeding \$500 000, or imprisonment for a term not exceeding ten years, or both. This law allows for the creation of a registry to contain the health reporting information of donors, recipients and people conceived by means of AHR procedures. Donor anonymity is guaranteed under the law. Donors can choose to conceal or disclose their identifying information by written consent (House of Commons of Canada, 2004). The AHR Canada, a federal regulatory agency, was established in January 2006 to administer a licensing framework for the controlled AHR activities, and to enforce prohibitions under the AHR Act (Bernier and Grégoire, 2004; Health Canada, 2007a, b).

## Semen donation in Canada

In Canada, semen falls within the definition of a drug if it is used for assisted conception. Semen screening and storage come under the authority of the Health Canada Food and Drugs Act: Processing and Distribution of Semen for Assisted Conception Regulations (Health Canada, 2004a), and the Health Canada Directive: Technical Requirements for Therapeutic Donor Insemination (Health Canada, 2000). The screening regulations were revised in 2000 after a woman undergoing donor semen insemination in 1999 became infected with Chlamydia. The stringent requirements in donor screening, semen processing and distribution have resulted in voluntary closure of nearly all the Canadian sperm banks even before the passage of the AHR Act in 2004, except one Toronto-based sperm bank (ReproMed, 2008) and a few clinics in Quebec that recruit semen donors for treatment of their own patients (Bissessar, 2005).

Semen donation is not a one-time event. Donors have to go through medical screening, and repeated blood tests for a minimum 6-month timeframe after being accepted into the programme (Sidhu *et al.*, 1997). The time commitment and the removal of financial incentive make it very difficult to recruit semen donors (Del Valle *et al.*, 2008). Currently, there is a huge shortage of local semen supply to meet the demands for Canadian patients requesting AHR services (Health Canada, 2004b; Daniels *et al.*, 2006). In the mean time, Health Canada is allowing the importation of donor semen from overseas sperm banks until new importation regulations are developed, and the regulatory and licensing frameworks are in place (Canadian Broadcasting Corporation, 2006; Health Canada, 2006). The majority of Canadian fertility clinics, except a few in the province of Quebec which recruit their own donors, are relying on one Toronto-based and two other US affiliated Canadian sperm distributors (Can-Am Cryoservices Corporation, 2008; Outreach Health Services Inc, 2008) for semen supply. One Canadian article suggested that the imported semen currently accounts for ~80–85% of semen distribution in Canada (Bissessar, 2005). Semen donation in Canada is now running under a two-tiered system: Canadian donors must be altruistically motivated to donate semen without receiving compensation, whereas overseas donors continue to be paid for their semen samples that are imported to Canada.

## Altruism and anonymity by law

Semen donation in Canada is now altruistic and anonymous under the AHR Act (Bissessar, 2005). Globally speaking, Canada is neither the first nor the only country in the world to support altruistic gamete

donation. Other countries have advocated for similar systems either through legislative changes or implementation of best practice models. In France, semen donation is both unpaid and anonymous by law, and only reimbursement of travelling costs is permitted. Donors must be living in a stable heterosexual relationship, have at least one living child, and have the consent of their spouse in order to be eligible (Novaes, 1989; Lansac and Lannou, 1994). There was a drop in the donor pool initially after the passage of the law, and then a gradual shift in donor demographics occurred (Guerin, 1998). In the UK, semen donors are allowed to receive £15 per donation plus direct 'out-of-pocket' expenses. A paper published by the UK's Human Fertilization and Embryology Authority (Human Fertilisation and Embryology Authority, 1998a, b) announced that unpaid gamete donation was most desirable to promote best practice, and payments to donors other than reasonable expenses should be phased out eventually. Although payment has not been banned yet because of the concern of not being able to recruit both altruistic and open identity donors, Human Fertilisation and Embryology Authority (HFEA) has suggested focusing on recruiting donors who already have children and are in a stable relationship (Human Fertilisation and Embryology Authority, 1993; Johnson, 1997). New Zealand Parliament also passed the Human Assisted Reproductive Technology Act in 2004, which uses criminal sanctions to prohibit commercial supply of human embryos and human gametes (New Zealand Government, 2004; Daniels, 2005).

The Canadian AHR Act is contentious because criminal laws are used to control prohibited activities. There have been many heated debates among medical professionals about the restrictions imposed by the Canadian government that make gamete donation not only difficult, but also theoretically impossible (Infertility Awareness Association of Canada, 2004; Claman, 2007). Understandably, there are fears and concerns among the AHR community that recruiting only altruistically motivated donors will eventually lead to cessation of the semen supply (Bissessar, 2005; Del Valle *et al.*, 2008). The rigid requirement of reimbursing only receipted expenditures (Health Canada, 2005) also creates extra administrative burden and cost on AHR clinics. There have already been suggestions to amend the AHR Act to allow at least some fair payment to donors to compensate for lost wages, risks involved or time spent during the course of donation (Claman, 2007). Nevertheless, the actual implementation of a fee schedule is rather tricky when the AHR Act prohibits payment. Many Canadians told the Royal Commission on New Reproductive Technologies that they did not support the commercialization of human gametes. The concern is that offering cash incentive will legitimize the social perceptions that human gametes are a commodity, and that there is a market for buyers and sellers of human body parts and tissues. Human dignity would be destroyed if a price tag or a market value were assigned to these human resources, including reproductive materials (Royal Commission on New Reproductive Technologies, 1993).

## Cash incentive and altruism in health care

The notion of altruism in gamete donation has drawn many debates about whether simply 'an altruistic desire to help' is adequate to attract sufficient donors (Lyll *et al.*, 1998; McLaughlin *et al.*, 1998).

In a scarce semen supply environment, perhaps the easiest route to resolve the shortage is to offer financial incentive to men willing to provide semen, using the economic principles of supply and demand. People make choices about their preferences in light of incentives. No doubt, money alters the motivational structures and serves as a powerful incentive for almost all individuals when making decisions (Hoffman, 1981). The introduction of money could crowd out donors' better motives, and compromise their ability to fully consider the implications and ramifications of donating gametes (Johnson, 1997; Shenfield, 1999).

The arguments put forward by proponents for paid donation, although pragmatic and utilitarian, raise the concerns of whether donors will be enticed by financial inducement to conceal unsuitable medical information or falsify health history to pass the screening (Shenfield and Steele, 1995; Guerin, 1998; Schonfeld, 2003). Personal, health and mental health history are based on honest disclosure from donors rather than by blood screening. For example, Schover *et al.* (1992) conducted the Minnesota Multiphasic Personality Inventory (MMPI) and a 45–60 min structured interview on 17 prospective semen donors who had successfully completed all general, medical and genetic screening. They found that 35% of the study population had mildly abnormal subscale scores, 47% had a history of minor depressive or anxiety episodes and 35% had had periods of heavy alcohol use. The sample size of this study is small and not representative, but it certainly raises the concern of how many paid donors can easily pass the medical screening despite having psychopathology and/or negative health history.

The term 'donors' implies altruism by definition. Donation is an act of giving based on generosity and voluntary altruism (Shenfield, 1999). Society defines those who help others and give voluntarily as donors, and they usually receive social recognition of their humanitarian acts of kindness (Hoffman, 1981; Eisenberg, 1986; Healy, 2006). If a man makes a profit from semen provision, he should be called a semen vendor (Annas, 1980), semen provider or supplier (Daniels, 2007) or reproductive service worker (Almeling, 2007). The term 'donation' should be changed to 'sale of gametes' (Shenfield and Steele, 1995). Payment would also minimize the donors' valuable contribution and depersonalize their roles to simply a semen provider interested primarily in money. The social context in which the donor-conceived child is born may compromise the welfare of the offspring, as they may be perceived as commodities resulting from a commercial transaction (Royal Commission on New Reproductive Technologies, 1993). The gift nature of donation is even more critical if the child is being told the true nature of conception (Johnson, 1997; Thorn, 2007).

Many areas in health care depend on voluntarism and altruistic contribution from generous donors. Reflecting on the meanings of altruism in gamete donation, perhaps there are some insights to be learned from blood donation literature. Titmuss (1970) wrote a classic book on social policies of blood donation almost four decades ago when both remuneration and voluntary blood donation models co-existed; it was possible to sell blood in the US at that time. Titmuss argued that when a blood supply system was run on cash incentives, altruistic donors were driven out and replaced by money-oriented suppliers seeking profits from donating blood. His groundbreaking international comparative analysis illustrated that a voluntary system actually produced a safer blood supply with lower risk of transmissible infections, and was in fact a morally preferable

system in the long run. Healy (2000, 2006) further built upon Titmuss's work to explore the institutional perspective on altruistic donation and the socially embedded meanings of altruism in blood collection regimes. The author elaborated on how blood donation centres can create a context of giving through eliciting altruistic actions from donors, and suggested that a few minor changes to administrative arrangements can have a considerable impact on influencing donor behaviours. However, one must interpret the blood donation literature with caution. There is no data suggesting that paid semen donors carry a higher risk of genetic and infectious diseases than unpaid donors, or that their sperm are more hazardous (Eastlund, 2003).

Both human gametes and human blood are valuable, scarce in supply, and in high demand. Although there are significant differences in moral and social attitudes between gamete donation and blood donation, semen and blood are both replenishable human tissues that in principle could become a commodity based on their scarcity and demand (Gillespie and Hillyer, 2002; Schonfeld, 2003; Waldby and Mitchell, 2006). As long as there is a commercialized market for semen donation, there will always be individuals willing to provide the desired commodity, and sperm banks willing to pay providers for high quality, saleable semen (Almeling, 2007). The purpose of blood donation is to save life, whereas the goal of gamete donation is to create new life. Patients can die from lack of a blood transfusion; patients in need of donated gametes could suffer from life long involuntary childlessness. Semen donation has an even more far-reaching ethical consequence than blood donation because the donor is donating his genetic materials to enable another individual or couple to have a child (Johnson, 1997).

## Egotistic or altruistic donors

What motivates a man to donate his semen altruistically? On the behavioural level, without knowing the donor's true motive, it is impossible to distinguish whether the semen donation act is altruistically motivated or if it arises from a series of egotistic considerations (Eisenberg, 1986; Gillespie and Hillyer, 2002). Different individuals involved in the same donation task may aim to satisfy distinct personal needs with different underlying motivational processes. Social scientists define altruism as a motivational state with concerns for the well-being of others rather than oneself, and the welfare of another as an end in itself. An egotistically motivated helping behaviour has a self serving motive, and is directed toward the ultimate goal of increasing self benefits and advancing one's own welfare, such as the expectation of receiving tangible rewards (Hoffman, 1981; Eisenberg *et al.*, 1989; Batson, 1991; FernándeX-Montoya, 1997). A behaviour is still considered altruistic if emotional gratification or self benefit is an unintended consequence of the donation act, such as the intrinsic rewards of feeling good and benevolent, or external rewards of receiving social recognition and acknowledgement (Hoffman, 1981; Piliavin and Callero, 1991).

It is entirely possible that semen donors have both altruistic desire and egotistic considerations when making a donation (Johnson, 1997). In fact, many studies have found the co-existence of both altruism and a desire for payment among semen donors (Schover *et al.*, 1992; Pedersen *et al.*, 1994; Cook and Golombok, 1995). One author suggested

that 'selfishness and altruism actually co-exist rather than forming separate dimensions' (Lui *et al.*, 1995, p. 236). A survey on semen donors carried out in Denmark found that 60% of the subjects possessed both altruistic and financial motives. Only 8% reported a purely altruistic motive and 32% reported being primarily motivated by monetary reward (Pedersen *et al.*, 1994).

There are obvious differences between egotistic and altruistic donors in terms of their motivation and reasons for donating semen (Batson, 1991). However, there will be motivational conflicts if these two goals lie in different directions and require polar behavioural acts. The donor will then have to make changes in his donation decision to adapt to his goals so as to minimize incongruent internal conflicts (Hoffman, 1981; Eisenberg, 1986). Under an altruistic donation system, a donor will be more driven to reflect on the meanings of his donation act when financial incentive is taken out of the equation. If the donor stops donating when monetary compensation is removed, there is a reasonable ground to believe that his ultimate goal is self-benefiting, and his donation motive is egotistic. If the donor still donates, his donation act is altruistic, as it points to something outside the self, and self-benefiting is not an ultimate goal (Misje *et al.*, 2005; Waldby and Mitchell, 2006). A survey of 81 of the UKs licensed fertility centres reported an estimate of losing more than 80% of prospective donors if payment was disallowed (Golombok and Cook, 1994). Gazvani *et al.* (1997) and Sauer *et al.* (1989) reported similar findings; 95 and 69% of existing donors in their studies had firmly indicated that they would not donate without compensation. These men are considered egotistic donors because they are motivated primarily by payment, although the majority of them also said helping others was an important goal.

## Emotion and cognition in altruism

Does compassion for people suffering from infertility and awareness of the need for gamete donation translate into an altruistic act of semen donation? Much social psychology literature supports the notion that empathetic reactions or vicarious affective responses may lead to altruistic behaviours (Eisenberg, 1986; Batson, 1991). The contributions of emotion and cognition in influencing donation decision are multifaceted. Humans are self-reflective rational agents and their behaviours are guided by values, goals, intentions, cognition and emotions. Feeling empathy for a person in need evokes an altruistic motivation to help. Motivation to donate semen for the purpose of assisting another individual or couple to have a child is likely to be based on the prospective donor's cognitive appraisal of the needs, as well as a genuine concern for those who are deprived of the opportunity of parenthood (Yee *et al.*, 2007). Altruistic behaviours, by definition, are cognitively organized voluntary behaviours aiming to accomplish a goal. People act voluntarily when they think a particular activity will serve important psychological functions for them (Hoffman, 1981; Eisenberg *et al.*, 1989).

The decision-making process leading to the actual donation act is complex and requires multi-dimensional exploration (Misje *et al.*, 2005). Very often, the word 'altruism' is used in vain without examining the underlying motives and other contextual factors influencing the donation decision. Personality profiles and social perception can also influence one's donation decision. People who view themselves as

altruistic are somewhat more likely to assist others (Yee *et al.*, 2007). However, just having an altruistic attitude is not a sufficient impetus to cause an action (Piliavin and Callero, 1991; Steele *et al.*, 2008). The stage model theory proposes that 'people pass through a number of decision-making stages as they attempt to change their behaviour and that the transition from one stage to the next is facilitated by different stage-specific cognitive or behavioural processes' (Ferguson *et al.*, 2007, p. 2001). The donor has to calculate the worthiness of his donation act based on cost-benefit analysis, and then re-assess his motives based on newly assimilated information once he has decided to take action.

For this reason, it is important to ensure that the legitimate concerns of semen donors are properly addressed, and that the practicalities of donation are considered at each stage to remove all the possible negative deterrents that may affect the donation decision. For example, a donor may not be inclined to donate semen, or may decide to drop out, for various reasons: inaccurate understanding of the screening and donation procedures; inconvenient operating hours and location of the sperm bank; lengthy screening process with a lot of form filling and/or unnecessary waiting time; concerns about the 72-h period of abstinence to optimize the quality of semen sample; personal embarrassment about giving a semen sample through masturbation at the laboratory and handing over the bottle to female staff; being unclear of the legal obligation to the donor offspring; not knowing the outcome of his donation or if a child will exist; dismissive attitudes from staff about samples with sub-optimal semen quality, etc. (Schover *et al.*, 1992; Paul *et al.*, 2006; Daniels, 2007).

## Compensation-based or non-remuneration model

Is altruistic donation too idealistic in a scare supply environment when demand is huge? Is it possible to offer monetary rewards and still retain the virtues of altruism in the name of a 'gift relationship' (Shenfield and Steele, 1995; Shenfield, 1998, 1999)? The deontic arguments of remuneration versus non-remuneration models often fall into the gift-and-commodity dichotomy which states that these two systems are mutually exclusive and ethically incompatible (Daniels and Lewis, 1996; Waldby and Mitchell, 2006). In jurisdictions where payment is legally permitted and compensation is expected, such as in the UK and the USA, research studies have consistently reported that monetary reward is the main donation incentive whereas only a very small percentage of men are willing to donate without getting paid (Schover *et al.*, 1992; Lui *et al.*, 1995). When monetary payment is the norm and compensation is expected, not to pay donors for their semen may indirectly imply exploitation (Lui and Weaver, 1996; Lyall *et al.*, 1998). However, the potential exploitation of donors needs further social discourse and debate (Schonfeld, 2003; Almeling, 2007).

Some authors believe that altruism is not necessarily the best motive if the donors think about the offspring periodically and feel a connection with the recipient family. Removal of compensation may attract different types of donors wanting to donate for the wrong reasons, such as compensation for past losses, or to prove one's fertility (Schover *et al.*, 1992). Paid donors may be perceived as more suitable because they have 'the right attitudes for the job' (Pennings,

1997, p. 1842). They do not want to extend their role and do not wish their involvement to go beyond donation. These men may have a better concept of boundary and be more psychologically and emotionally detached from the donation outcomes. The desire to receive financial reward is therefore perceived by some authors as a much healthier reason for donating than pure altruism (Lui *et al.*, 1995; Gazvani *et al.*, 1997; Pennings, 1997).

In contrast to the literature that supports payment as a legitimate practice in semen donation, findings from another body of research suggest that non-remuneration models do not necessarily lead to an end of semen supply in those countries where payment is prohibited by law and/or an altruistic donation culture is prominent. Therefore, based on empirical evidence, it is theoretically possible to recruit altruistic men to donate semen. Daniels *et al.* (2006) conducted a comprehensive literature review of 22 studies from 1980 to 2003 in eight countries (Australia, Belgium, Denmark, France, New Zealand, Sweden, the UK and the USA) and concluded that married men with children seem to be more interested in helping others altruistically, whereas younger men have a higher interest in payment. Research conducted in Australia and New Zealand also reported that the majority of men who donated semen for altruistic reasons rated payment rather unimportant (Daniels, 1989; Purdie *et al.*, 1994). It appears that somehow, different groups of people are attracted to the act of donation under different recruitment models and donation cultures as influenced by different regulatory frameworks. Compensation donation models appear to attract egotistic donors who are mostly anonymous and whose donation is primarily motivated by financial rewards (Lyll *et al.*, 1998; Ferguson *et al.*, 2007).

## Donation motivation and demographic profiles

### Student group

Research studies also found differences in donation incentives among various demographic groups. Traditionally, university students are the group most commonly targeted for semen donation, and therefore the majority of semen donors have tended to be students (Daniels, 2000; Daniels *et al.*, 2006). In the UK, the student group constituted the main source of semen donors before the legislative change removing donor anonymity in April 2005. This student group is also the common sampling body in research studies conducted to examine the impacts of payment withdrawal during that time (Cook and Golombok, 1995; Lui *et al.*, 1995; Lui and Weaver, 1996; Lyll *et al.*, 1998; Murray and Golombok, 2000). Cook and Golombok (1995) conducted a cross sectional survey of semen donation commissioned by the UK's Human Fertilization and Embryology Authority. A total of 144 semen donors from 14 clinics completed the survey. The average age of the donors was 24-year old and 81% of them were young single students. Only 26% were in paid employment. The majority were motivated primarily by payment. Two-thirds of them said they would discontinue donation if no payment were offered.

Lui *et al.* (1995) conducted another survey study of 55 potential semen donors from three IVF clinics also in the UK around the same time. They reported very similar findings with regards to the donor demographics. Seventy-seven percentage of donors were less than 22-year old and the majority were young university students.

Although most felt empathy for the recipients and indicated an altruistic desire to help, 69% of donors expected to receive financial rewards and would not donate semen if they were not paid. Lyll *et al.* (1998) found that 67% of students in their sample were in favour of payment whereas only 29% were against. This pro-payment attitude is not surprising, since the majority of the respondents in their samples were young university students with no or limited employment income.

Money is a powerful motivator for young students given their age, socio-economic and employment status. Students are drawn to donation by financial incentive although the system is never aimed at recruiting paid donors in that way. These men had prior knowledge of payment and therefore had the expectation to be paid. They were recruited by a compensation-based system and the research findings accurately reflected their views of payment (Irvine *et al.*, 1995). However, some concerns were raised that young university students are not suitable semen donors for reasons other than their egotistic donation incentive. They may not have the maturity to fully comprehend the meanings of parenthood. Proper one-to-one implicational counselling prior to donation would be essential to address the psychological implications pertaining to their decision (Lui, *et al.*, 1995; Lui and Weaver, 1996; Shenfield, 1999). Some students may also underestimate the potential for future emotional and psychological risks if their original decision to donate genetic materials were driven by financial vulnerability (Shenfield and Steele, 1995). Later when they have their own biological children these young men may be confronted with the possibility of unknown genetic offspring (Schover *et al.*, 1992; Purdie *et al.*, 1994; Guerin, 1998). A future spouse may be displeased with a prior involvement as a semen donor. There is, however, no solid evidence to suggest that young students have a higher chance of regretting the semen donation decision than mature men who already have children (Pennings, 1997; McLaughlin *et al.*, 1998).

Understandably, financial gain serves as an important incentive for most students. Although one cannot assume that all donations are motivated by money, data have shown that the virtue of altruism, in the form of helping someone to conceive a child, provides very little incentive and has little meaning for the majority of students (Irvine *et al.*, 1995). Recent statistics provided by the UK's HEFA, gathered through the sperm, egg and embryo donation review (SEED) in 2004, showed that 69% of donors who donated sperm in 2004–2005 were over 30-year old, the most common age range being 36–40. Also, 41.5% of donors already had children of their own, with 31.45% among them having two or more children. These data suggest that there is now a gradual shift in the profile of sperm donors in the UK, with more mature men being willing to come forward to donate sperm altruistically (Human Fertilisation and Embryology Authority, 2005). As the stereotypical image of sperm donors being predominantly young students is no longer valid, extrapolation of findings from research studies using student groups as the main sampling population must be interpreted with great caution to avoid overgeneralization when examining the possible effects of disallowing payments. The convenient use of samples of students on university campuses to explore attitudes towards paid gamete donation may also limit the applicability of such findings to the general population. Their views may have limited practical relevance to Canada for informing successful altruistic recruitment strategies because of different legal frameworks governing gamete donation.



## Non-student group

Most of the more recent research studies on gamete donation have focused on the impact of donor recruitment if anonymity is lifted (Cook and Golombok, 1995; Lui *et al.*, 1995; Lui and Weaver, 1996; Gazvani *et al.*, 1997; Lyall *et al.*, 1998). Arguments have been presented on the difficulties of recruiting men under a purely altruistic system without financial incentive (Pennings, 1997). This research may suggest that donors who are prepared to be identifiable to future offspring are likely to share similar demographics with donors who are willing to donate altruistically (Health Canada, 2004b; Daniels *et al.*, 2006).

A review of available research studies on donor motivation has uncovered an interesting pattern. It shows that financial motivation is significant only when the proportion of student donors is high (Golombok and Cook, 1994; Health Canada, 2004b; Daniels *et al.*, 2006). This may suggest that non-student donors are likely to have more altruistic motives to help others through gamete donation. One study compared the view of payment between 97 student semen donors, 56 non-donor students and 44 mature non-donor men who were fathers. The non-donor father group was least likely to demand financial reimbursement as a condition for their donation (Lui and Weaver, 1996). Daniels *et al.* (1996) conducted a study to compare the motives of semen donors at two London clinics using two different recruitment and payment policies. Donors recruited in the clinic using paid recruitment models were mostly students, in their early-to-mid-20s, single, unmarried and without children. Their donations were motivated primarily by financial rewards. In contrast, donors recruited under a non-remuneration system were mainly from middle class occupations, had an above-average education and a mean age of 40 years. Most were married with children, and said that they were motivated primarily by the desire to help. Some of them even had direct experience with infertility or knew other people who had infertility problems (Daniels *et al.*, 2006).

From a purely demographic perspective without looking at the biological component, this middle-age group is definitely a more appropriate donor population than the student group because of their presumed financial stability, fatherhood status and fertility potency. They are usually more aware of the rewards of having children and, thus, might have more empathy for the plight of infertile couples. The availability of compensation would provide little incentive, or perhaps even be demeaning to them if they have a well-established career (Lui and Weaver, 1996; Lalos *et al.*, 2003; Adams *et al.*, 2006). This group of men is also more likely to have a lower incidence of infectious and sexually transmitted disease because of their presumed stable relationship status (Purdie *et al.*, 1994; Guerin, 1998; Health Canada, 2004b). Nevertheless, the use of middle aged donors gives rise to concerns about the decline of male fertility with age and the quality of the semen samples (Ng *et al.*, 1994), suboptimal semen quality being the most common reason for rejection in any semen donation programme (Paul *et al.*, 2006). Prospective donors who enter the programme may not be able to complete the process if they fail to meet the screening criteria (Golombok and Cook, 1994; Gazvani *et al.*, 1997; Shenfield, 1999). A study by a sperm bank in the USA reported that among a total of 199 men who were recruited from advertisement for semen donation, only 25 were accepted and agreed to proceed with donation after the medical screening (Sidhu *et al.*, 1997). A large donation pool is thus

necessary to offset the anticipated high rejection and dropout rates with this presumed demographic profile under altruistic donation models.

Like many other pro-social behaviours, the semen donation act is determined by multiple variables, such as personality factors, attribution of personal and social responsibilities, the availability of incentives and social recognition, etc. Much blood donation literature has suggested that altruism and empathy are major motivators for blood donors (Piliavin and Callero, 1991; Healy, 2000) who usually have a strong sense of social duty and moral obligation to the community (Fernández-Montoya, 1997; Misje *et al.*, 2005; Ferguson *et al.*, 2007). A survey of 593 blood donors found that 43% of them expressed willingness to donate semen. Financial incentive was important to only 6% of them. Those who would not donate cited spouse objections, religious or ethical reasons. The author concluded that blood donors are very suitable prospective semen donors because of their relatively good health history and proven altruism (Eastlund, 2003). Surprisingly, very little empirical data is available to echo these findings and therefore its validity is limited. Further research is necessary to test the hypothesis of whether blood donors are more receptive to altruistic semen donation than other population groups, and whether past involvement in altruistic acts can predict attitudes and receptiveness towards semen donation. Other possible potential targets include husbands of obstetrics patients, men considering vasectomy, patients from family planning clinics, and men from male-oriented work settings. Parents with young children are also good candidates because of their parenthood status and their well-established social structures (Purdie *et al.*, 1994; Health Canada, 2004b).

Under the new regulatory framework in Canada, sperm banks can no longer use monetary rewards in their advertisements for donor recruitment. More systematic and large-scale recruitment strategies are yet to be found to reach out to untapped pools of potential donors. No doubt, the recruitment strategies chosen by the sperm banks will influence the type of donors recruited and the composition of the donor pool. Further investigation is needed to explore the correlation of donation decision with variables such as age, marital status, fatherhood status, occupation, socio-economic status, education level and ethnicity. A well-designed multivariate analytical study of the correlation between these variables will help to clarify the characteristics of potential donors, the decision-making process, and the need for donation incentive. The demographic profiling of prospective semen donors will guide the formulation of donor recruitment strategies in Canada (Ferguson *et al.*, 2007; Del Valle, *et al.*, 2008).

## Donor recruitment strategies

Donation occurs in response to a direct request to donate, and the availability of an opportunity to give. There may be a substantial number of potential donors who are willing to donate but have never been approached. Even highly altruistic donors are unlikely to donate unless asked. A research project commissioned by the AHR Implementation Office prior to the passage of the AHR Act (Health Canada, 2004b) reported various strategies employed by Canadian fertility clinics to improve donor recruitment, e.g. word of mouth, media advertisement, university newspaper, free weekly magazines, radio and web sites, advertising in hospitals and male-oriented work

settings. Local newspaper advertising and recipient-to-donor and donor-to-donor word of mouth were found to be more effective than posters, radio/TV, and advertisements in national newspapers.

A very recent study conducted by a Toronto-based Canadian sperm bank reported that 301 men contacted the centre via telephone or internet from January to October 2005 in response to its advertisements on semen donation. Students were not targeted in this protocol, and all applicants were informed that there was no financial compensation. Although only one donor was finally accepted into the donor programme after the lengthy screening process, the data are regarded as encouraging given that an average of 30 Canadian men per month decided to contact the sperm bank after the need for gamete donation was advertised over a 10-month timeframe (Del Valle *et al.*, 2008). This report is the only published research study in Canada that provides contextual information about the challenges of recruiting altruistic semen donors under the new AHR Act. It will be worthwhile to explore whether further modifications of these recruitment strategies and streamlining of logistics in the screening process would result in a larger pool of donor applicants and a smaller dropout rate.

A study by Paul *et al.* (2006) based on a UK semen recruitment centre unexpectedly reported that mature men who had not originally been targeted in the donor recruitment plan nevertheless came forward to donate semen. This study found that although all advertisements had been designed to target students, 45.12% of the 1101 donor applicants turned out to be non-students. This suggests that the recruitment messages were somehow transferred from one target group to a non-target group in an informal but a positive way, leading to a donation decision. It would be worthwhile to explore the mechanisms involved in information transmission from one group to another using a social marketing research approach.

Other international studies suggest that some centres hold 'donor information sessions' to attract prospective donors. Most of the advertisements highlight the financial compensation (Daniels *et al.*, 1996; Almeling, 2007). Social networking is also reported to be a commonly used recruitment method, direct referral from existing donors being the most effective method (Paul *et al.*, 2006). Some programmes offer a referral bonus to encourage existing donors to refer their friends and relatives (Schover *et al.*, 1992). Indirect advertising articles describing the plight of infertile couples and the need for donated gametes have been reported to be an effective recruitment strategy. Promoting the human face of those who benefit from gamete donation could help prospective donors relate to the recipient group (Gazvani *et al.*, 1997).

Almost all the studies reported that the majority of the recruited donors are from the Caucasian mainstream population. Donors from racial and ethnic groups are very difficult to recruit (Golombok and Cook, 1994; Cook and Golombok, 1995; Murray and Golombok, 2000). This is understandable because recruitment messages that appeal to the mainstream group may not be effective for other ethnic groups. It is unlikely that the same recruitment strategy would be applicable to all groups unless it addresses the issues relevant to different ethnic and cultural contexts (Glynn *et al.*, 2006). Prospective donors' female partners also tend to play an important role in influencing donors' attitudes and donation decision. Some men would not consider donating without the support of their female partners. Recruitment methods that target the female partners rather than the men should be considered (Purdie *et al.*, 1994; Daniels and Hall, 1997; Lalos *et al.*, 2003).

There are multiple personal and social motivations behind the act of semen donation and it is important to understand the underlying human psychology when tailoring messages to target prospective donors. It is essential to meet the psychological needs of donors make them feel valued and to show that their donation is greatly appreciated. How to present semen donation as a rewarding and meaningful act is no doubt a big challenge. Effective social marketing requires a careful market segmentation to target those who have a higher probability of being receptive to the messages. Research is needed to understand the types of message that appeal to donors and target their psychological needs, and what kinds of strategies would encourage the adoption of the desired behaviours (Daniels and Hall, 1997). The pre-existing psycho-social environment that hinders donors from considering altruistic donation should also be examined. There is a need to explore innovative strategies to replace obsolete recruitment methods that are based on institutional tradition and the paid donation system (Del Valle *et al.*, 2008). Daniels and Hall (1997) suggested esteem-based recruitment models using social marketing tools as an alternative to payment-based models. A review of blood donation research found that an esteem-based approach was effective only for donors with a short donation record but not long-term repeat donors (Misje *et al.*, 2005). The positive effects of boosting the donors' self-esteem to influence their donation behaviours are definitely helpful at least at the initial stage, but other strategies need to be considered for donor retention.

## Institutionalization of semen collection

Altruistic donation must be understood within the socio-structural framework that provides incentives and opportunities for the donors to act (Healy, 2000). The motives of donors are clearly important, but we should not stop asking how recruitment centres can make the process easier for prospective altruistic donors, and how society at large can give them social recognition for their good act. The characteristics of the men being recruited can be heavily influenced by the recruitment procedures and policies. The attitudes of sperm bank staff can also encourage or discourage altruism in donors (Healy, 2006). Recruitment centres that engage in a social relationship and continuous dialogue with donors require enormous sensitivity and effort on the part of their staff. A dedicated team and a 'donor friendly' institutional culture are required to encourage the donors' commitment in this lengthy but rewarding process. Prospective donors may not return after the initial contact with the sperm bank if they do not find it a rewarding experience (Steele *et al.*, 2008).

Review of existing literature reflects the imbalance of attention, focusing on the men who donate rather than the recruitment centres which collect. The minimum 6 months commitment needed to stay in the donation programme requires donors to take on a new social role and social identity. Medical professionals and semen recruitment centres play a crucial intermediary role in portraying the image of semen donors. A sociological study in the USA found that semen donors are valued much less than oocyte donors in the reproductive marketplace. For example, advertisements tend to appeal to women's altruism to help, but advertisements targeting men emphasize the financial compensation by conveying messages like 'a job opportunity to earn

income', or 'get paid to do what you are already doing'. This research study also found that sperm banks did not display much gratitude to semen donors during the course of donation. They were valued only for the samples they produced. The transaction was completed when samples were handed over. Money was paid for the job done with little regard to the thoughts and feelings of the donor (Almeling, 2007). More clinical knowledge is needed to understand how altruism is influenced by the contextual factors of semen giving and the institutional processes of semen collecting.

The challenges facing Canada now are no different from those facing other countries, because the demand for gametes always exceeds the supply regardless of whether donors are paid or not paid, identifiable or not identifiable (Daniels, 2007). In the UK, a clinic reported that they spent nearly 2 years to recruit unpaid donors utilizing specialized staff, professionally prepared posters and leaflets, and even an award winning radio advertisement. Despite the high costs involved in the recruitment campaigns, the programme 'reaped poor reward at large expense' (McLaughlin *et al.*, 1998, p. 1132). While most of the clinics in the UK had difficulties recruiting identifiable donors, a clinic in Manchester reported the encouraging news of having no problem. This clinic used recruitment tools such as newspapers and advertisements just like many other clinics. What seemed to make the differences was its recruitment philosophy and the attitude of its staff, rather than simply the tools. In this clinic a team of dedicated staff shared similar views regarding the underlying altruistic and open identity recruitment philosophy. The respect, appreciation, and acknowledgement of donors' valuable contributions of the gift of life were visible at all engagement and contact points. All logistics flows were carefully reviewed and much effort was made to simplify procedures in order to avoid wasting the donors' time and energy (Adams *et al.*, 2006). A clinic in London, which is currently the largest sperm bank in the UK, experienced similar success in donor recruitment and retention when it utilized a client-centred philosophy with better facilities, focused advertising and well-trained staff (Ahuja, 2008). Before launching any pilot donor recruitment plan in Canada that would involve a significant investment of resources, it would be advisable to thoroughly review existing donor recruitment strategies at an international level. This will avoid wasting valuable resources in developing obsolete recruitment plans that have already been tested with poor outcomes.

## Public awareness campaign

An effective recruitment model has to be accompanied by changes in public attitudes towards gamete donation and third party procreation. Social attitudes will affect the donor's self perceived social approval of his donation act, i.e. 'Will my friends/family support my decision to donate sperm?'; 'Do I feel comfortable telling my friends/family of my involvement as a sperm donor?'; 'Do I feel proud or am I ashamed to tell others?'. Reducing the social stigma commonly associated with infertility is an important first step in promoting the awareness of the needs among the general public (Daniels, 2007). There must be more public awareness of the distress of infertility and involuntary childlessness, and encouragement of the view that semen donation is an altruistic act.

Perhaps the UK model can provide some insights to illustrate the pivotal roles played by public education and mass media in shifting the social culture of gamete donation. A national government

charity called the National Gamete Donation Trust (c2008) (NGDT) was established in 1998 with the main goal of seeking ways to alleviate the national shortage of gamete donors. The NGDT works together with the HFEA, licensed clinics and community stakeholders to promote awareness of gamete donation. A large-scale survey commissioned by the NGDT (Murray and Golombok, 2000) provides contextual knowledge and baseline measures of the social climate and public attitudes towards gamete donation when the NGDT was newly formed. Clinic staff from 64 licensed clinics reported that the existing public awareness campaign was not only ineffective, but was not being targeted to those who might donate. Subsequently, the NGDT launched various large-scale public awareness campaigns that have successfully drawn a high volume of media attention and press coverage. For example, following public awareness campaigns launched in early 2000, NGDT reported a 500% increase in people calling to inquire about gamete donation. There were over 15 000 visits to the NGDT website within a 9-month period (Morris, 2005). Although the responses from some of the campaigns are mixed with positive feedback, e.g. the 'Give Life, Give Hope' campaign (Witjens, 2005), and controversial outcomes, e.g. the 'Give a Toss' web campaign ('Give a Toss' web campaign, 2007; Blyth and Ryll, 2007; McVeigh, 2007; Witjens, 2007), the NGDT has undoubtedly raised the public awareness of gamete shortage in the UK.

The government of New Zealand has also invested in massive publicity to foster the culture of altruistic donation. A community study of couples and parents in New Zealand from antenatal clinics and preschool settings reported that more than half of them had seen or heard about the need for semen donation. This awareness campaign and publicity seemed to have been very effective in reaching out to the general population to publicize and promote the need for donation (Purdie *et al.*, 1994).

So far, there has been no public educational campaign in the mass media to raise the awareness of, and the need for, altruistic gamete donation in Canada, other than some anecdotal reports from journalists. Newspaper journalists seek controversial stories to make news headlines and are not reliable publicity (Gilvie, 2007; Subramanian, 2007; Miner, 2008). People will not consider semen donation if they have never heard about the need for this, or have been exposed to negative media coverage, or misunderstand the ramifications of donation. Unlike blood donors, semen donors do not often get social recognition from their immediate social circle to acknowledge their humanitarian act of donating. Well-coordinated national and regional public awareness campaigns to nurture the culture of altruistic gamete donation and to promote a positive image of being a semen donor are desperately needed in Canada.

## Towards an altruistic donor recruitment model

Whether the AHR community in Canada agrees or not, altruistic gamete donation is now a reality at least until the next legislative review. Although paid donation is a well-established practical model that can help to reduce the shortage of donors its short term advantages may have far reaching potential consequences in the future. The altruistic model, on the other hand, is more ethically and morally responsive, but its feasibility is uncertain without empirical data to guide its implementation. It is unrealistic to expect Canadian clinics



to invest resources in conducting trial-and-error field experiments in search of innovative recruitment methods. While the rationales behind disallowing compensation to gamete donors are well intended by the Canadian Parliament, it is unlikely that altruistic sperm donors will emerge spontaneously without a coordinated, multi-level strategic plan to orchestrate recruitment efforts. The regulatory body, AHR Canada, does not have a mandate to be directly involved in donor recruitment. Nonetheless, the Agency may have a role to play in terms of public education about the need for gamete donation, and the legislative requirement for altruism. Canada is not the only country in the world that has legislation to prohibit payment to gamete donors. However, Canada does have an advantage in terms of being able to draw upon other countries' past experiences. Future research studies that document the Canadian experience in searching for innovative recruitment strategies will also offer invaluable empirical knowledge to other countries.

## Conclusion

Social and behavioural science can make a contribution towards understanding the complex dynamics involved in altruistic semen donation and inform the development of best practice models. A re-conceptualization of donor recruitment strategies based on the notion of gift giving is much needed in order to find those elusive altruistic donors. Empirical data generated from a research programme will provide scientific evidence to guide cost effective decisions in donor recruitment and to promote good practice of altruistic semen donation models. Research programmes which aim to identify social-psychological parameters and institutional factors that influence donation behaviours will be relevant to the international AHR research community as a whole. The findings will not only enrich the theoretical debates and expand the conceptual framework of altruistic donation, but will be invaluable when the AHR Act comes up for parliamentary review in the near future.

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